Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL, AND OTHER IMPROVEMENTS

VOLUME XII. NEW-YORK, DECEMBER 20, 1856. NUMBER 15.

THE
Scientific American,
PUBLISHED WEEKLY
At 128 Fulton street, N. Y. (Sun Buildings.)
BY MUNN & CO.
O. D. MUNN, S. H. WALES, A. E. BEACH.

Responsible Agents may also be found in all the principal cities and towns in the United States.
Single copies of the paper are on sale at the office of publication and at all the periodical stores in this city, Brooklyn, and Jersey City.
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The Moon's Influence on Man and Plants.

The influence of the moon is admitted by all medical men practicing in India. From infancy the natives of tropical climates are taught to believe in lunar influence, and that with good cause, for the intimate connection which exists between the new and full moon, the disturbed state of the atmosphere, and the attacks of epidemic, has been well ascertained. Two hundred years ago a physician named Diemerbroeck, wrote a treatise on the Plague, in which he says: "Two or three days before and after the full moon the disease was more violent; more persons were seized at these times than at others." Many other authorities could be quoted to prove that the moon's influence is not to be regarded as purely imaginary, as is commonly the case. Many curious facts are recorded concerning the moon's influence upon the vegetable kingdom. It is stated that if peas are sown when the moon is increasing, they never cease to bloom; that if fruits and herbs are set during the wane of the moon, they are not so rich in flavor nor so strong and healthy as when planted during the increase. In Brazil, the farmers plant during the decline of the moon all those vegetables whose roots are used as food; and, on the contrary, they plant during the increase of the moon the sugar cane, maize, rice, &c. The English gardeners observe similar rules in regard to grafting, pruning, &c. From observations of Mr. Howard it appears that northerly winds are most frequent during a full moon, and south-west winds blow chiefly at the time of the new moon. It is also remarkable that rain falls most frequently during the last quarter of the moon, and that not a twentieth part of the rain of the whole year falls at full moon.

SEPTIMUS PIESSE.

Chesnuts.

The common chesnut furnishes dextrine, glucose, and farina. It might be as profitably cultivated as any other fruit, but our horticulturists have as yet, exhibited a sublime in difference to its excellence. They have ransacked all the corners of the earth for new foreign fruit trees, but have entirely neglected to cultivate this excellent native nut.

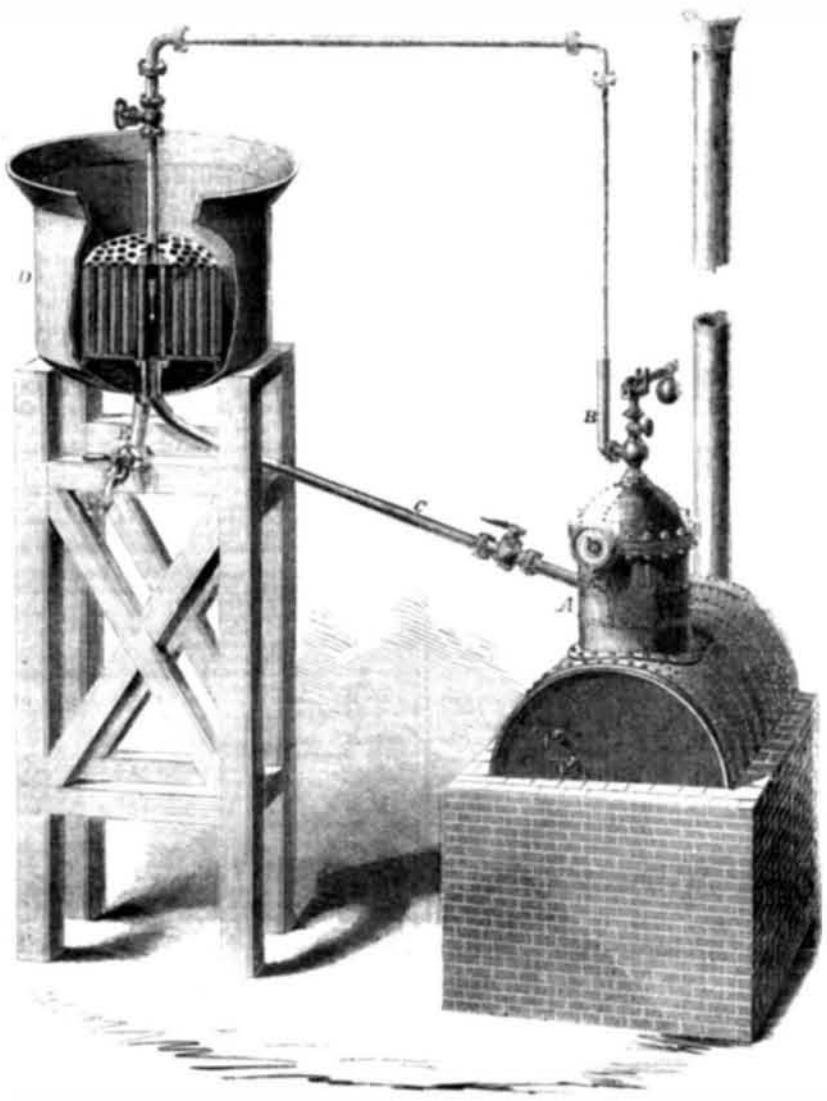
Silk Cultivation.

