



STORM SIGNALS.

RETURN to an Order of the Honourable The House of Commons,  
dated 18 June 1874;—for.

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RETURNS "showing the LIST of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1873, arranged according to Coasts :"  
"And, showing the Number of TELEGRAMS sent to each STATION, and the STORMS reported on the COASTS of the BRITISH ISLANDS, in 1873 (in continuation of Parliamentary Paper, No. 152, of Session 1873)."

Board of Trade, }  
29 July 1874. }

T. H. FARRER.

(Mr. Cavendish Bentinck.)

Ordered, by The House of Commons, to be Printed,  
18 June 1874.

Force	Scale	Approximate Velocity
0	0	0 to 1
1	1	1 to 2
2	2	2 to 3
3	3	3 to 4
4	4	4 to 5
5	5	5 to 6
6	6	6 to 7
7	7	7 to 8
8	8	8 to 9
9	9	9 to 10
10	10	10 to 11
11	11	11 to 12
12	12	12 to 13

The following relation of the velocity of the wind, as measured by a Robinson's anemometer of large size, and as force according to Mr. F. Besant's scale, has been taken up in the Meteorological Office from observations carried out at Hobart and Taroona, and may be considered as approximately correct.

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MEMORANDUM.

THE following pages contain a statement of all the telegrams conveying intelligence of weather issued by the Meteorological Office in the year 1873, and also of all the storms experienced on the coasts of the British Islands during the same period.

The facts on which the account of the storms has been based are,—

I. The continuous records of the direction and velocity of the wind furnished by the self-registering anemographs, on Dr. Robinson's principle, erected by the Meteorological Committee at 10 stations distributed over the United Kingdom, viz.: Kew, Yarmouth, Falmouth, Stonyhurst, Holyhead, Glasgow, Aberdeen, Sandwick Manse (Orkneys), Armagh, and Valencia; as well as at the stations of Alnwick Castle, Seaham Harbour, and Halifax, the results from which are supplied respectively by the kindness of the Duke of Northumberland, the Marquis of Londonderry, and L. J. Crossley, Esq.

II. The observations taken at the telegraph reporting stations (29 in number) situated in these islands.

III. Reports furnished by certain volunteer observers which have been received at the Meteorological Office.

The office is without accurate information as to the wind on the west coast of Ireland, generally; from Valencia to Lough Foyle, as well as on the west coast of Scotland, from the Mull of Cantyre to Cape Wrath, with the single exception of that received from its telegraphic reporting station at Stornoway.

The only stations at which the drum is hoisted within the above limits are Tralee, Limerick, and Galway, so that it is evident that the districts in question cannot be represented in the Return now submitted.

The scales, according to which the violence of the gales is estimated, are two in number, and are as follows:—

SCALES OF WIND.

FORCE, BEAUFORT SCALE.			Approximate Velocity. Miles per Hour.	
0. Calm	- - - - -	- - - - -	0	- - 0 to 5
1. Light air	- - - - -	- - - - -	1	- - 6 to 10
2. Light breeze	Or, that in which a well-conditioned man-of-war, with all sail set, and clean full, would go in smooth water from -	1 to 2 knots	2	- - 11 to 15
3. Gentle breeze		3 to 4 knots	3	- - 16 to 20
4. Moderate breeze		5 to 6 knots	4	- - 21 to 25
5. Fresh breeze	Or, that to which she could just carry in chase, full and by - - - - -	Royals, &c.	5	- - 26 to 30
6. Strong breeze		Single-reefed topsails and top-gallant sails.	6	- - 31 to 36
7. Moderate gale		Double-reefed topsails, jib, &c.	7	- - 37 to 44
8. Fresh gale	by - - - - -	Triple-reefed topsails, &c.	8	- - 45 to 52
9. Strong gale		Close-reefed topsails and courses.	9	- - 53 to 60
10. Whole gale	Or, that with which she could scarcely bear close-reefed main-topsail and reefed fore-sail.	- - - - -	10	- - 61 to 69
11. Storm	Or, that which would reduce her to storm-staysails.	- - - - -	11	- - 70 to 80
12. Hurricane	Or, that which no canvas could withstand.	- - - - -	12	- - 80 and upwards.

The foregoing relation of the velocity of the wind, as measured by a Robinson's anemograph of large size, and its force, according to Sir F. Beaufort's scale, has been drawn up in the Meteorological Office from observations carried on at Holyhead and Yarmouth, and may be considered as approximately correct.

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The principles of the system of warnings followed in 1873 are fully explained in Parliamentary Paper, No. 10, dated 25th November 1867, in which (Letter 9, from the Meteorological Committee to the Board of Trade) it is said, "The signal would be simply of a warning nature, and, without conveying the impression that the storm would necessarily strike the port where it was hoisted, would imply that extra caution in navigation was requisite." The Committee therefore would consider that extra caution in navigation would be necessary for coasters and fishing boats when the force of the wind reaches No. 8 of Beaufort's Scale, or even No. 7, while no serious danger can be said to exist unless the force reaches 9.

All observations of the wind in which the force exceeded 7 (a moderate gale), or the velocity exceeded 40 miles an hour, have been quoted as instances of the occurrence of a gale, but it has not been considered that the drum was hoisted late or was hauled down too soon unless the force of 9 (a strong gale) or the velocity of 50 miles an hour was reached prior to the issue of the order to hoist, or subsequent to the issue of the order to lower.

With reference to the definition of a serious gale, as force 9, which agrees with that adopted by the Board of Trade, a further limitation has been taken. The experience of the office has shown that at exposed stations, such as Holyhead and Sandwick Manse, the force of the wind is exceptionally strong, while it is exceptionally weak at inland stations, such as Kew and Armagh.

It is therefore fair to assume that the occurrence of a velocity of 50 miles an hour at Holyhead or Sandwick respectively does not in itself prove the prevalence of a strong gale on the whole line of coast of St. George's Channel and the Irish Sea, or on the east coast of Scotland, as the case may be.

In the Summary, pp. 24 to 29, all cases in which the signal has been shown to be partially late by one single report of force 9, or of the velocity of 50 miles, have been specially noted in the remarks.

The converse modification of increasing the velocities reported at inland stations has not been carried out, owing to the absence of sufficient information as to the co-efficients which should be used in each case to obtain the true velocity of the wind on the coast. Investigations are in progress in reference to this point.

The service of meteorological telegraphy is subject to a constantly recurring interruption, by the fact of no telegrams being received on Sundays. It should be borne in mind that even if attendance were given at the office on that day, it would not be possible to render generally available to the public the telegraphic intelligence which might be issued. As a rule, the telegraphic offices at the seaports and fishing stations are closed on Sundays at noon, about which time the telegrams from the Meteorological Office would usually reach the coast.

The Summary, p. 29, shows that the total per-centage of success is nearly identical with that for 1872, and far higher than those for 1871 and 1870 (Parl. Papers, No. 504, 1871; No. 152, 1873).

The following are the respective figures:—

	Warnings justified by subsequent Gales.	Warnings justified by subsequent Strong Winds.	Total Warnings justified.	Warnings not justified by subsequent Weather.
1870	46.7	21.7	68.4	22.4
1871	46.	17.7	63.7	22.
1872	61.	19.5	80.5	11.9
1873	45.2	34.	79.2	16.8

It will be seen that there is a serious difference between the years 1872 and 1873 as regards the way in which the proportion of the successful warnings (identical in the two years) is distributed between those justified by gales and those only justified by strong winds.

The explanation of this is to be found in the peculiar character of the weather during the greater part of the year; the paths of the storm-centres often lying to the northward of the United Kingdom, so that our stations felt the barometrical and other meteorological disturbances, but were not exposed to the full brunt of the storms.

The office having to issue its warnings on the first signs of the approach of storms, has in several cases only to show winds of forces 6 and 7 as justifications of its cautionary telegrams. The warnings, therefore, were perfectly right in principle, though hardly necessary for large sea-going ships, as distinguished from yachts, coasters, and fishing boats.

As an illustration of the foregoing statement, it is of interest to show that while the total number of gales reported on all coasts in 1872 was 174, in 1873 it was only 138, as will be seen from the Summaries, the falling off being mainly in the number of gales reported in Ireland, while in Scotland, on the contrary, there was an actual increase in 1873, as compared with 1872.

It will be noticed that in the cases of two very serious gales, those of 18th January and 16th December, the storms came on so rapidly during the night time, subsequent to the afternoon reports of the previous day, that no warning could be issued by the office; and it does not seem that the funds at present at the disposal of the office will enable it to anticipate the arrival of such gales as the two in question, as for that purpose much more frequent telegrams from the coast would be required.

The results of the four years' work will, it is hoped, show that while the office cannot be expected to be able to give timely warning of *all* gales, it has yet been able to give such information as would, if attended to, have enabled our coasting seamen to avoid the violence of almost all the serious storms which have visited our coasts.

## STORM SIGNALS.

LIST of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1873, arranged according to COASTS.

COASTS.		PLACES.	COASTS.		PLACES.
IRELAND	South	New Ross. Dunmore, East. Dungarvan. Youghal. Queenstown. Cork. Passage. Tralee. Limerick. Galway.	ENGLAND	West	Holyhead. Carnarvon. Port Dinorwic. Aberystwith. Milford. Pembrey. Llanelly. Swansea. Briton Ferry. Porthcawl. Penarth. Cardiff. Newport. Weston-super-Mare. Burnham.
Ditto	East	Belfast. Howth. Kingstown.	Ditto	South (Devon and Cornwall).	Ilfracombe. Barnstaple. Port Isaac. Boscastle. Newquay. Hayle. Pendennis. Scilly. Penzance. Falmouth. Plymouth. Teignmouth. Exeter. Exmouth.
SCOTLAND	East	Kirkwall. Inverness. Nairn. Burghead. Lossiemouth. Buckie. Portsoy. Banff. Fraserburgh. Peterhead. Aberdeen. Stonchaven. Montrose. Broughty Ferry. St. Andrews. Dundee. Anstruther. St. Monance. Burntisland. Alloa. Grangemouth. Bo'ness. Granton. Leith. Fisherrow. Dunbar. Eyemouth.	Ditto	South	Guernsey. St. Helier, Jersey. Gorey, Jersey. Weymouth. Poole. Cowes. Ventnor. Portsmouth. Littlehampton. Brighton. Newhaven. Hastings. Rye. Dover.
Ditto	West (Clyde)	Glasgow. Greenock. Rothesay. Campbelton. Girvan.	Ditto	South-east	Ipswich. Harwich. Chatham. Sheerness. Faversham.
ENGLAND	North West	Silloth. Maryport. Workington. Whitehaven. Ramsey. Douglas. Castletown. Barrow. Morecambe. Fleetwood. Blackpool. Lytham. Runcorn. Southport. Liverpool. Queensferry. Hawarden. Mostyn. Port Penrhyn.	Ditto	East	Tynemouth. South Shields. Sunderland. Middlesborough. Redcar. Whitby. Filey. Withernsea. Hull. Goole. Grimsby. Boston. Sutton Bridge. Lynn. Cromer. Yarmouth. Southwold.

RETURN showing the Number of TELEGRAMS sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
1	1 January	2.30 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and S., including Faversham.	Barometer falling very fast, Valencia, with southerly gale. Hoist drum
2	1 "	3.30 p.m.	England, E. and S.E., except Faversham	Barometer falling very fast, Valencia, with southerly gale. Hoist drum.
3	2 "	4.30 p.m.	England, E. and S.E.	Lower drum
4	3 January	1 p.m.	England, E., north of Hull	Gale has begun again from south-west in Irish Sea. Hoist drum
5	3 "	3.30 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W., with Exeter and Plymouth.	Barometer rising very rapidly since noon at Greencastle; west gale there. Keep up drum
6	4 "	11.20 a.m.	England, S.E. and S., except Exeter and Plymouth.	Barometer falling again in Ireland; southerly gale at Cork and Brest. Hoist drum again
7	6 January	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Barometer falling again in west, with slight southerly gale. Hoist drum again
8	6 "	4 p.m.	England, S.	Southerly gale, Valencia, and high sea. Hoist drum
9	7 "	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and S.	Lower drum
10	7 January	3.15 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.W.	Barometer falling again in west, wind backing slightly, and sea still keeping up. Hoist drum again
11	8 "	11.10 a.m.	England, S.W.	The gale has travelled to Scotland. Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the STORMS reported on the COASTS of the BRITISH ISLANDS in 1873.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.		
1	A strong southerly gale commenced at Valencia at about noon of 1st January, and extended during the evening to all parts of our coasts	Aberdeen, 2nd	S.	-	8	Strong winds were experienced along the whole of our east coasts.	
		" 1 a.m., 2nd	S. by E.	32	-		
		Stornoway, 2nd	S.W.	-	11		-
		Moorside, 6 and 7 a.m., 3rd	S.S.W.	40	-		
		Glasgow, 2 p.m., 3rd	S. by W.	50	-		
		Ardrossan, 1 p.m., 3rd	S.W.	-	10		
		Greencastle, 1 p.m., 3rd	S.S.W.	-	9		
		Armagh, noon, 3rd	S.W. by S.	44	-		
		Donaghadee, 2nd	S.W.	-	8		
		Dungloe, County Donegal	S.W.	-	9		
		Kingstown, 6 p.m., 1st	S.	-	9		
		Stonyhurst, 6 a.m., 3rd	S. by E.	41	-		
		Holyhead, 7 p.m., 1st	S.S.E.	56	-		
		" 4 a.m., 3rd	S. by E.	60	-		
		Dublin, 9 a.m., 3rd	S.W.	-	8		
		Galway, 9 a.m., 1st	S.	-	10*		
		Valencia, 1 p.m., 1st	S.E. by E.	57*	-		
		" Midnight, 2nd	W.S.W.	59	-		
		Roche's Point, 3rd	W.S.W.	-	10		
		Pembroke, 3rd	W.	-	9		
Falmouth, 5 p.m., 1st	S. by E.	47	-				
Plymouth, 1st	S.S.W.	-	9				
Dover, 1st	S.W.	-	8				
London, 1st	S.	-	8				
Kew, 11 a.m., 3rd	S. by W.	43	-				
Yarmouth, 1st	S.S.W.	-	9				
" 1 a.m., 2nd	S. by W.	37	-				
2	The south-westerly gale began again in the west on the 3rd January, and extended to all coasts next day	Shetland, 4th	W.	-	8	(a) The anemometer only records 30 miles per hour.	
		Sandwick, 3 p.m., 4th	S.S.E.	42	-		
		Stornoway, 4th	S.	-	9		
		Aberdeen, 4th	W.	-	9		
		" 5 p.m., 3rd	S.	34	-		
		Alnwick, 6 p.m., 3rd	W.S.W.	57	-		
		Holyhead, 9 a.m., 4th	S.S.E.	45	-		
		Roche's Point, 4th	S.	-	8		
		Valencia, 6 a.m., 4th	S.E. by S.	46	-		
		Pembroke, 4th	S.W.	-	8		
		Falmouth, 1 and 2 p.m., 4th	S.S.W.	51	-		
		Portsmouth, 4th	S.W.	-	9		
		Brighton	S.	-	8		
		Dover, 4th	W.S.W.	-	8		
		Kew, 8 p.m., 4th	S.S.W.	44	-		
London, 4th	S.W.	-	8				
Yarmouth, 4th (a)	S.W.	-	10				
3	A south-west gale was felt on our south-west, west, and north coasts on the night of the 5th, and on the 6th January	Nairn, 6th	S.W.	-	8		
		Alnwick, 1 p.m., 6th	S.W.	53*	-		
		Stornoway, 6th	S.W.	-	8		
		Ardrossan, 6th	S.S.W.	-	8		
		Dungloe, County Donegal	S.W.	-	10*		
		Liverpool	S.W.	-	8		
		Holyhead, 3 and 5 a.m., 6th	S.S.W.	52*	-		
		Valencia, 11 a.m., 6th	S. by E.	59*	-		
		Galway, 6th	S.W.	-	12*		
		4	The wind again increased to a gale on our north and west coasts on the night of the 7th	Sumburgh Head, 7th	S.		-
Sandwick, 10 a.m., 8th	S.S.W.			47	-		
Nairn, 7th	S.W.			-	9*		
Moorside, 1 p.m., 8th	S.S.W.			40	-		
Stornoway, 7th	S.W.			-	10		
Glasgow, 5 a.m., 8th	S. by W.			45	-		
Ardrossan, 7th	S.W.			-	9		
Dungloe, County Donegal	S.W.			-	11		
Armagh, 3 a.m., 8th	S.S.W.			40	-		
Holyhead, 2 a.m., 8th	S. by E.			58	-		
Valencia, 11 p.m., 7th	S.	69	-				
Falmouth, noon, 8th	S.S.W.	49	-				

an hour, was reached prior to the hoisting or subsequent to the hauling down of the drum.



RETURN showing the Number of Telegrams sent to each Station, at

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
19	25 January	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.W.	Barometer falling quickly. Valencia; strong south wind. Hoist drum
20	25 "	11 a.m.	England, S., S.E., and E. (south of Hull)	Lower drum for the present
			None	
21	30 January	11.5 a.m.	England S. (E. of Southampton); S.E., and E. (south of Hull).	Barometer falling in France; East wind likely to freshen. Hoist drum
22	31 "	11.10 a.m.	England, S. (east of Southampton)	Lower drum for the present
23	31 January	3 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and E. (north of Whitby).	Barometer falling, Valencia; strong south-east winds beginning. Hoist drum
24	1 February	3.15 p.m.	England, S., S.E., and E.	Barometer falling, Scilly; east gale, Pembroke and Scarborough. Hoist drum
25	5 February	11.10 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W.	Barometer falling briskly at Stornoway sudden rise of temperature, with southerly winds. Hoist drum
26	6 "	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W.	Lower drum
27	11 February	11.20 a.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. (Bangor only); E. (north of Hull).	Barometer falling briskly in north; northerly winds may freshen. Hoist drum
28	11 "	3.15 p.m.	Ireland, E. (Dublin only); England, N.W. (except Bangor); E. (south of Hull).	Barometer falling briskly in north; northerly west wind freshening. Hoist drum
29	12 "	11.15 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W.	Lower drum
30	12 February	11.20 a.m.	England, S.E.	Barometer rising fast, Scotland. Strong northerly winds, Helder. Hoist drum
31	13 "	11.15 a.m.	England, E. (south of Hull) and S.E.	Lower drum
32	25 February	3 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.W., with Channel Islands.	Barometer very low, Valencia; strong south-west winds. Hoist drum
33	25 "	4 p.m.	Scotland, E.; England, E. (north of Hull)	Barometer very low, Valencia; strong south-east wind, Aberdeen. Hoist drum
34	26 "	11.10 a.m.	Scotland, E.; England, E. (north of Hull)	Barometer uniformly low; no gale blowing. Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1873—continued.

Descriptive Number.	Storms.	Stations.	MAXIMUM FORCE OBSERVED.		REMARKS.		
			Velocity. Miles per Hour.	Force. Beaufort Scale.			
8	A southerly gale commenced at our south-western stations on the early morning of the 25th, and was felt at all but the extreme eastern stations later in the day	Sumburgh Head, 3 a.m., 26th	S.	8			
		Sandwick, 3 a.m., 26th	S.S.E.	52*			
		Aberdeen, 25th	S.	8			
		" 3 a.m., 26th	S. by E.	38			
		Donaghadee, 25th	S.S.W.	8			
		Kingstown, 25th	S.S.W.	8			
		Holyhead, 9 a.m., 26th	S.S.E.	56			
		Valencia, 6 p.m., 25th	(a)	48			
		Roche's Point, 25th	S.S.E.	9			
		Pembroke, 25th	S.S.E.	8			
9	A slight southerly gale swept round our extreme north-west and north coasts on the night of the 28th.	Scilly, 25th	S.E.	10			
		Falmouth, 6 a.m., 26th	S. by E.	41			
		Yarmouth, 25th	S.S.E.	8			
		" 7 a.m., 26th	S.	35			
		Sumburgh Head, 28th	S.	8			
		Sandwick, 8 p.m., 28th	S. by E.	55*			
		Stornoway, 28th	S.S.W.	8			
		Greencastle, 28th	S.S.E.	9			
		10	High winds on south and south-east coasts on the night of the 30th.	Sandwick, 9 a.m. and noon, 1st February.	S.E.	42	
				Nairn, 31st	E.S.E.	8	
Aberdeen, 8 p.m., 1st	S.E. by S.			40			
Shields, 1st February	S.E.			9			
Scarborough, 1st	S.E.			8			
Donaghadee, 1st	E.S.E.			8			
Kingstown, 8 a.m., 2nd	E.			8			
Holyhead, 10 a.m., 2nd	E. by N.			65			
Valencia, 6 p.m., 31st	N.E. by N.			47			
Roche's Point, 1st	S.S.E.			9			
10	A south-east to east gale in all parts of our islands on the 31st January or 1st February	Pembroke, 1st	E.	10			
		Scilly, 1st	E.S.E.	9			
		Falmouth, 11 p.m., 1st	E.S.E.	65			
		Plymouth, 1st	E.	8			
		Portsmouth, 1st	E.	8			
		Yarmouth, 6, 8, and 11 a.m., 2nd.	E.S.E.	54			
10	The north wind freshened considerably in all parts of our islands	Sandwick, 10 a.m., 11th	W.N.W.	42			
		Seaham, midnight, 11th	N	44			
		Holyhead, 2 a.m., 12th	N. by W.	42			
10	A slight southerly gale blew on most parts of our coasts on the 25th or 26th February	Yarmouth, 2 p.m., 12th	N.E. by N.	45			
		Sandwick, 4 p.m., 25th	S.E. by S.	46			
		Holyhead, 3 a.m., 27th	N. by W.	44			
		Valencia, 4 p.m., 25th	S. by E.	45			
		Roche's Point, 24th	E.S.E.	10*			
		Pembroke, 25th	S.	8			
		Plymouth, 25th	S.W.	8			
		Falmouth, 10 p.m., 25th	S. by E.	46			
		Yarmouth, 10 a.m., 25th	S.S.E.	50*			

(a) The direction pencil was not working; telegraph station reports south wind.

This gale was of very small importance.

Not supported by any other station.

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
35	1 March	11.10 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Barometer has fallen very fast. Wind serious as yet. Hoist drum.
36	6 March	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W., with Plymouth and Exeter.	Barometer has fallen very fast in north. South-west gale, Stornoway. Hoist drum.
37	7 "	11.20 a.m.	Scotland, E. and W.	Lower drum
-	-	-	None	-
-	-	-	None	-
-	-	-	None	-
38	22 March	11 a.m.	Ireland, S. and E. (except Tralee and Galway); England, N.W. and W.	Barometer falling fast in south of Ireland. North-east wind strong in Irish Sea. Hoist drum
39	22 "	3.30 p.m.	Ireland, S. and E. (except Tralee and Galway); England N.W. and W.	Lower drum
40	27 March	3 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W. (with Exeter and Plymouth).	Barometer falling in west, with fresh southerly wind. Sea getting up. Hoist drum
41	28 "	11.15 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W. (with Exeter and Plymouth).	Wind has gone down in west. Lower drum
-	-	-	None	-
-	-	-	None	-

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.				REMARKS.			
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.				
11	A north-westerly gale was felt on our south-west and south-east coasts on the night of the 1st March.	Holyhead, 3 a.m., 2nd	N.W.	45	-				
		Roche's Point, 1st	N.N.W.	-	8				
		Valencia, 1st	N.	-	9				
		" 10 p.m., 1st	N.N.W.	37	-				
		Scilly, 1st	N.N.W.	-	10				
		Falmouth, midnight, 1st	N.W. by W.	45	-				
		Yarmouth, 2 p.m., 1st	S. by E.	46	-				
		Sandwick, 3 p.m., 6th	S. by E.	41	-				
		Aberdeen, 7th	S.	-	8				
		" 4 p.m., 6th	S. by E.	31	-				
		Shields, 7th	N.W.	-	8				
12	The wind increased to a fresh gale from various directions at several of our stations on the 6th	Stornoway	S.S.W.	-	10*				
		Holyhead, noon, 7th	N.W. by N.	52	-				
		Plymouth, 6th	W.S.W.	-	8				
		-	A squally south-westerly gale, of very short duration, was experienced at a few stations on Sunday the 9th March.	Roche's Point, 9th	S.S.W.		-	9*	
		Holyhead, 5 p.m., 9th	S.S.E.	45	-				
		Falmouth, 5 p.m., 9th	S. by W.	42	-				
		Plymouth, 9th	S.S.W.	-	9*				
		Portsmouth, 9th	S.W.	-	8				
		London, 9th	S.S.W.	-	9*				
		13	A northerly to westerly gale blew on our west and south-west coasts on the night of the 10th, or early morning of 11th March.	Sandwick, 10 a.m., 12th	N.N.W.		49	-	A sudden gale came on in the night of the 10th.
				Kingstown, 11th	W.		-	10*	
Holyhead, 7 p.m., 11th	N.N.E.			44	-				
Roche's Point, 11th	N.N.W.			-	8				
Valencia, 11th	N.			-	9*				
" 1 a.m., 11th	W.N.W.			40	-				
Pembroke, 11th	W.			-	9*				
Plymouth, 11th	W.			-	9*				
Falmouth, 5 a.m., 11th	W.			48	-				
14	A stiff easterly gale was experienced over the Irish Sea, and on our south-west and south coasts on the 15th.			Kingstown, 15th	E.N.E.	-	8		
				Holyhead, 10 a.m., 16th	E.N.E.	53*	-		
		Valencia, 10 p.m., 15th	N.E. by E.	45	-				
		Roche's Point, 15th	N.E.	-	9*				
		Pembroke, 15th	E.N.E.	-	8				
		Scilly, 15th	E.	-	9*				
		Plymouth, 15th	S.E.	-	9*				
		Falmouth, 1 p.m., 15th	E. by N.	59*	-				
		Portsmouth, 15th	S.E.	-	8				
		Kew, 11 a.m., 15th	N.E. by E.	42	-				
		Yarmouth, 5 a.m., 16th	E. by S.	54*	-				
15	A stiff northerly breeze was experienced on our coasts, which increased to a gale over the Irish Sea on the night of the 6th April.	Kingstown, 7th	N.	-	9*				
		Holyhead, 8 p.m., 6th	N.N.W.	53*	-				
		-	No gale; wind freshened only in extreme west Ireland.	-	-		-		
		15	A very strong westerly gale was felt over the Bay of Biscay and its northern borders; just touched our most south-westerly stations on the afternoon of May 7th.	Valencia, 7th	W.N.W.		-	9*	Only fell at the entrance of the Channel.
				" 5 p.m.	W.S.W.		48	-	
				Scilly, 7th	W.N.W.		-	9*	
				Falmouth, 2 and 3 p.m., 7th	W. by N.		55*	-	

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
42	20 May	3.30 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Strong south wind and high sea, Valencia. Hoist drum
43	21 "	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Wind and sea gone down. Lower drum
44	7 July	11.30 a.m.	Ireland, S. and E.; Scotland, W. (with Wick); England, N.W. and W. (with Exeter and Plymouth).	Barometer falling, Valencia; strong south wind and high sea. Hoist drum.
45	7 "	3.45 p.m.	Ireland, S. and E.; Scotland, W. (with Wick); England, N.W. and W. (with Exeter and Plymouth).	Barometer rising, Valencia. Lower drum
46	28 August	11.20 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.	North-west gale, Ireland; west gale, Scilly; Lowest barometer, Pembroke. Hoist drum
47	28 "	12.10 p.m.	England, E. (south of Hull), and S.E.	North-west gale, Ireland; west gale, Scilly; lowest barometer, Pembroke. Hoist drum
48	29 "	11.20 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W.; S., S.E., and E. (south of Hull).	Gale passing off to the north-eastward. Lower drum
49	5 September	1 p.m.	Scotland, E.; England, E. and S.E.	North-east gale, Norway; north gale, Aberdeen. Hoist drum
50	6 "	11.30 a.m.	Scotland, E.; England, E. and S.E.	Lower drum
-	-	-	None	-
-	-	-	None	-
51	19 September	1 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. to Jersey.	Barometer falling fast, a Valencia south-east wind, freshening; sea rising. Hoist drum
52	20 "	11.10 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. to Jersey.	Light south-westerly winds prevail. Lower drum
-	-	-	None	-

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the Storms reported on the Coasts of the British Islands in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.			REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	
-	A westerly gale blew at a few places on the west coast on the evening of the 20th May	Stornoway, 20th - - - Holyhead, 5 and 7 p.m., 20th Valencia, 3 p.m., 20th - -	S.S.W. S. by W. S.	- 50 45	10 - -
-	The wind freshened very considerably from the south, on our western coasts, reaching the force of a gale for a few hours at some stations	Stornoway, 7th - - - Greencastle, 7th - - - Holyhead, 9 a.m., 7th - - Valencia, 5 a.m., 7th - -	S.S.E. S. S. by E. S.S.E.	- - 42 54*	8 8 - -
16	A north-west to west gale commenced at Valencia on the night of the 27th, and extended to nearly all our west and southerly stations next day	Holyhead, 7 p.m., 28th Liverpool, 28th - - - Valencia, 27th (a) - - - Roche's Point, 28th - - - Pembroke, 28th - - - Portishead, 28th - - - Scilly, 27th and 28th - - - Falmouth, 2 p.m., 28th - - Plymouth, 28th - - - Dover, 28th - - -	W.N.W. W. N.N.W. N.N.W. W. W. W.N.W. W. by N. W. W.S.W.	47 - - - - - - 52 - -	- 8 10* 9 8 8 9* - 8 8
-	The wind freshened considerably on our east coast, on the 5th September.	Shields, 5th - - - -	S.	-	8
17	The winds increased to a gale from the westward at our south-western stations on the 14th and 15th September.	Aberdeen, 6 p.m., 14th Seaham, 3 p.m., 15th - - Holyhead, 4 p.m., 15th Valencia, 11 p.m., 14th Pembroke, 15th - - - Scilly, 15th - - - Plymouth, 15th - - - Falmouth, 11 a.m., 15th Dover, 15th - - -	E. by N. N. N.W. by N. N.W. by W. S.S.W. W.N.W. S.W. N.W. by W. S.W.	44 40 47 44 - - - 51° -	- - - - 8 9* 8 - 8
18	A north-westerly gale swept over the northern parts of the kingdom on the night of the 17th or 18th September.	Sumburgh Head, 18th - Sandwick, 11 p.m., 18th Aberdeen, 1 a.m., 19th Alnwick Castle, 3 p.m., 17th Shields, 18th - - - Ardrossan, 18th - - - Greencastle, 17th - - Liverpool, 17th - - -	N.W. N.N.W. W. by N. W. by N. W. W.N.W. W.N.W. W.S.W.	- 42 40 42 - - - -	8 - - - 9* 9* 8 8
-	The wind freshened on our western coasts on the night of the 19th, reaching the force of a slight gale at Valencia and Holyhead	Holyhead, 7 a.m., 20th Valencia, 5 a.m., 20th -	S.W. by S. S.W.	40 41	- -
19	A south-westerly gale was felt at our extreme northern stations on the 6th of October.	Sumburgh Head, 8 a.m., 7th Sandwick, 2 a.m., 7th - Thurso, 6th - - - Wick, 6th - - - Nairn, 6th - - - Ardrossan, 6th - - - Greencastle, 6th - - - Holyhead, 3 p.m., 6th - Valencia, 1 p.m., 6th - Roche's Point, 6th - -	N. N.W. W.S.W. W. W.S.W. S.S.W. S.W. S. by W. S.W. by S. W.	- 54* - - - - - 47 50* -	8 - 9* 8 9* 8 8 - - 8

(a) Anemometer stopped for repairs, 1 p.m., 28th.

The 14th being Sunday, this gale was missed.

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
53	9 October	12.50 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (west of Jersey).	Barometer falling fast; sea rising in west; south gale, Pembroke. Hoist drum
54	9 "	3.20 p.m.	Ireland S. and E.; England, N.W., W., and S. (west of Jersey).	The gale has passed on to the west of Scotland. Lower drum
55	10 "	11.10 a.m.	Scotland, W.	Gale gone to Norway, where heavy southerly. Lower drum
56	10 October	3.15 p.m.	Ireland, S. and E.; Scotland, E. (north of Aberdeen) and W.; England, N.W. and W.	South-west gale, Valencia. Barometer falling, Ireland. High sea. Hoist drum
57	11 "	11.5 a.m.	Same coasts	Gale subsiding on our coasts. Still blowing in Norway. Lower drum
-	-	-	None	-
58	21 October	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W. (with Exeter and Plymouth), and E. (north of Hull).	Barometer falling rapidly in north and west; Wind backing to south-west. Hoist drum
59	21 "	Noon	England, S. (east of Plymouth), E. (south of Hull), and S.E.	Barometer falling very fast. West gale, Pembroke. Hoist drum
-	-	-	None	-

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the Storms reported on the Coasts of the British Isles in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.			REMARKS.			
		Stations.	Direction.	Force. Beaufort Scale.				
19	A slight southerly gale was experienced on our western and extreme northern coast on the 9th. This gale increased in force, and blew very hard in Norway on the 10th.	Sumburgh Head, 9th	S.	8				
		Sandwick, 5 p.m., 9th	S. by E.	48				
		Stornoway, 9th	S.S.W.	9				
		Ardrossan, 9th	S.S.W.	8				
		Holyhead, noon, and 1 p.m., 9th	S.	48				
		Valencia, 1 a.m., 9th	S. by E.	40				
		Pembroke, 9th	W.	8				
		Sumburgh Head, 10th	W.	8				
		Sandwick, 5 a.m., 10th	W.	47				
		Alwick Castle, 7 p.m., 10th	W.S.W.	58*				
		Shields, 10th	W.S.W.	9*				
		Stornoway, 10th	W.S.W.	9				
		Glasgow, 4 a.m., 11th	S.W. by S.	41				
		Holyhead, 8 and 9 p.m., 10th	S.S.W.	48				
		Valencia, 5 p.m., 10th (a)	S.W.	56*				
		Roche's Point, 10th	W.S.W.	8				
		Pembroke, 10th	W.S.W.	9				
		Portishead, 10th	S.	8				
		20	A south-westerly gale commenced at Valencia about noon of the 10th, and extended during the night to all our northern and western stations.	Sumburgh Head, 20th		N.	10*	
				Sandwick, 3 p.m., 20th		N.W.	71*	
Thurso, 20th	W.N.W.			10*				
Wick, 20th	W.N.W.			8				
Nairn, 20th	N.E.			8				
Aberdeen, 20th	W.N.W.			10*				
3 p.m., 20th	W.N.W.			47				
Stornoway, 20th	N.W.			9*				
Ardrossan, 20th	W.N.W.			10*				
Greencastle, 20th	N.W.			8				
Holyhead, 2 p.m., 20th	N.W. by W.			51*				
Liverpool, 20th	W.			8				
Valencia, 11 p.m., 19th	W. by S.			43				
21	A hard north-west to west gale blew all along our western and northern coasts on the 20th October.	Sandwick, 1 p.m., 22nd	W.N.W.	49				
		Alwick Castle, noon, 22nd	W.S.W.	44				
		Ardrossan, 22nd	W.N.W.	9				
		Kingstown, 21st	W.N.W.	9				
		Holyhead, 9 p.m., 22nd	S.W. by W.	47				
		Liverpool, 21st	W.S.W.	8				
		Valencia, 2 a.m., 22nd	W. by S.	42				
		Pembroke, 22nd	W.S.W.	9				
		Portishead, 22nd	W.S.W.	9				
		Scilly, 22nd	W.S.W.	8				
		Plymouth, 22nd	S.W.	8				
		Falmouth, 11 a.m., 22nd	W.	42				
		Portsmouth, 22nd	S.W.	9				
Dover, 22nd	W.S.W.	8						
London, 21st	W.S.W.	8						
Yarmouth, 21st	W.S.W.	8						
9 a.m., 22nd	S.W. by W.	30						
22	A strong westerly gale was experienced on almost all coasts on the 22nd	Sandwick, 5 p.m., 1st	W.N.W.	58*				
		Thurso, 2 p.m., 1st	N.W.	8				
		Wick, 1st	N.W.	8				
		Nairn, 31st	S.W.	8				
		Aberdeen, 1 p.m., 1st	S.W.	41				
		Alwick Castle, 8 a.m., 1st	S.W.	63*				
		Shields, 1st	S.W.	8				
		Ardrossan, 8 a.m., 1st	W.N.W.	9*				
		Holyhead, midnight, 31st	S.S.W.	47				
		Valencia, 8 p.m., 31st	S.W. by W.	49				
		Pembroke, 31st	W.	9*				
		Scilly, 31st	W.N.W.	8				
		23	A gale from south-west to north-west was felt on our western and northern coasts, on the 31st October and 1st November.	Sandwick, 5 p.m., 1st		W.N.W.	58*	
Thurso, 2 p.m., 1st	N.W.			8				
Wick, 1st	N.W.			8				
Nairn, 31st	S.W.			8				
Aberdeen, 1 p.m., 1st	S.W.			41				
Alwick Castle, 8 a.m., 1st	S.W.			63*				
Shields, 1st	S.W.			8				
Ardrossan, 8 a.m., 1st	W.N.W.			9*				
Holyhead, midnight, 31st	S.S.W.			47				
Valencia, 8 p.m., 31st	S.W. by W.			49				
Pembroke, 31st	W.			9*				
Scilly, 31st	W.N.W.			8				

(a) Velocity began to exceed 50 miles at 1 p.m., 10th.

