

A Register of the Weather, Winds, Height of the Mercury in the Barometer, and the first Six Months of the Year One Thousand

	January. 8. 12. 9.				February. 7. 12. 9.				March 7. 12. 9.				Weather
	Weather	Winds.	Barom.	Rain.	Weather.	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	
1	Frost	W. S. W.	30. 07		Frost				Cloudy		30. 1		Cloudy
	Fair		07				30. 06		Fair	S. W.	20		Warm
2	Mifling	S.	05		Cloudy		05		Cloudy	W. S. W.	18		Fair
			05		Frost	N. E.	29. 95		Warm	S. W.	19		
3	Fog	S. by W.	07		Cloudy	N. E. by E.	75		Fog	S.	02		Fair
	Cloudy	S.	11		Frost	E.	66		Spring	W. by S.	29. 95		Want
			15		Calm	S.	50		Fair	W. by S.	88		of Rain
4	Mifling	S.	18	0. 50	Cloudy	E. by S.	30	0. 02	Mist		75		Mifling
			18		Thaw		26	0. 02	Rain	S. W.	69	0. 13	Cloudy
			18		Sleet		20		Fair		69		Fair
5	Calm and Cloudy	W. by S. S. W.	22		Snow		20		Fair	S. W.	71		Cold
			23		Fair	E.	20	0. 03	Colder	S.	70		Fair
			26		Frost		19				46		Mifling
6	Fog Warm Mifling	W.	22	0. 30	Frost	N. by E.	05		Rain	S. W.	20		Frost
			14		Cloudy	N.	02	0. 03	Bluffer.	W.	12	0. 85	Fair
			14		Snow	N.	28.	90	Fair	W.	21		Frost
7	Cloudy	W. by N. N. W.	05		Cloudy	N. by S. S. by W.	86	0. 01	Colder	W. by N.	48		Dry
			05		Fairer		83		Bluffer.	W.	57		fon
			05		Sleet	S. W.	83		Frost	N. W.	60		Frost
8	Cloudy	N. W. N. W.	29. 94		Thaw		82	0. 01	Fair	N.	30. 01		Warmer
			90		Frost	S. W.	84	0. 01	Frost	N. by E.	11		Fog
			82				97		Fair	E.	15		Fair
9	Sunsh. Rain Snow	S.	51		Thaw		29. 90		Frost	W.	15		Fog
			38		Frost	S. W.	18		Fair	S. W.	14		Fair
			10	1. 20.	Frost		25		Fair	S. W.	08		Cloudy
10	Frost Thaw Rain	S. W. S. S. by E.	02		Frost	S. W. S. W. by W.	43		Mist.	S. W.	29. 95		Warm
			2. 00		Fair		52		Fair	S. W. by S.	90		and
			28. 95	0. 70.			61		Fair	S. by W.	76		Fair
11	Cloudy Fair	N.	29. 46		Snow	S. by E. S. E.	65	0. 27	Mist	S.	65		Fair
			77		Fair	E.	94		Frost	W. by S.	64		Warm
			83		Cloudy	E. by S.	30. 08		Cloudy		60		Cloudy
12	Sleet	N.			Frost		08		Rain	N. W.	47		Fair
					Thaw		00		Fair	W. S. W.	35		Cloudy
					Warm	S.	00		Rain	W. by N.	21		Rain
13	Cloudy				Cloudy		29. 95		Rain	N. by W.	18		Cloudy
			91		Calm		88		Fair	N.	35	0. 32	Rain
			96		Rain	S. by W.	87	0. 40	Frost	N.	59		
14	Snow	N. E. N. E. E. N. E.	96	0. 20	Rain	S.	80		Fair	W.	60	0. 02	Fair
			68		Mist	N.	85		Cloudy	W.	48		
			94		Warm	N. W.	85	0. 30	Fair	W.	40		Fair
15	Frost Cloudy	E. N. E. E.	92		Rain	E	80		Bluffer.		48		Warm
			50						Storms		28		Spr. Da
16	Frost Cloudy	E. N. E. N. E. by N.	90		Cloudy	S. by E. W. S. W.	54	0. 28	Fair		04		Fair
			91		Fair		60		Hail	W.	04	0. 80	
			94		Rain		50		Snow		28. 93		Cloudy
17	Frost Cloudy	N. N. N. W.	30. 02		Fair	S.	50	0. 20	Frost	N. W.	29. 16		Fair
	Calm		02		Rain		52		Fair		30		
			04		Cloudy	S. by E.	30		Fair		32		
18	Frost Fair	W. S. W.	09		Bluffer.	S.	25		Frost	S.	10		Fair
			10		Fair		42		Snow	N. W.	10		Hot
			10		Rain	E. by S.	30		Fair	W.	16		Day.
19					Fair	S.	38	0. 05	Frost	W. by S.	27		The fair
							39		Fair	N. W.	41		
							45		Frost	S. W. by S.	42		
					Frost	S. E. E. by S.	45		Snow	S.	4		The fair
							45			S. S. E.	37	0. 52	



ter, and Quantity of Rain falling every Day at Upminster, in Essex, Thousand Six Hundred Ninety Seven.