A few counties in Kentucky, in common with several in Tennessee, Indiana, Ohio, &c., grow the mulberry, and produce raw silk to a certain extent. It has been very satisfactorily demonstrated, especially in Kentucky and Tennessee, that this crop will pay better than three-fourths of all other farm productions; but owing to recollections of the "multicaulis fever," and ignorance of the rural population as to the management of the worms, the lightness of the labor, and the quickness and certainty of the return, silk-raising is not adopted generally among the crops of these several States.

Fuel and Wear of Locomotives.

It has been found by different railroad companies in England, that the wear and tear of engines, generally, is nearly in a direct ratio with the consumption of fuel. The Manchester and Leeds Co. have paid particular attention to this, and they find that the wear and tear follows nearly in a direct ratio.

PATENT EVAPORATOR AND CONDENSER.



Evaporator and Condenser.

The accompanying figure represents an Evaporating Apparatus which may be introduced into vessels of ordinary form where steam is used. It is the invention of Mr. James McCracken, of Bloomfield, N. J., and may be found among our List of Patents for the week ending March 14th, 1855.

The great novelty of this invention cousists in the fact that it receives steam both at the top and bottom of the cylinder, and while steam passes along the upper side of the return or condense pipe, the water of condensation runs down the lower side back into the boiler, thus obviating the necessity of a feed pump for the boiler.

A is the steam dome of the boiler; B a pipe for conveying steam to the evaporating pan, D; and C is the pipe which conveys all the condensed steam directly back into the boiler. The evaporating pan is represented on a platform, with a pipe to run off its concentrated contents. The pipes have the usual cocks on them for their proper management.

The operation of the apparatus is as follows:—The pan, D, in which the evaporator is placed, is filled with fluid till it covers the top of the steam cylinder inside, more or less; the liquid thus surrounds the cylinder and occupies the interior of the tubes. The cocks on the steam and condeuse pipes, B and C, are now opened, and steam enters the cylinder by both; the columns of cold fluid occupying the tubes in the cylinder take up the caloric, and expanding, rise to the surface, giving place to a supply of colder fluid from beneath; this goes on, the stream of water or liquid through the tubes increasing in velocity as the heat increases, till they assume the form of numerous small jets springing out of he tubes, and ebullition and evaporation take place with a rapidity hardly to be conceived, and this with a pressure on the boiler, A, as low as two pounds per square inch. Any amount of pressure, from one to one hundred pounds, may be carried, the apparatus being perfectly under the control of the operator.