This gale occurred on the night of the 19th and on the 20th, but the 19th being Sunday, no warning could be issued.

No indication of the approach of this gale was given in either the 2 p.m. or 6 p.m. reports.

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
60	1 November	3 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S., with Faversham.	Barometer falling in west, with fresh west wind, and high sea. Weather very unsettled. Hoist drum.
61	1 "	3.30 p.m.	Scotland, E.; England, E. and S.E. (except Faversham).	Barometer is falling this afternoon at Valencia, where sea is very high. Another gale seems coming. Hoist drum.
62	3 "	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Lower drum
63	6 November	11.15 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W., E., and S.E. (with Dover).	Barometer rising fast, Stornoway. Strong east gale reported, Norway. Hoist drum.
64	7 "	11.30 a.m.	England, E. (south of Hull), and S.E., with Dover.	Lower drum. The gale is only blowing in Scotland.
65	8 November	3.40 p.m.	Ireland, E.; England, S., S.E., and E.; N.W. (Bangor only); W. (Bristol Channel only).	Barometer falling over Bay of Biscay; east wind freshening. Hoist drum.
66	10 "	11.30 a.m.	England, W. (Bristol Channel only), and S., with Faversham.	Lower drum
67	21 November	1 p.m.	Ireland, E., and Galway; Scotland, E. and W.; England, N.W. and W. (north of Milford).	Barometer has fallen fast, Scotland; west wind rising. Hoist drum.
68	26 November	11.5 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W., with Exeter and Plymouth.	Barometer falling fast generally. Strong southerly wind all along west coast, sea, Valencia. Hoist drum.

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the Storms reported on the Coasts of the British Islands in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
24	No gale. The gale noticed above had quite subsided by the evening of the 1st, and winds were light to moderate next day.	Nairn, 6th	E.	-	9	
		Aberdeen, 8 a.m., 7th	N.	-	8	
25	A hard easterly gale was felt on our west, south, and east coasts, on the 9th or 10th November.	Shields, 7th	N.E. by N.	35	8	Very strong winds blew in the Bristol Channel.
		Donaghadee, 8 a.m., 7th	N.	-	8	
		Holyhead, 8 a.m., 7th	N.N.W.	50	-	
		Yarmouth, 1 p.m., 6th	S.S.E.	40	-	
		Shields, 9th	E.S.E.	-	9	
		Kingstown, 9th	E.N.E.	-	10	
		Holyhead, 6 a.m., 10th	E.	57	-	
		Falmouth, 11 a.m., 9th	N.E. by E.	50	-	
		Plymouth, 9th	N.E.	-	9	
		Portsmouth, 9th	N.E.	-	9	
26	A severe westerly gale was experienced on almost all coasts during the 22nd November.	Dover, 9th	E.	-	8	(a) One of the cups of anemometer blew off at 11 a.m., 9th inst.; taken down for repairs on 10th.
		London, 9th	E.	-	8	
		Yarmouth, (a) 7 p.m., 9th	E. by N.	60	-	
		Sandwick, 11 a.m., 23rd	W. by N.	61	-	
		Thurso, 8 a.m., 23rd	W.S.W.	-	10	
		Wick, 22nd	N.W.	-	8	
		Nairn, 22nd	W.N.W.	-	9	
		Aberdeen, 6 a.m., 22nd	W. by N.	45	-	
		Shields, 23rd	W.N.W.	-	11*	
		Alnwick Castle, 5 p.m., 21st	W.	52	-	
		Scarborough, 8 a.m., 22nd	N.W.	-	9*	
		Seaham, 5 a.m., 22nd	W. by N.	46	-	
		Moorside, 6 a.m., 23rd	N.W. by W.	55	-	
		Stornoway, 8 a.m., 23rd	W.	-	8	
		Glasgow, 5 a.m., 22nd	W.N.W.	41	-	
		Ardrossan, 21st	W.N.W.	-	9	
		Galway, 9 a.m., 21st	W.	-	9*	
Greencastle, 21st	W.N.W.	-	8			
Donaghadee, 22nd	W.N.W.	-	8			
Kingstown, 8 a.m., 23rd	W.N.W.	-	9			
Holyhead, 5 a.m., 22nd	W.N.W.	48	-			
Liverpool, 21st	W.	-	8			
Pembroke, 21st	W.	-	8			
Falmouth, 6 a.m., 22nd	W.N.W.	47	-			
Yarmouth, 8 a.m., 22nd	N.W. by W.	40	-			
27	A hard gale on our western and northern coasts on the 27th November.	Sandwick, 6 p.m., 27th	N.W.	54	-	
		Aberdeen, 8 p.m., 27th	W.N.W.	53	-	
		Moorside, 8 p.m., 27th	N.W.	43	-	
		Ardrossan, 27th	N.W.	-	11	
		Greencastle, 27th	N.W.	-	8	
		Kingstown, 27th	W.N.W.	-	8	
		Holyhead, 2 p.m., 26th	S.S.E.	47	-	
		Liverpool, 27th	W.	-	8	
		Valencia, 6 a.m., 26th	S. by E.	50*	-	
		Roche's Point, 8 a.m., 26th	S.	-	8	
		Pembroke, 8 a.m., 27th	W.	-	9	
Scilly, 26th	W.N.W.	-	10			
Falmouth, 11 a.m., 27th	W.N.W.	41	-			

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
69	28 November	4 p.m.	Ireland, E. with Belfast; Scotland, E. and W.; England, N.W. and E. (north of Hull).	Barometer falling again in north; looks dangerous. Hoist drum
70	29 "	11.10 a.m.	Ireland, S.; England, W. and S.	Barometer falling very quickly in north-west. Gale very likely from west. Hoist drum
71	29 "	3 p.m.	England, E. (south of Hull) and S.E.	Barometer more than inch lower, Thurso than Rochefort. Heavy west gale, Valencia. Hoist drum
72	1 December	11.10 a.m.	England, E. (south of Hull) and S.E.	Lower drum
73	1 December	11.10 a.m.	Scotland, E. and W.; Ireland, E. (Belfast only).	Barometer has risen too quickly; now falling in north; wind backing. Hoist drum again for southerly gale
74	2 "	11.10 a.m.	Same coasts	Lower drum
75	4 December	3.30 p.m.	Scotland, E. and W.	Barometer falling fast, Thurso; westerly gale seems likely. Hoist drum
76	5 "	11 a.m.	Same coasts	Lower drum
77	8 December	12.15 p.m.	Scotland, W. (with Wick); Ireland, E. (Belfast only).	Barometer much lower, Scotland, than north of France; wind likely to increase from south-west. Hoist drum
78	9 "	11.30 a.m.	Same coasts	Lower drum
			None	
79	17 December	11.30 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Barometer has ceased rising; wind backing seems likely for west gale. Hoist drum
80	17 "	3.30 p.m.	Scotland, E.; England E. (north of Hull)	Barometer beginning to fall again at Green castle. Wind likely to rise to a gale from west again. Hoist drum
81	18 "	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and E. (north of Hull).	Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.		REMARKS.	
		Stations.	Direction.		Velocity. Miles per Hour.
28	A hard westerly gale was felt on all parts of our coasts on the evening of the 28th, or on the 29th November	Sandwick, 10 a.m., 29th	W.	51	-
		Alnwick Castle, 3 a.m., 29th	W. by N.	46	-
		Moorside, 7 p.m., 29th	W.N.W.	44	-
		Ardrossan, 29th	W.N.W.	-	8
		Glasgow, 9 p.m., 28th	W. by S.	42	-
		Kingstown, 29th	W.N.W.	-	10
		Stonyhurst, 7 p.m., 29th	W.	44	-
		Liverpool, 29th	W.S.W.	-	9
		Holyhead, 7 p.m., 29th	W. by N.	53	-
		Valencia, 29th	W.N.W.	-	10
		" 7 a.m., 29th	S.W.	49	-
		Pembroke, 29th	W.	-	10
		Portishead, 29th	W.	-	8
Scilly, 29th	N.W.	-	10		
Falmouth, 7 and 9 p.m., 29th	W.N.W.	45	-		
London, 29th	W.N.W.	-	8		
Yarmouth, 11 p.m., 29th	W. by N.	41	-		
Ulceby, 9 p.m., 29th	W.	-	9		
	A westerly gale was felt on some parts of our north-east coasts on the evening of the 1st December	Sandwick, 5 p.m., 1st	W. by S.	47	-
		Alnwick Castle, 10 a.m., 1st	W. by S.	53*	-
	Wind again increased to a fresh gale from westward on our northern coasts during the morning of the 5th	Sandwick, 7 a.m., 5th	W.N.W.	48	-
		Alnwick Castle, 3 a.m., 5th	W. by S.	48	-
		Stornoway, 4th	W.	-	8
	A west-south-west gale in the north and west of Scotland on the 8th or 9th December	Sandwick, 2 p.m., 9th	W.S.W.	43	-
		Alnwick Castle, 1 and 2 a.m., 8th.	W. by S.	54*	-
		Stornoway, 8th	W.S.W.	-	8
29	A severe westerly gale was felt in all the more northern parts of our kingdom on December 16th.	Sandwick, 10 a.m., 16th	N.W. by W.	78*	-
		Thurso, 8 a.m., 16th	W.	-	9*
		Wick, 8 a.m., 16th	N.W.	-	9*
		Nairn, 16th	W.	-	10*
		Aberdeen, 11 a.m., 16th	W.N.W.	64	-
		Leith, 16th	S.W.	-	8
		Alnwick Castle, 4 a.m., 16th	W.S.W.	66*	-
		Seaham, 9 a.m., 16th	W.	49	-
		Moorside, 9 a.m., 16th	W.	50*	-
		Shields, 8 a.m., 16th	W.S.W.	-	11*
		Scarborough, 8 a.m., 16th	W.	-	8
		Stornoway, 8 a.m., 16th	W.	-	11*
		Glasgow, 8 a.m., 16th	W.	51*	-
		Ardrossan, 8 a.m., 16th	W.N.W.	-	10*
		Greencastle, 8 m., 16th	W.N.W.	-	8
Donaghadee, 16th	W.S.W.	-	8		
Stonyhurst, noon, 16th	W. by S.	52*	-		
Holyhead, 4 a.m., 16th	S.S.W.	40	-		
Liverpool, 16th	W.S.W.	-	8		
Valencia, 6 p.m., 15th	S.W. by W.	43	-		
	Wind freshened a little in the north, and increased to a gale at Sandwick. In the west, winds were moderate	Sandwick, 4 a.m., 18th	W.	50	-

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
-	-	-	None	-
82	24 December	3.20 p.m.	Ireland, S. and E.; Scotland W. (with Wick); and England, N.W. and W.	Barometer falling fast in north-west, after very rapid rise. Looks like west gale. Hoist drum.
83	29 December	11.20 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W. (with Plymouth and Exeter).	Barometer has fallen very fast in west; slight southerly gale at south-western stations. Hoist drum
84	29 "	3.40 p.m.	England, S. (except Plymouth and Exeter).	Barometer low in west and still falling, with southerly gale. Hoist drum
85	30 "	11.10 a.m.	Ireland, S. and E.; England, N.W., W., and S.	The gale has passed to the northward. Lower drum
86	30 December	3.30 p.m.	Ireland, S. and E.; England, N.W., W., and S. (West of Portsmouth).	Barometer has begun to fall again, Valencia, and wind backed towards south, with rain. Hoist drum
87	31 "	Noon	Same coasts	Gale has passed on to Norway. Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles in 1873—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1873.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
30	A fresh to strong westerly or south-westerly gale on our north and north-west coasts on the night of the 21st or morning of the 22nd December.	Sumburgh Head, 8 a.m., 22nd. Sandwich, 10 a.m., 22nd Thurso, 21st Wick, 21st Aberdeen, 7 and 8 p.m., 21st Leith, 6 p.m., 21st Alwick Castle, 8 p.m., 21st Shields, 21st Stornoway, 6 p.m., 21st Glasgow, 11 p.m., and mid-night, 21st. Greencastle, 21st Donaghadee, 21st Holyhead, 10 p.m., 21st Valencia, 3 p.m., 21st	W.N.W. W. S.W. W. S.W. by S. W. W.S.W. W.N.W. S.W. S.W. by W. W.S.W. W.S.W. S.S.W. S.W.	- 64* - - 40 - 68* - - - 41 - - 47 49	10* - 8 8 - 8 - 8 - - - - - - - -	This gale occurred late in the evening of the 21st. No notice could be obtained of it, or warnings issued, as that day was Sunday.
-	A westerly gale was experienced at Sandwich, but the winds were very light elsewhere; fresh, however, at Stornoway.	Sandwich, 4 a.m., 25th	W.S.W.	41	-	Barometer fell rapidly in the north on the 25th, but no gale followed.
31	A strong southerly gale commenced in the south-west on the 29th, and extended to the northern coasts on the night of the 29th or morning of the 30th	Sandwich, 1 a.m., 30th Nairn, 29th Aberdeen, 8 a.m., 30th " 3 a.m., 30th Alwick Castle, 6 a.m., 30th Ardrossan, 29th Greencastle, 29th Donaghadee, 29th Armagh, 11 p.m., 29th Holyhead, 4 a.m., 30th Valencia, 9 a.m., 29th Roche's Point, 29th Pembroke, 29th Scilly, 29th Falmouth, 7 p.m., 29th Holyhead, 9 p.m., 30th Valencia, 3 p.m., 30th Roche's Point, 30th Plymouth, 30th London, 30th	S. by W. S.S.W. S.S.W. S. by E. S. by W. S. S. S.S.W. S.S.E. S. by E. S. by E. S. S.S.E. S.S.E. S.S.E. S. by W. S.S.W. S.S.W. S. S.W.	44 - - 29 42 - - - 40 60 58* - - - - - 55 51* - - - 8	- 9 8 - - 8 8 - - - 9 9 8 42 - - 8 8 8 8	The 28th being Sunday, the warnings were too late.
-	The wind rose to a moderate gale on all our coasts on the night of the 30th, and reached the force of a fresh gale at some of the western and southern stations					

an hour was reached prior to the hoisting or subsequent to the hauling down of the drum.

SUMMARY.

COASTS.		NUMBERS OF TELEGRAMS.	
IRELAND	South	Orders to hoist drum	1e. 7c. 10a. 13s. 15b. 19a. 23a. 25b. 32b. 35a. 36b. 38b. 40b. 42b. 44p. 46p. 51b. 53b. 56p. 58a. 60c. 68b. 70a. 79c. 82c. 83s. 86p.
		Orders to hoist drum, Galway only.	67e.
		Repetitions of orders to hoist drum.	5a.
		Orders to lower drum	9. 26. 39. 41. 43. 45. 48. 52. 54. 57. 62. 81. 85. 87.
		Orders to lower drum, Belfast and Galway.	17.
Ditto	East	Orders to hoist drum	1a. 7b. 10a. 13a. 15c. 19a. 23a. 25c. 32b. 35b. 36b. 38b. 40c. 42b. 44b. 46b. 51b. 53b. 56b. 58a. 60c. 63a. 65a. 67a. 68a. 79c. 82c. 83a. 86b.
		Orders to hoist drum, Belfast and Dublin.	69a.
		Orders to hoist drum, Belfast only.	27b. 73b. 77b.
		Orders to hoist drum, Dublin only.	28b.
		Repetitions of orders to hoist drum.	5d.
		Orders to lower drum	9. 17. 26. 29. 39. 41. 43. 45. 48. 52. 54. 57. 62. 81. 85. 87.
		Belfast; orders to lower drum	74. 78.
SCOTLAND	East	Orders to hoist drum	1a. 7b. 23a. 25c. 27b. 33b. 35b. 36a. 49b. 58c. 61c. 63a. 67a. 68a. 69b. 73b. 75b. 80b. 83a.
		Orders to hoist drum, Wick only.	44b. 77b. 82b.
		Orders to hoist drum, North of Aberdeen.	56b.
		Repetitions of orders to hoist drum.	5a.
		Orders to lower drum	9. 26. 29. 34. 37. 50. 62. 74. 76. 81.
		Orders to lower drum, Wick only.	45. 78.
		Orders to lower drum, North of Aberdeen.	57.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three Telegrams referring to one Storm.

SUMMARY.

GALES REPORTED.	REMARKS.						
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.
1. 2. 3. 4. 5. 6. 7s. 8. 10. 11. 13. 14. 16. 20p. 22. 27. 28. 31s.	29	7	11	3	3	4	1
1. 4. 6p. 7. 10. 13. 22. 24. 25. 26. 27. 28. 31.	35	12	17	6	-	-	-
1. 2. 6. 9p. 10. 12. 19. 21. 23p. 24. 26. 27. 29. 30p. 31.	24	8	13	3	-	-	-
Carried forward	88	27	41	12	3	4	1

Storms for which no Warning was Issued.

Jan. 13p., Jan. 18, March 10p., March 15p.

Jan. 18p., March 10p.

Jan. 18, Jan. 28p., Oct. 6, Oct. 20s., Oct. 31p., Dec. 16, Dec. 22s.

SUMMARY—continued.

COASTS.		NUMBERS OF TELEGRAMS.	
SCOTLAND -	West (Clyde) -	Orders to hoist drum - -	1a. 7a. 10a. 13c. 15c. 19b. 23b. 25c. 27b. 32b. 35b. 36b. 40c. 42b. 44a. 46b. 51c. 53a. 56a. 58a. 60c. 63b. 67a. 68a. 69a. 73c. 75b. 77b. 79c. 82c. 83a.
		Repetitions of orders to hoist drum.	5a.
		Orders to lower drum - -	9. 17. 26. 29. 37. 41. 43. 45. 48. 52. 55. 57. 62. 74. 76. 78. 81.
ENGLAND -	North-west -	Orders to hoist drum - -	1a. 7p. 10a. 13a. 15c. 19a. 23a. 25c. 28b. 32b. 35b. 36a. 38b. 40c. 42b. 44c. 46a. 51b. 53b. 56a. 58a. 60c. 63a. 67a. 68a. 69a. 79b. 82c. 83a. 86a.
		Orders to hoist drum, Bangor only.	27a. 65a.
		Repetitions of orders to hoist drum.	5a.
Ditto -	West -	Orders to hoist drum - -	1a. 7b. 10b. 13a. 15a. 19a. 23a. 32a. 35b. 36b. 40c. 42b. 44c. 46a. 51b. 53b. 56a. 58a. 60c. 68a. 70a. 79c. 82c. 83a. 86b.
		Orders to hoist drum to Bristol Channel.	65b.
		Orders to hoist drum, exclusive of Bristol Channel.	67a.
Ditto -	South -	Repetitions of orders to hoist drum.	5a.
		Orders to lower drum - -	9. 39. 41. 43. 45. 48. 52. 54. 57. 62. 81. 85. 87.
		Orders to lower drum, Bristol Channel.	66.
Ditto -	South -	Orders to hoist drum - -	1a. 6a. 8b. 12a. 14a. 16b. 24a. 35a. 46p. 59a. 60c. 65a. 70a. 84a.
		Orders to hoist drum, Devon and Cornwall only.	10a. 13a. 15a. 19a. 32a. 36b. 40c. 44c. 51c. 53b. 58a. 68a. 83a. 86b.
		Orders to hoist drum, Dover to Brighton.	21b.
Ditto -	South -	Orders to hoist drum, Dover only.	63b.
		Repetitions of orders to hoist drum (Devon and Cornwall).	5a.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
	a	b	c	e	p	s		
Brought forward - - -	88	27	41	12	3	4	1	
1. 2. 3. 4. 5. 6. 18p. 20. 21. 22. 23. 26. 27. 28. 29. 30p. 31.	32	12	11	9	-	-	-	
Jan. 13p., Jan. 18, Sept. 18p., Oct. 20s., Oct. 31, Dec. 22s.								
1. 2. 3. 4. 5. 6p. 7. 8. 10. 12. 14. 16. 20. 21. 22. 23p. 24. 25. 26. 27. 28. 31.	33	18	8	6	-	1	-	
Jan. 13p., Jan. 18p., Mar. 15p., Oct. 20s., Oct. 31p.								
1. 2. 6. 7. 8. 10. 13. 16. 20. 22. 23p. 26. 27. 28. 31.	28	14	9	5	-	-	-	
Jan. 18, Mar. 10p., Oct. 31p.								
1. 2. 6. 7. 8. 10. 16. 22. 25. 28. 31.	31	19	7	4	-	1	-	
Mar. 10p., Mar. 15, May 7, Sept. 15s.								
4. 11. 13. 14. 15. 17. 27. -	-	-	-	-	-	-	-	
Carried forward - - -	212	90	76	36	3	6	1	

SUMMARY—continued.

COASTS.		NUMBERS OF TELEGRAMS.	
ENGLAND	South	Orders to lower drum	9. 48. 62. 66. 85.
		Orders to lower drum, Devon and Cornwall.	11. 20. 41. 45. 52. 54. 87.
		Orders to lower drum, Dover to Brighton.	22.
		Orders to lower drum, Dover only.	64.
Ditto	South-east	Orders to hoist drum	2a. 6a. 12a. 14a. 18c. 21b. 24a. 30a. 35a. 47a. 49c. 59a. 61c. 63a. 65a. 71a.
		Orders to hoist drum, Faversham.	1a.
		Repetitions of orders to hoist drum.	—
		Orders to lower drum	3. 20. 31. 48. 50. 62. 64. 72.
Ditto	East	Orders to hoist drum	2b. 12a. 24a. 35b. 49b. 61c. 63a. 65a.
		Orders to hoist drum, North of Hull.	4a. 23a. 27a. 33b. 58b. 69b. 80c.
		Orders to hoist drum, South of Hull.	18c. 21b. 28a. 47b. 59a. 71a.
		Repetitions of orders to hoist drum.	—
		Orders to lower drum	3. 50. 62.
		Orders to lower drum, North of Hull.	34. 81.
		Orders to lower drum, South of Hull.	20. 31. 48. 64. 72.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
	a	b	c	e	p	s		
Brought forward	212	90	76	36	3	6	1	
1. 2. 6. 7. 10. 14. 16. 22. 24. 25. 28.	17	13	1	3	—	—	—	Mar. 15p.
6. 10. 24. 25. 26. 29.	21	10	8	3	—	—	—	Nov. 22, Dec. 16.
20. 23p. 30p.	—	—	—	—	—	—	—	Oct. 10, Oct. 31p., Dec. 22s.
TOTALS	250	113	85	42	3	6	1	
Per-centages	—	45.2	34.0	16.8	1.2	2.4	0.4	



MEMORANDUM.

THE following pages contain a statement of all the telegrams conveying intelligence of weather issued by the Meteorological Office in the year 1874, and also of all the storms experienced on the coasts of the British Islands during the same period.

The facts on which the account of the storms has been based are,—

I. The continuous records of the direction and velocity of the wind furnished by the self-registering anemographs, on Dr. Robinson's principle, erected by the Meteorological Committee at 10 stations distributed over the United Kingdom, viz.: Kew, Yarmouth, Falmouth, Stonyhurst, Holyhead, Glasgow, Aberdeen, Sandwick Manse (Orkneys), Armagh, and Valencia; as well as at the stations of Alnwick Castle, Seaham Harbour, and Halifax, the results from which are supplied respectively by the kindness of the Duke of Northumberland, the Marquis of Londonderry, and L. J. Crossley, Esq.

II. The observations taken at the telegraphic reporting stations (29 in number) situated in these islands.

III. Reports furnished by certain volunteer observers which have been received at the Meteorological Office.

The office is without accurate information as to the wind on the west coast of Ireland, generally, from Valencia to Lough Foyle, as well as on the west coast of Scotland, from the Mull of Cantyre to Cape Wrath, with the single exception of that received from its telegraphic reporting station at Stornoway.

The only stations at which the signals are hoisted within the above limits are Tralee, Limerick, and Galway, so that it is evident that the districts in question cannot be represented in the Return now submitted.

The scales, according to which the violence of the gales is estimated, are two in number, and are as follows:—

SCALES OF WIND.

FORCE, BEAUFORT SCALE.			Approximate Velocity.
			Miles per Hour.
0. Calm	- - -	- - -	0 - - 3
1. Light air	- - -	Or, just sufficient to give steerage way.	1 - - 8
2. Light breeze	- - -	Or, that in which a well-conditioned man-of-war, with all sail set, and clean full, would go in smooth water from	1 to 2 knots - - - 2 - - 13
3. Gentle breeze	- - -		3 to 4 knots - - - 3 - - 18
4. Moderate breeze	- - -		5 to 6 knots - - - 4 - - 23
5. Fresh breeze	- - -	Or, that to which she could just carry in chase, full and by	Royals, &c. - - - 5 - - 28
6. Strong breeze	- - -		Single-reefed topsails and top-gallant sails. 6 - - 34
7. Moderate gale	- - -		Double-reefed topsails, jib, &c. 7 - - 40
8. Fresh gale	- - -	Triple-reefed topsails, &c. 8 - - 48	8 - - 48
9. Strong gale	- - -		Close-reefed topsails and courses. 9 - - 56
10. Whole gale	- - -	Or, that with which she could scarcely bear close-reefed main-topsail and reefed fore-sail.	10 - - 65
11. Storm	- - -	Or, that which would reduce her to storm-staysails.	11 - - 75
12. Hurricane	- - -	Or, that which no canvas could withstand.	12 - - 90

The foregoing relation of the velocity of the wind, as measured by a Robinson's anemograph of large size, and its force, according to Sir F. Beaufort's scale, has been drawn up in the Meteorological Office from observations carried on at Holyhead and Yarmouth, and may be considered as approximately correct.

The

The principles of the system of warnings followed in 1874 are fully explained in Parliamentary Paper, No. 10, dated 25th November 1867, in which (Letter 9, from the Meteorological Committee to the Board of Trade) it is said, "The signal would be simply of a warning nature, and, without conveying the impression that the storm would necessarily strike the port where it was hoisted, would imply that extra caution in navigation was requisite." The Committee therefore would consider that extra caution in navigation would be necessary for coasters and fishing boats when the force of the wind reaches No. 8 of Beaufort's Scale, or even No. 7, while no serious danger can be said to exist unless the force reaches 9.

All observations of the wind in which the force exceeded 7 (a moderate gale), or the velocity exceeded 40 miles an hour, have been quoted as instances of the occurrence of a gale, but it has not been considered that the signal was hoisted late or was hauled down too soon unless the force of 9 (a strong gale) or the velocity of 50 miles an hour was reached prior to the issue of the order to hoist, or subsequent to the issue of the order to lower.

With reference to the definition of a serious gale, as force 9, which agrees with that adopted by the Board of Trade, a further limitation has been taken. The experience of the office has shown that at exposed stations, such as Holyhead and Sandwick Manse, the force of the wind is exceptionally strong, while it is exceptionally weak at inland stations, such as Kew and Armagh.

It is therefore fair to assume that the occurrence of a velocity of 50 miles an hour at Holyhead or Sandwick respectively does not in itself prove the prevalence of a strong gale on the whole line of coast of St. George's Channel and the Irish Sea, or on the east coast of Scotland, as the case may be.

In the Summary, pp. 26 to 31, all cases in which the signal has been shown to be partially late by one single report of force 9, or of the velocity of 50 miles, have been specially noted in the remarks.

The converse modification of increasing the velocities reported at inland stations, in order to obtain an improved estimate of the force of wind on the coast, has not been carried out, owing to the absence of sufficient information as to the co-efficients which should be used in each case to obtain the true velocity of the wind on the coast.

The service of meteorological telegraphy is subject to a constantly recurring interruption, by the fact of no telegrams being received on Sundays. It should be borne in mind that even if attendance were given at the office on that day, it would not be possible to render generally available to the public the telegraphic intelligence which might be issued. As a rule, the telegraphic offices at the seaports and fishing stations are closed on Sundays at noon, about which time the telegrams from the Meteorological Office would usually reach the coast.

The Summary, p. 31, shows that the total per-centage of success is nearly identical with that for 1872, and far higher than those for 1871 and 1870 (Parl. Papers, No. 504, 1871; No. 152, 1873).

The following are the respective figures:—

	WARNINGS JUSTIFIED			Warnings not justified by subsequent Weather.
	By subsequent Gales.	By subsequent Strong Winds.	Total.	
1870	46.7	21.7	68.4	22.4
1871	46.	17.7	63.7	22.
1872	61.	19.5	80.5	11.9
1873	45.2	34.	79.2	16.8
1874	45.4	32.8	78.2	16.4

It will be seen that the figures for 1874 are almost identical with those for 1873, and that the total per-centage of success, almost 80 per cent., has been maintained

maintained during the past three years. The difference between the results as regards the warnings, justified by subsequent gales in 1872, as compared with 1873 and 1874, is due to the fact that in the preparation of the Return for that year a lower force of wind was taken as indicating a gale, and therefore a complete justification of the warning, than has subsequently been the case.

The office having to issue its warnings on the first signs of the approach of storms has in several cases only to show winds of forces 6 and 7 as justifications of its cautionary telegrams. The warnings, therefore, were perfectly right in principle, though hardly necessary for large sea-going ships, as distinguished from yachts, coasters, and fishing boats.

At the beginning of March the use of the cone, in addition to the drum, as an indication of the direction of the wind in a gale, was resumed.

The Return differs from that of previous years in that the duration of each gale at the observatories is given, *i.e.*, the number of hours during which the velocity exceeded 50 miles; it will be seen from this, that in many cases where the warnings were late, or were not issued at all, the gale which was felt was of little consequence.

It will be noticed that in the cases of one very serious gale, that of 21st October, the storm came on so rapidly during the night time, subsequent to the afternoon reports of the previous day, that no warning could be issued by the office; and it does not seem that the funds at present at the disposal of the office will enable it to anticipate the arrival of such gales as that in question, and a few others which will be seen in the Table, *e.g.*, that of November 28th, in the south of England, as for that purpose much more frequent telegrams from the coast would be required.

The results of the five years' work will, it is hoped, show that while the office cannot be expected to be able to give timely warning of *all* gales, it has yet been able to give such information as would, if attended to, have enabled our coasting seamen to avoid the violence of almost all the serious storms which have visited our coasts.

## STORM SIGNALS.

LIST of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1874, arranged according to COASTS.

COASTS.		PLACES.	COASTS.		PLACES.
IRELAND	South	New Ross. Dunmore, East. Dungarvan. Youghal. Queenstown. Cork. Passage. Tralee. Limerick. Galway.	ENGLAND	West	Holyhead. Carnarvon. Port Dinorwic. Aberystwith. Milford. Pembrey. Llanelly. Swansea. Briton Ferry. Porthcawl. Penarth. Cardiff. Newport. Weston-super-Mare. Burnham.
Ditto	East	Belfast. Howth. Kingstown.			
SCOTLAND	East	Kirkwall. Inverness. Nairn. Burghead. Lossiemouth. Buckie. Portsoy. Banff. Fraserburgh. Peterhead. Aberdeen. Stonehaven. Montrose. Broughty Ferry. St. Andrews. Dundee. Anstruther. St. Monance. Burntisland. Alloa. Grangemouth. Bo'ness. Granton. Leith. Fisherrow. Dunbar. Eyemouth.	Ditto	South (Devon and Cornwall).	Ilfracombe. Barnstaple. Port Isaac. Boscastle. Newquay. Hayle. Pendennis. Silly. Penzance. Falmouth. Plymouth (4 Stations). Teignmouth. Exeter. Exmouth.
Ditto	West (Clyde)	Glasgow. Greenock. Rothesay. Campbelton. Girvan.	Ditto	South	Guernsey. St. Helier, Jersey. Gorey, Jersey. Weymouth. Poole. Cowes. Ventnor. Portsmouth. Littlehampton. Brighton. Newhaven. Hastings. Rye. Dover.
ENGLAND	North West	Silloth. Maryport. Workington. Whitehaven. Ramsey. Douglas. Castletown. Barrow. Morecambe. Fleetwood. Blackpool. Lytham. Runcorn. Southport. Liverpool. Queensferry. Hawarden. Mostyn. Bangor. Port Penrhyn.	Ditto	South-east	Ipswich. Harwich. Chatham. Sheerness. Faversham.
			Ditto	East	Tynemouth. South Shields. Sunderland. Middlesborough. Redcar. Whitby. Filey. Withernsea. Hull. Goole. Grimsby. Boston. Sutton Bridge. Lynn. Cromer. Yarmouth. Southwold.