April. 6. 12. 9				May. 6. 12. 9				June. 6. 12. 9			
Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.
Cloudy		29. 83						Fair		29. 66	
Warm	N. E. 0	83						Hot	S. 0		
Fair		84						Rain		56	
Fair	N. 1.	88						Rain	S. 0	42	
	N. E. 2	88						Shine	S. 1	29. 0. 44	
		87						Rain	S. 1	10	
Fair	NE.b.E. 1	83						Fair	S.by W. 0	02. 0. 79	
Want	E. 1	82							S. 1	04	
of Rain		82						Showers	S. 1	02. 0. 37	
Milling	N. 0	75							S. W. 2	18	
Cloudy								Cloudy		38	
Fair		68							S. 1	58	
Cold		68						Cloudy		72	
Fair	N. by E.	68						Sultry	S. by W. 1	83	
Milling		74						Hot		85	
Frost		73						Thunder	E. by S.	85	
	E.	71						Rain	E. 0	82. 1. 13	
Fair		68						Thunder		74	
Frost		60						Fog	S. by W.	70. 0. 02	
Dry Sea-	E.	67						Fair	S. W. 1	71	
son		70						Hot	S.W.b.W.	72	
Frost		71						Fair	S.W.b.W.	70	
	E.	70						Cloudy	S. 0	56	
Warmer		71							S. by E. 0	50	
Fog	W.	65						Fair	S. 1	48	
Fair	W.	64						Rain	S. 0	51	
Cloudy		64						Fair	S. by E. 0	60	
Warm	E. 0	61							S. by W. 1	68. 0. 20	
and	E. by S. 1	61							S. 0	75	
Fair		60						Fair	S.	75	
Fair	E. 0	60							S.		
Warm	E. 1	62							E. 0	65	
Cloudy	N. by E. 2	64						Cloudy			
Fair	N. N.E. 2	65						Fair	N. W. 1	60	
Cloudy	N. by E.	67							N. W. b. W.	55	
Rain		70							N. W. 0	49	
Cloudy		72						Fair	W. 0	40	
Rain	N. E.	78. 0. 38							S. W. 0	34	
		78. 0. 30						Fair	S. W. 0	28	
Fair	N. N.E. 0	75						Fair			0. 20
	E. by N. 0	75						Rain	E. 0	38	
		77						Misty	E. 0	45	
Fair		77						Fair			
Warm	E. 1	77						Hot	N. b. W. 4	64	
Spr. Day		73						Cloudy	N. 1	78	0. 01
Fair	E. 0	73								90	
		75						Cloudy	N.		
Cloudy	N. 0	86						Fair	W. 1	90	
								Sultry	W. 0	94	
Fair	N. by W. 1	96		Cloudy					W. by S. 0	98	
		96		Milling		29. 65 30 0			W. by S. 1	30. 00	
Fair	N. 1	94		Blufr.	S. W. 2	55		Very	S. W. 0	00	
Fair	N. 0	91		Rain	W. 2	57		Drough-			
Hot	E. N.E. 0	93		Fair	W. by N. 1	65. 0. 19		ty.			
Day.		95				74		Hot	S. W. 0		
		93		Fair	W. by S. 1	79			S. W. b. W. 0	29. 93	
The same	E. 1	80			E. 1	85		Rain	N. by E. 1	91. 0. 22	
				Fair		92			N. E. 0	93	
The same	E. 0	69		Fair	E. by N. 0	99		Cloudy	N. by E. 2	92	
	S. 1	60			N. 2	30. 02				92	

19					Fair	S.	38	0. 05	Fair	N. W.	41		
							39			S. W. by S.	43		
20	Fair				Frost	S. E.	45		Frost	S.	4		The fam
	Frost					E. by S.	45		Snow	S. S. E.	37	0. 52	
	Cloudy	S. W. by W.	20			E.	40		Fair	S. E.	25		
21					Fair	E.	36		Blust.	E. by N.	07		Cloudy
							37		Cloudy	E. by N.	10		Fair
							45		Hazy	N. N. E.	24		Rain
22	Cloudy	W.	29.	95	Rain		47						Cloudy
	Thaw	W. by N.	90	0. 08		E.	48	0. 03					Rain
	Rain		95		Fair		52						Fair
23	Frost	N. W.	90		Hear	E.	52						Fair
	Snow	N. W.	80	0. 30	Frost	S.	54						Rain
	Fair	N. N. W.	68		Frost	S.	60		Frost	N. E.	40		Fair
	Snow	N. W. by W.	64		Rain		68		Frost	N.	46		Rain
24	Storm	N. E.	78	0. 20	Fair	S. by W.	75	0. 04	Frost	N. N. W.	54		Thunde
	Snow	N. by E.	95		Rain		81		Fair	N. by E.	70		Shower
25	Frost	E.	95		Cloudy		84		Frost	N. by E. I	78		Fair
	Fair	E. by N.	97		Bluster.	S.	85		Fair	S. I	30. 02		
		N. E.	98		Fair		88		Fair	S. o	11		Cloudy
26	Sharp	N. E.	96		Fair	S.	88		The	E. o	11		
	Frost	N. by E.	96		Cloudy		0. 10		Same	S. E. by E. I	10		
		N. N. E.	86		Rain	S. W.	92				04		
27	Frost	N. E.	77		Milling	S.	93		Same	E. o	29. 97		
			77		Fair	S. by W.	97				98		
			74		Calm	S. S. W.	98		Same	E. o	30. 07		
28	Cloudy		65		Cloudy		30. 01		Same	E. o	13		
	Frost	N. E.	60		Fair	S. W.	01	0. 03	Hazy	E. o	15		
					Cloudy		40			E. I.	20		
29	Snow	S.	47						Cloudy	NE. b. N. o	14		
	Thaw	S. W.	31	0. 08					Cold	N. N. E. I	12		
			29								12		
30	Frost	S. W.	41						Cloudy	N. I	12		
	Fair	W.	50						Warmer	N. N. E.	12		
		W. by S.	54								05		
31	Frost	W.	77	0. 05					Cloudy	N. I	96	0. 02	
	Fair	N. N. W.	86					Total	R. 80				
		N. by W.	95	3. 61					Rain	N. by E.	88	2. 68	

Place this between Pag. 48, 49.

