

repeatedly produced, in five minutes, solid ice weighing about a pound, and ice as pure as that from spring water in the frostiest winter; indeed, pure spring water is used, and Mr. Masters' ice thus produced is quite equal in flavour to that of the Wenham Lake ice. In fine, the lover of frigid luxuries may, by the aid of the ice apparatus, command, at any time and in any climate, at a few minutes' notice, a supply of any cooling dainty, from a sherry cobbler to a castellated tower of ice sufficiently capacious to stow away a week's provisions, of varied kind. Mr. Masters announced that he had arranged to exhibit these curious processes daily at his city depot in Mansion House Street. He is known also for other ingenious inventions.

SWEET OIL OF TURPENTINE.—There are many useful things, which, like many highly respectable individuals, have their full portion of the disagreeable. Among such things is turpentine, exceedingly useful and thoroughly disliked for its peculiar fulness of odour, by ladies and amateurs especially. The "Sweet Oil of Turpentin Co.," in Pream's-buildings, Chancery-lane, have obviated this objection to using turpentine in painting, in cleaning pictures, apparel, or indeed any of many applications of the liquid. The excellence of the discovery is certified by Dr. Serny, and it goes rather "beyond what we have specified—the disagreeable odour is expelled and a perfume substituted. You may now "turpentine" your handkerchief!

PAPER SPLITTING.—This is a recent invention, which, although of considerable importance and extensive application, has been hitherto little known or practised—indeed, scarcely at all beyond the moderate sphere of the few discoverers themselves. It may, indeed, be perhaps asked of what use can the splitting of a sheet of paper be? Now we understand that the art can be, and has been, applied to the separation of holographs and indorsations from written documents; and from the circumstance of the directors of the Bank of England having, a few months back, attached great importance to the splitting of a bank-note, much curiosity has been excited on the subject. The means, however, by which that note was split was kept a secret by the person who performed the task, so that in so far as the public are concerned, they have remained as much as ever ignorant of the art. Since then various modes have been prepared by different individuals for effecting the same object, and there are some who are said to have more or less succeeded by a means discovered by and known only to themselves, but up till the present time, if such discoveries have been made, they have been uniformly kept secret by the discoverers for their own special use and benefit. Now, however, a discoverer offers to teach this very ingenious art.

INSECT SLAVERY.—The most remarkable fact connected with the history of ants is the propensity possessed by certain species to kidnap the workers of other species and compel them to labour for the benefit of the community, thus using them completely as slaves; and as far as we yet know, the kidnapers are red or pale-colored ants, and the slaves, like the captured natives of Africa, of a jet black. The time for taking slaves extends over a period of about ten weeks, and never commences until the male or female are about emerging from the pupa state; and thus the ruthless marauders never interfere with the continuation of the species. This instinct seems especially provided; for were the slave ants created for no other end than to fill the station of slavery to which they appear doomed, still even that office must fail, were the attacks to be made on their nest before the winged myriads have departed or are departing, charged with the duty of continuing their kind.

When the red ants are about to sally forth on a marauding expedition, they send scouts to ascertain the exact position in which a colony of negroes may be found. The scouts having discovered the object of their search, return to the nest and report their success. Shortly afterwards, the army of red ants marches forth, headed by a vanguard, which is perpetually changing; the individuals who constitute it, when they have advanced a little before the main body, halt, falling into the rear, and being replaced by others. This vanguard consists of eight or ten ants only.

When they have arrived near the negro colony, they disperse, wandering through the herbage and hunting about, as aware of the propinquity of the object of their search, yet ignorant of its exact position. At last they discover the settlement; and the foremost of the invaders, rushing impetuously to the attack, are met, grappled with, and frequently killed by the negroes on guard. The alarm is quickly communicated to the interior of the nest; the negroes sally forth by thousands, and the red ants rushing to the rescue, a desperate conflict ensues, which, however, always terminates in the defeat of the negroes, who retire to the innermost recesses of their habitation. Now follows the scene of pillage. The red ants, with their powerful mandibles, tear open the sides of the negro ant-hills, and rush into the heart of the citadel. In a few minutes each invader emerges, carrying in its mouth the pupa of a worker negro, which it has obtained in spite of the vigilance and valor of its natural guardians. The red ants return in perfect order to their nest, bearing with them their living burdens. On reaching their nest, the pupa appear to be treated precisely as their own; and the workers when they emerge, perform the various duties of the community with the greatest energy and apparent good will. They repair the nest, excavate passages, collect food, feed the larvæ, take the pupa into the sunshine, and perform every office which the welfare of the colony seems to require. They conduct themselves entirely as if fulfilling their original destination.

CURIOUS PROGNOSTICATORS OF THE WEATHER.—

The following Notes were made by Mr. E. J. Lowe, and may be useful as practical prognosticators of the weather. There are one or two very curious items in this table—for instance, that in 14 cases where landralls were clamorous, 13 were followed by fine weather in 24 hours, and only one by rain; again (a reverse case) in 25 cases where cabbages and turnips were lowering, only five were followed by fine weather, and 20 by rain. The whole of the observations, indeed, are curious, and the table deserves a record among the other documents of meteorological observers:

	No. of observations.	Followed in hours.	Fine.	Main.
Solar halos.....	204	133	71	
Lunar halos.....	102	51	51	
Mock suns.....	35	19	16	
Mock moons.....	9	7	2	
White stratus in the valley.....	229	201	28	
Distance clear.....	191	61	41	
Distant sounds heard as if near at hand..	45	25	20	
Aurora borealis.....	76	49	27	
Lunar Burr.....	64	47	17	
Coloured clouds at sunset.....	35	26	9	
Black stratus.....	6	3	3	
Burr round Venus.....	6	4	2	
Whirlwind.....	4	4	0	
Dew profuse.....	241	198	43	
Dew from 1st April to 30th September....	185	161	24	
Dew from 1st October to 30th March....	56	37	19	
White frost.....	73	59	14	
Falling stars abundant.....	85	65	20	
Stars bright.....	83	61	10	
Stars dim.....	54	32	22	
Sun pale and sparkling.....	51	27	24	
Smoke rising perpendicularly.....	6	5	1	
Moon shining dimly.....	18	12	6	
Sun red and shorn of rays.....	34	31	3	