RETURN showing the Number of TELEGRAMS sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
1	1 January	3.15 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Moderate south-westerly gale in Ireland, with a falling barometer and rising sea. Hoist drum
2	2 "	12.40 p.m.	England, S., S.E., and E.	The south-westerly gale has passed to Norway and Denmark. Lower drum
3	3 January	11 a.m.	England, S., S.E., and E.	Barometer has fallen very fast over Irish Sea; west gale Scilly. Hoist drum
4	3 "	4 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Barometer falling again in west; wind backing. Hoist drum again
5	7 January	11.5 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W., with Exeter, Plymouth, and the Channel Islands.	Barometer falling very fast, Ireland; strong sudden south gale at Cork and Stornoway. Hoist drum
6	8 "	4 p.m.	England, S. (east of Channel Islands) S.E. and E.	Barometer falling briskly, Scilly, with slight south gale. Hoist drum
7	9 "	11.15 a.m.	England, S. (east of Channel Islands) S.E. and E.	Lower drum
-	11 January	-	None	None
8	13 January	2 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Barometer falling very fast Stornoway; wind backing. Hoist drum
9	13 "	3.30 p.m.	England, E. (north of Hull)	Barometer falling very fast Scotland; strong south-west winds. Hoist drum
10	14 "	Noon	Ireland, S. and E. (except Belfast); England, W.	Danger seems over. Lower drum
11	14 "	3.40 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. and E. (north of Hull).	Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the STORMS reported on the COASTS of the BRITISH ISLANDS in 1874.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1874.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
1	A fresh south-westerly gale was experienced on most coasts on the night of the 1st or on the 2nd	Sumburgh Head, 2nd	W.S.W.	-	10	Six hours gale. Six hours gale.
		Sandwich, 1 a.m., 2nd	W.S.W.	47	-	
		Stornoway,* 2nd	S.S.W.	-	11*	
		Aberdeen, 1st	S.S.W.	-	9	
		" 5 p.m., 1st	S.S.W.	37	-	
		Shields, 1st	S.W.	-	9	
		Alnwick Castle, 4 p.m., 2nd	W.S.W.	47	-	
		Seaham, 10 p.m., 1st	S.S.W.	43	-	
		Glasgow, midnight, 1st	S.W.	43	-	
		Ardrossan, 2nd	W.S.W.	-	8	
		Greencastle, 1st	W.S.W.	-	8	
		Donaghadee, 1st	S.	-	8	
		Holyhead, 10 p.m., 1st	S.S.W.	55	-	
Liverpool, 2nd	W.S.W.	-	8			
Valencia,* 5 p.m., 1st	S.S.W.	53*	-			
Pembroke, 1st	W.S.W.	-	9			
Falmouth, 11 p.m., 1st	S.W. by S.	40	-			
London, 1st	S.W.	-	8			
2	A westerly gale blew over all the more southerly stations on the night of the 3rd, but was not felt in the north	Holyhead, 5 p.m., 4th	W. by N.	46	-	One hour only.
		Valencia, 3rd	N.N.W.	-	10	
		Pembroke, 3rd	W.N.W.	-	8	
		Scilly, 3rd	W.N.W.	-	10	
		Falmouth,* 11 a.m., 3rd	W.N.W.	56*	-	
		" 11 a.m., 4th	W.N.W.	44	-	
		Portsmouth, 3rd	W.	-	9	
		Dover, 3rd	S.S.W.	-	8	
Yarmouth, 6 p.m., 3rd	W. by N.	40	-			
3	A fresh gale from the southward, in the south and south-west, and drawing into west in the north, was experienced on the 7th, or morning of the 8th	Sumburgh Head, 7th	W.	-	8	Three hours gale. Three hours gale.
		Orkney, 4 p.m., 7th	S.	41	-	
		Stornoway,* 7th	S.	-	10*	
		Nairn, 7th	W.	-	8	
		Greencastle, 7th	S.	-	8	
		Armagh, 11 a.m., 7th	S.	40	-	
		Holyhead, 9 p.m., 7th	S. by E.	55	-	
		Valencia,* 11 a.m., and noon	S.	51*	-	
		Roche's Point,* 8 a.m., 7th	S.S.W.	-	9*	
		Pembroke, 7th	S.	-	8	
Scilly, 8th	S.	-	8			
Falmouth, 4 p.m., 8th	S. by W.	42	-			
Plymouth, 8th	S.S.W.	-	8			
4	A fresh north-westerly gale was experienced on our northern and north-eastern coasts during the night of the 11th or morning of the 12th.	Sumburgh Head, 12th	N.N.W.	-	8	January 11th was Sunday, and there were no indications on Saturday of the approach of this gale. 15 hours gale.
		Sandwich,* 11 a.m., 12th	W. by N.	62*	-	
		Thurso,* 12th	W.N.W.	-	9*	
		Wick, 12th	N.W.	-	8	
		Alnwick Castle, 1 p.m., 11th	S.W. by W.	49	-	
Shields, 11th	W.N.W.	-	8			
5	The wind increased to a fresh breeze over the more northern parts of our Islands	Sandwich, 5 a.m., 14th	W. by N.	42	-	Two hours gale.
		Alnwick Castle,* midnight, 13th.	W. by S.	58*	-	
		Shields, 14th	W.	-	8	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the drum.

Return showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
12	15 January	3.40 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.	Barometer falling in west; wind backing to south; sea rising. Hoist drum - - - - -
13	17 "	11.10 a.m.	Same coasts - - - - -	Lower drum - - - - -
-	18 "	-	None - - - - -	None - - - - -
14	19 "	11.15 a.m.	England, W. (south of Milford), S., and S.E.	Barometer falling at Scilly; wind rising; look out for south-west gale. Hoist drum - - - - -
15	20 "	11.5 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W. (north of Milford).	Barometer falling fast in north-west; south-west gale, Cork. Hoist drum - - - - -
16	20 "	4 p.m.	England, E. - - - - -	Barometer very low, Scotland; south-west gale, Holyhead, drawing to west. Hoist drum - - - - -
17	21 "	11 a.m.	Scotland, E.; England, E. - - - - -	Lower drum - - - - -
18	22 "	11.15 a.m.	Ireland, E. (Belfast only); Scotland, E. and W.	Barometer falling after sudden rise in north; strong south-west wind and high sea Stornoway. Hoist drum - - - - -
19	23 "	12.15 p.m.	Scotland, E. - - - - -	Lower drum - - - - -
-	26 "	-	None - - - - -	None - - - - -
20	29 "	11.10 a.m.	Ireland (Belfast and Galway); Scotland, W. and E. (Wick only); England, N.W.	Barometer falling fast in north-west; look out for west gale. Hoist drum - - - - -
21	30 "	11.10 a.m.	Same coasts - - - - -	Lower drum. Gale has only blown in north Scotland - - - - -
22	7 February	4 p.m.	Ireland, S. and E. (except Cork); Scotland, E. and W.; England, N.W., W. (north of Milford), and E. (north of Hull).	Barometer falling in north; wind likely to blow hard from west to north-west. Hoist drum - - - - -
23	9 "	11.15 a.m.	Same coasts - - - - -	Lower drum - - - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1874—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
6	The wind increased considerably on our west and south coasts, and reached the force of a gale at some stations - - - - -	Holyhead, 6 and 7 a.m., 16th	S.	50	-	One hour only.
		Valencia, noon, 15th - - - - -	S.S.W.	50	-	
7	A westerly gale was experienced on all coasts on the 18th, which was particularly severe at the northern stations.	Roche's Point, 8 p.m., 15th - - - - -	S.W.	-	8	This gale came on on Sunday afternoon, and no indications were given of it at 2 p.m. on Saturday. 12 hours gale.
		Falmouth, 8 a.m., 16th - - - - -	S. by W.	41	-	
		Plymouth, 16th - - - - -	W.S.W.	-	8	
		Sumburgh Head, 8 a.m., 19th	W.S.W.	-	8	
		Sandwich,* 10 a.m., 19th - - - - -	W. by N.	69*	-	
		Stornoway,* 18th - - - - -	W.N.W.	-	10*	
		Thurso,* 18th - - - - -	W.	-	9*	
		" 19th - - - - -	W.N.W.	-	10*	
		Wick,* 18th - - - - -	W.	-	10*	
		Nairn, 18th - - - - -	S.W.	-	8	
		Aberdeen,* 7 p.m., 18th - - - - -	S.W. by W.	52°	-	
		Leith,* 18th - - - - -	W.	-	9*	
		Alnwick Castle,* 4 p.m., 18th	W.S.W.	62*	-	
		Shields,* 18th - - - - -	W.	-	9*	
		Ardrossan,* 18th - - - - -	W.N.W.	-	11*	
		Glasgow,* 4 p.m., 18th - - - - -	S.W. by W.	60*	-	
		Greencastle,* 18th - - - - -	S.W.	-	10*	
Donaghadee, 18th - - - - -	W.S.W.	-	8			
Armagh, 2 p.m., 18th - - - - -	W.S.W.	43	-			
Kingstown,* 18th - - - - -	W.	-	9*			
Holyhead, 11 p.m., 18th - - - - -	S.W. by W.	45	-			
Liverpool, 18th - - - - -	W.S.W.	-	8			
Valencia, 9 a.m., 18th - - - - -	S.W. by W.	45	-			
London, 18th - - - - -	S.S.W.	-	8			
Yarmouth, 18th - - - - -	S.S.W.	-	8			
8	A south-westerly gale was experienced on our south coasts on the morning of the 20th, which extended to the northern stations on the 21st - - - - -	Sumburgh Head, 6 p.m., 21st	W.	-	8	Velocity above 50 miles for six hours only.
		Sandwich, 10 a.m., 21st - - - - -	W. by S.	43	-	
		Stornoway, 21st - - - - -	S.W.	-	8	
		Alnwick Castle, 11 a.m., 21st	W. by S.	42	-	
		Ardrossan, 5 p.m., 20th - - - - -	W.	-	8	
		Kingstown, 20th - - - - -	W.	-	10	
		Holyhead, noon, 20th - - - - -	S.W. by S.	57	-	
		Liverpool, 20th - - - - -	W.	-	8	
		Valencia,* 7 a.m., 20th - - - - -	S.W.	69*	-	
		Roche's Point,* 8 a.m., 20th	S.W.	-	9*	
9	A fresh westerly gale was felt in the extreme north of Scotland, with strong winds at all the northern stations - - - - -	Pembroke, 9 a.m., 20th - - - - -	W.S.W.	-	9	This velocity lasted for only one hour.
		Falmouth, 1 p.m., 19th - - - - -	W.S.W.	44	-	
		" 11 a.m., 20th - - - - -	S.W.	40	-	
		Portsmouth, 19th - - - - -	S.W.	-	9	
10	A fresh local gale was experienced over Scotland, but was strong only on the east coast.	London, 20th - - - - -	S.W.	-	8	19 hours gale. The 25th was Sunday, so that no notice could be obtained of the approach of the gale. Two hours gale.
		Sumburgh Head,* 8 a.m., 26th	N.	-	9*	
		Sandwich,* 7 a.m., 26th - - - - -	W.N.W.	61*	-	
		Thurso, 26th - - - - -	W.N.W.	-	8	
10	The wind rose to a moderate gale, but it was again confined to the north of Scotland	Wick, 26th - - - - -	N.W.	-	8	(a) The anemometer clock had stopped at 11 a.m. 29th, but the gale was blowing all the night of the 29th.
		Aberdeen, 11 a.m., 26th - - - - -	W.	45	-	
		Alnwick Castle,* 1 a.m., 26th	W.	56*	-	
		Glasgow, 11 a.m., 26th - - - - -	W.	49	-	
		Ardrossan, 26th - - - - -	W.N.W.	-	8	
		Sandwich, 11 a.m., 30th (a) - - - - -	N.W. by W.	48	-	
-	No gale - - - - -	Thurso, 26th - - - - -	W.N.W.	-	8	Strong winds were reported from the more northern stations.
		Wick, 29th - - - - -	N.W.	-	8	
10	The wind rose to a moderate gale, but it was again confined to the north of Scotland	Alnwick Castle, 8 p.m., 29th	W.S.W.	47	-	
		Moorside, 11 a.m., 29th - - - - -	W. by N.	41	-	
-	-	Sandwich, 5 p.m., 7th - - - - -	W.N.W.	45	-	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the drum.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
24	10 February	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W.; S. (west of Plymouth), S.E. and E.	Barometer risen very fast east; falling west; south-east gale Valencia. Look out for south-east gale. Hoist drum
25	11 "	11 a.m.	England S. (east of Plymouth) except Dover.	Barometer still falling in west, and southerly gale is extending slowly to the eastward, with a high sea. Hoist drum
26	12 "	11.30 a.m.	England S. (east of Plymouth) except Dover.	Lower drum for the present
27	13 February	11.30 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Barometer falling fast in north-west; look out for southerly gale. Hoist drum
28	16 February	3.40 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W. and S. with Faversham.	Barometer falling again, Ireland; wind backing to south-west in west. Hoist drum
29	17 "	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Lower drum
30	17 "	3.45 a.m.	England, S., with Faversham	Lower drum
31	20 February	11.10 a.m.	Scotland, E. and W.	Barometer falling briskly in north; strong south-west wind Stornoway; high sea; look out for south-west gale. Hoist drum
32	21 "	11.10 a.m.	Same coasts	Lower drum
33	24 February	4.0 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S. (west of Plymouth) and E. (north of Hull).	Barometer has risen steadily in Norway; gradients steep for southerly winds; look-out for southerly gale. Hoist drum
34	26 "	11.20 a.m.	England S. (east of Plymouth) S.E. and E. (south of Hull).	Heavy southerly gale at entrance of Channel, and on north-east coast of England. Hoist drum
35	26 "	4.0 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S. (west of Plymouth) and E. (north of Hull).	Barometer very low and west gale Valencia; south-east gale Scarborough. Keep up drum
36	27 "	11.30 a.m.	England, S. (east of Plymouth); S.E. and E. (south of Hull).	Lower drum for the present. Gale over here, but may come on again from eastward ere long
37	27 "	4.0 p.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Plymouth).	Lower drum. Barometer rising in west, and falling in Norway
38	28 "	11.10 a.m.	Scotland, E.	Lower drum
39	28 February	11.10 a.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Plymouth).	Barometer has ceased rising Valencia; wind has backed to south-west; blowing fresh. Hoist drum
40	28 "	3.45 p.m.	Scotland, E. and W.; England, S.; (east of Plymouth) and E. (north of Hull).	Barometer falling fast, Valencia; another southerly gale and high sea. Hoist drum again
41	2 March	11.30 a.m.	Scotland, E. and W.; England, S. (east of Plymouth) and E. (north of Hull).	Lower drum

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles in 1874—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1874.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
11	A south-east gale, which extended to the more easterly stations, was felt in the west and south-west on the night of the 10th	Greencastle, 11th	S.S.E.	-	10	32 hours gale.
		Donaghadee, 10th	S.S.E.	-	8	
		Kingstown, 10th	S.E.	-	10	
		Valencia,* 5 and 6 p.m., 10th.	S.E.	64*	-	
		Roche's Point, 10th	S.	-	10	
		Pembroke, 10th	S.E.	-	10	
		Scilly, 3 a.m., 11th	E.S.E.	-	10	
		Falmouth, 2 a.m., 11th	S.E. by S.	58	-	
		Plymouth, 10th	S.E.	-	8	
		Yarmouth, 3 a.m., 10th	E. by N.	45	-	
		12	A southerly gale was felt at some of the Western stations.	Stornoway, 14th	S.S.W.	
Donaghadee, 13th	S.			-	8	
Holyhead, 5 a.m., 14th	S. by E.			54	-	
Valencia, midnight, 13th	S.S.W.			57	-	
Portishead, 14th	W.S.W.			-	8	
-	A slight westerly gale was felt at the south-west stations.	Valencia, night of 16th	W.	-	8	
		Scilly, night of 16th	N.W.	-	8	
-	No gale; a general fall of the barometer, but nothing beyond a strong breeze was felt.	-	-	-	-	Aberdeen, a strong wind from south (7).
		-	-	-	-	
13	An extremely heavy southerly gale swept over these Islands; it commenced at the western stations on the evening of the 24th, and was very severe in the north of Scotland	Sumburgh Head, 8 a.m., 26th	S.E.	-	9	53 hours gale. 36 hours gale reported. 20 hours gale. 15 hours gale. 20 hours gale. 24 hours gale. Eight hours gale. Gale continued with lulls during the whole of 25th and 26th. Three hours gale.
		Sandwick, 3 p.m., 26th	S.E.	77	-	
		Stornoway, 26th	S.E.	-	9	
		Thurso, 26th	S.E.	-	11	
		Wick, 26th	S.E.	-	11	
		Nairn, 2 a.m., 26th	S.	-	10	
		Aberdeen, 11 a.m., 26th	S.E.	69	-	
		Alnwick Castle, 9 a.m., 26th	S.E. by S.	51	-	
		Seaham, 10 a.m., 26th	S.E.	42	-	
		Shields, 26th	S.S.E.	-	9	
		Scarborough, 26th	S.S.E.	-	10	
		Glasgow, 9 a.m., 26th	S.E. by E.	49	-	
		Ardrossan, 26th	E.S.E.	-	9	
		Greencastle, 25th	S.E.	-	10	
		Donaghadee, 26th	S.S.E.	-	9	
		Armagh, 4 a.m., 26th	S.E.	46	-	
		Kingstown, 25th	S.S.E.	-	9	
Holyhead, 8 a.m., 26th	S.S.E.	65	-			
Stonyhurst, noon, 26th	S.E. by S.	46	-			
Valencia, 2 p.m., 26th	S.S.W.	65	-			
Roche's Point, 25th	S.	-	10			
Pembroke, 25th	S.	-	10			
Portishead, 26th	S.	-	9			
Scilly, 25th	S.S.E.	-	8			
Falmouth, 3 a.m., 26th	S. by E.	55	-			
Plymouth, 26th	S.	-	10			
London, 27th	S.	-	8			
Yarmouth, 3 a.m., 27th	S.E. by S.	48	-			
14	A southerly gale commenced on the morning of the 28th at Valencia, and extended eastward during the next two days	Sandwick, 10 a.m., 2nd	S.S.E.	45	-	Three hours gale.
		Greencastle, 28th	N.N.E.	-	8	
		Holyhead, 9 p.m., 28th	S.S.E.	48	-	
		Valencia,* 11 a.m., 28th	S.S.E.	53*	-	
		Roche's Point, 1st March	S.S.W.	-	9	
		Pembroke, 28th	S.S.E.	-	8	
Scilly, 28th	S.	-	9			

an hour, was reached prior to the hoisting or subsequent to the hauling down of the drum.



RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
51	30 March	3.0 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., S., S.E., and E.	Barometer falling and wind backing to south Valencia; look out for south gale. Hoist south cone
52	31 "	3.30 p.m.	England, S. and E. (south of Sutton Bridge).	Lower cone. Gale only blowing in north, England
53	1 April	3.30 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., S., S.E., and E.	Barometer falling Valencia; strong southerly winds, high sea; look out for south-west gale. Hoist south cone
54	2 "	11.10 a.m.	Scotland, E.	Strong south-west winds and high sea Ireland. Hoist south cone
55	4 "	11.20 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (west of Jersey).	Moderate south-west gale in south. Barometer falling in west, with high sea. Hoist south cone.
	9 "		None	None
56	13 "	11.10 a.m.	Ireland, E.; Scotland, W.; England, N.W., W., S., S.E., and E.	Barometer falling very fast; heavy west gale Valencia; look out for south-west gale. Hoist south cone
57	13 "	4 p.m.	Scotland, E.	Barometer falling briskly in south; high in Norway. Hoist north cone
58	14 "	11.5 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Lower cone. Gale has gone to south of France

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles in 1874—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.			
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.				
19	A westerly gale was felt at our western and northern stations, and strong winds in the south on the night of the 31st	Sandwich,* 11 a.m., 1st	W. by S.	52*	-	One hour only.			
		Thurso, 31st	S.W.	-	8				
		Alnwick Castle, 1 a.m., 1st	S.W.	41	-				
		Shields, 30th	W.	-	10				
		Glasgow, 1 a.m., 1st	S.W. by W.	42	-				
		Ardrossan, 31st	W.N.W.	-	9				
		Greencastle, 31st	W.	-	8				
		Kingstown, 31st	W.	-	10				
		Holyhead, 2 a.m., 1st	S.W.	45	-				
		Liverpool, 31st	W.S.W.	-	8				
		Valencia, 10 p.m., 31st	S.W.	55	-		One hour only.		
		20	A south-westerly gale set in at Valencia on the afternoon of the 1st, and extended to all coasts during the next day, reaching its maximum force on the night of the 2nd	Sumburgh Head, 3rd	W.		-	9	Eight hours gale.
				Sandwich, 1 p.m., 3rd	W.		62	-	
Stornoway, 3rd	W.N.W.			-	8				
Thurso, 3rd	W.S.W.			-	8				
Aberdeen, noon, 3rd	W. by S.			42	-				
Alnwick Castle, 9 a.m., 2nd	W.S.W.			67	-	10 hours gale.			
Seaham, 11 a.m., 2nd	S.W. by S.			45	-				
Shields, 2nd	S.W.			-	10				
Scarborough, 3rd	S.W.			-	8				
Moorside, 4 p.m., 2nd	S.W. by W.			41	-				
Glasgow, 3 a.m., 2nd	S.W.			42	-				
Ardrossan, 3rd	W.S.W.			-	10				
Greencastle, 2nd	S.W.			-	8				
Donaghadee, 2nd	S.S.W.			-	8				
Kingstown, 2nd	S.W.			-	10				
Holyhead, 8 p.m., 1st	S. by W.			58	-	Gale lasted, with lulls, from 7 p.m., 1st, to 1 a.m., 3rd.			
" 1 a.m., 3rd	S.W.			55	-				
Liverpool, 2nd	S.S.W.	-	8	17 hours gale.					
Valencia, 7 p.m., 2nd	S.W.	67	-						
Roche's Point, 2nd	W.S.W.	-	9						
Pembroke, 2nd	W.S.W.	-	11						
Portishead, 2nd	S.	-	8						
Scilly, 2nd	S.W.	-	9						
Falmouth, 8 p.m., 2nd	S.S.W.	53	-		Three hours gale.				
Plymouth, 2nd	S.W.	-	9						
Hurst Castle, 2nd	S.W.	-	10						
Dover, 2nd	W.S.W.	-	8						
21	Strong south-westerly breezes were experienced on our south, west, and north coasts, which increased to a gale in some places.	Stornoway, 4th	S.S.W.	-	10	April 5th was Sunday, or the signals would have been lowered.			
		Alnwick Castle, noon and 3 p.m., 4th	S.W.	46	-				
		Greencastle, 4th	S.W.	-	8				
21	The wind blew strongly from the south for some hours on the evening of the 8th, in Ireland, and on the morning of the 9th along the remainder of our west and north coasts.	Sandwich,* 10 a.m., 9th	S. by E.	53*	-	Gale only lasted four hours. Only three hours.			
		Holyhead,* 3 a.m., 9th	S. by E.	57*	-				
		Valencia, 6 and 7 p.m., 8th	S.S.W.	48	-				
		Holyhead,* 6 a.m., 13th	S.S.E.	59*	-		Two hours.		
		" 5 and 7 a.m. 14th	N. by E.	49	-		April 12th was Sunday, so no warning of the gale could have been issued. 15 hours.		
		Valencia,* 11 a.m. and noon 13th.	N.W. by W.	60*	-				
		Roche's Point, 13th	N.N.W.	-	9				
		Pembroke,* 13th	S.S.W.	-	9*				
		Scilly, 13th	W.N.W.	-	11				
		Falmouth, midnight 13th	N.W. by N.	53	-				
Plymouth,* 13th	S.W.	-	9*						
Yarmouth, 3 p.m. 13th	S. by E.	43	-						

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
-	16 April	- - -	None - - - - -	None - - - - -
-	11 June	- - -	None - - - - -	None - - - - -
-	6 August	- - -	None - - - - -	None - - - - -
59	1 September	3.50 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W. and S. (west of Jersey).	Barometer high France; low on north-west coasts; wind backing Valencia. Hoist south cone - - - - -
60	2 "	3.50 p.m.	Same coasts - - - - -	Lower south cone - - - - -
61	14 September	3.30 p.m.	Scotland, E. and W. (with Newcastle)	Barometer falling rapidly Scotland; heavy south-west gale Stornoway. Hoist south cone - - - - -
62	15 "	12.5 p.m.	Scotland, E. (with Newcastle)	Lower south cone - - - - -
63	15 "	3.50 p.m.	Scotland, W.	Lower south cone - - - - -
64	22 September	11.10 a.m.	Scotland, E. and W.; England, N.W., S. (east of Southampton), S.E. and E.	Easterly gale Greencastle; south-west gale Pembroke; barometer falling Ireland. Hoist south cone - - - - -
65	22 "	4.0 p.m.	England, S. (east of Southampton), S.E. and E. (south of Hull).	Gale passing away to the northward. Lower south cone - - - - -
66	23 "	11.0 a.m.	Scotland, E. and W.; England, N.W. and E. (north of Hull).	Gale has passed off to north-westward. Lower south cone - - - - -
67	2 October	10.50 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W. and S. (west of Jersey).	An easterly gale Stornoway; west gale Greencastle; north gale Valencia; barometer falling rapidly. Hoist north cone - - - - -
68	2 "	10.50 a.m.	Scotland, E.; England S. (east of Southampton), S.E. and E.	East gale Stornoway; west gale Greencastle; north gale Valencia; south gale Norway; barometer falling rapidly. Hoist south cone - - - - -
69	3 "	11.20 a.m.	England, S. (with Faversham); Ireland, S. (Cork only).	Barometer rising in west and in south, north-west gale blowing in north-west. Lower cone - - - - -
70	3 "	3.40 p.m.	Ireland, S. (except Cork) and E.; Scotland, E. and W.; England, N.W., W. and E. (except Faversham).	Gale is passing away slowly to eastward. Lower cone - - - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1874—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
22	A west to north-west gale was experienced on the extreme northern Scotch coasts, on the night of the 16th April.	Sumburgh Head, 17th - Sandwick,* 4 p.m., 16th - Stornoway,* 16th - Thurso,* 16th - Wick, 16th -	N. W. by N. W.N.W. W. N.W.	- 50* - - -	8 - 10* 9* 8	
-	A slight north-west gale was felt at our north-western and northern stations, on the morning of June 11th.	Sandwick, 3 p.m., 11th - Alnwick Castle,* 9 a.m., 11th - Seaham, 5 p.m., 11th - Glasgow, 11 a.m., 11th - Greencastle, 8 a.m., 11th - Donaghadee, 11th - Kingstown, 11th -	N.N.W. W. by S. N. W. by N. W.N.W. N.N.W. W.N.W.	40 61* 40 45 - - -	- - - - 8 8 8	Holyhead, anemometer out of action. The velocity exceeded 50 miles for only three hours at Alnwick.
23	A depression passed down the North Sea in a south-easterly direction, and north-westerly gales were experienced on our north and north-east coasts, on the morning of the 6th August.	Sandwick, 5 a.m., 6th - Stornoway,* 5th - Thurso, 6th - Wick, 6th - Nairn, 6th - Aberdeen, 2 a.m., 6th - Shields, 6th -	N.W. by N. N.W. N.W. N.W. W.S.W. W. by N. N.N.W.	40 - - - - 49 -	- 10* 8 8 8 - 8	
-	The wind rose to a gale on the 1st September at Valencia and Holyhead, and fresh to strong southerly breezes were felt along our whole west coast.	Holyhead, 7 a.m., 2nd - Valencia, 11 p.m., 1st - Stornoway, 1st -	S. by W. S.S.W. S.W.	41 46 -	- - 8	
24	A fresh southerly gale was experienced at the northern and some of the western stations on the night of the 14th	Sumburgh Head, 15th - Sandwick, 3 p.m., 15th - Stornoway,* 2 p.m., 14th - Aberdeen, 15th - Alnwick Castle, 5 a.m., 15th - Seaham, 7 a.m., 15th - Holyhead, 1 a.m., 15th - Valencia, 2 a.m., 15th -	W.S.W. W. by S. S.W. S.S.W. S.W. S.S.W. S. by W. S.S.W.	- 45 - - 42 40 46 48	8 - 11* 8 - - - -	
25	A fresh southerly gale was experienced on the night of the 21st or early on the 22nd at most of our western stations	Greencastle, 8 a.m., 22nd - Donaghadee, 8 a.m., 22nd - Holyhead,* 8 a.m., 22nd - Valencia, 2 p.m., 22nd - Roche's Point,* 21st - Pembroke, 8 a.m., 22nd - Scilly,* 21st - Plymouth, 22nd - Falmouth, 11 p.m., 21st -	E. S.E. S. S.W. by W. S. S.W. S.E. S. S. by W.	- - 58* 40 - - - - 45	8 8 - - 9* 8 10* 8 -	Seven hours gale.
26	A fresh gale from west at the western stations, and drawing into south and south-east in the north, was felt over our Islands on the 2nd. In Scotland the north-westerly wind in the rear of the disturbance also reached the force of a gale.	Sumburgh Head, 2nd - Sandwick, 7 a.m., 2nd - Stornoway,* 2nd - Thurso, 3rd - Wick, 3rd - Nairn, 2nd - Aberdeen, 6 a.m., 2nd - Leith, 2nd - Alnwick Castle, 7 a.m., 3rd - Glasgow, 9 a.m., 2nd - Ardrossan, 3rd - Greencastle, 3rd - Kingstown, 3rd - Holyhead, 2 a.m., 3rd - Liverpool, 3rd - Stonyhurst, 1 p.m., 3rd - Valencia, 10 p.m., 1st - " 2nd - Pembroke, 3rd - Falmouth, 11 a.m., 3rd -	S.S.E. S.S.E. S.S.W. N.W. N.W. S. S.S.E. W. W.S.W. S.W. W.N.W. W.N.W. W. W. by N. W. W.S.W. S.W. N.N.W. W.N.W. W. by N.	- 46 - - - - 41 - 46 45 - - - 47 - - 41 43 - - 41	8 - 10* 9 8 8 - 8 - - 9 9 9 8 - - 9 9 - 9 -	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
71	6 October	10.40 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S. (west of Exeter), and E. (Newcastle only).	Barometer falling fast in north-west. South-west gale Greencastle. Hoist south cone.
72	6 "	3.30 p.m.	England, S. (east of Exeter); S.E. and E. (except Newcastle).	Barometer still falling in west. Southerly gale in Irish Channel. Hoist south cone.
73	7 "	11.10 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E. and E.	Gale over for the present, and barometer rising. Lower cone.
74	8 October	11.0 a.m.	Ireland, S. (Cork only); and E. (Dublin only).	Barometer beginning to fall, Valencia, with freshening southerly wind. Hoist south cone.
75	8 "	2.40 p.m.	Ireland S. (except Cork), and E. (except Dublin); Scotland, W.; England, N.W., W., and S.	South gale Valencia, with rising sea; barometer falling fast. Hoist south cone.
76	8 "	3.40 p.m.	Scotland, E.; England, E. and S.E.	South gale Valencia, with rising sea; barometer falling fast. Hoist south cone.
77	9 "	11.15 a.m.	Ireland, S. and E.; Scotland E. (north of Grangemouth) and W.; England, N.W., W., S., S.E. and E.	Gale subsided in south, and travelling northerly. Lower cone.
78	17 October	3.40 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W. and S. (Devon and Cornwall).	South-westerly gale at Stornoway; wind backing at Valencia. Hoist south cone.
79	19 "	11.10 a.m.	Same coasts	Lower south cone.
80	20 "	11.0 a.m.	Scotland, E. and W.; Ireland, E. (Belfast only).	Fresh west-south-west gale in Shetlands. Barometer falling, Stornoway. Hoist south cone.
81	20 "	3.40 p.m.	Same coasts	Lower south cone.
	21 October		None	None

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the Storms reported on the Coasts of the British Isles in 1874—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1874.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.		
27	A south-westerly gale (fresh in the south-west, but moderate elsewhere) was felt on our west and south coasts on the morning of the 6th October	Seaham, 2 p.m., 6th	S.	44	-	Two hours only.	
		Shields, 6th	S.W.	-	8		
		Moorside, midnight, 6th	S.W. by S.	45	-		
		Greencastle, 8 a.m., 6th	S.S.W.	-	8		
		Holyhead, 7 p.m., 6th	S.S.W.	48	-		
		Valencia,* 4 a.m., 6th	S.W. by S.	51*	-		
		Roche's Point, 6th	S.S.W.	-	8		
		Pembroke, 6th	S.W.	-	9		
		Portishead, 6th	S.	-	8		
		Scilly, 6th	S.S.W.	-	9		
		Falmouth, 10 p.m., 6th	S. by W.	43	-		
		Plymouth, 6th	S.W.	-	9		
Hurst Castle, 6th	S.S.W.	-	8				
28	A southerly to south-easterly gale was experienced on our west and north coasts on the 9th	Sumburgh Head, 9th	S.	-	8	One hour only.	
		Sandwich, 6 a.m., 9th	S.S.E.	52	-		
		Stornoway, 8th	S.S.E.	-	9		
		Wick, 9th	S.	-	10		
		Nairn, 8th	S.W.	-	8		
		Aberdeen, 9th	S.	-	8		
		Greencastle, 8th	S.S.E.	-	9		
		Holyhead, midnight, 8th	S. by E.	55	-		
		Valencia, 7 p.m., 8th	S.	57	-		
		Roche's Point, 8th	S.S.W.	-	9		
Pembroke, 9th	W.S.W.	-	8				
29	A south-westerly gale, which blew freshly in the south-west, and at Stornoway, was experienced at a few stations on the 17th	Sumburgh Head, 8 a.m., 17th	S.	-	8	October 18, Sunday.	
		Aberdeen, 8 a.m., 17th	S.	-	8		
		Sandwich, 8 and 9 a.m., 17th	S.	44	-		
		Stornoway,* 17th	S.S.W.	-	10*		
		Greencastle, 18th	S.S.W.	-	8		
		Holyhead, 2 a.m., 17th	S. by W.	49	-		
-	No gale	Valencia,* midnight, 16th	S. by W.	55*	-	Five hours gale.	
		Roche's Point,* 17th	S.S.W.	-	9*		
30	An exceedingly heavy gale from west to north-west was felt at all stations on the 21st; most severely in the north.	Sumburgh Head, 8 a.m., 20th	W.S.W.	-	8	These signals were lowered too soon, inasmuch as the most serious storm of the year followed in the course of the night. The barometer, however, did not begin to fall rapidly until after 6 p.m., so that without later reports than those for 2 p.m. it was not possible to say with certainty that the gale was imminent, though the weather was very unsettled.	
		Sumburgh Head,* 21st	N.	-	10*		29 hours gale.
		Sandwich,* 9 a.m., 21st	N. by W.	72*	-		
		Stornoway,* 21st	N.W.	-	11*		
		Thurso,* 21st	N.N.E.	-	11*		
		Wick,* 21st	N.W.	-	10*		
		Nairn,* 21st	W.N.W.	-	10*		
		Aberdeen,* noon, 21st	W.N.W.	57*	-		
		Leith,* 21st	W.	-	10*		
		Alnwick Castle,* 5 and 10 a.m., 21st	S.W. and W.	66*	-		
		Seaham, 6 and 11 a.m., 21st	S.W. and W.	47	-		
		Shields,* 21st	W.N.W.	-	10*		
		Scarborough,* 21st	W.	-	9*		
		Moorside, 11 a.m., 21st	N.W. by W.	41	-		
		Glasgow,* 5 a.m., 21st	W.S.W.	63*	-		
		Ardrrossan,* 21st	W.N.W.	-	11*		
		Greencastle,* 21st	W.N.W.	-	9*		
		Armagh, 2 a.m., 21st	S.W. by S.	40	-		
		Donaghadee,* 21st	W.S.W.	-	9*		
		Kingstown,* 21st	W.N.W.	-	9*		
Holyhead,* 4 a.m., 21st	S.W.	63*	-				
Liverpool,* 21st	W.S.W.	-	9*				
Stonyharst, 8 a.m., 21st	W.S.W.	42	-				
Valencia,* 2 a.m., 21st	W.S.W.	56*	-				
Pembroke,* 21st	W.S.W.	-	10*				
Portishead, 21st	W.S.W.	-	8				
Falmouth, 9 a.m., 21st	W.S.W.	45	-				
Hurst Castle, 21st	W.	-	8				
Dover, 21st	W.S.W.	-	8				
London,* 21st	W.S.W.	-	9*				
Yarmouth, 21st	W.S.W.	-	8				

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
82	22 October	11 a.m.	Ireland, S. and E. (except Belfast)	Barometer falling fast Valencia, and wind has backed to south. Hoist south cone
83	22 "	1.10 p.m.	Ireland, S. and E. (except Belfast)	Depression is passing to the south-eastward. Lower south cone
84	24 "	3.40 p.m.	Ireland, S. and E.; Scotland, E. (Wick only), and W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer still falling in west, and southerly wind increasing, with rough sea. Hoist south cone
85	26 "	11.10 p.m.	Same coasts	Lower south cone
86	3 November	4.0 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W.	Barometer falling fast north, with south-west wind freshening; looks like gale. Hoist south cone
87	5 "	11.0 a.m.	Same coasts	Lower cone. Gale has passed to the northward of Scotland
88	9 "	3.45 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W.	Barometer falling fast Thurso; wind backing; looks bad. Hoist south cone
89	10 "	3.30 p.m.	Same coasts	Lower cone
90	11 "	3.40 p.m.	England, E. and S.E.	Barometer very low in Sweden; north gale in Shetland Islands. Hoist north cone
91	12 "	11.20 a.m.	Same coasts	Lower cone. Wind has moderated in north
92	16 "	3.30 p.m.	Ireland, S. and E.; Scotland E. and W.; England, N.W., W., S., S.E., and E.	Barometer falling fast in north Ireland; westerly wind increasing; look out for north-west gale. Hoist north cone
93	17 "	11.10 a.m.	Scotland, E. and W.; England, S. (east of Southampton), S.E. and E.	Lower cone. No serious gale this morning
94	17 "	3.30 p.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Southampton).	Lower cone. Wind falling light
95	26 "	4.0 p.m.	Ireland, S. and E.; Scotland, E., and W.; England, N.W. and W.	Barometer falling quickly Valencia; rising Thurso; weather very unsettled. Hoist south cone
96	27 "	11.30 a.m.	Ireland, S. and E.; Scotland, E. (south of Grangemouth), and W.; England, N.W. and W.	Lower cone. Gale has passed to the north of Scotland
97	28 "	3.30 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Barometer falling briskly in south-west; southerly wind increasing. Hoist south cone.