The same	E. I	80	Fair	E. I	85	Rain	N. by E. 1	91	0. 22
The same	E. o	69	Fair	E. by N. o	92	Cloudy	N. E. o	93	
	S. I	60	Fair	N. 2	99	Cloudy	N. by E. 2	92	
	S. o	52	Cool	N. by E. o	30. 02	Cooler	N. I	92	
					07			96	
Cloudy	E. by S. o	35	Cloudy	N. o	08	Cloudy	N. o	30. 06	
Fair	E. by S. I	21	Cold	N. by E. I	08	Much			
Rain	S. by E. I	10	Fair	N. by E. o	11	Cooler	N. E. I	02	
Cloudy	E I	08				Fair	N. o	01	
Rain	S. I	05	The same	N. by E. o	07	Fair	E. I		
Fair	S. E. o	15		E. o	02		NE. b. N. o	29. 90	
Fair	E. o	20	Cloudy	E.	29. 98	Cloudy	N. o	80	
Rain	S. by E. I	22	Lefs Cold	E. by N. o	93	Rain	E. I	79	
Fair	S. E.	27	Fair	E. by N. o	88	Fair		79	
Rain	S. E. I.	31		N. by E. o	85	Great	NE. b. E. I	77	
Thunder	N. N. W.	32	The same			Drought	E. I	78	0. 10
Showers	E.	34		E. o	88	Cloudy	N. E. b. E. o	74	
Fair	E. by N.	28	Moist		88	Dry	N. E. I	73	
	E. o	27	Hot and	E. o	85		E. I	71	
		18				Sultry		71	
Cloudy	S.	14		E. o	83	Dry	E. o	71	0. 05
			The same	E. I	80	Mist	E. o	74	
				E. o.	73	Rain	E. by S.	73	0. 29
			Fair	N. o.	65	Thunder	S. o	74	
			Little	N. I.	65	Mist		81	
			Rain		75	Hot and	S. I	83	
			Fair	N. o	82	Dry		86	
			Warm	S. o	74	Dry	E. o	85	
			Fair	S. o.	79	Burning	E. I	85	
			Hot	E. o	75	Day	S. o	87	
				E. I	73	Fair	S. W. o	88	0. 97
			The same	E.	73	Rain	S. I	88	0. 31
					75				
				S. o	80				
					80				
			The same	S. o	75				
					3. 20				
			Total	7. 53				Total	4. 91

Philosoph. Transact. Numb. 237. Tab. 1.

*A Register of the Weather, Winds, Height of the Mercury in the Barometer
the last Six Months of the Year One T*

July. 6. 12. 9.				August. 6. 12. 9.				September. 6. 12. 9.				
	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.
1	Rain	S S W	29. 75		Cloudy	S. by E. 1	29. 73		Fair	E. by N. 1	29. 98	
	Fair	S W I	72			S. by E. 2	72		Cool	N. E. 2	30. 00	
		S W o	70 o. 24		Rain	S. by E. 2	65				29. 98	
2	Same	S W o	67		Fair	S. by E. o	63 o. 51		The same	NE. b. N. 1	93	
		S W I	59 o. 22		Showers	W. by S. 1	65			N. E. 2	92	
		W b. N. 1	64		Fair		63 o. 40				90	
3	Fair	W o	75		Rain	S. by E. 2	69		Hot Sun	E. by N. o	88	
			84		Cloudy	W. 3	71		but	E. 1	89	
			85		Fair		73 o. 05		Cool Air	E.	89	
4	Cloudy	S o	85		Rain	S. W. b. S. 1	69		Fair	E. o	84	
	Fair	S W I	85		Fairer	S. by W. 2	65		Warmer	E. 2	84	
	Hot	S W	85		Rain	W. 1.	60 I. 00		Air		80	
5	Fair	W o	87		Rain				Fair	E. 1	78	
	Cool				Fairer	S. W. 2	50			E. o	80	
	Breezes	W I	99			S. W. 1	49 o. 79		Hot		83	
6	Hot	W. o	29. 95		The same	S. by W. o	47		Mist	E. o	83	
	Dry	W. by S. 1	94			S. 1	41		Fair	S. by E. o	86	
	Dry		90				49 o. 22		Hot		87	
	Fair	W. by N. o	86		Cloudy	S. by E. o	51			S. o	85	
7	Hot				Rain	E. by N. 1	55		The same	E. 2.	83	
	Rain	W by S. o	79 o. 12		Fairer	E. N. E. 1	58 o. 07			E. o	80	
8	Misting	S. W. 1	68		Rain	N. 2	50		The same	E. o	73	
	Rain	S. W. 2	60		both	N. 1	48 I. 0				70	
	Cloudy	S. S. W. 1	44 o. 32			N. 2	35 o. 91		Fair	E. by N. 1	68	
	Rain	S. W. 1	42 o. 75		Days	W. 2.	37		Cooler	E. by N. 2	65	
	Cool	S. W. 1	43			W. by S. 1	42 o. 50				55	
	Fairer	W. NW. o	47 o. 77		Cloudy	W. 1.	48 2. 20		Cloudy	E. 1.	43	
9	Fair and	W. by N. o	58		Rain	N. W. 2	65		Rain	S. 2	39	
	Cool	W. 1	71		Fairer	W. 1	75 o. 07				40 o. 10	
10		N. W. b. W.	83									
11	Rain		85		Fair	W. o.	77		Showers	S. by E. o	35	
	Warmer	S. W. 1	85		Pleasant	W. 1	80			W. S. W. 1	40	
			92 o. 50		Day	W. N. W. 1	82		Fair	S. o	60 I. 59	
		S. W. b. W.	30. 00		Cloudy	W. by N. o	82		Cloudy	S. by W. 2	75 o. 07	
12					Fair	W. by N. o	82		Rain	S. 2.	77	
	Fair					N. o	85			S. 3	70	
13	Fair and				Mist	N. o.	88		Fair		49	
	Hot	S. o	29. 98		Cloudy	W. by S. 1	89				38	
					Rain.	S. by W. 1	82 o. 33				63 I. 54	
	Fair				Cloudy	S. W. 2	78		Rain	S. o	67	
14		S. o	90			W. 2	83			S. 2	50	
	Cloudy	S. by W. 1	88		Fair	W. 2	88		Fair	S. 4	32	
		S. W. 1	84		Cloudy	S. W. 1	84		Rain	S. W. 1	46	
15	Rain	N. b. W. 1	84		Little	W. by S. 2	81		Rain	3	30	
	Cloudy	W. 1	85 o. 48		Rain	S. W. b. W. 1	75				30	
	Fair	N. W. o	90									
16	Cooler	W. 1	95		Cloudy		70		Fair	S. W. 4	28	
	Rain	N. W. b. W.	94		Fair	S. 1	62		Cool	W. by S. 6	32	
	Thunder		92 o. 42		Cloudy		53		Cloudy	2	34	
		W. by N. o	91			S. o	48		Fair	W. 1	45	
17	Fair and	N. o	93						Cool	o	75	
	Cool	N. N. W. o	93									
			93									
18	Fair	N. W. 1	95						Rain	E. by S. o	55	
	Cloudy									S. S. W. 2	34 3. 10	
	Rain	N. 1	98							S. W. 2	10 I. 60	
	Misting	N.	93						Fair	W. by N. o	38	
19	Cloudy	W. N. W. 1	30. 00 o. 62						Cloudy	S. W. 1	50	
									Rain			

arometer, and Quantity of Rain falling every Day at Upminster, in Essex,
One Thousand Six Hundred Ninety Seven.