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1874—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1874.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
-	No gale	-	-	-	-	The fall of the barometer at Valencia was not so serious as was reported.
-	The wind rose to the force of a gale from the southward at a few stations on the 25th	Sumburgh Head, 8 a.m., 25th Stornoway, 25th - Aberdeen, 7 p.m., 24th - Holyhead, 5 a.m., 25th Valencia, midnight, 24th Pembroke, 6 p.m., 24th	W.S.W. S.W. S. S. by W. S.S.W. S.W.	- - - 51 54 -	8 8 8 - - 8	Two hours gale. One hour only.
-	Fresh westerly winds were experienced in Scotland, but gales in the extreme north only	Sumburgh Head, 3rd Sandwick, 6 p.m., 3rd Stornoway, 4th	W. W. S.S.W.	- 47 -	8 - 9	
31	A depression again passed to the northward of Scotland, and the wind freshened considerably, reaching the force of a gale in some places	Sumburgh Head,* 9th Sandwick, midnight, 9th Thurso, 9th - Alnwick Castle, 3 p.m., 9th Holyhead, 5 p.m., 10th	N. W.N.W. W.N.W. S.W. by W. N. by W.	- 55 - 47 46	9* - 8 - -	Six hours gale. Gale commenced, noon 10th.
-	No gale on the east coast, but the north wind increased considerably in force.	-	-	-	-	
32	The wind rose to a gale from north-west on some parts of our west coasts	Greencastle, 17th Holyhead, 9 p.m., 16th Liverpool, 16th Roche's Point, 17th Pembroke, 16th Falmouth, 2 a.m., 17th	W.N.W. W. by N. W.S.W. N.W. W. W.N.W.	- 44 - - - 51	8 - 8 8 9 -	
33	A depression again appeared to the northward of Scotland, and moderate gales were experienced at our most northern stations	Sumburgh Head, 27th Sandwick, 7 a.m., 27th Stornoway, 27th Wick, 27th Pembroke, 26th	S.S.E. S.S.E. S. S. S.S.E.	- 46 - - -	8 - 8 8 8	
34	A depression passed over the north of England, and hard gales were experienced on all coasts; from west in the south and west, from south-east on our north-east coasts, and from east over Scotland.	Sumburgh Head, 28th Sandwick 9 p.m., 29th Wick, 29th Aberdeen, 2-5 p.m., 29th Leith, 29th Alnwick Castle, 6 a.m., 29th Shields,* 29th Scarborough,* 29th Holyhead, 5 p.m., 29th Liverpool, 29th Valencia, 29th Roche's Point, 29th Pembroke, 29th Portishead, 29th Scilly,* 29th Falmouth,* 9 a.m., 29th Plymouth, 29th Hurst Castle,* 29th London,* 29th Yarmouth,* 8 a.m., 29th	S.E. E. E. E. and E. by N. E. E.S.E. S.E. S.E. W. W. N. N.W. W.N.W. W. N.W. W. by N. N.W. W.N.W. W. S.E. by E.	- 44 - 60 - 43 - - 48 - - - - - - 59° - - - - 59°	8 9 9 9 - 10* 10* - 8 8 8 10 8 11° 8 8 9* 9* -	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
98	1 December	4.30 p.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Southampton).	Rise of barometer checked in west; sea high. Looks like another gale. Hoist south cone.
99	2 "	11.15 a.m.	Same coast	Lower cone. Signs of gale have gone down
100	4 December	11.10 a.m.	Scotland, E. and W.	Barometer falling very fast in north. Hoist south cone
101	4 "	3.15 p.m.	Ireland, S. and E.; England, N.W., W., and S. (Devon and Cornwall only); and E. (north of Hull).	Barometer falling very fast in north. Hoist south cone
102	5 "	Noon	Ireland, E.; England, W. (south of Aberystwith), and S. (Devon and Cornwall only).	Lower cone. Gale has passed off to north of Scotland
103	8 December	11.0 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., S., S.E., and E.	Sudden serious fall of the barometer in west; south gale Cork and Pembroke. Hoist south cone.
104	10 December	Noon	Ireland, S. and E.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling Valencia; southerly wind increasing, sea rising. Hoist south cone.

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1874—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1874.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
-	No gale, but fresh northerly breezes prevailed on some coasts.	Holyhead, 4 a.m., 2nd	N.E.	48	-	
35	A fresh gale was experienced in the north, north-west, and north-east, and strong wind in the south of these Islands on the 4th and 5th December	Sumburgh Head, 5th	W.N.W.	-	9	
		Sandwick, 7 p.m., 4th	W.	65	-	
		Stornoway, 4th	W.S.W.	-	8	
		Leith, 4th	S.W.	-	8	
		Alnwick Castle,* 5 p.m., 4th	W.S.W.	56°	-	
		Glasgow, 3 p.m., 4th	S.W. by S.	45	-	
		Holyhead, midnight, 5th	S.W.	46	-	
		Aberdeen, 11 p.m., 8th	N.E.	40	-	
		Leith, 8th	E.	-	9*	
		Alnwick Castle, 11 p.m., 8th	N.E. by N.	53	-	Two hours gale.
36	A depression passed in a due easterly direction over central England, and the wind rose to a gale, first from south, and, after the disturbance had passed off, from the northward.	Seaham, midnight, 8th	N.E.	61	-	Three hours gale.
		Shields, 8th	S.E.	-	8	
		Scarborough, 9th	N.	-	10	
		Glasgow, 8 p.m., 8th	N.E.	40	-	
		Donaghadee, 8th	W.	-	-	
		Holyhead, 3 a.m., 9th	N.N.E.	74	-	Eight hours gale.
		Valencia,* 3 and 7 p.m., 8th	W. by N. N.W. by W.	53*	-	15 hours gale.
		"	N.W.	-	11	
		Roche's Point,* 8 a.m., 8th	S.S.W.	-	11*	
		Pembroke, 8th	W.S.W.	-	10	
		Portishead, 8th	W.S.W.	-	9	
		Scilly, 9th	N.W.	-	11	
		Falmouth, 11 p.m., 8th	W.	66	-	Seven hours gale.
		Plymouth, 9th	W.	-	10	
		Hurst Castle, 9th	W.N.W.	-	10	
London, 9th	W.S.W.	-	9			
37	A disturbance travelled across our Islands in a manner similar to the last; and a severe westerly gale was experienced in the west and south-west, and from south-east in the north.	Sandwick, 5 a.m., 11th	S.S.E.	45	-	
		Aberdeen,* 1 p.m., 11th	S.E.	52*	-	One hour only.
		Armagh, 11 p.m., 10th	S.S.E.	45	-	
		Donaghadee, 10th	S.S.E.	-	8	
		Holyhead, 1 a.m., 11th	S by E.	57	-	Five hours gale.
		Valencia, midnight, 11th, and 4 a.m., 12th.	N.W.	48	-	
		Roche's Point, 11th	N.W.	-	10	
		Pembroke, 11th	W.	-	10	
		Portishead, 10th	S.W.	-	8	
		Scilly, 12th	N.W.	-	11	
38		Falmouth, 2 and 10 p.m., 11th	W.N.W.	55	-	Ten hours gale (with slight lulls).
		Plymouth, 11th	W.	-	8	
		Hurst Castle,* 11th	W.	-	10*	
		Yarmouth, 9 a.m., 11th	S.E. by S.	49	-	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
105	15 December	3.40 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Barometer falling fast in west. South-west gale Valencia. Hoist south cone
106	16 "	11.20 a.m.	Scotland, E. and W.	Lowest barometer at Bristol. Northerly gales in Ireland, and south-east wind at Dover. Lower cone
107	17 "	Noon	Ireland, S. and E.; England, N.W., W., S., S.E., and E.	Lower cone
108	19 December	4.0 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. and E. (north of Hull).	Barometer falling again in north; north-westerly winds likely to increase. Hoist north cone
109	21 "	11.10 a.m.	Same coasts	Lower cone
110	31 December	3.40 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only)	South-east gale Valencia; barometer falling fast, and sea rising. Hoist south cone
111	1875: 1 January	11.10 a.m.	Scotland, E.; England, E. (north of Hull).	Southerly gale in west. Hoist south cone

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in 1874—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
38	A gale was felt on our west, south, and south-east coasts, on the night of the 15th, or on the 16th	Holyhead, 7 p.m., 15th	S. by E.	51	-	One hour only.
		" 8 a.m., 16th	N.	-	10	
		Valencia, midnight, 15th	N.W.	50	-	One hour only.
		Roche's Point, 16th	N.N.W.	-	9	
		Portishead, 16th	S.E.	-	8	
		Scilly, 15th	W.	-	8	
		" 16th	N.N.E.	-	9	
		Falmouth, 4 p.m., 16th	N.N.E.	45	-	
		Plymouth, 16th	N.E.	-	8	
		Hurst Castle, 15th	S.	-	8	
" 16th	E.	-	8			
Yarmouth, 7 p.m., 16th	E.N.E.	46	-			
39	The northerly wind increased to a gale at a few stations on the 19th, and again at Holyhead on the 20th	Sumburgh Head, 19th	N.	-	9°	
		Sandwich, 3 p.m., 19th	N.W.	52°	-	One hour only.
		Shields, 20th	N.	-	8	
		Holyhead, 3 p.m., 19th	N.	-	-	
		" 6 a.m., 20th	N.W. by N.	46	-	
39	A strong southerly to south-easterly gale was felt on all coasts on the 1st January	Sumburgh Head, 1st January	S.E.	-	9	
		Stornoway, 2nd	S.	-	9	
		Wick, 1st	S.E.	-	8	
		Nairn, 1st	S.E.	-	9	
		Aberdeen, 10 p.m., 1st	S.E. by S.	51	-	Three hours gale.
		" midnight, 1st				
		Alnwick Castle, 9 p.m., 1st	S. by E.	46	-	
		Shields, 1st	S.	-	9	
		Greencastle, 1st	S.S.E.	-	9	
		Armagh, 1 and 8 p.m., 1st	S.E. by S.	43	-	
		Kingstown, 1st	S.S.E.	-	10	
		Holyhead, 10 p.m., 1st	S. by E.	55	-	Two hours gale.
		Valencia, 7 p.m., 1st	S.W.	56	-	Six hours gale.
Roche's Point, 1st	S.E.	-	9			
Pembroke, 1st	S.E.	-	9			
Falmouth, 3, 5, and 8 a.m., 1st	S.E. by S.	44	-			
Plymouth, 1st	S.E.	-	8			
Yarmouth,* 10 p.m. to midnight, 1st.	S.S.E.	50°	-	Three hours gale.		

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

SUMMARY.

COASTS.		NUMBER OF TELEGRAMS.	
IRELAND	South	Orders to hoist signal	1p. 4a. 5e. 8c. 12a. 15e. 22c. 24p. 27a. 28b. 33a. 39p. 42a. 46c. 48a. 49a. 51a. 53a. 55b. 59b. 67a. 71p. 75a. 78e. 82c. 84b. 92a. 95c. 97a. 98c. 101b. 103e. 104a. 105a. 110a.
		Orders to hoist signal, Galway only.	20b.
		Repetitions of orders to hoist signal.	35a.
		Orders to lower signal	10. 13. 21. 23. 29. 37. 45. 47. 60. 70. 73. 77. 79. 83. 85. 94. 96. 99. 107.
Ditto	East	Orders to hoist signal	1a. 4b. 5a. 8b. 12b. 15a. 22b. 24a. 27a. 28c. 33a. 39b. 42a. 46c. 48a. 49a. 51a. 53a. 55b. 56s. 59b. 67a. 71a. 74b. 78b. 82c. 84b. 92a. 95c. 97a. 98c. 101c. 103a. 104a. 105b. 110a.
		Orders to hoist signal, Belfast only.	18b. 20c. 80c. 86b. 88b. 108b.
		Repetitions of orders to hoist signal.	35a.
		Orders to lower signal	10. 13. 21. 23. 29. 37. 45. 47. 58. 60. 70. 73. 77. 79. 83. 85. 87. 89. 94. 96. 99. 102. 107.
		Orders to lower signal, Belfast only.	81. 109.
SCOTLAND	East	Orders to hoist signal	1a. 4c. 5a. 8b. 15c. 18b. 22b. 24c. 28c. 31b. 33a. 40c. 44a. 49b. 54a. 57c. 59b. 61a. 64c. 68a. 71b. 76a. 80c. 86b. 88a. 92c. 95a. 97a. 100a. 105c. 108p. 111a.
		Orders to hoist signal, Wick only.	20a. 84b.
		Repetitions of orders to hoist signal.	35a.
		Orders to lower signal	11. 17. 19. 21. 23. 29. 32. 38. 41. 58. 60. 63. 66. 70. 73. 77. 81. 87. 89. 93. 106. 109.
		Orders to lower signal, Wick only.	85

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
		a	b	c	e	p	s	
1. 2. 3. 6. 8. 11. 12. 13. 14. 15. 16. 18. 19. 20. 21. 25. 26. 27. 28. 29. 30. 32. 34. 36. 37. 38. 39.	37	17	6	6	4	4	-	21s. 25. 30.
1. 3. 7. 8. 11. 12. 13. 15. 16. 18. 19. 20. 21. 25. 26. 27. 30. 32. 34. 36. 37. 39.	43	19	15	8	-	-	1	7s. 25. 30.
1. 3. 4. 7. 9. 10. 13. 15. 20. 22. 23. 24. 26. 28. 30. 31. 33. 34. 35. 36. 37p. 39.	35	15	9	10	-	1	-	4s. 7s. 9s. 22. 23. 30. 36. 37p.
Carried forward	115	51	30	24	4	5	1	

SUMMARY—continued.

COASTS.		NUMBER OF TELEGRAMS.	
SCOTLAND - -	West (Clyde) -	Orders to hoist signal - -	1a. 4c. 5b. 8b. 12b. 15a. 18b. 20b. 22b. 24a. 27a. 28c. 31b. 33a. 40b. 42a. 48b. 49a. 51a. 53a. 55b. 56b. 59b. 61a. 64c. 67a. 71b. 75a. 78p. 80c. 84b. 86b. 88b. 92b. 95b. 97b. 100a. 103a. 105c. 108b. 110a.
		Repetitions of orders to hoist signal.	35b.
		Orders to lower signal - -	11. 13. 21. 23. 29. 32. 41. 58. 60. 63. 66. 70. 73. 77. 79. 81. 85. 87. 89. 93. 96. 106. 109.
ENGLAND - -	North-west -	Orders to hoist signal - -	1a. 4a. 5a. 8c. 12a. 15a. 20b. 22c. 24b. 27a. 28b. 33a. 39a. 42a. 46c. 48a. 49a. 51a. 53a. 55b. 56s. 59b. 64e. 67a. 71a. 75a. 78p. 84b. 86c. 88a. 92a. 95c. 97a. 98c. 101b. 103a. 104a. 105a. 108a. 110a.
		Repetitions of orders to hoist signal.	35a.
		Orders to lower signal - -	11. 13. 21. 23. 29. 37. 45. 47. 58. 60. 66. 70. 73. 77. 79. 85. 87. 89. 94. 96. 99. 107. 109.
Ditto - -	West - -	Orders to hoist signal - -	1a. 4a. 5a. 8c. 12b. 24a. 27b. 28b. 33a. 39a. 42b. 46c. 48b. 49a. 51b. 53a. 55b. 56s. 59b. 67a. 71a. 75a. 78b. 84b. 92a. 95c. 97a. 98c. 101b. 103a. 104a. 105a. 110a.
		Orders to hoist signal South of Milford.	14a.
		Orders to hoist signal North of Milford.	15a. 22c.
		Repetitions of orders to hoist signal.	35b.
		Orders to lower signal - -	10. 13. 23. 29. 37. 45. 47. 58. 60. 70. 73. 77. 79. 85. 94. 96. 99. 107.
		Orders to lower signal South of Aberystwith.	102.
Ditto - -	South - -	Orders to hoist signal - -	1b. 3p. 12a. 14a. 28b. 43b. 51b. 53a. 56a. 71a. 75b. 92a. 103a. 105a.
		Orders to hoist signal, Devon and Cornwall only.	5a. 24a. 33a. 39a. 46c. 49a. 55b. 59b. 67a. 78b. 84b. 98c. 101c. 104a. 110a.
		Orders to hoist signal East of Plymouth.	6b. 25b. 34a. 40c. 64b. 68b.
		Repetitions of orders to hoist signal.	—

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards, a	Warnings justified by subsequent Strong Winds, Force 6 and 7. b	Warnings not justified by subsequent Weather. c	Warnings Late, Force 9 reached at two Stations before Issue. e	Warnings partially Late, Force 9 reached at one Station before Issue. p	Warnings Late, owing to Sundays or Telegraphic Errors, s	
Brought forward - - -	115	51	30	24	4	5	1	
1. 7. 8. 11. 13. 15. 17. 18. 19. 20. 24. 26. 28. 29. 30. 35. 36. 39.	42	15	21	5	-	1	-	7s. 17. 30.
1. 2. 3. 6. 8. 12. 13. 14. 15. 16. 18. 19. 20. 25. 26. 27. 28. 30. 32. 34. 36. 37. 38. 39.	41	25	7	6	1	1	1	30.
1. 2. 3. 8. 11. 13. 14. 18. 20. 26. 27. 28. 30. 32. 34. 36. 37. 38. 39.	37	19	12	5	-	-	1	30.
2. 6. 8. 20. 21. 30. 32. 34. 36. 37. 38.	36	17	14	4	-	1	-	30. 34.
3. 11. 13. 14. 18. 25. 26. 27. 39.	-	-	-	-	-	-	-	25p.
- - - - -	-	-	-	-	-	-	-	37p.
Carried forward - - -	271	127	84	44	5	8	3	

SUMMARY—continued.

COASTS.		NUMBER OF TELEGRAMS.	
ENGLAND - -	South—continued	Repetitions of orders to hoist signal, Devon and Cornwall only.	35b.
		Orders to lower signal - -	2. 13. 30. 45. 52. 58. 69. 73. 77. 93. 107.
		Orders to lower signal, Devon and Cornwall only.	37. 47. 60. 79. 85. 99. 102.
		Orders to lower signal East of Plymouth.	7. 26. 36. 41. 65.
Ditto - -	South-east	Orders to hoist signal - -	1b. 3a. 6b. 14b. 24b. 34a. 43b. 51b. 53a. 56a. 64c. 68b. 69b. 71b. 76c. 90c. 92b. 103b. 105a.
		Repetitions of orders to hoist signal.	—
		Orders to lower signal - -	2. 7. 36. 58. 65. 73. 77. 91. 93. 107.
Ditto - -	East	Orders to hoist signal - -	1a. 3c. 6c. 16b. 24b. 43a. 51a. 53a. 56b. 64b. 68b. 72a. 76c. 90b. 92c. 103a. 105b.
		Orders to hoist signal North of Hull.	9p. 22b. 23a. 40c. 50a. 101a. 108a. 111a. -
		Orders to hoist signal South of Hull.	34a.
		Repetitions of orders to hoist signal North of Hull.	35b.
		Orders to lower signal - -	2. 7. 17. 58. 70. 73. 77. 91. 93. 107.
		Orders to lower signal North of Hull.	11. 23. 41. 66. 109.
		Orders to lower signal South of Hull.	36. 52. 65.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
Brought forward - - -	271	127	84	44	5	8	3	
2. 13. 20. 21. 30. 34. 38. -	19	5	11	3	-	-	-	30. 34.
1. 5. 7. 12. 13. 15. 19. 20. 27. 30. 34. 36. 18. 35.	27	12	9	5	-	1	-	7s. 30. 34.
TOTALS for Year - -	317	144	104	52	5	9	3	
Per-centages - - -	-	45.4	32.8	16.4	1.5	2.8	1.0	

WEATHER INTELLIGENCE.



RETURN to an Order of the Honourable The House of Commons,  
dated 11 July 1876;—for,

RETURNS “ showing the LIST of PLACES to which TELEGRAPHIC WEATHER  
INTELLIGENCE was sent in 1875, arranged according to Coasts :”

“ And, showing the Number of TELEGRAMS sent to each STATION, and the  
STORMS reported on the COASTS of the BRITISH ISLANDS, in 1875 (in  
continuation of Parliamentary Paper, No. 210, of Session 1875).”

Board of Trade, }  
11 July 1876. }

T. H. FARRER.

(Sir Charles Adderley.)

Ordered, by The House of Commons, to be Printed,  
11 July 1876.

WEATHER INTELLIGENCE.

RETURNS showing the List of PLACES to which  
TELEGRAPHIC WEATHER INTELLIGENCE was sent  
in 1874, arranged according to Coasts; and,  
showing the Number of TELEGRAMS sent to each  
Station, and the STORMS reported on the Coasts  
of the BRITISH ISLANDS, in 1874 (in continuation  
of Parliamentary Paper, No. 228, of Session  
1874).

(Mr. Coeendish Bentick.)

Ordered, by The House of Commons, to be Printed,  
20 May 1875.

210.

Under 3 oz.

MEMORANDUM.

THE following pages contain a statement of all the telegrams conveying intelligence of weather issued by the Meteorological Office in the year 1875, and also of all the storms experienced on the coasts of the British Islands during the same period.

The facts on which the account of the storms has been based are,—

I. The continuous records of the direction and velocity of the wind furnished by the self-registering anemographs, on Dr. Robinson's principle, erected by the Meteorological Committee at 10 stations distributed over the United Kingdom, viz.: Kew, Yarmouth, Falmouth, Stonyhurst, Holyhead, Glasgow, Aberdeen, Sandwick Manse (Orkneys), Armagh, and Valencia; as well as at the stations of Alnwick Castle, Seaham Harbour, and Halifax, the results from which are supplied respectively by the kindness of the Duke of Northumberland, the Marquis of Londonderry, and L. J. Crossley, Esq.

II. The observations taken at the telegraphic reporting stations (29 in number) situated in these islands.

III. Reports furnished by certain volunteer observers which have been received at the Meteorological Office.

The office is without accurate information as to the wind on the west coast of Ireland, generally, from Valencia to Lough Foyle, as well as on the west coast of Scotland, from the Mull of Cantyre to Cape Wrath, with the single exception of that received from its telegraphic reporting station at Stornoway.

The only stations at which the signals are hoisted within the above limits are Tralee, Limerick, and Galway, so that it is evident that the districts in question cannot be represented in the Return now submitted.

The scales, according to which the violence of the gales is estimated, are two in number, and are as follows:—

SCALES OF WIND.

FORCE, BEAUFORT SCALE.			Approximate Velocity.	
			Miles per Hour.	
0. Calm	- - -	- - -	0 - - 3	
1. Light air	- - -	Or, just sufficient to give steerage way.	1 - - 8	
2. Light breeze	- - -	Or, that in which a well-conditioned man-of-war, with all sail set, and clean full, would go in smooth water from	2 - - 13	
3. Gentle breeze	- - -		3 to 4 knots	3 - - 18
4. Moderate breeze	- - -		5 to 6 knots	4 - - 23
5. Fresh breeze	- - -	Royals, &c.	5 - - 28	
6. Strong breeze	- - -	Single-reefed topsails and top-gallant sails.	6 - - 34	
7. Moderate gale	- - -	Or, that to which she could just carry in chase, full and by	7 - - 40	
8. Fresh gale	- - -		Double-reefed topsails, jib, &c.	8 - - 48
9. Strong gale	- - -		Triple-reefed topsails, &c.	9 - - 56
		Close-reefed topsails and courses.		
10. Whole gale	- - -	Or, that with which she could scarcely bear close-reefed main-topsail and reefed fore-sail.	10 - - 65	
11. Storm	- - -	Or, that which would reduce her to storm-staysails.	11 - - 75	
12. Hurricane	- - -	Or, that which no canvas could withstand.	12 - - 90	

The foregoing relation of the velocity of the wind, as measured by a Robinson's anemograph of large size, and its force, according to Sir F. Beaufort's scale, has

has been drawn up in the Meteorological Office from observations carried on at Holyhead and Yarmouth, and may be considered as approximately correct.

The principles of the system of warnings followed in 1874 are fully explained in Parliamentary Paper, No. 10, dated 25th November 1867, in which (Letter 9, from the Meteorological Committee to the Board of Trade) it is said, "The signal would be simply of a warning nature, and, without conveying the impression that the storm would necessarily strike the port where it was hoisted, would imply that extra caution in navigation was requisite." The Committee therefore would consider that extra caution in navigation would be necessary for coasters and fishing boats when the force of the wind reaches No. 8 of Beaufort's Scale, or even No. 7, while no serious danger can be said to exist unless the force reaches 9.

All observations of the wind in which the force exceeded 7 (a moderate gale), or the velocity exceeded 40 miles an hour, have been quoted as instances of the occurrence of a gale, but it has not been considered that the signal was hoisted late or was hauled down too soon unless the force of 9 (a strong gale) or the velocity of 50 miles an hour was reached prior to the issue of the order to hoist, or subsequent to the issue of the order to lower.

With reference to the definition of a serious gale, as force 9, which agrees with that adopted by the Board of Trade, a further limitation has been taken. The experience of the office has shown that at exposed stations, such as Holyhead and Sandwick Manse, the force of the wind is exceptionally strong, while it is exceptionally weak at inland stations, such as Kew and Armagh.

It is therefore fair to assume that the occurrence of a velocity of 50 miles an hour at Holyhead or Sandwick respectively does not in itself prove the prevalence of a strong gale on the whole line of coast of St. George's Channel and the Irish Sea, or on the east coast of Scotland, as the case may be.

In the Summary, pp. 22 to 27, all cases in which the signal has been shown to be partially late by one single report of force 9, or of the velocity of 50 miles, have been specially noted in the remarks.

The converse modification of increasing the velocities reported at inland stations, in order to obtain an improved estimate of the force of wind on the coast, has not been carried out, owing to the absence of sufficient information as to the co-efficients which should be used in each case to obtain the true velocity of the wind on the coast.

The service of meteorological telegraphy is subject to a constantly recurring interruption, by the fact of no telegrams being received on Sundays. It should be borne in mind that even if attendance were given at the office on that day, it would not be possible to render generally available to the public the telegraphic intelligence which might be issued. As a rule, the telegraphic offices at the seaports and fishing stations are closed on Sundays at noon, about which time the telegrams from the Meteorological Office would usually reach the coast.

The Summary, p. 27, shows that the total per-centage of success is nearly the same as in the last three years, and far higher than those for 1871 and 1870 (Parl. Papers, No. 504, 1871; No. 152, 1873).

The following are the respective figures:—

	WARNINGS JUSTIFIED			Warnings not justified by subsequent Weather.
	By subsequent Gales.	By subsequent Strong Winds.	Total.	
1870	46.7	21.7	68.4	22.4
1871	46.	17.7	63.7	22.
1872	61.	19.5	80.5	11.9
1873	45.2	34.	79.2	16.8
1874	45.4	32.8	78.2	16.4
1875	41.1	35.1	76.2	21.0

It will be seen that a total proportion of success, above 75 per cent., has been maintained during the past four years. The difference between the results as regards the warnings, justified by subsequent gales in 1872, as compared with the later years, is due to the fact that in the preparation of the Return for that year a lower force of wind was taken as indicating a gale, and there appeared to be, therefore, a more complete justification of the warning, than has subsequently been the case.

The office having to issue its warnings on the first signs of the approach of storms has in several cases only to show winds of forces 6 and 7 as justifications of its cautionary telegrams. The warnings, therefore, were perfectly right in principle, though hardly necessary for large sea-going ships, as distinguished from yachts, coasters, and fishing boats.

In this Return, as in that for 1874, the duration of each gale at the observatories is given, *i.e.*, the number of hours during which the velocity exceeded 50 miles; it will be seen from this, that in many cases where the warnings were late, or were not issued at all, the gale which was felt was of little consequence.

The results of the six years' work will, it is hoped, show that while the office cannot be expected to be able to give timely warning of *all* gales, it has yet been able to give such information as would, if attended to, have enabled our coasting seamen to avoid the violence of almost all the serious storms which have visited our coasts.

STORM SIGNALS.

LIST of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1875, arranged according to COASTS.

COASTS.		PLACES.	COASTS.		PLACES.
IRELAND	South	New Ross. Dunmore, East. Dungarvan. Youghal. Queenstown. Cork. Passage. Tralee. Limerick. Galway.	ENGLAND	West	Holyhead. Carnarvon. Port Dinorwic. Aberystwith. Milford. Pembrey. Llanelly. Swansea. Briton Ferry. Porthcawl. Penarth. Cardiff. Newport. Weston-super-Mare. Burnham.
Ditto	East	Belfast. Howth. Kingstown.	Ditto	South (Devon and Cornwall).	Ilfracombe. Barnstaple. Port Isaac. Boscastle. Newquay. Hayle. Pendennis. Scilly. Penzance. Falmouth. Plymouth (4 Stations). Teignmouth. Exeter. Exmouth.
SCOTLAND	East	Kirkwall. Inverness. Nairn. Burghead. Lossiemouth. Buckie. Portsoy. Banff. Fraserburgh. Peterhead. Aberdeen. Stonehaven. Montrose. Broughty Ferry. St. Andrews. Dundee. Anstruther. St. Monance. Burntisland. Alloa. Grangemouth. Bo'ness. Granton. Leith. Fisherrow. Dunbar. Eyemouth.	Ditto	South-east	Guernsey. St. Helier, Jersey. Gorey, Jersey. Weymouth. Poole. Cowes. Ventnor. Portsmouth. Littlehampton. Brighton. Newhaven. Hastings. Rye. Dover.
Ditto	West (Clyde)	Glasgow. Greenock. Rothesay. Campbelton. Girvan.	Ditto	East	Ipswich. Harwich. Chatham. Sheerness. Faversham. Tynemouth. South Shields. Sunderland. Middlesborough. Redcar. Whitby. Filey. Withernsea. Hull. Goole. Grimsby. Boston. Sutton Bridge. Lynn. Cromer. Yarmouth. Southwold.
ENGLAND	North West	Silloth. Maryport. Workington. Whitehaven. Ramsey. Douglas. Castletown. Barrow. Morecambe. Fleetwood. Blackpool. Lytham. Runcorn. Southport. Liverpool. Queensferry. Hawarden. Mostyn. Bangor. Port Penrhyn.			

RETURN showing the Number of TELEGRAMS sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
1	2 January	4 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Barometer falling again Valencia; wind has backed to south, with heavy sea. Hoist south cone.
2	8 January	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W. and S. (Devon and Cornwall and Channel Islands only).	Barometer falling fast Valencia; south gale, high sea. Hoist south cone.
3	12 January	3.20 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Barometer falling Valencia; wind backing to south, and rising. Hoist south cone
4	13	3.20 p.m.	Same coasts	Lower cone; gale has died down
5	14 January	4 p.m.	Ireland, S. and E.; Scotland, W. (Clyde); England N.W. and W., and S. (Devon and Cornwall only).	Barometer has begun to fall fast, Valencia. Hoist south cone.
6	19 January	2.40 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Barometer falling in north, wind increased to gale south-west Ardrossan. Hoist south cone
7	20	3.40 p.m.	Same coasts	Lower cone
8	21 January	11.5 a.m.	Ireland, S. and E.; England, N.W. (except Manchester), W. and S. (to Southampton).	Barometer falling again Valencia; wind backed to south. Hoist south cone
9	21	12.20 p.m.	England, S. (E. of Southampton), S.E. and E.	Sudden south gale Scilly. Hoist south cone
10	22	11.30 a.m.	Ireland, S. and E.; England, N.W. (except Manchester), W., S., S.E., and E.	Lower cone. Gale has passed over France

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the STORMS reported on the COASTS of the BRITISH ISLANDS, in 1875.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1875.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
1	A strong westerly gale was felt on all but our south and south-east coasts during the night of the 2nd and the morning of the 3rd.	Sandwich, 4 p.m., 3rd Stornoway, 3rd Thurso, 3rd Wick, 3rd Leith, 3rd Alnwick Castle, 3 p.m., 3rd Shields, 3rd Ardrossan, 3rd Glasgow, 11 a.m., 3rd Holyhead, 11 p.m., 2nd Valencia, 2nd " 7 p.m., 2nd Dublin, 5.30 a.m., 3rd Falmouth, 10 and 11 p.m., 2nd, and 2 and 3 a.m., 3rd.	N.W. by W. S.W. W. W. W. W.S.W. W. W.S.W. W.S.W. S. by E. S.S.W. S. by E. W. S.W.	50 - - - - 52 - - 47 43 - 51 - 40	- 9 9 8 8 - 9 - - 10 - 8 -	Six hours gale.     Six hours gale. Seaham, not working. Four hours gale. Two hours gale.  Six hours gale.  Two hours 2nd, two hours 3rd, gale.
2	A strong southerly gale was felt on our west and south-west coasts on the 8th.	Sandwich, 10 a.m., 9th Holyhead, 5 p.m., 9th Valencia, 7 a.m., 8th Roche's Point, 8th Scilly, 8th	S. by E. S. by E. S.E. by S. S. S.	41 47 55* 9 9	- - - 9 9	One hour only. Five hours gale. 11 hours gale; inst. out of order.
3	Fresh southerly gale, only felt at our south-western stations	Holyhead, 3 p.m., 13th Valencia, 7 p.m., 12th Roche's Point, 12th Scilly, 8 a.m., 13th Falmouth, 11 a.m., 13th	S. by E. S. by E. S. S. S. by E.	43 43 - 9 42	- - 9 9 -	Seven hours gale. Two hours gale.  One hour gale.
4	A strong southerly gale was again felt in the south-west on the 15th.	Stornoway, 15th Holyhead, 10 a.m., 15th Valencia, 8 and 9 a.m., 15th Roche's Point, 8 a.m., 15th Pembroke, 8 a.m., 15th Scilly, 15th Falmouth, 2 p.m., 15th	S.W. S. by E. S.S.W. S.S.W. S.S.W. S. S.S.W.	- 53 50 - 9 8 10 41	9 - - 9 8 - -	10 hours gale. 18 hours gale.  One hour gale.
5	The south-westerly wind, which was already blowing strongly on our south-west coasts on the morning of the 19th, increased to a heavy gale at all except our most northern stations	Leith, 19th Alnwick Castle, noon, 19th Seaham, 5 a.m., 20th Shields, 19th Scarborough, 19th Ardrossan, 19th Glasgow, noon, 3 p.m., 19th Greencastle, 19th Donaghadee, 19th Armagh, midnight, 19th Kingstown, 19th Holyhead, 10 p.m., 19th Liverpool, 19th Stonyhurst, 3 a.m., 20th Valencia, 7 p.m., 19th Roche's Point, 19th Pembroke, 19th Scilly, 19th " 20th Falmouth, 11 a.m., 19th Plymouth, 19th Hurst Castle, 20th London, 2 a.m., 20th	W.S.W. S.W. by W. W.S.W. W. W. W.S.W. S.W. W. S.W. W. S.W. by S. W.S.W. S.W. by W. S.W. S.W. W.S.W. S.W. W.N.W. S.W. S.W. W.N.W. S.W.	- 66* 45 - - - 44 - - 47 - 51 - 42 65* - - - 47 - - - 45 52 -	9 - 11 9 8 - 8 10 - 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	16 hours gale. One hour gale.    Four hours gale.  Three hours gale. 28 hours gale.  Three hours gale. Lulled mid day, 10 hours gale.  28 hours gale.
6	A severe westerly gale was felt at the mouth of the Channel, but its effect did not extend to the British Islands, the gale passing over France	Holyhead, 6 p.m., 21st Scilly, 2 p.m., 21st Falmouth, 4 p.m., 21st Plymouth, 21st	N.N.E. W. W. W.N.W.	45 - 52 -	- 10 - 8	Three hours gale. Three hours gale.

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
11	23 January	3.40 p.m.	Ireland, S. and E.; England, N.W., W., and S.	Barometer falling briskly Valencia; wind backing; looks ugly. Hoist south cone.
12	25 January	11 a.m.	Scotland, E. and W.; England E. (north of Hull).	Barometer rising in north. Hoist north cone
13	26 "	11 a.m.	Same coasts	Lower cone
14	26 January	3.30 p.m.	Ireland, S. and E.; Scotland, E. (Wick only), and W.; England, N.W., W. and S. (Devon and Cornwall only).	Barometer falling after so sudden a rise, looks bad. Hoist south cone
15	28 "	11.30 a.m.	Same coasts	Lower cone
16	9 February	11.10 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and S. (Devon and Cornwall, and the Channel Islands only).	Barometer fell fast last night in Ireland; strong south wind. Hoist south cone
17	10 "	11.40 a.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. (except Bangor).	Gale has died down. Lower cone
18	11 February	3.20 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W. and S. (Devon and Cornwall only).	Barometer falling briskly in north-west. Hoist south cone again
19	12 "	11.30 a.m.	Same coasts	Lower cone
			None	None
20	23 February	3.30 p.m.	England, E. and S.E.	Freshening northerly winds in Scotland. Hoist north cone.
21	26 February	4 p.m.	Ireland, E.; Scotland, E. and W.; England, N.W., S. and S.E.	Wind freshening again from east. Hoist north cone
22	27 "	3.30 p.m.	Same coasts	Lower cone

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1875—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
7	A deep depression passed across Scotland, and both the south-westerly and westerly winds on its southern side, and the easterly wind in the north of Scotland increased to a heavy gale.	Sandwich, 1 p.m., 24th Wick, 8 a.m., 24th Aberdeen, 8 a.m., 24th Alnwick Castle, 11 a.m., 24th Kingstown, 24th Dublin, 9 p.m., 24th Holyhead, 10 p.m., 24th Valencia, 9 p.m., 24th " 24th Roche's Point, 23rd Pembroke, 23rd " 8 a.m., 25th Portishead, 24th Scilly, 24th Falmouth, 1 p.m., 24th Plymouth, 24th Hurst Castle, 23rd Dover, 24th London, 24th Kew, 7 a.m., 24th Yarmouth, 24th	E.S.E. E.S.E. S.E. by E. W. by S. W.N.W. W. S.W. by W. W. by N. N.W. S.S.W. W.S.W. W.N.W. W. W.S.W. W.S.W. S.W. S.S.W. W.S.W. W. S.S.W. S.S.W.	51* — 42 45 — — 53 54 — — — — — — — 51 — — — — — 45 —	— — 9* — 8 8 — — 11 9 10 9 9 11 — 9 10 8 9* 8	Three hours gale. Two hours gale. Three hours gale. Five hours gale. 13 hours gale. Eight hours gale. One hour only.
	No gale					Strong winds were experienced in Caithness, but in the north-east of England the winds were very light.
8	A south-westerly gale was felt along our west and north coasts on the 26th and 27th	Sandwich, 8 p.m., 26th Stornoway, 26th Wick, 26th Aberdeen, 26th Leith, 26th Glasgow, 6 p.m., 27th Holyhead, 5 p.m., 27th Valencia, 4 a.m., 28th	S. S. E.S.E. (?) S. S.W. S. by W. S. by E. S.W. by W.	54 — — — — 40 54 46	— 9 10 9* 8 — — —	
	A fresh gale was felt in the south of Ireland, and strong winds at the mouth of the Channel, on the 9th.	Valencia, noon, 9th Roche's Point, 9th	S.E. by S. S.S.E.	47 —	— 8	Eight hours gale.
	Strong winds and moderate gales were felt on our west and north coasts	Sandwich, 2 p.m., 11th Stornoway, 11th Holyhead, 3 p.m., 11th Pembroke, 11th	S. by E. Wly. (?) S. S.W.	41 — 45 —	— 9* — 8	Four hours gale. Gale, 9 to 12 a.m. Four hours gale.
	A very strong easterly wind was experienced over England on the 20th and 21st, but it did not exceed force 8, except for one hour at Yarmouth.	Shields, 20th February Kingstown, 6 p.m., 20th Holyhead, 11 a.m., 21st Yarmouth, noon, 21st	E.N.E. E. E. by N. E. by N.	— — 46 50*	8 8 — —	47 hours above 40 miles per hour, but only reached 50 miles for one hour.
9	A strong north-easterly gale was felt over Scotland, the north-east of England, and the Irish Sea.	Sandwich, 1 p.m., 23rd Aberdeen, 8 a.m., 25th Leith, 24th Shields, 6 p.m., 24th Glasgow, 1 p.m., 24th Ardrossan, 24th Kingstown, 24th Holyhead, 4 a.m., 24th Valencia, 1 and 6 a.m., 25th	N. by W. E. by N. N.E. N.E. N.E. N. N. N.E. by N. N.E. by E.	44 46 — 40 — — — 59* 45	— — 9* 8 — 3 9* — —	Two hours gale. 19 hours gale. One hour only. Eight hours gale. 13 hours gale.
10	The wind increased to a moderate gale on all but our south coasts on the evening of the 26th, and to a fresh or strong gale in many places	Greencastle, 6 p.m., 26th Donaghadee, midnight, 26th Kingstown, 6 p.m., 26th Holyhead, 3 and 5 a.m., 27th Scilly, 2 p.m., 26th Yarmouth, 8 p.m., 26th	E. E. E. E. E. E.	— — — 52 — 50	8 9 9 — 8 —	Six hours gale. 25 hours gale.

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
-	-	-	None	-
23	8 March	3.20 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W. and S. (with Faversham).	Barometer falling in west. Southerly wind; looks like gale. Hoist south cone
24	9 "	11.40 a.m.	England, S. (with Faversham)	Lower cone; gale has passed off northwards
25	10 "	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W. and W.	Lower cone
26	10 March	3 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and S. (Devon and Cornwall and Channel Islands only).	Barometer falling again in west. Strong south-east wind. Hoist south cone
27	11 "	11.15 a.m.	Scotland, E. and W.	Lower cone; gale blowing in south-west, from eastward
28	11 "	3.40 p.m.	England, E., S.E., and S. (to Southampton)	East gale holds at Scilly. Hoist north cone
29	17 March	11.15 a.m.	England, E. and S. E.	Barometer has risen rapidly Scotland. Heavy east gale Denmark. Hoist north cone
30	18 "	11.10 a.m.	Same coasts	Lower cone; gale has died down
31	25 March	11 a.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. (Manchester only); England, E. (Newcastle only).	Strong southerly gale Stornoway. barometer falling briskly. Hoist south cone.
32	25 "	3.40 p.m.	Ireland, S. and E. (except Belfast); England, N.W. (except Manchester), W. and S. to Plymouth.	Barometer falling briskly in west. Hoist south cone
33	27 "	11.10 a.m.	Ireland, S. and E. (except Belfast); England, N.W. (except Manchester), W. and S. to Plymouth.	Lower cone
34	3 April	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and E. down to Hull.	Barometer falling fast in north-west; look out for west gale. Hoist south cone.
-	-	-	None	None
35	6 May	4 p.m.	Ireland, S. and E.; England, N.W., W., and S. (West of Jersey).	Wind breaking towards south; looks like a gale. Hoist south cone.
36	8 "	11 a.m.	Same coasts	Lower cone

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands in, 1875—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
11	A stiff south-easterly gale was felt at the mouth of the Channel on the 5th March.	Valencia, 6 p.m., 5th	S.E.	52*	-	15 hours gale.
		Roche's Point, 6 p.m., 5th	S.E.	-	9*	
		Pembroke, 5th	S.E.	-	8	
		Scilly, 5th	S.E.	-	9*	
		Falmouth, 8 p.m., 5th	S.E. by E.	49	-	
		Plymouth, 5th	S.E.	-	8	14 hours gale.
		Sandwich, 11 a.m., 8th	W.S.W.	43	-	One hour only.
		Aberdeen, 8 a.m., 9th	N.	-	8	
		Alnwick Castle, 5 and 8 a.m., 9th.	S.W.	57*	-	Seven hours gale.
		Shields, 9th	N.W.	-	10*	
		12	A strong north-westerly gale was felt on our north-west and north-east coasts on the morning of the 9th	Scarborough, 9th	N.N.W.	-
Moorside, 11 a.m., 9th	W.N.W.			42	-	
Ardrossan, 9th	N.W.			-	9	
Dublin, 9th	W.			-	9	
Holyhead, 11 p.m. and mid-night, 8th.	S.			46	-	Five hours gale.
Holyhead, 10 a.m., 9th	W.			45	-	
Liverpool, 8 a.m., 9th	W.S.W.			-	9	
Stonyhurst, 9 a.m., 9th	W. by S.			43	-	
Valencia, 5 p.m., 8th	S.S.W.			55	-	Five hours gale.
Portishead, 8 a.m., 9th	W.			-	8	
Yarmouth, noon, 9th	W.			45	-	Four hours gale.
13	A fresh easterly gale was felt over the Channel and south of England, and a hard easterly gale at Scilly on the 11th	Greencastle, 11th	S.E.	-	8	One hour only.
		Holyhead, 11 a.m. and 11 p.m., 11th.	E. by N.	40	-	
		Valencia, 7 p.m., 10th	S.E. by S.	53	-	26 hours gale.
		" 11 p.m., 11th	S.E.	62	-	
		Scilly, 11th, 2 p.m.	E.	-	10	
		Falmouth, 10 a.m. and 2 p.m., 11th.	E.	47	-	
		Plymouth, 8 a.m., 11th	E.	-	8	
		Kew, 11 a.m., 11th	E. by N.	40	-	
		Yarmouth, 1 a.m., 12th	E.	48	-	26 hours gale.
		Yarmouth, 4 p.m., 17th	N.E. by E.	47	-	Five hours gale.
		14	Strong winds were experienced all along our east coast, but reached the force of a gale at Yarmouth only	Stornoway, 8 a.m., 25th	S.S.W.	-
Alnwick Castle, 6 p.m., 25th	W.S.W.			51	-	
Shields, 8 a.m., 27th	W.N.W.			-	8	
Valencia, 1 p.m., 25th	S. by W.			46	-	12 hours gale.
15	A fresh south-westerly gale was felt at a few of our stations, principally in the north-east of England.	Alnwick Castle, 10 p.m., 3rd, and 3 a.m., 4th.	W. by S.	51	-	A fresh fall of the barometer having appeared at Valencia, after a rapid fall there in the morning, a serious disturbance was expected, but it proved to be only a subsidiary disturbance, and no storm occurred.
		Leith, 6 p.m., 3rd	W.	-	8	
		Shields, 3rd	W.S.W.	-	8	
		Holyhead, 11 a.m. and 3 p.m., 3rd.	S.S.W.	40	-	
		Valencia, 11 a.m. and noon, 3rd.	S.W.	45	-	
		Holyhead, 7, 8, and 9 p.m., 8th.	N.N.E.	50*	-	
-	A fresh south-west gale was felt on our south-west coasts on the 8th, but was confined to that region.	Valencia, 8 a.m., 8th	N.N.E.	-	8	
		Scilly, 8th	N.N.E.	-	8	
		Falmouth, 9 a.m., 8th	N.W. by N.	42	-	
-	No gale; wind freshened to a strong breeze at some of our south-western stations.	-	-	-	-	
		-	-	-	-	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
37	11 May	11 a.m.	Ireland, E. (Belfast only); and Scotland, E. and W.	Barometer falling fast in north. Strong south-west gale Stornoway. Hoist south cone
38	12 "	11 a.m.	Same coasts	Lower cone. Gale over
-	21 May	-	None	-
39	27 May	11.10 a.m.	Scotland, E. and W.	Barometer falling briskly in north; high sea. Thurso; looks bad. Hoist north cone
40	28 "	11.10 a.m.	Same coasts	Lower cone. Probable mistake in Thurso report of sea yesterday
41	14 June	2.15 p.m.	Ireland, S. and E.; England, N.W., W., and S.	South-westerly gale at Valencia. Hoist south cone.
42	10 July	4.10 p.m.	Ireland, S. and E., except Belfast; England, W., with Bangor, and S. with Faversham.	Barometer falling again, and wind backing at Valencia. Hoist south cone
43	12 "	11.10 a.m.	Same coasts	Lower cone
-	14 July	-	None	None
-	30 July	-	None	None
44	21 Sept.	3.50 p.m.	Ireland, S., Cork only, and E. Dublin only; England, W., South of Milford, and S. (Devon and Cornwall only).	South-east gale at Valencia; barometer falling; sea rising. Hoist south cone
45	22 "	11 a.m.	Same coasts	The gale has passed away. Lower cone
46	24 Sept.	3.15 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S. (Devon and Cornwall only), and E. north of Hull.	Fresh southerly gale at Valencia and Scarborough; south-easterly at Thurso; sea high. Hoist south cone.

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1875—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1875.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
-	Strong winds were experienced over our northern coasts during the 11th.	Stornoway, 8 a.m., 11th Alnwick Castle, 4 and 5 p.m., 11th.	S.S.W. S.W.	- 43	9*	
-	Strong south winds, increasing to a fresh gale in some places, were experienced on all but our south-east coasts on the 21st.	Sandwick, 9 p.m., 21st Moville, 2 p.m., 21st Donaghadee, 11 a.m., 21st Holyhead, 3 and 4 p.m., 21st Valencia, 6 a.m., 21st Falmouth, 5 p.m., 21st	S.E. by S. S.S.E. S.E. S.S.E. S.S.E. S.W. by S.	45 - - 52* 43 40	- 8 8 - - -	Six hours gale.
-	No gale; winds light or moderate in force.	-	-	-	-	Telegraphic error. Thurso sea sent as 6 should have been 2.
16	A south-west gale, which commenced at Valencia on the 14th, swept over our western and southern stations on the 15th.	Dublin, 14th Holyhead, 10 p.m., 14th Valencia, 1 p.m., 14th Pembroke, 15th Portishead, 6 p.m., 15th Scilly, 6 p.m., 15th Falmouth, noon, and 1 p.m., 15th Hurst Castle, 15th London, 15th	S.W. S. by W. S.W. by S. S.W. W. W.S.W. S.W. by W. W.S.W. S.W.	- 51 60* - - - 45 - - -	8 - - 8 8 8 - 8 8	
17	Rough weather was experienced at our southern stations and over the Channel, and the wind increased to a gale at some stations.	Sandwick, 4 p.m., 11th Thurso, 6 p.m., 11th Wick, 6 p.m., 11th Valencia, 10th Pembroke, 10th and 11th Falmouth, 9 and 10 a.m., 11th.	N.N.W. N.N.W. N.W. S. W. W. by N.	42 - - - - 41	- 8 8 8 8 -	
18	A deep depression advanced to the south-west of England, and the winds which circulated round it reached the force of a gale in many places.	Holyhead, 9 a.m., 15th Pembroke, 14th Falmouth, 1 p.m., 14th Yarmouth, 8 p.m., 15th	N.E. by E. E. S. by E. E.N.E.	53* - 41 48	- 8 - -	23 hours gale; seven hours above 50 miles.
-	Fresh northerly breezes were experienced over the north of our islands, which increased to a gale over Scotland.	Sandwick, 5 a.m., 30th Wick, 30th Aberdeen, 8 a.m., 31st Ardrossan, 30th	N.W. by W. N. N.W. N.N.W.	40 - - -	- 8 8 8	
-	No gale; but a fresh breeze was felt at some of our south-western stations.	Valencia, 3 p.m., 21st	E.	40	-	
19	A fresh to strong south-westerly to south-easterly gale was felt on all but our south coasts on the 25th and morning of the 26th.	Sandwick, midnight, 24th Stornoway, 25th Wick, 8 a.m., 25th Aberdeen, 8 a.m., 25th Shields, 24th Scarborough, 24th Holyhead, 10 a.m., 26th Valencia, 11 p.m., 25th Roche's Point, 25th Yarmouth, 1 a.m., 25th	S.E. S.S.W. S.E. S. S.S.E. S.S.E. S. S.S.W. S.S.W. S.E.	57 - - - - - 55 60 - 54	- 9 8 8 8 9 - - 8 -	25 hours gale; 10 hours over 50 miles.  12 hours gale.

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.



RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
59	18 October	11.5 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and E. (north of Hull).	Barometer rising briskly in Norway; look out for south-east gale. Hoist south cone
60	20 "	11.5 a.m.	Scotland, E.; England, E. (north of Hull)	Gale seems likely to continue. Keep up south cone
61	21 October	11.5 a.m.	England, E. (north of Hull)	Lower cone; gale only blowing in north of Scotland.
62	25 October	3.40 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling in west; fresh southerly winds. Hoist south cone
63	26 "	12.40 p.m.	England, S. (except Devon and Cornwall), and S.E. (Faversham only).	Southerly gale at Scilly. Hoist south cone
64	27 "	2 p.m.	England, E. and S.E. (except Faversham)	Barometer lowest at Scilly; look out for east gale. Hoist north cone
65	28 "	11.5 a.m.	Same coasts	Lower cone; gale over
-	-	-	None	None
66	9 November	11.15 a.m.	England, S. (west of Southampton)	Barometer falling very fast in south Ireland; likely for west gale. Hoist south cone.
67	10 "	11.10 a.m.	England, S. (East of Southampton), S.E., and E.	Wind freshening from north-east on east coast; north-west gale, Scilly. Hoist north cone
68	10 "	3 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., and W.	A fresh disturbance is coming in along Channel. Hoist north cone
69	11 "	Noon	Ireland, S. (except Cork), and E. (except Dublin); Scotland, W.; England, N.W. (with Aberystwith).	Lower cone; gale seems over for the present
70	12 "	11.10 a.m.	Ireland, S. (Cork only); England, W. (except Aberystwith).	Lower cone; gale seems over for present

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles, in 1875—continued.

Descriptive Number.	Storms.	Stations.	MAXIMUM FORCE OBTAINED.		REMARKS.	
			Direction.	Velocity. Miles per Hour.		Force. Beaufort Scale.
23	A strong east-south-east gale was felt on our east coast and at some of our north-western stations	Sandwich, 10 a.m., 20th	S.E.	44	-	16 hours gale.
		Wick, 18th	S.E.	-	9*	
		Aberdeen, 9 a.m., 20th	S.E. by E.	44	-	10 hours gale.
		Shields, midnight, 18th	S.E.	-	10	
		Scarborough, 8 a.m., 19th	E.S.E.	-	9	
		Ardrossan, 18th	E.	-	8	
		Greencastle, 18th	E.S.E. (?)	-	8	
		Donaghadee, 8 a.m., 19th	E.S.E.	-	8	
		Holyhead, 5 p.m., 18th	E. by S	45	-	Four hours gale.
		Pembroke, 18th	E.S.E. (?)	-	8	
Portishead, 18th	E.S.E.	-	8			
Yarmouth, † 5 a.m., 19th	E. by S.	54	-	† Approximate velocity; instrument out of order.		
24	The gale noticed above continued on our east coast, but ceased in the west and north-west.	Sandwich, 2 p.m., 21st	E.S.E.	47	-	16 hours gale.
		Stornoway, 8 a.m., 21st	E.S.E.	-	8	
		Wick, 8 a.m., 22nd	E.S.E.	-	(?) 10*	
		Aberdeen, noon, 21st	S.E. by E.	53	-	18 hours gale.
		" 3 p.m., 21st	S.E.	-	10	
		Alnwick Castle, 11 p.m., 20th	S.E. by E.	40	-	
		Shields, 20th	E.	-	10	
		Scarborough, 6 p.m., 20th	E.S.E.	-	9	
Yarmouth, ‡ noon, 20th	E.	60	-	‡ Doubtful; instrument out of order.		
25	Strong southerly winds were experienced at our southern stations, and fresh to strong gales at some stations	Aberdeen, 9 a.m., 27th	S.E.	40	-	One hour only.
		Shields, 27th	E.S.E.	-	8	
		Roche's Point, 6 p.m., 25th	S.S.E.	-	8	
		Pembroke, 6 p.m., 25th	S.S.E.	-	8	
		Scilly, 25th	S.S.E.	-	10	
		" 27th	N.W.	-	10	
		Falmouth, 8 a.m., 26th	S.E. by E.	40	-	One hour only.
Yarmouth, 7 a.m., 27th	E. by S.	48	-	Instrument out of order.		
26	A fresh westerly gale was felt over the south of England on the 6th, and on the wind veering to the northward a fresh gale was felt in the north-east of Scotland.	Sandwich, 3 p.m., 7th Nov.	N.W.	47	-	Two hours. The velocity did not exceed 50 miles on any but our extreme south-west coasts.
		Thurso, 8 a.m., 7th Nov.	N.	-	8	
		Wick, 6 p.m., 7th Nov.	W.N.W.	-	8	
		Ardrossan, 6th Nov.	N.	-	8	
		Holyhead, 8 p.m., 6th Nov.	N.W.	45	-	Eight hours gale.
		Valencia, 8 a.m., 6th Nov.	W.N.W.	-	8	
		Pembroke, 8 a.m., 6th Nov.	W.	-	8	
		Scilly, 2 p.m., 6th Nov.	W.	-	10*	
		Falmouth, 10 a.m., 6th Nov.	W.	49	-	16 hours gale.
		London, 8 a.m., 6th Nov.	W.S.W.	-	8	
27	A deep depression passed across the south of our Islands, and the wind increased to a moderate or fresh gale over the greater part of England	Holyhead, 5 and 6 a.m., 11th	N. by E.	42	-	Two hours only.
		Pembroke, 9th	W.S.W.	-	9*	
		Scilly, 9th	N.W.	-	11	
		Falmouth, 3 a.m., 11th	N.N.W.	49	-	One hour only.
		Plymouth, 10th	S.W.	-	8	
		Hurst Castle, 10th	W.	-	8	
Yarmouth, 5 a.m., 11th	N.E. by N.	44	-	Two hours only. This gale was very severe in France and Belgium, but was not felt in the south-east of England.		

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
71	13 November	11 a.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Southampton).	Barometer falling very fast south Ireland. East gale, Pembroke. Looks like south-east to south gale. Hoist south cone.
72	15 November	3.15 p.m.	Ireland, S. and E.; England, N.W., W., and S. (Devon and Cornwall, and Guernsey and Jersey only).	Barometer falling again in Ireland. Strong south breeze. Hoist south cone.
73	19 November	10.45 a.m.	England, E. and S.E.	Heavy north gale, Scotland. Hoist north cone
74	29 November	11.20 a.m.	England, E., S.E., and S. (east of Southampton).	Barometer falling briskly in France; look out for east gale. Hoist north cone
75	30 "	11.50 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W.	East gale in north of England. Hoist north cone
76	1 December	11.20 a.m.	England, E., (south of Hull), S.E. and S. (Dover only).	North-easterly gale Yarmouth, with rough sea; keep up north cone
77	1 "	11.20 a.m.	Scotland, E. and W.	Barometer falling in north, with light westerly wind. Lower north cone
78	1 "	3.10 p.m.	Ireland, E.; England, N.W., E. (south of Hull), S.E., and S. (Dover only).	Gale is passing off. Lower cone
79	10 December	12.20 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.	Barometer falling briskly in north-west Scotland. Hoist north cone for gale from west to north-west
80	11 "	11.5 a.m.	Same coasts	Lower cone; barometer has fallen generally. No gale

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the Storms reported on the Coasts of the British Islands, in 1875—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1875.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.		
28	A second very deep depression passed across England from the westward, and a very serious gale was felt on most of our coasts.	Aberdeen, 4 a.m., 14th	E. by N.	50*	-	For one hour only.	
		Leith, 8 a.m., 14th	E.	-	8		
		Shields, 8 a.m., 14th	N.E.	-	11*		
		Alnwick Castle, 7 a.m., 14th	E.N.E.	49	-		
		Seaham, 10 a.m., 14th	N.E.	50*	-		
		Scarborough, 14th	N.	-	9*		
		Ardrossan, 14th	E.	-	8		
		Greencastle, 14th	E.	-	9		
		Donaghadee, 8 a.m., 14th	E.N.E.	-	8		
		Kingstown, 13th	E.	-	8		
		Holyhead, 11 a.m., and noon, 14th.	N.	70	-		10 hours gale.
		Valencia, 11 p.m., 13th	N.W. by N.	44	-		Eight hours gale.
		" 13th	N. (?)	-	11		
		Roche's Point, 8 a.m., 14th	N.N.W.	-	9		
		Pembroke, 8 a.m., 14th	W.N.W.	-	10		
		Portishead, 8 a.m., 14th	S.W.	-	8		
		Scilly, 8 a.m., 14th	W.	-	11		
		Falmouth, 6 a.m., and 11 a.m., 14th.	W.	59	-		15 hours gale.
		Plymouth, 14th	S.W.	-	9		
		Hurst Castle, 14th	W.	-	10		
Dover, 8 a.m., 14th	S.W.	-	9*				
Kew, 10 a.m., 14th	S.W.	39	-				
Yarmouth, noon, 13th	E.	43	-				
" 14th	N.N.W.	-	8				
-	The wind was strong on our western coasts, but only reached the force of a gale at two stations.	Holyhead, 10 a.m., 16th	S. by E.	48	-	10 hours gale.	
		Valencia, 2, 3, and 4 a.m., 16th.	S.	45	-	Nine hours gale.	
29	A very severe north-north-westerly gale commenced in the north of Scotland on the morning of the 19th, and extended over England during the day.	Sandwick, 11 a.m., 19th	N.N.E.	48	-	Eight hours gale.	
		Stornoway, 8 a.m., 19th	N.N.E.	-	9*		
		Thurso, 8 a.m., 19th	N.N.E.	-	8		
		Wick, 8 a.m., 19th	N.N.W.	-	8		
		Nairn, 8 a.m., 19th	N.N.W.	-	8		
		Aberdeen, noon, 19th	N.	-	9*	Anemometer says 35 miles per hour.	
		Seaham, 4 p.m., 19th	N. by W.	68	-	11 hours gale.	
		Shields, 2 p.m., 19th	N.	-	10		
		Scarborough, 19th	N.N.W.	-	10		
		Ardrossan, 19th	W.	-	8		
		Greencastle, 19th	W.	-	10*		
		Donaghadee, 6 p.m., 19th	N.W.	-	8		
		Kingstown, 19th	W.	-	8		
		Holyhead, 2 p.m., 19th	N.N.W.	61*	-	15 hours gale.	
		Liverpool, 8 a.m., 19th	W.S.W.	-	8		
Pembroke, 19th	W.	-	8				
Portishead, 8 a.m., 19th	W.	-	9*				
Falmouth, 1 p.m., 19th	W.N.W.	47	-	Eight hours gale.			
Plymouth, 19th	N.N.W.	-	8				
Hurst Castle, 19th	W.	-	8				
Dover, 19th	N.N.W.	-	9*				
London, 19th	N.N.W.	-	9				
Yarmouth, 19th	N.N.W.	-	9	Anemometer, west, 33 miles.			
30	A strong easterly gale was felt along the east coast of England, and strong winds or moderate gales on our north-west coasts.	Aberdeen, 2 a.m., 30th	E. by N.	40	-	One hour only.	
		Shields, 10 a.m., 30th	E.	-	9		
		Yarmouth, 5 p.m., 30th	E.	57	-	34 hours gale.	
-	No gale; wind was very light over Scotland.	-	-	-	-	The fall of the barometer became general, and the wind consequently remained light everywhere.	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
81	13 December	3 p.m.	Ireland, S. and E., (except Belfast)	Barometer falling briskly in west. Hoist south cone.
-	17 December	-	None	None
82	18 December	4 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W., (except Cardiff and Bristol).	Barometer falling in west, and wind backing. Hoist south cone.
83	20 December	6 p.m.	Ireland, S. and E.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer has begun to fall again at Valencia. Hoist south cone.
84	21 "	3.10 p.m.	Scotland, W.; England, S., S.E., and E.	South-westerly gale, Valencia; barometer falling very fast. Hoist south cone.
85	23 "	11.40 a.m.	England, S., S.E., and E.	Lower cone
-	24 December	-	None	None
86	31 December 1876:	11.10 a.m.	Scotland, E. and W.	Barometer falling very fast; stiff south gale in the Minch. Hoist south cone
87	1 January	11.0 a.m.	Same coasts	Lower cone

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the Storms reported on the Coasts of the British Isles, in 1875—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1875.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
-	The wind freshened over Ireland, but only reached the force of a gale at Valencia.	Valencia, 10 a.m., 13th	S.E. by S.	43	-	
-	The wind blew freshly on our west coasts, and increased to a gale in some places on the night of the 17th or morning of the 18th.	Stornoway, 17th	S.	-	10*	The wind rose to a gale for two hours at Holyhead, and for a short time at Stornoway.
-		Ardrossan, 18th	S.	-	8	
-		Holyhead, 8 a.m., 18th	S. by E.	52*	-	
-		Valencia, 5 p.m., 17th	S. by E.	41	-	
-	The wind was fresh from south over the whole country, especially in the west.	Holyhead, 8 a.m., 20th	S.	47	-	Four hours gale.
-		Valencia, 2 a.m., 20th	S.	46	-	Three hours gale.
-		Pembroke, 20th	S.	-	8	
-	A strong south-westerly gale was felt on almost all our coasts on the 21st.	Sandwich, 6, 7, and 8 p.m., 21st	S.S.E.	47	-	Eight hours gale.
-		Stornoway, 6 p.m., 21st	S.	-	11	
-		Thurso, 21st	S.	-	8	
-		Aberdeen, 21st	S.	-	8	
-		Alnwick Castle, 8 a.m., 23rd	S.W. by S.	58	-	10 hours gale.
-		Shields, 5 p.m., 22nd	S.W.	-	10	
-		Ardrossan, 22nd	W.S.W.	-	9	
-		Holyhead, 2 p.m., 22nd	S.W.	53	-	16 hours gale.
-		Valencia, 6 p.m., 21st	S. by W.	62	-	13 hours gale.
-		Roche's Point, 21st	S.	-	8	
-		Pembroke, 21st	S.S.W.	-	9	
-		Portishead, 21st	W.	-	8	
-		Falmouth, 2 a.m., 22nd	S.W. by S.	50	-	Eight hours gale.
-		Plymouth, 21st	S.W.	-	8	
-	London, 21st	S.W.	-	9		
-	Yarmouth, 21st	S.W.	-	8		
32	A sudden and very severe gale was experienced in the north of our Islands on the 24th December.	Sumburgh Head, 5 p.m., 24th	S.S.W.	-	10*	22 hours gale.
-		Sandwich, 3 a.m., 25th	W. by N.	61*	-	
-		Stornoway, 24th	W.S.W.	-	11*	
-		Wick, 24th	W.	-	10*	
-		Nairn, 24th	W.	-	8	
-		Aberdeen, 9 a.m., 24th	S.W.	43	-	
-		" 24th	W.	-	9*	
-		Leith, 8 a.m., 24th	W.S.W.	-	8	
-		Alnwick Castle, noon, 24th	W. by S.	67*	-	
-		Glasgow, 1 and 2 a.m., 24th	S.W. by S.	40	-	
-		Ardrossan, 24th	W.	-	9*	
-	Holyhead, 8 a.m., 24th	S.S.W.	45	-		
-	Valencia, 6 a.m., 24th	S.W. by S.	50*	-		
-	Pembroke, noon, 24th	S.W.	-	8		
33	A fresh southerly gale was experienced on the morning of the 31st at some of our western stations.	Stornoway, 8 a.m., 31st	S.	-	10°	Seven hours gale.
-		Glasgow, 11 a.m., 31st	S. by W.	41	-	
-		Holyhead, 1 and 4 p.m., 31st	S. by W.	51*	-	
-		Valencia, 5 and 10 a.m., 31st	S. by W.	53*	-	
-		Roche's Point, 31st	S.S.W.	-	8	11 hours gale.