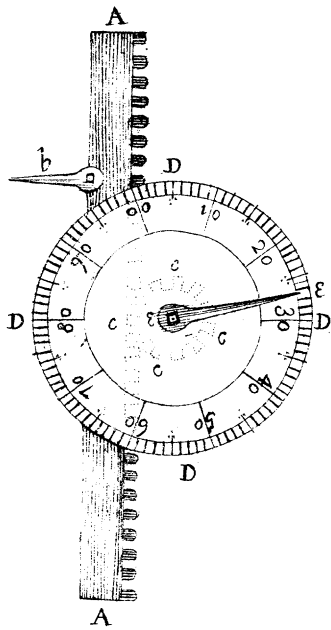
12 9.		October. 7. 12. 9				November. 8. 12. 9.				December. 8. 12. 9.			
Rain.	Weather	Winds.	Barom.	Rain	Weather.	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	
	Cloudy	N. W. o	29. 75		Miffling	S. 1	30. 19		Hard	W. b. N. o	29. 86		
	Misty	S. 1							Frost and	W. b. N. 2	87		
	Warm	S. o	78		Misty		15		Fair		89		
	Rain----	S. o	77	o. 10	Fair	S. S. W. o	11		Same	N. 1	90		
	Cloudy	S. by E. o	75		Warm	W. by S. o	11			N. o	94		
	Warm		70		Pleasant		07				99		
	Cloudy	S. by E. o	51		Fair	W. o	04		Same	N. o	30. 05		
		S. 1	46		Colder	W. by S. o	02		Same	N. N. E. o	08		
	Rain		31	o. 72	Fog		29. 99				06		
	Fair	SWb. W. 1	50		Cloudy	SW. b. S. 2	94		Cloudy	N. W. 1	29. 98		
	Cold	S. W. 2	52		Cold		88		Snow	N. N. W. 1	89		
	Rain		28		Day		80		Half Inch		96		
		S. 4	00	o. 12	Rain----	S. W. 2	73	o. 50	Cloudy	N. b. E. 2	30. 00		
	Rain	S. by W. 2	28. 98		Fair	W. b. S. 2	75		Fair	N. N. E. 1	06		
			29. 13	o. 57			81				09		
	Rain	S. 1	16		Rain				Snow	NW. b. N. 3	29. 98		
	Stormy	E. & W. S.	28. 97		Fair	W. by N. 1	87		Fair	NW. b. N. 1	99		
	Fairer	S. & c. 6	29. 28	o. 36	Cold		30. 00		Sn. 1 Inch		30. 00		
	Rain	S. by E. 1	08		Cold	E. o.	29. 93		Snow 6	N. W. o	29. 93		
		N. 1	13		Cloudy	E. S. E. o	91		Snow 8	S. o	71		
	Fair	W. 1	58	o. 52	Day		92		Inches		68		
	Rain	S. 2.	66		Frost	E. by S. o	96		Fair	E. o	84		
	Cloudy	S. W. 4	64	o. 10	Fair	E. S. E. o	99				87		
	Stormy	5	44		Hard		30. 10				85		
	Stormy	S. W. 8	39		Frost	E. o	10		Snow	S. b. E. 1	64		
	Cloudy	W. S. W. 4	51		Fair		10		Sleet		53		
	Fairer	2	66		Cloudy	N. E. o	08		Thaw	E. N. E. o	42		
	Fair	SWb. W. o	88		Frost		04		Frost	E. o	55		
	and	W. by S. o	30. 00		Fair				Thaw	2	57	3. 62	
	Pleasant		15						Snow		46		
	Frost	W. by S. o	20		Rain	W. by S. 1	29. 73		Rain	E. S. E. 2	09	2. 76	
	and	S. W. o	21		Fairer	N. 2	72	o. 78	Warm	S. b. W. 1	10		
	Misty		18						Thaw		24	o. 90	
	Frost	SWb. W. o	17		Rain	N. by W. 2	70	o. 02	Thaw	S. by E. 2	14		
	Fair				Fair	N. 1	68			S. 2	04		
					Frost		65	o. 15	Rain		11	o. 42	
	Fair				Rain----	N. 1	63		Fair	S. W. 3	33		
					Cloudy		62	o. 09	Warm	W. S. W. 3	50		
	Fair	W. 1	20		Frost		56		Pleasant	S. W. 1	61		
	Fair	W. by S. o	18		Snow	N. E. 2	40	o. 82	Cloudy	S. W. 1	63		
	and	W. N. W. o	18		Sleet	N. 1	38		Warm	W. S. W. 1	67		
	Warm		16		All Day		48	o. 50	Day	W. S. W. o	65		
	Cloudy	W. by S. o	12		Frost	W. b. S. o	64		Misty	E. 1	64		
	Warm	N. W. o	12						Warm	E. by N. o	64		
	Miffling		10						Day		65		
	Cloudy	W. o	06		Hard				Frost				
	Fair	N. N. W. 2	08	o. 14	Frost	Nb y W. 2	30. 04		Fair	E. by N. 1	58		
	Cold	N. by W.	20		Fair						59		
	Same	N. by W. o	27		The same	N. b. W. 2	03		Frost		57		
		N. by E. 1	30			N. b. W. 3	03		Cloudy	E. o	56		
			34				00		Fairer		62		
	Cloudy	N. by E. o	32			N. N. W. 1	29. 92				64		
	Fair	E. by S. o	33		The same	N. N. W. o	91		Mist	E. o	72		
	Colder		27				76						
	Hoar Fr.	S. W. o	22		Snow	S. S. W. 2	26		Cloudy	E. 1	70		
	Mist	N. by E. o	28		Sleet				Warm		68		
	Fair		30		Rain		28	20	Day		62		

19	Rain	N. 1	98					Fair	S.W. 2	101. 60	
	Miffling	N.	93					Fair	W.by N.0	38	
	Cloudy	W.N.W.1	30. 00	62				Cloudy	S.W. 1	50	
20	Showry		30					Rain	S. 1	22	56
		W.by S.1	29. 88					Rain	S.W. 3	05	
								Fair	W.S.W.3	02	
								Fair	3	21	14
								Great Steer Thun. Ra.		60	1. 88
21	Rain	W.by W.1	75					Cloudy		60	
	Fair	W.by N.1	71					Rain	S. 1	60	
	Miffling	W. 1	60					Cloudy		61	o. 13
22	Mifty	S.W.b.W.	48					Cloudy	W.by S.0	74	
	Rain							Miffling	W. 1.	84	
	Fair	S.W.b.S0	50	45				Fair	W.	90	
23	Fair	S.by W.0	50					Fair	W.by S.0	92	
	Cool	S. 1	48					Cloudy	W.by S.2	88	
	Day	S. o	48					Fair	S.W. 2.	84	
24	Fair	S. 1	50					Cloudy		82	
	Thun. Great Sh. with Hail	W. & N. & S.	56	02				Fair	S.W. 1	82	
			60					Sultry		78	
25	Fair	W. o	65					Cloudy	S.W.b.S1	70	
	Pleasant	N. W. 1	72					Fair	S.W.b.S2	67	
	Day	W.S.W.0	77					Fair	S.by W.2	54	
26	Fair		76					Rain	S. 3	29	
	Cloudy	W.by S.0	76					Fair	W.by S.3	31	
	Miffling		69							54	o. 53
27	Cloudy	S.by W.0	63					Fair	S.W. 1	81	
	and	SE. Sb.W	60					Fair	W.by S.2	93	
	Cool	E. by N.1	60							98	
28	The same	N. N. E.2	58					Fair	S.S.W.0	94	
		E. by N.2	62						S.S.W.2	94	
			69							90	
29	Fair	N. 1	70					Cloudy	S.W. 0	95	
	Cool	N. 2	76					Sultry	E. o	99	
	Day		90					Very Cl.		30. 03	
30	The same	N.by W.0	77					Fair	N. E. 0	03	
		W.by N.1	30. 00								
			00								
31	Cloudy	S.by E.1	29. 50	20				Fair and Air sharp			
	Warmer	S. S. E.1	86								
	Rain	S. 1	79. 6	19							10. 47

Place this between Pag. 48, 49.

60	Clear	E. by S. 0	27			76			72
	Hoar Fr.	S. W. 0	22			26			70
	Mist	N. by E. 0	28						68
	Fair		30						63
56	Fog/Frost	N. W.	28			28.	83	I. 20	
	Cold	S. W.	26						50
	Rain		23						44
14	Cloudy	W. S. 1	15						
	Fair	W. by S. 1	16						
			20						
	Fog	W. by S. 0	25						
		S. W. 0	25						
			25						
09	Cloudy	S. S. W.	22						
	Fair		15						
	Cloudy		06						
	and Warm	S. W. 0	29.	94					
08	Same	S. W. 2	80						
		W. S. W. 2	78						
30			74						
	Cloudy	S. W. 2	60						
	Warm	S. W. 6	52						
24	Rain	6	27						
	Fair	S. W. 2	37	I. 52					
	Rain	SW. by W. 5	34						
84	Stormy	0	88	O. 21					
	Frost	S. W. 0	30.	08					
	Fair		29.	89					
	Rain								
	Warm	S. W. 4	78						
	Small			O. 02					
	Showers	3	74						
	Cloudy	W. by S. 5	48						
22	Fair	W. 6	54						
			72						
	Fair	N. 0	30.	04	O. 01				
	and	N. E. 2	17						
0.47	Cool		26	8.	39				
	Snow	S. S. W. 2							
	Sleet								
	Rain								
	Cloudy	N. b. W. 2							
	Sleet	N. b. W. 3							
	Cold								
	Cloudy	N. W. 2							
	Snow	W. by N. 1							
	Frost	N. 0							
	Fair	N. 1							
	Sleet								
	Frost	N. W. 2							
	Fair								
	Snow								
	Fair								
	Hard	S. 0							
	Frost	S. 1							
	Dripping								
	Rain	S. E. b. S. 2							
	Fairer	S. E. 2							
	Rain								
	Fair	S. b. W. 0							
	Thaw	S. 1							
	Rain								
	Cloudy	S. 0							
	Warmer								
	Rain								
	Frost	S. S. W. 0							
	Fair								
	Small	W. 1							
	Frost &	W. by N. 1							
	Fair								
	Cloudy								
	Warm								
	Day								
	Fog								
	Cloudy								
	Colder								
	Rain								
	Cloudy	E. 1:							
	Cold								
	Rain								
	Cloudy	E. 1							
	Fair								
	Cloudy	S. by E. 1							
	Fair	S. 1							
	Rain								
	Stormy	S. by W. 2							
	Fair	S. 2.							
	and	6.							
	Warm	W. 3							
		S. W. 2							
	Cloudy	W. S. W. 2							
	Fair	W. b. S. 2							
	Warm	3							
	Cloudy	W. S. W. 2							
	Mifling								
	Cloudy	S. by W. 0							
	Rain	W. by S. 3							
	Fair								
	Fair	W. 2.							
	Cloudy	W. by N. 2							
	Rain	0							
	Fair	N. E. 1	30.	10	O. 05				
	Cloudy	N. E. 1							
	Fair								
	Frost	E. 0							
	Cloudy	E. b. S. 0							
	Fair								
	Total					5.	63		
	Frost								
	Cloudy								
	Fair								

Philosoph. Transact. Numb. 237. Tab. 2.