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

SUMMARY.

COASTS.		NUMBER OF TELEGRAMS.	
IRELAND	South	Orders to hoist cone	1a. 2p. 3a. 5a. 6p. 8c. 11a. 14b. 16a. 18c. 23a. 26a. 32a. 34a. 35c. 41p. 42a. 46a. 47c. 49c. 52b. 54b. 59b. 62a. 68c. 71a. 72b. 81a. 82b. 83a.
		Orders to hoist cone, Cork only.	44b.
		Orders to lower cone	4. 7. 10. 15. 19. 25. 33. 36. 43. 48. 51. 53. 55.
		Orders to lower cone, except Cork.	69.
Ditto	East	Orders to hoist cone	1a. 2b. 3b. 5a. 6a. 8b. 11a. 14b. 16b. 18c. 21a. 23b. 26a. 34c. 35c. 41a. 46a. 47c. 49c. 52b. 54b. 57b. 59a. 62b. 68c. 71a. 72b. 75b. 82c. 83b.
		Orders to hoist cone, Belfast only.	31b. 37b. 79c.
		Orders to hoist cone, except Belfast.	32b. 42b. 81c.
		Orders to hoist cone, Dublin only.	44c.
		Orders to lower cone	4. 7. 10. 15. 19. 22. 25. 36. 48. 51. 53. 55. 58. 78.
		Orders to lower cone, except Dublin.	69.
		Orders to lower cone, Belfast only.	17. 38. 80.
		Orders to lower cone, except Belfast.	33. 43.
SCOTLAND	East	Orders to hoist cone	1a. 6a. 12c. 16c. 18b. 21b. 26c. 31c. 34b. 37b. 39s. 46a. 52a. 54b. 59a. 60a. 75b. 79c. 82b. 86b.
		Orders to hoist cone, Wick only.	14a.
		Orders to hoist cone, except Wick and Inverness.	56a.
		Orders to lower cone	7. 13. 17. 19. 22. 27. 38. 40. 55. 58. 77. 80. 87.
		Orders to lower one, Wick only.	15.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Reiterations.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
1. 2. 3. 4. 5. 7. 11. 12. 13. 14. 15. 16. 17. 19. 20s. 25. 28. 31. 33.	31	15	7	6	-	3	-	Mar. 5. Sept. 27s. Dec. 31.
1. 4. 5. 7. 9p. 10. 12. 16. 19. 20s. 23. 28. 29.	37	10	17	10	-	-	-	Feb. 24p. Sept. 27s. <del>Nov. 9.</del>
1. 5. 7p. 8p. 9. 17. 19. 20s. 21. 22. 23. 24. 28p. 29. 32.	22	8	8	5	-	-	1	Jan. 24p. Feb. 24. Sept. 27s. Nov. 13p. Nov. 19. Dec. 24.
Carried forward	90	33	32	21	-	3	1	

SUMMARY—continued.

COASTS.		NUMBER OF TELEGRAMS.	
SCOTLAND -	West -	Orders to hoist cone -	1a. 2b. 3b. 5b. 6a. 12c. 14a. 16c. 18c. 21b. 23a. 26c. 31c. 34b. 37b. 39s. 46a. 49c. 52a. 54c. 59a. 62c. 68c. 75c. 79c. 82b. 84a. 86a.
		Orders to lower cone -	4. 7. 13. 15. 17. 19. 22. 25. 27. 38. 40. 51. 55. 69. 77. 80. 87.
ENGLAND -	North-west -	Orders to hoist cone -	1a. 2a. 3a. 5a. 6a. 11a. 14a. 16c. 18b. 21a. 23a. 26b. 34a. 35c. 41a. 46a. 47c. 49c. 52b. 54b. 57a. 59a. 62b. 68b. 71a. 72b. 75b. 82b. 83a.
		Orders to hoist cone, Manchester only.	31b.
		Orders to hoist cone, except Manchester.	8b. 32b.
		Orders to lower cone -	4. 7. 10. 15. 19. 22. 25. 36. 48. 51. 55. 58. 69. 78.
		Orders to lower cone, except Manchester	33.
		Orders to lower cone, except Bangor.	17.
Ditto -	West -	Orders to hoist cone -	1b. 2a. 3b. 5a. 6a. 8a. 11a. 14b. 16c. 18b. 23a. 26b. 32c. 34b. 35b. 41a. 42a. 46b. 47c. 49c. 52b. 57b. 59a. 62a. 68p. 71a. 72b. 83a.
		Orders to hoist cone, South of Milford.	44b.
		Orders to hoist cone, except Bristol Channel.	82b.
		Orders to lower cone -	4. 7. 10. 15. 19. 25. 33. 36. 43. 48. 51. 53. 58. 79.
		Orders to lower cone, South of Milford.	45.
Ditto -	South -	Orders to hoist cone -	1b. 6a. 11a. 21b. 23b. 41a. 42a. 47c. 49c. 84a.
		Orders to hoist cone, Devon and Cornwall only.	5a. 14b. 18b. 32b. 35b. 44c. 46b. 57b. 62a. 83a.
		Orders to hoist cone, Devon, Cornwall, and Channel Isles.	2a. 16b. 26a. 72b.
		Orders to hoist cone, West of Southampton.	8a. 66a. 71a.
		Orders to hoist cone, East of Southampton.	9b. 28c. 67a. 74b.
		Orders to hoist cone, except Devon and Cornwall.	63c.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or Telegraphic Errors.	
Brought forward - - -	90	33	32	21	-	3	1	
1. 5. 8. 12. 14p. 19. 20s. 21. 23. 29p. 31. 32. 33.	28	9	7	11	-	-	1	Sept. 27s. Nov. 19p. Dec. 24.
1. 2. 4. 5. 7. 8. 9p. 10. 12. 16. 18p. 19. 20s. 27. 28. 29. 31.	32	16	12	4	-	-	-	Feb. 24p. July 15p. Sept. 27s. Nov. 19.
2. 3. 4. 5. 6. 7. 12. 16. 17. 20s. 23. 25. 27. 28. 29p. 31.	30	12	13	4	-	1	-	Sept. 27s. Nov. 19p.
5. 6. 7. 16. 17. 27. 28. 29. 31. 4. 20s. 25. 26.	33	14	13	6	-	-	-	Nov. 19. Sept. 27s. Nov. 6.
2. 13.								
Carried forward - - -	213	84	77	46	-	4	2	

SUMMARY—continued.

COASTS.		NUMBER OF TELEGRAMS.	
ENGLAND - -	South—continued	Repetition of orders to hoist cone, Dover only.	76c.
		Orders to lower cone - -	7. 10. 22. 24. 43. 48. 85.
		Orders to lower cone, Devon and Cornwall only.	15. 19. 33. 36. 45. 51. 58.
		Orders to lower cone, Guernsey to Dover.	50.
Ditto - -	South-east - -	Orders to hoist cone - -	1c. 6a. 9b. 20c. 21a. 28b. 29b. 47c. 56b. 64b. 67c. 73a. 74b. 84a.
		Repetition - - - -	76b.
		Orders to lower cone - -	7. 10. 22. 30. 48. 58. 65. 78. 85.
Ditto - -	East - - - -	Orders to hoist cone - -	1a. 6p. 9c. 20b. 28a. 29b. 52a. 56a. 64a. 67b. 73a. 74a. 84a.
		Orders to hoist cone, North of Hull.	12c. 34a. 46a. 59a. 60a.
		Orders to hoist cone, Newcastle only.	31a.
		Repetition (South of Hull) -	76a.
		Orders to lower cone - -	7. 10. 30. 58. 65. 85.
		Orders to lower cone, North of Hull.	13. 61.
		Orders to lower cone, South of Hull.	53. 78.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY—continued.

GALES REPORTED.	REMARKS.							
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards. a	Warnings justified by subsequent Strong Winds, Forces 6 and 7. b	Warnings not justified by subsequent Weather. c	Warnings Late, Force 9 reached at two Stations before Issue. e	Warnings partially Late, Force 9 reached at one Station before Issue. p	Warnings Late, owing to Sundays or Telegraphic Errors. s	Storms for which no Warning was Issued.
Brought forward - - -	213	84	77	46	-	4	2	
5. 7. 10. 28. 29. 30. - - -	15	4	7	4	-	-	-	Jan. 24. Nov. 13.
- - - - -	20	14	3	2	-	1	-	March 9. Sept. 27s. Nov. 13. Dec. 24p.
TOTALS for Year - -	248	102	87	52	-	5	2	
Per-centages - - -	-	41.1	35.1	21.0	-	2	1	



WEATHER INTELLIGENCE.

RETURN to an Order of the Honourable The House of Commons,  
dated 10 August 1877;—for,

RETURNS “showing the LIST of PLACES to which TELEGRAPHIC WEATHER  
INTELLIGENCE was sent in 1876, arranged according to Coasts:”

“And, showing the Number of TELEGRAMS sent to each STATION, and the  
STORMS reported on the COASTS of the BRITISH ISLANDS, in 1876 (in  
continuation of Parliamentary Paper, No. 351, of Session 1876).”

Board of Trade,  
10 August 1877.

T. H. FARRER.

(Mr. Edward Stanhope.)

Ordered, by The House of Commons, to be Printed,  
10 August 1877.

WEATHER INTELLIGENCE.

RETURNS showing the List of PLACES to which  
TELEGRAPHIC WEATHER INTELLIGENCE was sent  
in 1876, arranged according to Coasts; and,  
showing the Number of TELEGRAMS sent to each  
Station, and the STORMS reported on the Coasts  
of the BRITISH ISLANDS, in 1876 (in continuation  
of Parliamentary Paper, No. 210, of Session  
1876).

(Sir Charles Alderley.)

Ordered, by The House of Commons, to be Printed,  
11 July 1876.

351.

Under 3 oz.

MEMORANDUM.

THE following pages contain a statement of all the telegrams conveying intelligence of weather issued by the Meteorological Office in the year 1876, and also of all the storms experienced on the coasts of the British Islands during the same period.

The facts on which the account of the storms has been based are,—

I. The continuous records of the direction and velocity of the wind furnished by the self-registering anemographs, on Dr. Robinson's principle, erected by the Meteorological Committee at 10 stations distributed over the United Kingdom, viz.: Kew, Yarmouth, Falmouth, Stonyhurst, Holyhead, Glasgow, Aberdeen, Sandwick Manse (Orkneys), Armagh, and Valencia; as well as at the stations of Alnwick Castle, Seaham Harbour, and Halifax, the results from which are supplied respectively by the kindness of the Duke of Northumberland, the Marquis of Londonderry, and L. J. Crossley, Esq.

II. The observations taken at the telegraphic reporting stations (29 in number) situated in these islands.

III. Reports furnished by certain volunteer observers which have been received at the Meteorological Office.

IV. The records kept at certain lightships and lighthouses on the coast, for the loan of which the committee is indebted to the kindness of the Trinity House, the Commissioners of Irish Lights, and to the Board of Northern Lights.

The Stations in question were,—

England: *Lightships*.—Kentish Knock, Galloper, Varne, Owers, Seven Stones, Scarweather, Morecambe Bay.

Ireland: *Lightships*.—Kish, Coningbeg, Daunt's Rock.

Scotland: *Lighthouses*.—Pentland Skerries, Kinnaird Head, Bell Rock, Sanda, Mull of Cantyre.

The office is without accurate information as to the wind on the west coast of Ireland, generally, from Valencia to Lough Foyle, as well as on the west coast of Scotland, from the Mull of Cantyre to Cape Wrath, with the single exception of that received from its telegraphic reporting station at Stornoway.

The only stations at which the signals are hoisted within the above limits are Tralee, Limerick, and Galway, so that it is evident that the districts in question cannot be represented in the Return now submitted.

The scales, according to which the violence of the gales is estimated, are two in number, and are as follows:—

SCALES OF WIND.

FORCE, BEAUFORT SCALE.			Approximate Velocity.
			Miles per Hour.
0. Calm	- - -	- - -	0 - - 3
1. Light air	- - -	Or, just sufficient to give steerage way.	1 - - 8
2. Light breeze	- - -	Or, that in which a well-conditioned man-of-war, with all sail set, and clean full, would go in smooth water from -	1 to 2 knots - - - 2 - - 13
3. Gentle breeze	- - -		3 to 4 knots - - - 3 - - 18
4. Moderate breeze	- - -		5 to 6 knots - - - 4 - - 23
5. Fresh breeze	- - -	Or, that to which she could just carry in chase, full and by - - - - -	Royals, &c. - - - - 5 - - 28
6. Strong breeze	- - -		Single-reefed topsails and top-gallant sails. - - - 6 - - 34
7. Moderate gale	- - -	Or, that which no canvas could withstand.	Double-reefed topsails, jib, &c. - 7 - - 40
8. Fresh gale	- - -		Triple-reefed topsails, &c. - 8 - - 48
9. Strong gale	- - -		Close-reefed topsails and courses. - - - - - 9 - - 56
10. Whole gale	- - -	Or, that with which she could scarcely bear close-reefed main-topsail and reefed fore-sail.	10 - - 65
11. Storm	- - -	Or, that which would reduce her to storm-staysails.	11 - - 75
12. Hurricane	- - -	Or, that which no canvas could withstand.	12 - - 90

The foregoing relation of the velocity of the wind, as measured by a Robinson's anemograph of large size, and its force, according to Sir F. Beaufort's scale, has been drawn up in the Meteorological Office from observations carried on at Holyhead and Yarmouth, and may be considered as approximately correct.

The principles of the system of warnings followed in 1876 are fully explained in Parliamentary Paper, No. 10, dated 25th November 1867, in which (Letter 9, from the Meteorological Committee to the Board of Trade) it is said, "The signal would be simply of a warning nature, and, without conveying the impression that the storm would necessarily strike the port where it was hoisted, would imply that extra caution in navigation was requisite." The Committee, therefore, would consider that extra caution in navigation would be necessary for coasters and fishing boats when the force of the wind reaches No. 8 of Beaufort's Scale, or even No. 7, while no serious danger can be said to exist unless the force reaches 9.

All observations of the wind in which the force exceeded 7 (a moderate gale), or the velocity exceeded 40 miles an hour, have been quoted as instances of the occurrence of a gale, but it has not been considered that the signal was hoisted late or was hauled down too soon unless the force of 9 (a strong gale) or the velocity of 50 miles an hour was reached prior to the issue of the order to hoist, or subsequent to the issue of the order to lower.

With reference to the definition of a serious gale, as force 9, which agrees with that adopted by the Board of Trade, a further limitation has been taken. The experience of the office has shown that at exposed stations, such as Holyhead and Sandwick Manse, the force of the wind is exceptionally strong, while it is exceptionally weak at inland stations, such as Kew and Armagh.

It is therefore fair to assume that the occurrence of a velocity of 50 miles an hour at Holyhead or Sandwick respectively does not in itself prove the prevalence of a strong gale on the whole line of coast of St. George's Channel and the Irish Sea, or on the east coast of Scotland, as the case may be.

In the Summary, pp. 34 to 39, all cases in which the signal has been shown to be partially late by one single report of force 9, or of the velocity of 50 miles, have been specially noted in the remarks.

The converse modification of increasing the velocities reported at inland stations, in order to obtain an improved estimate of the force of wind on the coast, has not been carried out, owing to the absence of sufficient information as to the co-efficients which should be used in each case to obtain the true velocity of the wind on the coast.

In dealing with the lighthouse records, however, some discretion has necessarily been exercised, for some of these stations report extreme forces, for the wind

wind, such as 11 or 12 of Beaufort's scale, at times when no gale of exceptional severity could possibly have occurred.

The service of Meteorological telegraphy up to end of 1875 had been subject to a constantly recurring interruption owing to the fact of no telegrams being received on Sundays. On the 1st of January 1876, a special service was commenced for the purpose of supplying to the "Times" a daily report at 6 p.m. from certain stations. This service is conducted on Sundays as on other days. The entire expense connected with it is about 500 *l.* a year, and this is borne by the proprietors of that newspaper.

These gentlemen have most liberally permitted the office to use the information collected and transmitted at their expense, for any scientific purposes for which it might be required, and the result has been that on many occasions storm warnings have been issued in the evening, and have thus enabled the office to give timely intimation of the approach of disturbances which had not shown themselves at the time of the preceding observations at 2 p.m., but which would have been felt as gales before noon next day, before which time, under other circumstances, the warnings could not have reached the coast, and would consequently have been too late.

It is mainly to these circumstances that the improvement in the results of the warnings in 1876, as compared with previous years, is to be attributed, and the Committee would here express their sincere thanks to the proprietors of the "Times" for the great assistance they have afforded to the service of storm warnings.

With reference to the question of Sunday telegraphy, the Committee in November 1876 determined to devote a portion of the available surplus funds in their hands to the maintenance of a regular Sunday service during the winter and spring of 1876-7. This system was only in operation for the last six weeks of 1876, but, as far as could be judged, the results were very satisfactory.

The Summary, p. 39, shows that the total per-centage of success in 1876 is decidedly higher than in any previous year.

The following are the respective figures:—

	WARNINGS JUSTIFIED			Warnings not justified by subsequent Weather.
	By subsequent Gales.	By subsequent Strong Winds.	Total.	
1870	46·7	21·7	68·4	22·4
1871	46·	17·7	63·7	22·
1872	61·	19·5	80·5	11·9
1873	45·2	34·	79·2	16·8
1874	45·4	32·8	78·2	16·4
1875	41·1	35·1	76·2	21·0
1876	61·1	22·8	83·9	14·0

The reasons for this marked improvement of the results as compared with previous years, are partly to be found in the circumstances already explained of the receipt of information at more frequent intervals from the reporting stations; partly, however, they are attributable to the increased facilities for information as to the weather prevailing at sea, which have been afforded by the Lighthouse Registers.

The office having to issue its warnings on the first signs of the approach of storms, has, in several cases, only to show winds of forces six and seven as justification of its cautionary telegrams. The warnings, therefore, were perfectly right in principle, though hardly necessary for large sea-going ships, as distinguished from yachts, coasters, and fishing boats.

The results of the seven years' work will, it is hoped, show that while the office cannot be expected to be able to give timely warning of *all* gales, it has yet been able to give such information as would, if attended to, have enabled our coasting seamen to avoid the violence of almost all the serious storms which have visited our coasts.

## STORM SIGNALS.

LIST of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1876, arranged according to COASTS.

COASTS.		PLACES.	COASTS.		PLACES.
IRELAND	South	New Ross. Dunmore, East. Dungarvan. Youghal. Queenstown. Cork. Passage. Tralee. Limerick. Galway.	ENGLAND	West	Holyhead. Carnarvon. Port Dinorwic. Aberystwith. Milford. Pembrey. Llanelly. Swansea. Briton Ferry. Porthcawl. Penarth. Cardiff. Newport. Weston-super-Mare. Burnham.
Ditto	East	Belfast. Howth. Kingstown.			
SCOTLAND	East	Kirkwall. Inverness. Nairn. Burghead. Lossiemouth. Buckie. Portsoy. Banff. Fraserburgh. Peterhead. Aberdeen. Stonehaven. Montrose. Broughty Ferry. St. Andrews. Dundee. Anstruther. St. Monance. Burntisland. Alloa. Grangemouth. Bo'ness. Granton. Leith. Fisherrow. Dunbar. Eyemouth.	Ditto	South (Devon and Cornwall).	Ilfracombe. Barnstaple. Port Isaac. Boscastle. Newquay. Hayle. Pendennis. Silly. Penzance. Falmouth. Plymouth (4 Stations). Teignmouth. Exeter. Exmouth.
			Ditto	South	Guernsey. St. Helier's, Jersey. Gorey, Jersey. Weymouth. Poole. Cowes. Ventnor. Portsmouth. Littlehampton. Brighton. Newhaven. Hastings. Rye. Dover.
Ditto	West (Clyde)	Glasgow. Greenock. Rothesay. Campbelton. Girvan.	Ditto	South-east	Ipswich. Harwich. Chatham. Sheerness. Faversham.
ENGLAND	North West	Silloth. Maryport. Workington. Whitehaven. Ramsey. Douglas. Castletown. Barrow. Morecambe. Fleetwood. Blackpool. Lytham. Runcorn. Southport. Liverpool. Queensferry. Hawarden. Mostyn. Bangor. Port Penrhyn.	Ditto	East	Berwick-on-Tweed. Tynemouth. South Shields. Sunderland. Middlesborough. Redcar. Whitby. Filey. Withernsea. Hull. Goole. Grimsby. Boston. Sutton Bridge. Lynn. Cromer. Yarmouth. Southwold.

RETURN showing the Number of TELEGRAMS sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
1	6 January	7 p.m.	England, E. and S.E., with Dover	Barometer very high and rising Norway; falling in south-east and wind rising. Hoist north cone
2	7 "	7 p.m.	Ireland, E. (except Belfast); Scotland, E. (except Wick).	Barometer still falling in south; rising Stornoway. Hoist north cone
3	8 "	3.15 p.m.	Ireland, E. (except Belfast)	Lower cone
4	13 January	3.15 p.m.	England, E. (South of Hull); S.E. and S. (Dover only).	Barometer falling fast in France; wind freshening from east at Yarmouth. Hoist north cone.
5	17 January	4 p.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W. and W.	Barometer falling briskly in west and north. Hoist south cone
6	17 "	7.50 p.m.	England, E. (North of Hull)	Barometer high in south; falling rapidly in north. Hoist south cone for westerly gale
7	19 "	11.10 a.m.	Ireland, S. and E. (except Belfast); England, N.W. (except Manchester) and W.	Lower cone
8	19 January	7.30 p.m.	Ireland, S. (Galway only); E. (Belfast only); Scotland, E. and W.; England, N.W., W., and E. (North of Hull).	Barometer still falling generally; most west and north. Hoist south cone again for westerly gale
9	20 "	3 p.m.	Same coasts	Lower cone; gale seems over
10	22 January	7.15 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. and E. (Newcastle and Whitby).	Barometer falling fast in north; hard southerly gale Stornoway. Hoist south cone for westerly gale.

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the STORMS reported on the COASTS of the BRITISH ISLANDS, in 1876.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
1	On the first few days of the year pressure was very much higher in the north than south, and, on a further fall occurring in the south, a stiff easterly gale was felt in the east and south.	Orkney, midnight, 6th	S.S.E.	49	-	11 hours gale.
		Wick, 8 a.m., 8th	S.E.	-	8	36 hours gale.
		Bell Rock, 7 a.m., 8th	E.	-	8	
		Shields, 8th	E.N.E.	-	8	
		Galloper, noon, 7th	E.S.E.	-	8	
		Kentish Knock, 7th	E.	-	9*	
		Brixham, 7th	E.	-	8	
		Hastings, 6 p.m., 7th	E.N.E.	-	9	
		Yarmouth, 6 p.m., 7th	E.	-	8	
		" 1 p.m., 7th	E. by N.	60	-	42 hours gale.
2	A slight north-easterly gale was felt for some hours during the 13th and 14th, on our south-east and south coasts.	Brixham, 13th	E. by S.	-	8	
		Hastings, 13th and 14th	N.E.	-	9*	
		Yarmouth, 10 p.m., 13th	E.N.E.	44	-	16 hours slight gale.
		Kentish Knock, 13th and 14th.	E.N.E.	-	8	19 hours gale.
3	A deep depression passed from west to east, a little to the north of Scotland, and very hard westerly gales were felt in the north, though in the south the wind was light.	Sumburgh Head, 8 a.m., 18th	N.W.	-	8	15 hours gale.
		Orkney, 5 a.m., 18th	W.N.W.	74	-	7 hours gale.
		Stornoway, 6 p.m., 17th	S.S.W.	-	10	16 hours gale.
		Thurso, 8 a.m., 18th	W.N.W.	-	9	17 hours gale.
		Pentland Firth, 4 a.m., 18th	W.N.W.	-	8	
		Wick, 8 a.m., 18th	W.N.W.	-	10	
		Kinnaird's Head, 8 a.m., 18th	W.	-	8	13 hours gale.
		Aberdeen, 8 a.m., 18th	W.	-	9	
		" 10 a.m., 18th	W. by N.	52	-	4 hours gale.
		Alnwick Castle, midnight, 17th.	W. by S.	49	-	2 hours only.
4	This gale was also caused by the passage of a depression near our northern coasts, but this disturbance passed more from south-west to north-east, and the wind was consequently south-westerly.	Shields, 3 a.m., 18th	W.	-	9	
		Ardrossan, 18th	W.	-	8	
		Valencia, 5 p.m., 17th	S.W. by W.	40	-	
		Orkney, 10 a.m., 20th	W.	61	-	5 hours gale.
		Pentland Firth, 9 a.m., 20th	N.W.	-	8	12 hours gale.
		Bell Rock, midnight, 19th	S.W.	-	9	29 hours gale.
		Alnwick, 11 p.m., 19th	S.W. by W.	60	-	10 hours gale.
		Seaham, 7 and 8 p.m., 19th	S.S.W.	40	-	
		Shields, 8 p.m., 19th	S.W.	-	9	
		Ardrossan, 11 p.m., 19th	S.W.	-	8	
5	A very hard south-westerly gale, which sprang up in the Hebrides on the 22nd, spread to all our more northern coasts during the next day.	Morecambe Bay, 3 a.m., 20th	W.S.W.	-	9	3 hours only.
		Holyhead, midnight, 19th	S.S.W.	44	-	10 hours gale.
		Valencia, 7 p.m., 19th	S.S.W.	48	-	
		Daunt's Rock, 9 p.m., 19th	S.W.	-	8	
		Coningbeg	S.W.	-	8	
		Orkney, 10 a.m., 24th	W.	50	-	13 hours gale.
		Stornoway, 22nd and 23rd	S.S.W.	-	11*	8 hours gale.
		Wick, 8 a.m., 24th	W.S.W.	-	8	
		Nairn, 8.30 a.m., 24th	W.S.W.	-	10	
		Kinnaird's Head, 9 a.m., 24th	N.W.	-	8	8 hours gale.
6	A very hard south-westerly gale, which sprang up in the Hebrides on the 22nd, spread to all our more northern coasts during the next day.	Aberdeen, 23rd	S.S.W.	-	9	24 hours gale.
		Bell Rock, 8 p.m., 23rd	S.W.	-	8	
		Leith, 23rd	W.S.W.	-	8	
		Alnwick Castle, 7 a.m., 24th	S.W. by W.	56	-	Squally gale.
		Seaham, 1 a.m., 24th	S. by W.	46	-	6 hours gale.
		Shields, 9 p.m., 22nd	S.W.	-	8	
		Scarborough, 23rd	W.S.W.	-	8	
		Ardrossan, 23rd	S.W.	-	9	
		Mull of Cantyre, 23rd	S.W.	-	8	
		Moville, 23rd	S.S.W.	-	9	
7	A very hard south-westerly gale, which sprang up in the Hebrides on the 22nd, spread to all our more northern coasts during the next day.	Morecambe Bay, midnight, 22nd.	S.W.	-	8	
		Holyhead, 9 p.m., 23rd	S. by W.	50	-	18 hours gale.
		Liverpool, 23rd	S.W.	-	10	
		Valencia, 2 and 9 p.m., 23rd	S. by W.	56*	-	
		Coningbeg	S.W.	-	8	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
11	2 February	4.20 p.m.	Ireland, S. (Galway only), and E. (Belfast only); Scotland, E. and W.; England, N.W., and E. (Newcastle and Whitby).	Barometer highest south, falling in north-west wind rising. Hoist south cone for westerly gale.
12	3 "	3.30 p.m.	Scotland, E. and W.; England, N.W., and E. (Newcastle and Whitby).	Lower cone gale over for present - - -
-	-	-	None - - - - -	None - - - - -
13	16 February	7.50 p.m.	Ireland, E. (Belfast only), Scotland E. and W.	Barometer highest in south, gradients rather steep, and mercury falling in north. Hoist south cone for westerly gale.
14	17 "	11.10 a.m.	Same coasts - - - - -	Lower cone, barometer has risen again -
-	-	-	None - - - - -	None - - - - -
-	-	-	None - - - - -	None - - - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
6	A deep depression skirted our northern coasts, and the wind increased to a gale from south-west in some places, and subsequently from north-west at Valentia and Portishead.	Orkney, 4 p.m., 3rd February	N.W. by W.	43	-	One hour only.
		Bell Rock, midnight, 2nd -	S.W.	-	9	18 hours gale.
		Leith, midnight, 2nd - -	S.W.	-	8	
		Alnwick Castle, 11 a.m., 3rd	W.S.W.	55	-	20 hours gale.
		Ardrossan, 3rd - - - -	W.S.W.	-	9	
		Sanda, 3rd - - - - -	N.W.	-	9	36 hours gale.
		Valentia, 3rd - - - - -	?	-	10	Anemometer gives about 20 miles per hour.
		Portishead, 3rd - - - -	N.W.	-	8	
7	A rather deep depression lay off our north western coasts, and strong south-west winds were experienced over the whole country, while in the north of Scotland a hard south-easterly gale was felt.	Orkney, 7 a.m., 15th - -	S.E. by E.	54°	-	20 hours gale.
		Pentland Firth, 5 a.m., 15th	S.E.	-	8	20 hours gale.
		Wick, 8 a.m., 15th - -	E.S.E.	-	10*	
		Kinnaird's Head, 15th -	E.	-	8	
		Aberdeen, 8 a.m., 15th -	S.E.	-	9*	
		" 6 a.m., 15th - - -	S.E. by S.	50*	-	
		Bell Rock, 3 a.m., 15th -	S.E.	-	8	14 hours gale.
		Holyhead, 2 a.m., 15th -	S.	41	-	
		Coningbeg, 15th - - -	S.W.	-	9°?	36 hours gale.
		8	No wind was experienced on our more northern coasts, but in the south-west the wind freshened to a slight gale.	Alnwick Castle, 3 a.m., 17th	W.S.W.	42
Valentia, 3 to 6 a.m., 17th -	S.W. by S.			40	-	
Pembroke, 17th - - - -	S.W.			-	8	
Portishead, 17th - - - -	W.S.W.			-	9*	
Brixham, 17th - - - - -	W.S.W.			-	8	
Falmouth, midnight, 16th -	S.S.W.			44	-	4 hours gale.
Wick, 19th - - - - -	N.E.			-	9*	4 hours gale.
Bell Rock, 11 a.m., 19th -	W.			-	8	12 hours gale.
Alnwick Castle, 2 p.m., 19th	W. by N.			53°	-	6 hours gale.
Seaham, 3 p.m., 18th - -	S. by W.			42	-	2 hours only.
9	A slight but general south-westerly gale was felt on the 18th, and as the barometer rose again, a northerly gale was experienced at a few stations.	Shields, 2 p.m., 18th - -	S.W.	-	8	
		Ardrossan, midnight, 18th -	N.W.	-	8	
		Dublin, 11 a.m., 18th - -	S.W.	-	10°?	
		Holyhead, 9 a.m., 18th -	S.	45	-	3 hours only.
		Morecambe Bay, noon, 18th	S.W. by W.	-	8	
		Valentia, 6 a.m., 18th - -	S. by W.	46	-	6 hours gale.
		Coningbeg, 8 a.m., 18th -	S.W.	-	9*	
		Pembroke, 18th - - - - -	S.W.	-	8	
		Falmouth, 7 a.m., 18th -	S.S.W.	41	-	2 hours gale.
		Brixham, noon, 18th - -	W.S.W.	-	9*	
		Hastings, 9 p.m., 17th - -	S.W.	-	8	
		London, 18th - - - - -	S.W.	-	8	
		9	A strong north-west gale sprang up in the south-west, in the early morning of the 23rd, and extending northward, was felt at most of our more western stations during the day or following night.	Stornoway, 23rd - - - -	W.N.W.	-
Nairn, 23rd - - - - -	N.W.			-	10°	
Kinnaird's Head, 7 a.m., 24th	N.			-	3	19 hours gale.
Bell Rock, 9 a.m., 24th -	N.W.			-	9*	17 hours gale.
Ardrossan, 3 a.m., 24th -	N.W.			-	9°	
Holyhead, 10 p.m., 23rd -	N.W. by W.			47	-	3 hours gale.
Liverpool, 8 a.m., 23rd -	W.S.W.			-	8	
Morecambe Bay, 9 p.m., 23rd	N.W.			-	9°	
Valentia, 22nd - - - - -	W.N.W.			-	11*?	
Coningbeg, 8 a.m., 23rd -	W.N.W.			-	9°	
Daunt's Rock, noon, 23rd -	N.N.W.			-	8	
Kish Bank, noon, 23rd -	N.N.W.			-	8	
Pembroke, 23rd - - - - -	W.			-	8	
Portishead, 23rd - - - -	W.S.W.	-	8			
Scarweather, noon, 23rd -	N.W.	-	9°			
Falmouth, 10 a.m., 23rd -	W. by N.	42	-	4 hours gale.		
Brixham, 23rd - - - - -	N.W.	-	9°			

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.