II. *A Letter of Mr. W. Derham, Rector of Upminster, dated Jan. 13. 1697. to Dr. Sloane, about a Contrivance to measure the Height of the Mercury in the Barometer, by a Circle on one of the Weather Plates, with a Register of the Weather, &c. for the Year 1697.*

TO my former Observations about the Barometer, give me leave to subjoin a Contrivance for measuring the Height of the *Mercury*, which hath lately occurred to my Thoughts, and which in some Cases is more commodious, than that way with a crooked Tube (I spake of.) This way is by a Circle on one of the Weather-plates, of any convenient Diameter. Divide this into 100 Parts (which are to answer the 100 Parts of an Inch.) The Index which pointeth to these Parts, must be driven round by a small wheel, like the Dial-wheel of a Watch. This Wheel must be driven round by a strait Piece, like a small Ruler, with Teeth on one Edge thereof; every Inch whereof must contain just the same Number of Teeth as are in the Dial-wheel before mentioned; so as that by the thrusting up and down this toothed Ruler, you may at every Inch turn round the Index once. About the middle of this toothed Ruler, a fine Finger must be fixed to point exactly to the Height of the *Mercury*. And consequently by raising or depressing this Finger to the Height of the *Mercury*, you very exactly see, on the Circle, the Parts of an Inch, which the *Mercury* riseth or falleth in the Tube, by reason the Circumference of the Circle is Three or more Inches about.

This Description in Words may perhaps be sufficient, but to prevent Obscurity, I have added a Figure.

Having propos'd the nicest ways I can think of, for measuring the Variation of the *Mercury* on different Heights, there is one Difficulty (partly suggested to me by a correspondent Friend) which may be resolv'd hereby, which I have not yet had Opportunity to make trial of, and do therefore recommend it to others. And that is, *Whether the Mercury hath exactly the same Variation, on one and the same Height, at two different Times: viz. When the Mercury is high, as in fair Weather; or low, as in foul:* I am inclin'd to think, That as the Atmosphere is heavier or lighter, so its pressure being more or less on the same Height, that consequently the *Mercury* riseth or falleth sometimes more, sometimes less on one and the same Height. As for Instance, If the *Mercury* sinketh $\frac{1}{2}$ of an Inch at the Height of 82 Feet, when the *Mercury* standeth at 30 Inches in the Barometer, I Quære, Whether it will sink so much when the Barometer is at 29 Inches?

Fig. 1. representeth the Circle and toothed Ruler, without the Interposition of the Weather-plate; that the Contrivance may be the better seen.

A. A. The Ruler with Teeth, made to slide up and down.

b. The little Finger that pointeth to the *Mercury's* Height (which is placed higher on the toothed Rule than it ought to be, that it may be seen.)

c. c. c. c. The Index or Dial-wheel.

D. D. D. D. The Circle.

e. e. The Index.

The following Table explained, with Remarks upon it.

1. **T**HE Four Columns in each Month are easy : The First giveth the State of the Weather in the Morning, at Noon, and at Night. The Second the Bearing of the Winds. The Third, the Height of the *Mercury* in the Barometer, in Inches and Centesimals. The last the Quantity of Rain that fell every Day through a Tunnel of Twelve Inches Diameter, in Pounds and Centesimals of a Pound : At the Bottom of which Column is the Quantity of all the Rain that fell in the Month.

2. Where only one sort of Weather is noted upon one Day, that was the Weather of all the Day ; especially if the Barometer be noted three times. The same observe also in the Column of Winds. Thus *Jan. 2.* it was a Mistling Day, Wind S.

3. The uppermost Observation of each Day is the Morning Observation ; the middlemost at Noon ; the lowermost at Night. Or if a Defect be in any of those Three Places, no Observation was made at that time.

If you meet with [Rain] noted on the Line that parts every Day, it signifies rain fell in the Night.

4. The Time of observing at Night, was at Nine of the Clock all the Year. But the Morning Observations were all *January* at 8 of the Clock ; all *February*, and to *March 20.* at 7 of the Clock ; thence to the End of *September* at Six of the Clock ; all *October* at Seven ; all *November* and *December* at Eight : And this is the meaning of the Figures that follow the Name of every Month.

5. The Strength of the Winds is noted in the Column

of Winds, from *March* 25. The Reason I did it not before, was, because I did not think of it till Mr. *Townley* suggested it to me, *Note*, A Cypher signifies a Calm; 1, 2, 3, &c. denotes the Strength of the Wind; wherefore 5, or 6 is a little Storm; 7, or 8 a great Storm.

6. Where the Weather, Winds, or Rain are noted only in the Morning and at Night, it signifies the Weather, &c. all the Morning and Afternoon; especially if the Barometer was observed at Noon.

7. The Defect of Observations from *April* 26. to *May* 16. was occasioned by my Absence in a Journey: Notwithstanding which, I took Care to have the Rain that fell, measured; tho' not on the Days it fell.

8. Forasmuch as the Quantity of Snow falling can't be well observed by the Tunnel, I have therefore in the Table noted the Depth of it on the Ground, as on *Dec.* 4, &c.

9. The whole Quantity of Rain that fell through my Tunnel last Year, was 77.60 lb. which is less than fell from the Beginning of *March* (at which time I began my Rain-Observations) till the End of *December*, 1696. In which Ten Months there fell here, at *Upminster*, almost 115 lb. and at *Townley* in *Lancashire* (according to Mr. *Townley's* Observations) above 172 lb. and in the whole Year at *Townley* 203.75 lb.

10. My Rain-Observations I make with a Tunnel of Twelve Inches Diameter (as I have said) the Rain I measure with a Cylindrical Glass. But for a fuller Description, I refer to Mr. *Townley's* Account of his Method, in one of the Transactions of a former Year.

A Register of the Weather, Winds, Height of the Mercury in the Barometer, and Quantity of Rain falling every Day at Upminster, in Essex, the first Six Months of the Year One Thousand Six Hundred Ninety Seven.

Day	January. 8. 12. 9.				February. 7. 12. 9.				March 7. 12. 9.				April. 6. 12. 9.				May. 6. 12. 9.				June. 6. 12. 9.			
	Weather	Winds.	Barom.	Rain.	Weather.	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.
1	Frost	W.S.W.	30. 07		Frost				Cloudy	S. W.	30. 1		Cloudy	N. E. 0	29. 83						Fair	S. 0	29. 66	
2	Milling	S.	05		Cloudy	N. E.	29. 05		Cloudy	W. S. W.	18		Fair	N. E. 2	88						Rain	S. 0		42
3	Fog	S. by W.	07		Frost	N.E.by E.	75		Fog	S.	29. 02		Fair	N.E. by E. 1	82						Rain	S. 1	29. 44	
4	Milling	S.	18	0. 50	Cloudy	E. by S.	30	0. 02	Fair	W. by S.	88		Milling	N. 0	75						Fair	S. by W. 0	02	0. 79
5	Calm and Cloudy	W. by S.	22		Thaw	E.	20	0. 03	Fair	S. W.	71		Cloudy	N. by E.	68						Showers	S. 1	02	0. 37
6	Fog	W.	22	0. 30	Frost	N. by E.	05		Rain	S. W.	20		Frost	E.	73						Cloudy	S. W. 2	18	
7	Cloudy	W. by N.	05		Snow	N.	28. 90		Fair	W.	48		Fair	E.	69						Thunder	E. 0	82	0. 13
8	Cloudy	N. W.	29. 94		Cloudy	W. by S.	83	0. 01	Colder	W. by N.	57		Frost	E.	67						Fog	S. by W.	70	0. 02
9	Sunsh. Rain Snow	S.	51	1. 20.	Fairer	S. W.	84	0. 01	Bluffer.	W.	60		Warmer	E.	71						Fair	S. W. 1	71	
10	Frost	S. W.	02		Thaw	S. W.	29. 90		Fair	N. W.	30. 01		Fog	W.	65						Hot	S. W. 1	71	
11	Cloudy	N.	29. 46		Frost	S. W.	25		Mist.	S. W.	29. 95		Cloudy	W.	64						Fair	S. W. b. W.	70	
12	sleet	N.	83		Cloudy	E. by S.	30. 08		Fair	N. by E.	15		Warm	E. 0	61						Cloudy	S. 0	56	
13	Cloudy		91		Tinaw	S.	00		Rain	N. W.	11		Fog	E. by S. 1	61						Fair	S. by E. 0	50	
14	Snow	N. E.	95	0. 20	Calm	S. by W.	88	0. 40	Frost	E.	15		Cloudy	E. 0	61						Rain	S. 0	48	
15	Frost	E. N. E.	94		Mist	N.	85	0. 30	Fair	W.	14		Warm	E. by S. 1	61						Fair	S. by W. 1	65	0. 20
16	Cloudy	E. N. E.	90		Warm	N. W.	80		Bluffer.	W.	48		Fair	E. 0	60						Hot	S. 0	51	
17	Cloudy	N. E. b. N.	91		Warm	N. W.	80		Storms	W.	28		Cloudy	E. 0	60						Fair	S. by E. 0	60	
18	Cloudy	N. N. W.	30. 02		Cloudy	S. by E.	30		Fair	N. W.	47		Fair	E. 1	62						Cloudy	S. 0	75	
19	Fair	W.	09		Rain	E. by S.	30		Frost	W. S. W.	35		Cloudy	N. by E. 2	65						Fair	N. W. 1	60	
20	Cloudy	S. W.	10		Fair	S.	29. 95		Cloudy	W. by N.	21		Rain	N. by E.	70						Fair	N. W. 0	45	
21	Frost	S. W.	10		Cloudy	S. by W.	75	0. 04	Rain	N. by W.	18		Cloudy	N. E.	72	2. 38					Fair	W. 0	40	
22	Cloudy	N. E.	96		Fair	S.	38	0. 05	Frost	N.	35		Fair	N. N. E. 0	75						Fair	S. W. 0	34	
23	Frost	N. E.	77		Fair	S. by W.	81		Cloudy	N. N. E.	48		Warm	E. by N. 0	75						Rain	S. W. 0	28	
24	Cloudy	N. E.	65		Cloudy	S. E.	45		Frost	W.	40		Fair	E. by N. 0	75						Hot	S. W. 0	28	
25	Snow	S. W.	47	0. 08	Cloudy	E. by S.	45		Frost	W.	40		Fair	E. by N. 0	75						Rain	S. W. 0	28	
26	Frost	N. E.	96		Fair	E.	37		Bluff.	N. W.	40		Fair	E. 0	60						Very	S. W. 0	34	
27	Cloudy	N. E.	74		Fair	E.	48	0. 03	Cloudy	N. W.	10		Hot	E. by N. 0	75						Droughty.	S. W. 0	00	
28	Snow	S. W.	31	0. 08	Cloudy	S. by W.	75	0. 04	Frost	W.	10		Cloudy	E. by N. 0	75						Hot	S. W. 0	00	
29	Frost	S. W.	41		Cloudy	S.	85		Frost	W.	10		Cloudy	E. by N. 0	75						Hot	S. W. 0	00	
30	Fair	W.	50		Cloudy	S.	88		Frost	N. W.	10		Cloudy	E. by N. 0	75						Rain	S. W. 0	00	
31	Fair	N. N. W.	95	3. 61	Cloudy	S.	88		Bluff.	N. W.	10		Cloudy	E. by N. 0	75						Hot	S. W. 0	00	

A Register of the Weather, Winds, Height of the Mercury in the Barometer, and Quantity of Rain falling every Day at Upminster, in Essex, the last Six Months of the Year One Thousand Six Hundred Ninety Seven.