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Descriptive Number.	Day.	Hour.		
17	8 March	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling very fast, Valentia; wind backed to southward. Hoist south cone
18	8 "	2.10 p.m.	England S. (E. of Devon and Cornwall), S.E. and E.	Barometer falling very fast in west. Hoist south cone
			None	None

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
13	During the 8th a deep depression passed across Scotland, causing fresh south-westerly to westerly gales on all the English and Irish coasts, while in Scotland also, after the centre had passed, the wind rose to a fresh gale from north	Orkney, 10 a.m., 10th March	N.	49	-	11 hours gale.
		Thurso, 1 p.m., 9th	N.	-	8	
		Pentland Skerries, 2 a.m., 10th.	N.E.	-	8	35 hours gale.
		Wick, 8 a.m., 9th	N.W.	-	8	
		Kinnaird's Head, 11.30 a.m., 9th.	N.W.	-	9°	40 hours gale.
		Aberdeen, 8 a.m., 9th	W.N.W.	-	8	
		Bell Rock, 3 a.m., 9th	W.S.W.	-	(?) 10°	
		Alnwick Castle, 4 and 5 a.m., 10th.	W.S.W.	52	-	24 hours gale.
		Ardrossan, 9th	W.S.W.	-	9	
		Sanda, 9th	W.	-	9	
		Kish Bank, 4 a.m., 9th	W.	-	9	
		Holyhead, 1 p.m., 8th	S. by W.	49	-	4 hours gale.
		Morecambe Bay, 3 a.m., 9th	W. by N.	-	8	
		Valencia, 10 a.m., 8th	S.W. by S.	52*	-	6 hours gale.
		Roche's Point, 8th	W.N.W.	-	8	
		Coningbeg, noon, 8th	S.W.	-	9	
		Daunt's Dock, noon, 8th	W.S.W.	-	8	
		Pembroke, 8 p.m., 8th	W. (?)	-	11	
		Scarweather, 9 p.m. to midnight, 8th.	W.N.W.	-	10	
		Portishead, 8th	S.S.W.	-	8	
		Seven Stones, 9 p.m., 8th, to 3 a.m., 9th.	N.W.	-	10	
		Scilly, 8 a.m., 9th	W.	-	8	
		Falmouth, 3 p.m., 8th	S.W.	48	-	
Brixham, noon, 9th	W.S.W.	-	8			
Plymouth, 8th	W. (?)	-	8			
Hurst Castle, 6 p.m., 9th	W.	-	8			
Owers, 6 p.m., 9th	W. by S.	-	8			
Varne, 9 p.m., 9th	W.S.W.	-	8			
Hastings, 9 p.m., 9th	S.W.	-	(?) 10			
Folkestone, 9 p.m., 9th	S.W. by S.	-	8			
Dover, 7 p.m., 8th	S.W.	-	8			
Kentish Knock, 9 p.m., 9th	W.S.W.	-	9			
Galloper, midnight, 9th	S.W.	-	8			
14	This gale, which was caused by the passage of a small but very deep disturbance over southern England, was very severe from westward at all our Channel and south-eastern stations, while in France and North Germany the force, if anything, increased.	Valentia, 6 p.m., 12th	N.	-	8	
		Scarweather, 9 a.m., 12th	N.E.	-	9°	
		Seven Stones, 6 a.m., 12th	W.	-	9°	
		Falmouth, 8 a.m., 12th	W.S.W.	52*	-	7 hours gale.
		Dartmoor, 9 a.m., 12th	W.	-	9°	
		Plymouth, 12th	W.S.W.	-	8	
		Jersey, 9 a.m., 12th	W.S.W.	-	10°	
		Hurst Castle, 10 a.m., 12th	W.	-	10°	
		Hastings, 1 p.m., 12th	S.W.	-	10°	
		Owers, noon, 12th	W. by S.	-	8	
		Folkestone, 2 p.m., 12th	S.S.W.	-	10°	
		Varne, 3 p.m., 12th	W.S.W.	-	10°	
		Dover, 10 a.m., 12th	W.S.W.	-	8	
		London, 1 p.m., 12th	N.W.	-	10°	
Yarmouth, 2 p.m., 12th	E. (?)	54*	-	6 hours gale.		
Kentish Knock, 4 p.m., 12th	N.	-	10°			
Galloper, 4 p.m., 12th	N.N.W.	-	10°			

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Descriptive Number.	Day.	Hour.		
19	13 March	7.30 p.m.	Ireland, E. (Belfast only); Scotland, E. and W.; England, N.W. and E. (north of Whitby).	Barometer falling fast, Stornoway, with sleet. Hoist north cone for north-westerly gale.
20	13 "	8.20 p.m.	Ireland, S. and E. (except Belfast); England, W., S., S.E., and E. (south of Hull).	Barometer falling fast in north-west, appearance threatening for north-west gale. Hoist north cone - - - - -
-	-	-	None - - - - -	None - - - - -

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the Storms reported on the Coasts of the British Isles, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.		
15	A general and severe westerly gale was felt during the 14th and part of the 15th.	Orkney, 5 and 6 p.m., 15th	N.W.	55	-	14 hours gale.	
		March.					
		Stornoway, 14th - - -	(?) W.	-	9		
		Thurso, 2 p.m., 15th - -	N.W.	-	9		
		Wick, 8 a.m., 15th - - -	N.W.	-	8		
		Kinnaird's Head, 4 p.m., 15th	N.W.	-	8		31 hours gale.
		Aberdeen, 4 and 7 p.m., 15th	W.N.W.	50	-		7 hours gale.
		Bell Rock, 4 a.m., 15th -	W.S.W.	-	9		26 hours gale.
		Alnwick Castle, 10 a.m., 15th	W.S.W.	52	-		7 hours gale.
		Shields, 8 p.m., 14th - -	W.	-	9		
		Scarborough, 14th - - -	W.	-	9		
		Ardrossan, midnight, 14th -	W.	-	9		
		Glasgow, 2 p.m., 15th - -	N.W. by W.	45	-		One hour only.
		Mull of Cantire, 2 a.m., 15th	W.N.W.	-	12 (?)		
		Sanda, 15th - - - - -	W.	-	9		
		Moville, 14th - - - - -	W.	-	9		Lasted all day.
		Donaghadee, 14th - - - -	W.	-	9		
		Dublin, 9 p.m., 14th - - -	W.	-	8		
		Kingstown, 14th - - - - -	W.	-	8		
		Kish Bank, midnight, 14th -	W.N.W.	-	12 (?)		
		Holyhead, 9 a.m., 15th - -	W. by S.	47	-		About 18 hours gale.
		Liverpool, 14th - - - - -	W.S.W.	-	9		All day.
		Stonyhurst, 2 p.m., 15th -	W. by S.	40	-		
		Morecambe Bay, 6 a.m., 15th	W.N.W.	-	9		
		Valencia, 9 p.m., 14th - -	W. by S.	47	-		19 hours gale.
		Roche's Point, 14th - - -	W.	-	8		
		Coningbeg, 8 p.m., 14th -	W.S.W.	-	9		
		Daunt's Rock, 4 p.m., 14th -	W. by N.	-	9		
Pembroke, 14th - - - - -	(?) W.	-	10				
Scarweather, midnight, 14th	W. by S.	-	10				
Portishead, 14th - - - -	W.S.W.	-	9				
Seven Stones, 9 p.m., 14th -	W.	-	9				
Falmouth, 9 a.m., 14th, and 1 p.m., 15th.	W.	48	-		About 24 hours gale, with lulls.		
Brixham, 14th and 15th - -	W.N.W.	-	9				
Plymouth, 14th and 15th - -	S.W.	-	8				
Hurst Castle, 8 a.m., 15th -	W.	-	8				
Owers, 3 a.m., 15th - - -	W.	-	8				
Varne, 3 a.m., 15th - - -	W.S.W.	-	9				
Hastings, 9 a.m., 15th - -	S.W.	-	9				
London, 7 p.m., 14th - - -	W.	-	10				
Yarmouth, 14th - - - - -	W.S.W.	-	9		Anemometer gives only 39 m.		
Kentish Knock, 9 a.m., 15th	W.N.W.	-	9				
16	The wind rose to a brisk gale from north on the evening of the 17th, and after lulling for a few hours sprang up again on the 18th, the maximum forces being registered on the latter day.	Orkney, 6 p.m., 18th - - -	N.N.W.	60*	-	About 30 hours gale, but lulling at times.	
		Thurso, 18th - - - - -	N.N.W.	-	8		
		Pentland Skerries, 7 p.m., 19th.	N.	-	8		19 hours gale.
		Nairn, midnight, 17th - -	N.W.	-	9*		
		Kinnaird's Head, 6 p.m., 18th.	N.E.	-	9*		48 hours gale.
		Aberdeen, 8 p.m., 18th - -	W.N.W.	40	-		3 hours gale.
		Bell Rock, 11 p.m., 18th -	N.N.W.	-	10*		36 hours gale.
		Alnwick Castle, midnight, 18th.	N.W.	45	-		3 hours gale.
		Shields, 18th - - - - -	N.	-	9*		
		Scarborough, 18th - - -	N.	-	9*		
		Moville, 18th - - - - -	N.	-	8		
		Kingstown, 18th - - - - -	N.N.W.	-	8		
		Kish Bank, 8 p.m., 18th - -	N.E.	-	9*		
		Holyhead, 9 p.m., 17th, and 7 p.m., 18th - - - - -	N.N.W. } N.E. by N. }	55*	-		22 hours gale, with lulls.
		Morecombe Bay, 3 a.m., 19th	N. by W.	-	9*		
		Roche's Point, 17th - - -	N.N.W.	-	8		
		Coningbeg, 8 p.m., 18th -	N.	-	8		
Falmouth, 11 and midnight, 18th, and 1 a.m., 19th.	W. by N.	40	-				

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RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
-	-	-	None	None
-	-	-	None	None
21	17 April	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, W., S. (Devon and Cornwall) and E. (N. of Hull).	Barometer falling fast, Valentia; strong south-east wind. Hoist south cone
22	18 "	11 a.m.	Same coasts	Lower cone
23	4 July	7.15 p.m.	England S. and S.E.	Barometer falling fast, Valentia, with south-easterly wind and threatening appearance. Hoist south cone
24	5 "	11.20 a.m.	Same coasts	Lower cone; gale not coming on
-	-	-	None	None
-	-	-	None	None

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the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.			REMARKS.	
		Stations.	Direction.	Velocity. Miles per Hour. Force. Beaufort Scale.		
17	A depression advanced over us from the south-westward, causing fresh south-westerly gales on the south-coast, and (as it disappeared) northerly gales in the north and west.	Orkney, 8 p.m., 10th April - Stornoway, 10th - - - Nairn, 10th - - - - Seaham, 5 p.m., 10th - Holyhead, 6 a.m., 11th - Morecambe Bay, 9 a.m., 11th - Valentia, 10th - - - St. Ann's Head, 1 a.m., 11th - Scarweather, midnight, 10th - Scilly, 8 a.m., 10th - - Seven Stones, 3 a.m., 10th - Falmouth, 8 a.m., 10th - Brixham, noon, 10th - - Hurst Castle, 10th - - Hastings, 9 p.m., 10th - Varne, 9 a.m., 10th - -	N.E. by N. N.N.E. N.W. N. by W. N.W. by W. N.N.W. N.W. (?) W.N.W. N.W. S.W. W.S.W. S.S.W. S.W. S.W. S.W. W.S.W.	47 - - 40 47 - - - - - - 45 - - - - -	- 8 8 - - 8 11° 10° 8 10° - 10° - 8 8 8	6 hours gale.   One hour only. 10 hours gale.   5 hours gale. 3 hours gale.
18	A stiff northerly gale was felt on our south-west coasts on the early morning of the 14th; it was however of a local character.	Holyhead, 11 p.m., 13th - Pembroke, 14th - - - Portishead, 14th - - - Scarweather, 9 a.m., 14th - Scilly, 14th - - - - Seven Stones, 3 a.m., 14th - Falmouth, 11 a.m., 14th - Brixham, noon, 14th - - London, 14th - - - - Yarmouth, 8 a.m., 14th -	N.E. by N. N. N. N.E. N. N.N.E. N.W. by N. N.E. N.W. E. by S.	48 - - - - - 54* - - 43	- 8 9° 9° 8 8 - 9* 9* -	17 hours gale.     12 hours gale, about 8 hours gale.
	The wind was locally fresh in the south-west; but no gale was experienced - - -	Orkney, 1 and 2 p.m., 17th - Valentia, midnight, 16th, 2 a.m., 17th. Daunt's Rock, noon, 17th - St. Ann's Head, 17th - -	E.S.E. S.E. S.E. S.E.	41 45 - 8	8 hours gale, began 9 p.m., 16th.	
	The depression which caused the issue of this warning passed northward up our western coasts, instead of crossing the country, and the only gale felt was a slight one from south-west in the north -	Stornoway, 5th - - - Alnwick Castle, noon 5th - Bell Rock, 3 p.m., 5th - Valentia, 11 p.m., 4th - -	S.S.W. W.S.W. W.S.W. S. by W.	- 40 - 51*	10* 8 5 hours gale.	
	A slight westerly gale blew for a few hours on the 9th at some of our northern stations.	Sandwich, 6 p.m., 9th - - Bell Rock, 3 p.m., 9th - - Alnwick Castle, 11 a.m. and 3 p.m., 9th. Shields, 8 a.m., 10th - - Ardrossan, 6 p.m., 9th - -	W. by S. W.S.W. W.S.W. W. N.W.	51* - 42 - 8	4 hours gale.	
	The wind blew strongly from south-west at all our western and northern stations on the 30th, and reached the force of a fresh gale at some of the more exposed ports.	Seaham, noon, 30th - - - Shields, a.m., 30th - - - Morecambe Bay, noon, 30th - Holyhead, 9 a.m., 30th - Valentia, 4 a.m., 30th - - Seven Stones, 3 a.m., 31st -	S.S.W. W. S.W. by W. S.S.W. S.S.W. W.N.W.	42 - - 43 44 -	8 8 8 4 hours gale. 3 hours gale.	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
25	2 August	3.40 p.m.	Ireland, S. and E.; Scotland, E. (north of Aberdeen) and W.; England, N.W. and W.	Barometer falling fast, Valentia; south wind rising. Hoist south cone - - - -
26	3 "	8 p.m.	Ireland, S. and E.; England, N.W. and W.	Lower south cone - - - -
27	4 August	3 p.m.	Ireland, S. (Waterford and Cork only), E. (Dublin only); England, W. (Milford to Bristol), S., S.E., and E. (south of Lynn).	Barometer falling, Scilly; wind freshening from south-east; sea rising. Hoist south cone - - - -
28	5 "	11 a.m.	Same coasts - - - -	Lower south cone - - - -
29	31 August	11 a.m.	England, S., S.E., and E. - - - -	Barometer very low at Shields, rising Ireland; strong north-west gale in west. Hoist north cone - - - -
30	1 September	11 a.m.	Same coasts - - - -	Lower cone - - - -
31	3 September	7.15 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W. and S. (west of Southampton).	Barometer falling fast, Valentia, with strong southerly wind and rising sea. Hoist south cone - - - -
32	4 "	8 p.m.	England, S. (east of Southampton) - - - -	Barometer falling again, Scilly, with fresh southerly gale and rough sea. Hoist south cone - - - -
38	5 "	11 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.	Lower cone - - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Isles, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
19	A deep depression travelled in a north-north-easterly direction, over our western and northern coasts, and fresh or hard gales, generally from south or south-west, were felt at all our western and northern stations - - - -	Sumburgh Head, 8 a.m., 4th August.	S.W.	-	8	The depression which caused this decrease in the south-west proved to be exceedingly slight, and although it passed directly across the country, did not cause any gale.
		Sandwich, 10 a.m., 4th -	W. by S.	48	-	
		Wick, 8 a.m., 3rd - - -	S.E.	-	8	
		Pentland Skerries, 9 a.m., 4th -	W.	-	8	
		Kinnaird's Head, 10.30 p.m., 3rd -	N.W.	-	8	
		Aberdeen, 9 p.m., 2nd - - -	S.	-	8	
		Observatory, 7 a.m., 3rd -	S.E. by S.	41	-	
		Alnwick Castle, 2 p.m. and 9 p.m., 3rd.	W. by S.	46	-	
		Shields, 3rd - - - -	W.S.W.	-	9	
		Scarborough, 3rd - - - -	S.S.E. & S.W.	-	8	
		Mull of Cantire, 7 p.m., 2nd -	S.E.	-	8	
		Sanda, 10 to 12 p.m., 2nd -	S.S.E.	-	9	
		Kish Bank, 4 p.m., 2nd - -	S.S.W.	-	8	
		Holyhead, 11 p.m., 2nd - -	S. by E.	64	-	
		Liverpool, 6 p.m., 3rd - -	W.S.W.	-	8	
		Morecambe Bay, midnight, 2nd -	S.	-	9	
		Valentia, 1 p.m., 2nd - - -	S. by E.	53*	-	
		Coningbeg, noon, 2nd - - -	S.S.W.	-	10*	
		Roche's Point, 6 p.m., 2nd -	S.	-	8	
Daunt's Rock, noon, 2nd - -	S.S.W.	-	9*			
Pembroke, 2nd - - - -	S.W.	-	8			
Portishead, 3rd - - - -	S.S.W.	-	8			
Scarweather, midnight, 2nd -	S. by W.	-	8			
Seven Stones, 9 p.m., 2nd -	S.W.	-	8			
Scilly, 2nd and 3rd - - - -	S.W.	-	9*			
Falmouth, 3 a.m., 3rd - - -	S.S.W.	40	-			
Plymouth, 2nd and 3rd - - -	S.S.W.	-	8			
No gale - - - -	-	-	-	-		
20	A fresh to strong north to north-west gale was felt on nearly all coasts on the 31st, in the rear of a depression, which travelled across our islands, and over the North Sea - - - -	Nairn, 6 a.m., 31st - - -	E.N.E.	-	8	10 hours gale.
		Bell Rock, 2 p.m., 31st - -	N.	-	9*	
		Shields, 31st - - - -	N.E.	-	8	
		Seaham, 10 p.m., 31st - - -	N.	45	-	
		Scarborough, 8 a.m., Sept. 1st -	N.	-	8	
		Mull of Cantire, 6 a.m., 31st -	N.W.	-	8	
		Holyhead, 9 a.m., 31st - - -	N.W. by N.	65*	-	
		Morecambe Bay, 3 a.m., 31st -	W. by N.	-	8	
		Roche's Point, 8 a.m., 31st - -	N.N.W.	-	8	
		Coningbeg, 4 a.m., 31st - - -	N.W.	-	8	
		Daunt's Rock, noon, 31st - - -	N. by W.	-	9*	
		Pembroke, 31st - - - -	N.W.	-	8	
		Scarweather, noon, 31st - - -	N.N.W.	-	9*	
		Seven Stones, 9 a.m., 31st - -	W.N.W.	-	9*	
Scilly, 8 a.m., 31st - - - -	W.N.W.	-	9*			
Falmouth, 10 a.m., 31st - - -	W.N.W.	52*	-			
Plymouth, 31st - - - -	N.W.	-	9			
Brixham, 31st - - - -	W.N.W.	-	8			
Hurst Castle, 31st - - - -	W.N.W.	-	8			
Owers, 10 p.m., 31st - - - -	W. by N.	-	8			
Hastings, 9 p.m., 30th - - -	S.W.	-	9*			
21	Two depressions passed up our west coasts. The first caused a slight south-east gale in the north-east; but strong wind only in the west and south. The second produced strong winds on all our west and south coasts, with a fresh gale in exposed places, and in the south-west of England - - - -	Kinnaird's Head, 2 p.m., 4th -	S.E.	-	8	One hour only.
		Aberdeen, 11 a.m., 4th - - -	S.E.	44	-	
		Bell Rock, 9 a.m., 4th - - -	S.E.	-	8	
		Alnwick Castle, 7 a.m., 5th -	S.W.	45	-	
		Scarborough, 8 a.m., 4th - - -	S.S.E.	-	8	
		Holyhead, { 1 and 3 a.m., 4th -	S. by E.	41	-	
		{ midnight, 4th - - - -	S.S.W.	48	-	
Portishead, 4th - - - -	S.S.W.	-	8			
Scilly, 6 p.m., 4th - - - -	S.S.W.	-	8			
Plymouth, 5th - - - -	W.	-	8			
Brixham, noon, 5th - - - -	W. by N.	-	8			

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
34	10 September	7.30 p.m.	Scotland, E. ; England, E. (north of Hull)	Barometer very low and falling in Norway; still rising England; strong north wind Norway. Hoist north cone
35	11 "	7.20 p.m.	Same coasts	Lower cone
36	12 "	7.10 p.m.	England, E. (north of Hull)	Gale still holds in Scotland, and threatens to extend southwards. Hoist north cone
37	13 "	11.10 a.m.	Same coast	Lower cone
38	15 September	3.50 p.m.	Ireland, E. (Dublin only), and S. (Cork only); England, W. (south of Milford), and S. (west of Southampton).	South-easterly gale at Scilly. Barometer falling. Sea rising. Hoist south cone
39	16 "	11 a.m.	Same coasts	Lower cone
—	—	—	None	None
40	25 September	3.40 p.m.	Ireland, S. and E.; England, N.W., W., and S.	Barometer falling again at Valentia, and wind backing, with dull weather. Hoist south cone
41	26 "	11.10 a.m.	Scotland, E. and W.; England, S.E. and E.	Barometer falling fast in west. East gale Holyhead. Strong west breeze Scilly. Hoist north cone
42	27 "	10.50 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., S., S.E., and E.	Lower cone
43	30 September	10.50 a.m.	Ireland, S. and E.; England, N.W., W., S., S.E., and E.	Barometer falling fast in south-west. Heavy east gale Scilly. Hoist north cone
44	1 October	7.15 p.m.	Same coasts	Lower cone
45	2 October	11 a.m.	Ireland, S. and E.; England, N.W., W., and S. (Devon and Cornwall).	Barometer falling again in south-west. South-east gale Pembroke. Hoist south cone
46	3 "	4 p.m.	Same coasts	Lower cone
47	3 October	7.50 p.m.	Scotland, E.	Barometer falling quickly. Hoist south cone
48	4 "	11 a.m.	Same coast	Lower cone

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the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
22	A slight northerly gale was felt on the east coast of Scotland, and strong winds from the same quarter in the north-east of England	Thurso, 2 p.m., 11th September	N.N.W.	—	8	One hour only.
		Nairn, midnight, 12th - Kinnaird's Head, 3 a.m., 13th - Aberdeen, 11th and 12th - Holyhead, 6 a.m., 12th -	N.W. N. N.N.W. N.N.W.	— — — 43	8 8 8 —	
—	No gale.					
23	A fresh to strong south-west to west gale blew in the Channel for a few hours during the 24th	Holyhead, 11 a.m., 24th	S.S.E.	42	—	One hour only.
		Liverpool, 24th - Portishead, 24th - Seven Stones, 3 p.m., 24th - Scilly, 24th - Falmouth, 5 p.m., 24th - Plymouth, 24th - Brixham, noon, 24th - Hurst Castle, 6 p.m., 24th - Hastings, 9 p.m., 24th - London, 24th -	W. S. W.N.W. W. W. S.W. S.W. W. S.W. W.	— — — — 51* — — — — —	8 8 8 9* — 9* 8 8 9* 8	
—	The wind blew strongly on our south-western and southern coasts on the 26th, but attained the force of a gale in a very few places	Holyhead, 8 a.m., 26th	E.	41	—	One hour only.
		Brixham, noon, 26th -	S.W.	—	8	
24	An easterly gale was felt on the coasts of England and Ireland during the 30th September. It commenced in the south-west on the morning of the 30th, and did not subside in the south-east until the morning of the 1st	Scarborough, 30th	E.N.E.	—	8	28 hours gale.
		Kingstown, 1 p.m., 30th - Dublin, 30th - Kish Bank, noon, 30th - Holyhead, 9 and 10 p.m., 30th - Morecambe Bay, noon, 30th - Valentia, 11 a.m., 30th - Coningbeg, noon, 30th -	E. E. E.S.E. E.N.E. E. N.E. E. by S.	— — — 52 — 43 —	— 10 8 — 8 — — —	
25	The wind blew a moderate or fresh gale from south-east on all our western and south-western coasts on the 2nd or 3rd	Daunt's Rock, noon, 30th	E.	—	8	One hour only.
		Pembroke, 2 p.m., 30th - Scarweather, 3 a.m., 30th - Scilly, 8 a.m., 30th - Seven Stones, 3 a.m., 30th - Falmouth, 5 a.m., 30th - Brixham, noon, 30th - Gallopier, 9 a.m., 1st October - Yarmouth, 3 a.m., 1st -	E.N.E. S.E. E. E.S.E. E. by S. S.E. E. by N. N.E. by E.	— — — 45 — — — 57	8 8 8 10 9* — 8 8	
—	Strong south south-east winds were experienced in the east of Scotland.	Kingstown, 2nd	S.W.	—	8	? Number of hours. Anemometer out of action. Holyhead recorded 34 miles at 2 p.m., 3rd.
		Valentia, 6 a.m., 3rd - Coningbeg, 8 p.m., 2nd - Scarweather, 3 p.m., 2nd - Scilly, 2nd -	S.E. S.S.E. S.E. S.E.	48 — — —	8 8 8 8	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

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Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
49	11 October	10.40 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., S., S.E., and E.	Heavy southerly gale, Scilly; barometer at Valentia, 28.75. Hoist south cone
50	11 "	3.50 p.m.	Scotland, E.	Barometer very low, Greencastle; moderate south-westerly gale, Holyhead; heavy, Scilly. Hoist south cone
51	12 "	11 a.m.	England, S.E. and E.	There is another southerly gale at Valentia, but lower south cone for the present
52	12 "	3.40 p.m.	Scotland, E.	The wind is again strong southerly at Valentia. Lower cone for the present
53	12 "	7.15 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S.	Lower cone. Weather seems more settled
54	15 October	7.30 p.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling very quickly, Valentia. Hoist south cone
55	16 "	11.10 a.m.	Scotland, E.	Barometer low in west; fresh southerly gale, Irish Channel. Hoist south cone
56	17 "	11 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W., W., and S. (Devon and Cornwall only).	Lower cone
-	-	-	None	None
57	1 November	3.30 p.m.	Scotland, E. and W.; England, E. (Newcastle only).	Barometer falling again in north; wind backed to W. Hoist north cone
58	2 "	11.15 a.m.	Same coasts	Lower cone. Depression has passed on to Norway

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the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
26	A hard south to south-west gale was experienced on all coasts during the 11th	Sumburgh Head, midnight, 11th October.	W.N.W.	-	8	6 hours gale.
		Sandwick, 3 a.m., 12th	W.N.W.	62	-	
		Pentland Skerries, 3.30 a.m., 12th.	W.	-	8	
		Wick, 12th - - - -	N.W.	-	9	
		Bell Rock, 2 a.m., 12th	W.S.W.	-	8	
		Alnwick Castle, 3 a.m., 12th	W.S.W.	45	-	
		Shields, 11th - - - -	S.S.W.	-	9	
		Ardrossan, 11 p.m., 11th	S.W.	-	10	
		Sanda, 11 p.m., 11th	S.W.	-	9	
		Dublin, 1-7 p.m., 11th	S.W.	-	9	
		Holyhead, noon, 11th	S.S.W.	58*	-	
		Stonyhurst, 2 p.m., 11th	S.	42	-	
		Morecambe Bay, 6 p.m., 11th	S.W.	-	10	
		Valentia, 11 a.m., 11th	W.S.W.	53*	-	
		Roche's Point, 4 p.m., 11th	S.W.	-	8	
		Coningbeg, 4 p.m., 11th	W.S.W.	-	10	
		Daunt's Rock, noon, 11th	W.	-	10	
		Pembroke, 8 p.m., 11th	W.	-	10	
		Scarweather, 9 p.m., 11th	W.S.W.	-	8	
		Portishead, 11th - - -	S.S.W.	-	8	
		Seven Stones, 9 p.m., 11th	S.W.	-	8	
		Scilly, 8 a.m., 11th	S.S.W.	-	10*	
		Falmouth, 8 and 9 a.m., 11th	S.	44	-	
		Plymouth, 6 p.m., 11th	S.W.	-	9	
		Hurst Castle, 6 p.m., 11th	W.	-	8	
		Folkestone, 5.25 p.m., 11th	S.W.	-	9	
27	A fresh or hard southerly gale was experienced on all our western and northern coasts during the morning of the 16th	Sandwick, noon, and 1 p.m., 16th.	S.S.E.	41	-	6 hours gale.
		Pentland Skerries, 7 a.m., 16th.	S.	-	8	
		Bell Rock, 10 a.m., 16th	S.S.E.	-	8	
		Ardrossan, 9 p.m., 16th	S.E.	-	8	
		Mull of Cantire, 16th - -	S.S.W.	-	8	
		Sanda, 3 a.m., 16th - - -	S.	-	9	
		Donaghadee, 8 a.m., 16th	S.S.W.	-	8	
		Kish Bank, 4 a.m., 16th	S.S.W.	-	8	
		Holyhead, 6 and 7 a.m., 16th	S. by E.	50	-	
		Morecambe Bay, midnight, 16th.	S.S.E.	-	8	
		Valentia, 5 p.m., 15th - -	S.	48	-	
		Coningbeg, 4 a.m., 16th	S.S.W.	-	9	
		Daunt's Rock, midnight, 15th	S.S.W.	-	9	
		Pembroke, 16th - - - -	S.	-	8	
28	A fresh but local north-westerly gale blew in the north and north-east of Scotland on the 29th or 30th October.	Sumburgh Head, 29th - - -	N.W.	-	8	50 hours gale.
		Sandwick, 1 a.m., 30th	N.W. by W.	62*	-	
		Pentland Skerries, 3 a.m., 30th.	S.W.	-	8	
		Wick, 29th - - - - -	N.W.	-	9*	
		Nairn, 29th - - - - -	W.N.W.	-	8	
		Kinnaird's Head, 2.30 a.m., 30th.	N.N.W.	-	8	
		Aberdeen, 30th - - - -	N.N.W.	-	8	
		Bell Rock, 30th - - - -	N.N.W.	-	8	
		Alnwick Castle, 6 a.m., 29th	W.	50*	-	
		Shields, 29th - - - - -	W.	-	8	
-	The wind blew a strong breeze from N.W. in the north, on the 1st, and reached the force of a moderate gale in the Orkneys	Fair Island, 1st - - - -	W.N.W.	-	8	

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
59	11 November	11.5 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon, Cornwall, and Channel Islands only).	Barometer lowest Valentia; southerly gale in south-west. Hoist south cone
60	11 "	3.15 p.m.	England, S. (east of Southampton)	Barometer falling fast west; heavy south-east gale Scilly. Hoist south cone
61	11 "	7.15 p.m.	England, E. and S.E.	Barometer still falling at Scilly, and gale backing to east. Hoist south cone for easterly gale
62	12 "	9.45 a.m.	Scotland, E.	Barometer still falling in south; south-easterly gale apparently spreading northward. Hoist south cone
63	13 November	Noon	Ireland, S. and E.	Barometer seems to be falling again Valentia; east gale Scotland. Hoist south cone
64	14 "	3.40 p.m.	Scotland, E. and W.; England, E.	Barometer falling briskly Ireland; gale will probably rise again. Hoist south cone again
65	15 "	11.10 a.m.	England, E.	Lower cone; gale has passed on to Scotland
66	18 November	7.15 p.m.	Scotland, E.	Barometer high Norway; falling north-west. Hoist south cone
67	19 "	6.40 p.m.	Same coast	Lower cone
68	22 November	3.30 p.m.	Ireland, S. and E.; Scotland W.; England, N.W., W., and S. (Devon and Cornwall).	Barometer lowest in west; slight southerly gale Valentia. Hoist south cone
69	23 "	11.30 a.m.	Scotland, E.	Barometer lowest Valentia; southerly gale in south of Ireland, and at Stornoway. Hoist south cone
70	23 "	3.30 p.m.	England, S. (Guernsey to Southampton)	South-easterly gale Scilly and Pembroke. Hoist south cone
71	24 "	11.10 a.m.	Ireland, S. and E.; England, N.W., W., and S. (west of Southampton).	Lower cone; gale seems over for the present

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the Storms reported on the Coasts of the British Isles, in 1876—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.	
29	A strong south-easterly gale commenced in the south-west on the night of the 10th, and extended to all coasts during the following day	Stornoway, 8 a.m., 13th November.	E.S.E.	-	8	Sandwick anemometer not working. 4 hours gale. 6 hours gale. Seaham anemometer not working. 14 hours gale. Gale began at noon, 10th, continued for 26 hours. 24 hours gale. Number of hours doubtful. 15 hours gale. 3 hours gale. 6 hours gale. Anemometer only 30 m. per hour. 19 hours gale. Anemometer gives only 23 m. for the maximum. 30 hours gale. One hour only.
		Aberdeen, 9 and 10 p.m., 12th	S.E. by E.	42	-	
		Bell Rock, 2 a.m., 12th	E.	-	8	
		Alnwick Castle, 7 p.m., 12th	E.S.E.	42	-	
		Shields, 12th	S.E.	-	10	
		Scarborough, 8 a.m., 12th	S.E.	-	9	
		Mull of Cantire, 12th	E.	-	8	
		Sanda, 2 p.m., 12th	E.N.E.	-	8	
		Donaghadee, 8 a.m., 11th	S.	-	8	
		Dublin, 11th	S.E.	-	8	
		Kish Bank, 4 a.m., 12th	S.E.	-	8	
		Holyhead, 8 and 9 a.m., 12th	E.	51	-	
		Morecambe Bay, 3 a.m., 12th	S.E. by E.	-	9	
		Valentia, 5 a.m., 11th	S. by E.	47	-	
		Coningbeg, 4 p.m., 11th	S.E.	-	10*	
		Roche's Point, 8 a.m., 11th	S.S.E.	-	8	
		Daunt's Rock, 4 a.m., 11th	S.S.E.	-	9*	
		Pembroke, 11th	S.E.	-	9	
		Scarweather, midnight, 11th, to 3 a.m., 12th.	S.E.	-	9	
		Portishead, 11th	E.S.E.	-	8	
		Seven Stones, 9 p.m., 11th	S.E.	-	9	
		Scilly, 8 a.m., 11th	E.S.E.	-	9*	
		Falmouth, 8 p.m., 11th	E. by S.	58	-	
		Plymouth, 11th	S.E.	-	9	
		Owers, midnight, 11th	S.E.	-	8	
		Yarmouth, 9 a.m., 12th	E.S.E.	65*	-	
		Galloper, 3 a.m., 12th	S. by E.	-	8	
		Kentish Knock, midnight, 11th.	S.E.	-	9	
		30	A fresh south to south-east gale was felt on the Irish, Scotch, and north-east coast of England on the 14th or 15th	Sumburgh Head, 8 a.m., 15th	S.E.	
Fair Island, 15th	E.S.E.			-	9	
Sandwick, 1 a.m., 15th	E.S.E.			52	-	
Stornoway, 14th	E.S.E.			-	8	
Wick, 14th	S.E.			-	8	
Pentland Skerries, 11 a.m., 15th.	S.E.			-	8	
Kinnaird's Head, 2 a.m., 15th	S.E.			-	8	
Aberdeen, 8 p.m., 14th	S.E. by E.			44	-	
Bell Rock, 2 a.m., 15th	S.S.E.			-	8	
Shields, 13th	E.			-	9	
Scarborough, 13th	E.			-	8	
Mull of Cantire, 15th	E.			-	8	
Kish Bank, midnight, 14th	S.W.			-	9	
Holyhead, 11 p.m., 14th	S.	48	-			
Valentia, 11 p.m., 14th	S.W. by W.	47	-			
Roche's Point	S.	-	8			
Coningbeg, 8 p.m., 14th	S.	-	8			
Daunt's Rock, 8 p.m., 14th	S.S.W.	-	8			
31	A hard southerly gale blew on the south-west, west, and north coasts on the 23rd	Sumburgh Head, 8 a.m., 19th	S.E.	-	8	
		Fair Island, 19th	S.E.	-	8	
		Sandwick, 5 a.m., 19th	S.E.	47	-	
		Kinnaird's Head, 3 a.m., 19th	S.E.	-	8	
		Aberdeen, 19th	S.	-	8	
		Fair Island, 9 p.m., 22nd	S.S.W.	-	8	
		Sandwick, 9 p.m., 23rd	S.S.E.	47	-	
		Stornoway, 23rd	S.	-	9	
		Pentland Skerries, midnight, 23rd.	S.	-	8	
		Aberdeen, 23rd	S.	-	8	
Mull of Cantire, 23rd	S.E.	-	8			
Kish Bank, 8 a.m. to 8 p.m., 23rd.	S.	-	8			
Morecambe Bay, 23rd	S.S.E.	-	8			
Valentia, 3 a.m., 23rd	S.S.E.	49	-			
Coningbeg, 4 p.m., 23rd	S. by E.	-	9			
Roche's Point, 23rd	S.	-	9			
Daunt's Rock, 4 p.m., 23rd	S.S.E.	-	9			
Pembroke, 23rd	S.	-	8			
Scilly, 8 a.m., 23rd	E.S.E.	-	9			
Falmouth, 11 a.m., 23rd	S.E. by S.	40	-			