July. 6. 12. 9.				August. 6. 12. 9.				September. 6. 12. 9.				October. 7. 12. 9.				November. 8. 12. 9.				December. 8. 12. 9.								
Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	Weather	Winds.	Barom.	Rain.	
1	Rain	S.S.W	29. 75					Fair	E. by N. 1	29. 98		Cloudy	N. W. 0	29. 75		Milling	S. 1	30. 19		Hard	W. b. N. 0	29. 86						
2	Fair	S.W. 1	72	Cloudy	S. by E. 1	29. 73		Cool	N. E. 2	30. 00		Misty	S. 1	71		Fair	S. S. W. 0	11		Frost and	W. b. N. 2	87						
3	Fair	S.W. 0	70. 0. 24	Fair	S. by E. 2	65		The same	NE. b. N. 1	29. 98		Warm	S. 0	71		Fair	W. by S. 0	11		Same	N. 1	90						
4	Same	S.W. 1	57	Showers	W. by S. 1	65		Fair	N. E. 2	92		Rain	S. by E. 0	71	10	Fair	S. S. W. 0	11		Fair	N. 0	94						
5	Fair	W. b. N. 1	59. 0. 22	Fair	S. by E. 2	69	51	Hot Sun	E. by N. 0	88		Cloudy	S. by E. 0	70		Pleasant	W. 0	07		Same	N. 0	30. 05						
6	Fair	W. 0	64	Rain	W. 3	69		Cool Air	E. 1	89		Cloudy	S. 1	41		Fair	W. by S. 0	04		Same	N. N. E. 0	30. 08						
7	Cloudy	S. 0	85	Fairer	S. W. b. S. 1	69		Fair	E. 0	84		Rain	S. by E. 0	51		Fog	W. by S. 0	02		Cloudy	N. W. 1	29. 98						
8	Fair	S.W. 1	85	Rain	S. by W. 2	65		Warmer	E. 2	84		Fair	S. W. 1	41		Cloud	SW. b. S. 2	94		Snow	N. N. W. 1	29. 89						
9	Hot	S.W. 1	85	Fairer	W. 1.	60. 1. 00		Air	E. 0	80		Cold	S. W. 2	51		Day	80			Cloudy	N. b. E. 2	30. 00						
10	Fair	W. 0	87	Rain	S. W. 2	50		Fair	E. 1	78		Rain	S. 4	00	12	Rain	S. W. 2	73	50	Cloudy	N. b. E. 2	30. 00						
11	Cool	W. 1	99	Fairer	S. W. 1	49. 0. 79		Hot	E. 0	80		Fair	S. by W. 2	28. 95		Fair	W. b. S. 2	75		Fair	N. N. E. 1	06						
12	Hot	W. 0	29. 95	The same	S. by W. 0	4		Miff.	E. 0	82		Rain	S. 1	16		Rain	W. by N. 1	87		Snow	NW. b. N. 3	29. 98						
13	Dry	W. by S. 1	94	Cloudy	S. 1	41	22	Fair	S. by E. 0	85		Stormy	E. & W. S. 1	28. 97		Fair	W. by N. 1	87		Fair	NW. b. N. 1	30. 00						
14	Day	90		Fair	S. 1	45		Hot	S. by E. 0	87		Fairer	S. & C. 6	29. 28	36	Cold	30. 00			Snow	S. 1	30. 00						
15	Fair	W. by N. 0	86	Cloudy	S. by E. 0	51		The same	S. 0	85		Rain	S. by E. 1	08		Cloudy	E. 0. 29. 93			Snow	N. W. 0	29. 93						
16	Hot	W. by N. 0	86	Rain	E. by N. 1	55		The same	E. 2.	83		Fair	N. 1	13		Cloudy	E. S. E. 0	91		Snow	S. 0	71						
17	Fair	W. by S. 0	79. 0. 12	Fairer	E. N. E. 1	55	07	The same	E. 0	80		Rain	W. 1	58. 2. 52		Day	92			Snow	6	29. 93						
18	Milling	S. W. 1	68	Rain	N. 2	50		The same	E. 0	73		Cloudy	S. 2.	60		Frost	E. by S. 0	96		Fair	E. 0	84						
19	Rain	S. W. 2	60	Fairer	N. 1	41	0	Fair	E. 0	70		Stormy	S. W. 4	64	10	Fair	E. S. E. 0	99		Snow	S. b. E. 1	04						
20	Cloudy	S. S. W. 1	44. 0. 32	Rain	N. 2	31	91	The same	E. 0	70		Cloudy	5	44		Fair	E. S. E. 0	99		Fair	E. 0	87						
21	Rain	S. W. 1	42. 0. 75	Days	W. 2.	37		Fair	E. by N. 1	68		Stormy	S. W. 8	39		Hard	E. 0	30. 10		Snow	S. 0	85						
22	Cool	S. W. 1	43	W. by S. 1	41	50		Cooler	E. by N. 2	65		Cloudy	W. S. W. 4	51		Frost	E. 0	10		Sleet	S. b. E. 1	53						
23	Fairer	W. N. W. 0	43. 0. 77	Cloudy	W. 1.	61	39	Cloudy	E. by N. 2	55		Fairer	2	66		Fair	E. 0	10		Fair	S. b. E. 1	42						
24	Fair and	W. by N. 0	50	Rain	N. W. 2	65		Cloudy	E. 1.	43		and	SW. b. W. 0	88		Cloudy	E. 0	08		Thaw	E. N. E. 0	55						
25	Cool	W. 1	71	Fairer	W. 1	75	07	Rain	S. 2	39	10	Pleasant	W. by S. 0	30. 00		Fair	04			Snow	E. 0	57	3. 62					
26	Rain	S. W. 1	85	Fair	W. 0.	77		Showers	S. by E. 0	31		Frost	S. W. 0	20		Rain	W. by S. 1	29. 73		Rain	E. S. E. 2	09	2. 76					
27	Warmer	S. W. 1	85	Pleasant	W. 1	80		W. S. W. 1	W. S. W. 1	40		Misty	S. W. 0	18		Warm	N. 2	72. 0. 78		Thaw	S. b. W. 1	10						
28	Day	92. 0. 50		Day	W. N. W. 1	82		W. N. W. 1	W. N. W. 1	60	59	Fair	SW. b. W. 0	17		Thaw	S. by E. 2	14		Thaw	S. 2	04						
29	Fair	S. W. b. W.	30. 00	Cloudy	W. by N. 0	82		Fair	S. 0	76	07	Frost	W. by S. 0	17		Rain	N. by W. 2	70. 0. 02		Rain	S. 2	04						
30	Fair	W. by N. 0	86	Fair	W. by N. 0	82		Cloudy	S. by W. 2	77		Fair	W. 1	20		Fair	N. 1	68		Thaw	S. 2	04						
31	Hot	W. by N. 0	86	Miff.	N. 0.	64		Rain	S. 2.	49		Fair	W. 1	20		Rain	N. 1	63		Fair	S. W. 3	33						