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
72	25 November	11.5 a.m.	England, E. and S.E.	Barometer rising, Sweden; look out for south-east gale. Hoist south cone
73	25 "	0.20 p.m.	Scotland, E.	Barometer rising, Sweden. Lowest south of England. South-east gale Scarborough. Hoist south cone again
74	30 November	11.5 a.m.	Ireland, S. and E.; England, W. and S. (to Channel Islands).	Barometer falling fast in the west; temperature rising. Hoist south cone. Eleven five
75	1 December	3 p.m.	England, S. (east of Southampton), S.E. and E.	Barometer falling very fast, Scilly. South-west gale. Hoist south cone
76	2 December	3.10 p.m.	Ireland, S.; England, W., and S. (to Channel Islands).	Barometer falling again Scilly; wind backing. High sea Bay of Biscay. Hoist south cone
77	2 "	3.10 p.m.	Ireland, E. Scotland, E. and W.; England, N.W.	Barometer falling fast Scilly. North-east gale Aberdeen. Hoist north cone
78	3 "	9.40 a.m.	England, S. (east of Southampton), S.E. and E.	Barometer very low west. Keep up cone
79	4 "	8 p.m.	England, S. (east of Southampton), S.E. and E.	Barometer rising in south, and gale subsiding. Lower cone for the present

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	Storms.	Stations.	MAXIMUM FORCE OBTAINED.		REMARKS.	
			Direction.	Force.		
			Velocity.	Force.		
			Miles per Hour.	Beaufort Scale.		
32	A hard south-east gale was experienced on the east coast of England, and strong breezes from the same quarter in the east of Scotland on the 25th	Fair Island, 9 a.m., 25th	S.S.E.	-	8	
		Shields, 3 p.m., 25th	E.S.E.	-	9	
		Scarborough, 2 p.m., 25th	S.E.	-	9	
		Yarmouth, 11 a.m., 25th	S.E. by E.	51*	-	7 hours gale.
33	On the night of the 30th November strong southerly winds were felt on our western coasts, and a gale was reached in some places. During the following night a depression passed across England, and strong south-west gales were felt on our south and south-east coasts.	Aberdeen, 3 a.m., 2nd	E.N.E.	45	-	11 hours gale.
		Pembroke, 1st December	S.	-	8	
		Portishead, 1st	S.S.W.	-	8	
		Scilly, 6 p.m., 1st	S.S.W.	-	9	
		Falmouth, 11 a.m., 30th	S.E. by E.	44	-	One hour only.
		Plymouth, 1st	S.W.	-	9	
		Hurst Castle, 1st	W.S.W.	-	8	
		Owers, midnight, 1st	S.W. by W.	-	9	
		Varne, 3 a.m., 2nd	S.W. by W.	-	9	
		Galloper, 3 a.m., 2nd	S.W.	-	8	
		London, 1st	S.W.	-	8	The anemometer at Yarmouth was not in action.
		Kentish Knock, 3 a.m., 2nd	S.W.	-	9	
		Sumburgh Head, 10 p.m., 3rd	E.S.E.	-	10	
		Fair Island, 9 p.m., 4th	S.E.	-	10	Gale lasted three days. 39 hours gale.
Sandwich, 5 p.m., 3rd	E.	58	-			
Stornoway, 6 p.m., 3rd	E.	-	11			
Pentland Skerries, 4 a.m., 4th	E.	-	8			
Thurso, 6 p.m., 3rd	E.S.E.	-	8			
Wick, 6 p.m., 3rd	E.S.E.	-	10			
Kinnaird's Head, 7 p.m., 3rd	E.	-	8	21 hours gale.		
Aberdeen, 8 a.m., 3rd	E.	55	-			
Bell Rock, 2 a.m., 3rd	E.	-	10			
Alnwick Castle, 1 a.m., 3rd	E.S.E.	43	-			
Seaham, 4 a.m., 3rd	E. by S.	40	-			
Shields, 3 a.m., 3rd	S.E.	-	10			
Scarborough, 10 p.m., 2nd	E.N.E.	-	8	Covered by previous warning.		
Ardrossan, 3rd	E.N.E.	-	9	One hour only.		
Glasgow, 6 a.m., 3rd	N.E. by E.	40	-			
Mull of Cantire, 3rd	E.	-	8			
Sanda, 9 p.m., 2nd	N.E.	-	11?			
Greencastle, 3rd	E.	-	8			
Donaghadee, 3rd	E.	-	10			
Holyhead, 10 p.m., 2nd	E. by S.	50	-	10 hours gale, with lulls.		
Morecambe Bay, midnight, 2nd	E.S.E.	-	10			
Coningbeg, 4 a.m., 3rd	S.	-	8			
Pembroke, 3rd	S.S.W.	-	9			
Portishead, 8 a.m., 3rd	S.	-	8			
Scilly, 8 a.m., 3rd	S.S.W.	-	10			
Seven Stones, 9 p.m., 2nd, to 9 a.m., 3rd	S.W.	-	8			
Falmouth, 3 a.m., 3rd	S. by W.	46	-	9 hours gale.		
Plymouth, 4th	S.S.W.	-	10			
Brixham, noon, 4th	W.S.W.	-	10			
Jersey, 9 p.m., 3rd, to 9 a.m., 4th	S.W.	-	8			
Hurst Castle, 4th	W.S.W.	-	10			
Owers, 6 a.m., 4th	S.S.W.	-	10			
Varne, 11 a.m. and noon, 4th	S.W.	-	10			
Hastings, 9 a.m., 4th	S.S.W.	-	10			
Folkestone, noon, 4th	S.	-	9	One hour only.		
Kew, 11 a.m., 4th	S.S.W.	42	-			
London, 4th	S.S.W.	-	9			
Galloper, 5 p.m., 4th	W.S.W.	-	8			
Kentish Knock, 1.30 p.m., 4th	S.S.W.	-	10			
Yarmouth, 1 p.m., 4th	S. by E.	45	-	One hour only.		

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
80	5 December	11.15 a.m.	Ireland, S. and E. (except Belfast); England, W., S., and S.E.	Barometer falling again very fast in south-west; south gale, Scilly. Hoist south cone again.
81	5 "	7.10 p.m.	Scotland, E.; England, E. (Newcastle only).	Barometer very low at Holyhead; high and rising in Norway; south-easterly gale, Shields. Hoist south cone.
82	6 "	Noon	Scotland, E.; England, S. (east of Southampton), S.E., and E. (Newcastle only).	Lower cone for the present.
83	10 "	9.10 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling fast, Valentia, and southerly wind freshening. Hoist south cone.
84	13 "	11.10 a.m.	Ireland, S. and E.; Scotland, W.; England, N.W., W., and S. (Devon and Cornwall only).	Barometer falling briskly in west; freshening southerly wind. Hoist south cone.
85	14 "	11.10 a.m.	Same coasts	Lower cone; gale over.
86	15 "	11.15 a.m.	Ireland, S. and E.; Scotland, E. and W.; England, N.W.	Barometer low, Ireland; rising, Norway; strong southerly wind, Valentia. Hoist south cone.
87	15 "	7.10 p.m.	England, W. and E. (north of Hull)	Barometer still falling, Scilly; rising in Norway. Hoist south cone.
88	16 "	11.15 a.m.	England, S. (west of Southampton)	Barometer low and falling in west; south gale, Scilly, likely to freshen again. Hoist south cone.
89	16 "	4 p.m.	England, E. (south of Hull), and S.E.	Barometer falling in south-west; south gale, Scilly; south-east gale, Scarborough. Hoist south cone.
90	17 "	7.20 p.m.	England E. (south of Hull), and S.E.	Lower cone.
91	19 December	11.10 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W. and E. (north of Hull).	Barometer very low; Valentia, falling fast; rising rapidly, Lapland. Hoist north cone.
92	20 "	7.40 p.m.	England, S. (east of Southampton), S.E., and E. (south of Hull).	Barometer very low in south, and falling fast at Hurst Castle, with strong southerly wind. Hoist south cone.
93	21 "	11.10 a.m.	Ireland, E.; Scotland, E. and W.; England, N.W. and E. (north of Hull).	Barometer rising fast, Sweden, with very severe cold. Keep up north cone.
94	21 "	7.10 p.m.	England, S. (east of Southampton), S.E., and E. (south of Hull).	Lower south cone.
95	21 "	7.30 p.m.	Ireland, S. (Galway only); England, W. and S. (Devon and Cornwall only).	Barometer very low over England; rising fast, Valentia; strong north-easterly gales, Scotland. Hoist north cone.
96	22 "	11.15 a.m.	Ireland, E. and S. (Galway only); England, N.W., W., S. (Devon and Cornwall only), and E. (north of Hull).	Lower cone.

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.			
		Stations.	Direction.	Velocity. Miles per Hour.	Force. Beaufort Scale.				
35	The wind blew strongly in all parts of the country, and reached the force of a fresh or strong gale on some parts of our east coasts, and in the south-west and south.	Sumburgh Head, 8 a.m., 6th	E.S.E.	-	8	Gale continued from 4th. 2 hours only.			
		Fair Island, 9 a.m., 6th	E.S.E.	-	9				
		Alnwick Castle, 1 and 2 p.m., 6th.	W.S.W.	40	-				
		Scarborough, 6 p.m., 5th	S.E.	-	9*				
		Daunt's Rock, noon, 6th	W.	-	8				
		Pembroke, 4 p.m., 5th	W.S.W.	-	10				
		Scilly, 5th	W.S.W.	-	9				
		Falmouth, 1 p.m., 5th	W.S.W.	43	-		One hour only.		
		Brixham, noon, 5th	W.S.W.	-	8				
		Owers, noon, 5th	S.	-	9				
		Varne, 3 p.m., 5th, and 3 a.m., 6th.	S. by W.	-	8				
		36	A fresh southerly gale was felt on many parts of our west and south-west coasts on the 13th.	Hastings, 9 p.m., 5th	S.S.W.		-	9	2 hours gale.
London, 5th	S.S.E.			-	8				
Kentish Knock, 5 p.m., 5th	S. by E.			-	8				
Yarmouth, 4 p.m., 5th	S.E. by S.			46	-				
Holyhead, 1 a.m., 12th	S. by W.			40	-	One hour only.			
Valentia, 9 p.m., 11th	S.S.W.			43	-	2 hours gale.			
37	A fresh south to south-east gale blew on our west, north, and north-east coasts on the 15th or 16th December.	Holyhead, 1 a.m., 14th	S. by E.	42	-	3 hours gale. 4 hours gale.			
		Valentia, 1 p.m., 13th	S.S.E.	49	-				
		Coningbeg, midnight, 13th	N.W.	-	8				
		Daunt's Rock, noon, 13th	S. by W.	-	8				
		Seven Stones, 9 p.m., 13th	S.W.	-	8				
		Scilly, 6 p.m., 13th	S.	-	9				
		38	A deep depression passed slowly over our islands, and a hard south-west gale was felt in the south, whilst very severe easterly gales blew in the north and north-east. The latter continued for two or three days, even four days at Aberdeen.	Sandwich, 4 a.m., 16th	S.E. by E.		43	-	2 hours gale.
				Fair Island, 9 a.m., 15th	S.E.		-	9*	
				Pentland Skerries, 9 p.m., 16th	S.S.E.		-	8	
				Wick, 10th	E.S.E.		-	9	
				Kinnaird's Head, 3 a.m., 17th	S.E.		-	8	
				Bell Rock, 16th	S.E.		-	8	
Shields, 3 p.m., 15th	S.S.E.			-	8				
Mull of Cantire, noon, 16th	S.E.			-	8				
Sanda, 4 p.m., 15th	S.E.			-	8				
Kish Bank, 4 a.m., 16th	S.			-	8				
Kingstown, 15th	S.S.E.			-	8				
Valentia, 1 p.m., 15th	S.S.E.			45	-	2 hours gale.			
39	A deep depression passed slowly over our islands, and a hard south-west gale was felt in the south, whilst very severe easterly gales blew in the north and north-east. The latter continued for two or three days, even four days at Aberdeen.	Roche's Point, 6 p.m., 15th	S.	-	8	93 hours gale. 56 hours gale.			
		Daunt's Rock, 4 p.m., 15th	S. by E.	-	8				
		Scilly, 15th	S.S.E.	-	10*				
		Fair Island, 9 a.m., 23rd	E.	-	10		4 days gale.		
		Sandwich, 2 p.m., 20th (a)	E.	46	-		16 hours gale.		
		" 10 a.m., 22nd	E. by N.	60	-		50 hours gale.		
		Stornoway, 6 p.m., 20th	E.N.E.	-	9		(a) The wind lulled for a few hours on the night of the 20th at Sandwich.		
		Pentland Skerries, 5 p.m., 22nd (b)	E.	-	8		(b) At Pentland Skerries gale commenced at 9 p.m., 19th.		
		Thurso, 6 p.m., 22nd	E.S.E.	-	8				
		Wick, 8 a.m., 22nd	E.	-	11				
		Nairn, 8 a.m., 21st	E.S.E.	-	8				
		Kinnaird's Head, 2 p.m., 22nd	S.S.E.	-	8				
Aberdeen, 2 p.m., 22nd	S.E. by E.	70	-	93 hours gale.					
Bell Rock, 11 a.m., 20th	E.N.E.	-	12	56 hours gale.					
Leith, 6 p.m., 20th	E.	-	8						
Alnwick Castle, 5 p.m. and 8 p.m., 20th.	E.	50	-	16 hours gale.					
40	A deep depression passed slowly over our islands, and a hard south-west gale was felt in the south, whilst very severe easterly gales blew in the north and north-east. The latter continued for two or three days, even four days at Aberdeen.	Shields, 11 a.m., 20th	E.	-	11	Anemometer at Seaham was out of action. 2 hours only.			
		Scarborough, 8 a.m., 20th	E.	-	10				
		Glasgow, 5 p.m., 20th	N.E. by E.	41	-				
		Ardrossan, 20th	E.N.E.	-	9				
		Mull of Cantire, 21st	E. by N.	-	8				
		Sanda, 5 p.m., 20th, to 4 a.m., 21st.	E.N.E.	-	9				
		Donaghadee, 6 p.m., 20th	E.	-	9				
		Kish Bank, midnight, 19th	E.S.E.	-	9				
		Holyhead, 5 p.m., 21st	N.N.E.	45	-		6 hours gale.		
		Daunt's Rock, 4 p.m. to midnight, 19th.	E.N.E.	-	9				
		Seven Stones, 3 a.m., 20th	W.	-	9*				
		Scilly, 20th	S.W.	-	9*				
Hastings, 9 a.m., 21st	S.S.W.	-	9						
Varne, 21st	S.W.	-	9						
Kentish Knock, midnight, 20th., 3 a.m., 21st.	S.	-	9						

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

Descriptive Number.	DATE OF TELEGRAM.		COASTS TO WHICH SENT.	TELEGRAM.
	Day.	Hour.		
97	26 December	11 a.m.	Ireland, S. and E.; Scotland, W.; Eng- N.W., W., and S. (Devon and Cornwall only).	Barometer falling fast in west. South-east gale at Scilly and Valentia. Hoist south cone - - - - -
98	26 "	1 p.m.	Scotland, E.; England, E. (north of Hull)	South-east gale in south-west. South gale Aberdeen. Hoist south cone - - - - -
99	26 "	3.30 p.m.	England, S. (except Devon and Cornwall); S.E. and E. (south of Hull).	Heavy south gale in south-west. Fresh gale Aberdeen, seems likely to extend. Hoist south cone - - - - -
100	28 December	11 a.m.	Ireland, S. and E. (except Belfast); Eng- land, N.W. (except Manchester); W. and S. (Devon and Cornwall only).	Barometer falling in west, with south-west gale. Keep up south cone - - - - -
101	29 "	12.15 a.m.	England, S. (except Devon and Cornwall)	Barometer falling very rapidly in west. South gale in Ireland. Hoist south cone - - - - -
102	29 "	7.30 p.m.	England, S.E. and E (south of Hull)	Barometer falling quickly. Southerly gale Channel. Hoist south cone - - - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	Storms.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Directions.	Velocity. Miles per Hour.	Force. Beaufort Scale.		
39	A hard south-west to south-east gale blew throughout the 26th and 27th (with the exception of some slight lulls), on all the coasts of the British Islands - - -	Sumburgh Head, 8 a.m., 27th	S.E.	-	9	17 hours gale.	
		Sandwich, 4 a.m., 27th	S.E.	51	-		
		Thurso, 6 p.m., 26th	S.S.E.	-	8		
		Wick, 26th	S.	-	10		
		Kinnaird's Head, 5 a.m., 27th.	S.	-	8		
		Aberdeen, 1 and 4 a.m., 27th	S.S.E.	41	-		6 hours gale.
		Bell Rock, 2 a.m., 27th	S.S.E.	-	8		
		Alnwick Castle, 5 a.m., 27th	S. by E.	44	-		One hour only.
		" 3 a.m., 28th	W.S.W.	57	-		9 hours gale.
		Shields, 27th	S.S.E.	-	8		
		Mull of Cantire, 27th	S.E.	-	8		
		Sanda, 11 p.m., 26th	E.S.E.	-	9		2 hours gale.
		Armagh, 7 p.m., 26th	S.E.	46	-		
		Dublin, 26th	S.E.	-	9		
		Kingstown, 26th	S.E.	-	10		
		Kish Bank, midnight, 26th	S.S.W.	-	9		9 hours gale.
		Holyhead, 10 p.m., 26th	S.S.E.	59	-		
		Morecambe Bay, midnight, 26th, to 3 a.m., 27th.	S.	-	9		
		Valentia, 5 a.m., 26th	S.E. by S.	50*	-		10 hours gale.
		" 1 p.m., 27th	S.W. by S.	53	-		6 hours gale.
		Coningbeg, 4 p.m., 26th	S.S.E.	-	10		
		Roche's Point, 26th	S.S.E.	-	8		
		Daunt's Rock, noon, 26th	S.S.E.	-	10		
		Pembroke, 2 p.m., 26th	S.S.E.	-	9		
		Portishead, 26th	S.	-	8		
		Scilly, 2 p.m., 26th	S.S.E.	-	10*		
		Seven Stones, 3 p.m., 26th	S. by E.	-	8		
		" 3 p.m., 27th	W.S.W.	-	8		
		Falmouth, 11 a.m., 26th	S.E. by S.	49	-		6 hours gale.
		" 4 p.m., 27th	S.W. by S.	44	-		6 hours gale.
		Brixham, noon, 27th	S.	-	9		
		Hurst Castle, 26th	S.	-	8		
		Hastings, 9 p.m., 27th	S.W.	-	8		
		London, 27th	S.W.	-	8		
		Galloper, 9 a.m., 27th	S.S.W.	-	8		
		Kentish Knock, 9 a.m., 27th	S.S.W.	-	8		
		Yarmouth, 6 a.m., 27th	S. by E.	47	-		11 hours gale.
		Alnwick Castle, 11 p.m., 28th, to 1 a.m., 29th.	S.W.	45	-		4 hours gale.
		Dublin, 9 p.m., 28th	S.S.E.	-	8		
Kish Bank, midnight, 28th	W.N.W.	-	8				
Holyhead, 10 a.m., 28th	S.S.E.	43	-	2 hours gale.			
Valentia, 10 a.m., 29th	S.	50	-				
Roche's Point, 1 p.m., 29th	S.S.E.	-	8				
Portishead, 29th	W.	-	8				
Scilly, 29th	S.	-	11				
Seven Stones, 3 p.m., 29th	S.W.	-	9				
Plymouth, 6 p.m., 29th	W.S.W.	-	8				
Falmouth, 1 and 4 p.m., 29th	S.	51	-	6 hours gale.			
Hurst Castle, 29th	W.S.W.	-	9				
Owers, 9 p.m., 29th	W.S.W.	-	8				
Hastings, 9 p.m., 29th	S.W.	-	9				
Varne, 10 p.m., 29th	W.S.W.	-	9				
Folkestone, 9 p.m., 29th	S.W.	-	8				
Kew, 8 p.m., 29th	S.W. by S.	41	-	One hour only.			
London, 29th	W.	-	9				
Galloper, midnight, 29th	W. by S.	-	8				
Kentish Knock, 9 p.m. to midnight, 29th.	S.W.	-	8				

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

RETURN showing the Number of Telegrams sent to each Station, and

DATE OF TELEGRAM.			COASTS TO WHICH SENT.	TELEGRAM.
Descriptive Number.	Day.	Hour.		
103	30 December	11.20 a.m.	Ireland, S. and E. (except Belfast); England, N.W. (except Manchester), W. and S. (Devon and Cornwall only).	Barometer falling again in west. S. gale beginning again. Keep up south cone - -
104	31 "	9.35 a.m.	Ireland, E. (Belfast only); Scotland, W.; England, N.W. (Manchester only), and S. (except Devon and Cornwall).	Barometer still falling south-west, with hard S.W. gale. Hoist south cone - - -

Note.—The asterisk (\*) after the name of any station indicates that force 9, or the velocity of 50 miles

the Storms reported on the Coasts of the British Islands, in 1876—continued.

Descriptive Number.	STORMS experienced on the Coasts of the British Isles in 1876.	MAXIMUM FORCE OBTAINED.				REMARKS.	
		Stations.	Direction.	Velocity Miles per Hour.	Force Beaufort Scale.		
41	Very severe gales on all but the east coast of England; in the south they were from S.W., but in the north from E.  The gale was especially violent in the south of England, but as the extreme force was registered on the morning of the 1st January, it is not reported fully in this return.	Sumburgh Head, 6 p.m., 31st	N.E.	-	9*	12 hours gale.	
		Sandwick, 4 p.m., 31st	N.E. by E.	54*	-		
		Stornoway, 31st - - -	N.E.	-	10		
		Thurso, 31st - - -	E.N.E.	-	8		
		Wick, 31st - - - -	E.	-	10*		N.E. gale at Pentland Skerries.
		Nairn, 31st - - - -	N.N.E.	-	9*		
		Kinnaird's Head, 7 p.m., 31st	E	-	8		Gale continued into the new year.
		Aberdeen, 1 p.m., 1st - -	N.E.	54*	-		4 hours gale.
		Bell Rock, 11 p.m., 31st -	N.E.	-	8		Gale continued into the new year.
		Dublin, 31st - - - -	S.W.	-	9		
		Kish Bank, 8 a.m., 31st -	S.S.W.	-	8		
		Holyhead, 10 a.m., 31st -	S.S.W.	48	-		16 hours gale.
		" 2 p.m. - - - -	S.W. by S.	48	-		
		Morecambe Bay, noon, 31st -	S.W.	-	8		
		Valentia, 3 p.m., 31st - -	S.S.W.	57	-		29 hours gale.
		Coningbeg, 8 a.m., 31st -	S.W.	-	10		
		Roche's Point, 31st - - -	S.W.	-	8		
		Daunt's Rock, noon, 31st -	S.W. by W.	-	10		
		Pembroke, 30th - - - -	S.W.	-	10		
		Scarweather, noon, 31st -	S.W.	-	8		
Portishead, 30th - - - -	S.W.	-	9				
Seven Stones, 3 a.m. to 3 p.m., 31st.	S.S.W.	-	9				
Scilly, 30th - - - -	S.S.E.	-	11				
Falmouth, 1 a.m., 31st -	S. by E.	46	-	3 hours gale.			
Plymouth, 31st - - - -	W.S.W.	-	8				
Jersey, 31st - - - -	S.	-	8				
Hurst Castle, 8 a.m., 1st Jan.	W.	-	10				
Varne, 31st - - - -	S.W.	-	9				
Dover, 10 a.m., 1st Jan. -	S.S.W.	-	9				
London, 1st Jan. - - - -	W.S.W.	-	9				
Yarmouth, noon, to 3 p.m., 1st	W.S.W.	40	-	3 hours only.			

an hour, was reached prior to the hoisting or subsequent to the hauling down of the signal.

SUMMARY, 1876.

COASTS.		NUMBER OF TELEGRAMS.	
IRELAND	South	Orders to hoist cone	5b. 15a. 16p. 17p. 20a. 21a. 25e. 27c. 31c. 38b. 40b. 43a. 45a. 49a. 54a. 59p. 63a. 68a. 74b. 76b. 80b. 83a. 84a. 86a. 97p.
		Orders to hoist cone, Galway only.	8a. 11b. 95c.
		Repetitions of orders to hoist cone.	100a. 103a.
		Orders to lower cone	7. 22. 26. 28. 33. 39. 42. 44. 46. 53. 56. 71. 85.
		Orders to lower cone, Galway only.	9. 96.
Ditto	East	Orders to hoist cone	5b. 16a. 17a. 21b. 25a. 31b. 40b. 43a. 45b. 49a. 54a. 59a. 63a. 68a. 74b. 77a. 83c. 84b. 86a. 91a. 97a.
		Orders to hoist cone, except Belfast.	2c. 15a. 20a. 80b.
		Orders to hoist cone, Belfast only.	8a. 10a. 11b. 13c. 19a. 104b.
		Orders to hoist cone, Dublin only.	27c. 38c.
		Repetitions of orders to hoist cone.	93a.
		Repetitions of orders, except Belfast.	100a. 103a.
		Orders to lower cone	22. 26. 28. 33. 42. 44. 46. 53. 56. 71. 85. 96.
		Orders to lower cone, except Belfast.	3. 7.
		Orders to lower cone, Belfast only.	9. 14.
		Orders to lower cone, Dublin only.	39.
SCOTLAND	East	Orders to hoist cone	2a. 5a. 8a. 10a. 11a. 13c. 16a. 19a. 21b. 34a. 41c. 47b. 50a. 55a. 57b. 62a. 64a. 66a. 69a. 73b. 77a. 81b. 86a. 91a. 98a.
		Orders to hoist cone, north of Aberdeen.	25a.
		Repetitions of orders to hoist cone.	93a.
		Orders to lower cone	9. 12. 14. 22. 35. 42. 48. 52. 56. 58. 67. 82.
Ditto	West (Clyde)	Orders to hoist cone	5a. 8a. 10a. 11a. 13b. 16a. 17a. 19a. 21c. 25a. 31c. 41c. 49a. 54a. 57c. 59a. 64a. 68a. 77a. 83b. 84c. 86a. 91a. 97a. 104b.
		Repetitions of orders to hoist cone.	93a.
		Orders to lower cone	9. 12. 14. 22. 33. 42. 53. 56. 58. 85.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY, 1876.

GALES REPORTED.	REMARKS.						Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	
4. 5. 8. 9. 10. 11. 13. 15. 19. 20. 24. 25. 26. 27. 29. 30. 31. 36. 37. 39. 40. 41.	30	14	7	3	2	4	Jan. 22p. Feb. 18p. Feb. 23.
4. 5. 8. 10. 11. 12. 13. 15. 16. 19. 24. 26. 27. 29. 30. 31. 34. 37. 38. 39. 40. 41.	36	21	10	5	-	-	Feb. 18p. Mar. 6p. Mar. 18p.
1. 3. 4. 5. 6. 7. 8. 9. 11. 12. 13. 15. 16. 19. 20. 22. 26. 27. 28. 29. 30. 31. 34. 37. 38. 39. 41.	27	20	5	2	-	-	Feb. 15. Feb. 18p. Feb. 23. Mar. 6p. Mar. 8. Mar. 18. Oct. 30p. Dec. 31.
3. 4. 5. 6. 9. 11. 12. 13. 15. 19. 26. 27. 29. 30. 31. 34. 37. 38. 39.	26	18	3	5	-	-	Feb. 23. Mar. 6.
Carried forward	119	73	25	15	2	4	-

SUMMARY, 1876—continued.

COASTS.		NUMBER OF TELEGRAMS.	
ENGLAND - -	North-west - -	Orders to hoist cone - -	5b. 8a. 10a. 11c. 16a. 17a. 19a. 25a. 31a. 40b. 43a. 45b. 49p. 54a. 59a. 68b. 77a. 83a. 84a. 86b. 91a. 97a.
		Orders to hoist cone, except Manchester.	15c.
		Orders to hoist cone, Manchester only.	104a.
		Repetitions of orders to hoist cone.	93a.
		Repetitions of orders to hoist cone, except Manchester.	100a. 103a.
Ditto - -	West - -	Orders to hoist cone - -	5b. 8b. 15a. 16a. 17a. 20a. 21b. 25a. 31a. 40b. 43a. 45b. 49a. 54a. 59a. 68a. 74a. 76a. 80a. 83b. 84b. 87b. 95c. 97a.
		Orders to hoist cone, Bristol Channel.	27c. 38c.
		Repetitions of orders to hoist cone.	100a. 103a.
		Orders to lower cone - -	7. 9. 22. 26. 33. 42. 44. 46. 53. 56. 71. 85. 96.
		Orders to lower cone, Bristol Channel.	28. 39.
Ditto - -	South - -	Orders to hoist cone - -	20a. 23c. 27c. 29e. 40b. 43e. 49p. 80a.
		Orders to hoist cone, Devon and Cornwall only.	16a. 17a. 21b. 45b. 54a. 68a. 83b. 84a. 95b. 97p.
		Orders to hoist cone, Devon, Cornwall, and Channel Isles.	15a. 31a. 38b. 59p. 74a. 76a. 88p.
		Orders to hoist cone, Dover only.	1a. 4a.
		Orders to hoist cone, except Devon and Cornwall.	18a. 32b. 60a. 75a. 92a. 99a. 101a. 104a.
		Orders to hoist cone, Guernsey to Southampton.	70c.
		Repetitions of orders to hoist cone, Devon and Cornwall only.	78a. 100a. 103a.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY, 1876—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards.	Warnings justified by subsequent Strong Winds, Forces 6 and 7.	Warnings not justified by subsequent Weather.	Warnings Late, Force 9 reached at two Stations before Issue.	Warnings partially Late, Force 9 reached at one Station before Issue.	Warnings Late, owing to Sundays or to Telegraphic Errors.	
Brought forward - - -	119	73	25	15	2	4	-	
4. 5. 11. 13. 15. 16. 19. 20. 21. 24. 26. 27. 29. 34. 36. 38. 39. 40. 41.	27	19	5	2	-	1	-	Mar. 18. Aug. 31p.
10. 11. 13. 15. 17. 18. 19. 20. 21. 24. 26. 27. 29. 31. 33. 34. 35. 39. 40. 41.	28	17	8	3	-	-	-	April 10. April 14s. Aug. 31p.
1. 2. 8. 10. 12. 13. 14. 15. 17. 18. 20. 21. 23. 24. 26. 29. 33. 34. 35. 38. 39. 40. 41.	39	23	7	3	2	4	-	Feb. 18p. Feb. 26. Mar. 6p. Mar. 12s. Apr. 10?. Apr. 14s. Sept. 24s.
9. 11. 19. 27. 31. 36. 37 -	-	-	-	-	-	-	-	Feb. 23p. Aug. 2p. Dec. 20.
Carried forward - - -	213	132	45	23	4	9	-	

SUMMARY, 1876—continued.

COASTS.		NUMBER OF TELEGRAMS.	
ENGLAND - -	South—continued	Orders to lower cone - -	24. 28. 30. 33. 42. 44. 53.
		Orders to lower cone, Devon and Cornwall only.	22. 46. 56. 85. 96.
		Orders to lower cone, Devon, Cornwall, and Channel Isles.	39. 71.
		Orders to lower cone, East of Southampton.	79. 82. 94.
Ditto - -	South-east - -	Orders to hoist cone - -	1a. 4a. 18a. 20a. 23c. 27c. 29b. 41c. 43a. 49b. 61a. 72p. 75a. 80a. 89c. 92b. 99a. 102a.
		Repetitions of orders to hoist cone.	78a.
		Orders to lower cone - -	24. 28. 30. 42. 44. 51. 79. 82. 90. 94.
Ditto - -	East - -	Orders to hoist cone - -	1a. 18a. 29a. 41c. 43a. 49a. 61p. 64a. 72a. 75b.
		Orders to hoist cone, North of Hull.	6a. 8a. 10a. 11a. 19a. 21c. 34c. 36b. 87b. 91a. 98a.
		Orders to hoist cone, South of Hull.	4b. 20a. 27c. 89b. 92b. 99a. 102b.
		Orders to hoist cone, Newcastle only.	16a. 57b. 81a.
		Repetition of order to hoist cone.	78a.
		Repetition of orders to hoist cone, North of Hull.	93b.
		Orders to lower cone - -	30. 42. 44. 51. 65. 79.
		Orders to lower cone, North of Hull.	9. 22. 35. 37. 96.
		Orders to lower cone, South of Hull.	12. 28. 90. 94.
		Orders to lower cone, Newcastle only.	58. 82.

Note.—It will be remembered that the descriptive numbers of the Telegrams and Storms are quite independent of each other; two, and sometimes three, Telegrams referring to one Storm.

SUMMARY, 1876—continued.

GALES REPORTED.	REMARKS.							Storms for which no Warning was Issued.
	Total Number of Orders to Hoist, and Repetitions.	Warnings justified by subsequent Gales, Force 8 and upwards. a	Warnings justified by subsequent Strong Winds, Forces 6 and 7. b	Warnings not justified by subsequent Weather. c	Warnings Late, Force 9 reached at two Stations before Issue. e	Warnings partially Late, Force 9 reached at one Station before Issue. p	Warnings Late, owing to Sundays or to Telegraphic Errors. s	
Brought forward - - -	213	132	45	23	4	9	-	
1. 2. 13. 14. 15. 24. 29. 33. 34. 35. 39. 40.	19	11	3	4	-	1	-	Mar. 12s.
1. 3. 4. 5. 6. 8. 11. 13. 15. 24. 26. 29. 30. 32. 34. 35. 38. 39.	33	19	9	4	-	1	-	Feb. 18p.
12. 16. 19 - - - -	-	-	-	-	-	-	-	Mar. 6p. Mar. 18.
TOTALS for Year - -	265	162	57	31	4	11	-	
Per-centages - - -	-	61.1	21.5	11.7	1.5	4.1	-	

SUMMARY 1876

RETURNS showing the List of PLACES to which TELEGRAPHIC WEATHER INTELLIGENCE was sent in 1876, arranged according to Coasts; and, showing the Number of TELEGRAMS sent to each Station, and the STORMS reported on the Coasts of the BRITISH ISLANDS, in 1876 (in continuation of Parliamentary Paper, No. 351, of Session 1876).

Station	Coast	Number of Telegrams sent	Number of Storms reported
London	South	12	1
Southampton	South	15	1
Bristol	West	10	1
Cardiff	West	8	1
Galley Head	West	5	1
Wexford	South	3	1
Malinbeg	North	2	1
St. John's	North	1	1
<b>TOTAL</b>		<b>56</b>	<b>7</b>

(Mr. Edward Stanhope.)

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Under 4 oz.