The economy of this improvement will be evident to every practical man, as it saves fuel, power, and original cost of feed pump; and where water is scarce, or of such bad quality as to render evaporation by steam, under the old method, impracticable, it removes the difficulty, for the boiler needs no supply beyond what escapes by leakage or defective joints.

The space occupied by the apparatus is small, compared with the vast amount of steam surface obtained; as an illustration, take a cylinder 2 feet 9 inches in diameter by 22 inches deep—the size adapted to pans 7 feet in diameter and 5 feet deep—this will contain 187 tubes 2 inches in diameter and 22 inches long, which, together with the sides and parts of the top and bottom of the cylinder not occupied by tubes, all of which is effective for evaporation, will present a surface of 175 square feet to the fluid to be evaporated, which may be wort, dye liquor, salt, molasses, cane juice, &c., as occasion requires. These evaporators are excellent for breweries, to heat the wort, as they produce perfect circulation and thorough saccharification of the whole.

These Evaporators, on a large scale, may be seen at the works of the inventor, Bloomfield, N. J., where three are constantly in operation, evaporating dye stuffs. A working model, having a glass tube fitted to the return pipe to show the return of the water to the boiler, may be seen any day from 2 to 4 o'clock P. M., at the store of the agents and manufacturers, John W. Reid & Co., No. 11 Old Slip, New York City, who will give any further information required.

Uses of the Sulphuret of Carbon.

An article in the *Comptes Rendus*, by E. Deiss, is both instructive and novel regarding the uses to which this sulphuret may be applied in the industrial arts.

The author commences by stating that in 1840 the price of sulphuret of carbon was as high as from 50 to 60 francs the kilogramme, but that soon afterwards he reduced its price so greatly that in 1848 he sold it at 8 francs the kilogramme, for the purpose of vulcanizing india rubber. At present, with an apparatus composed of 3 retorts he is able to manufacture the immense quantity of 500 kilogrammes of sulphuret in 24 hours, although scarcely a year ago, with the same furnace, the same retorts, and the same amount of fuel, he could only produce 150 kilogrammes in the same time. The product now costs him only 50 centimes the kilogramme, and he has no doubt that, by operating on a larger scale, it might be sold at 40 francs per 100 kilogrammes. As, however, this substance has at present only a very limited employment in the vulcanization of india rubber, the author having a large quantity on his hands, naturally desired to find some other purpose to which it might be applied. He considers that he has discovered one of the greatest importance, namely, the extraction of fatty matters.

He states that Paris daily produces 30,000 kilogrammes of bones, which are collected by the *chiffoniers*, and carried to the manufactories of ivory-black and gelatine. Here they are sorted, some being devoted to the production of ivory-black, others of gelatine, whilst some are sold to the workers in bone. The greater part of them—25,000 kilogrammes daily—are employed in the manufacture of ivory-black; but these undergo a preliminary treatment for the extraction of their fatty matter. The bones are broken and boiled with water for about three hours in large cauldrons; the fat floats on the surface and is skimmed of. The bones are then taken and thrown into a heap, to undergo a kind of fermentation, in which the production of heat induces a state of desiccation which fits the bones for calcination.

In these operations the bone undergoes a great alteration; the long boiling in water dissolves a great portion of the gelatine, which is necessary for the production of a good black; and the fermentation and long exposure to the air causes the almost total destruction of the animal matter, so that a bad black is produced for the sake of only 5 or 6 per cent. of fat.

The author states that much more advantageous results may be obtained by the employment of sulphuret of carbon. He proposes to crush the bones almost to powder, then to treat them with this agent, which almost instantly dissolves all the grease contained in them, and from this it may be separated by distillation, which is greatly facilitated by the low temperature at which this fluid boils, and the ease with which it may be condensed.—The quantity of grease thus obtained is 10 or 12 per cent., and it is superior to that procured by boiling.

He adds, that the same agent may be applied to the extraction of oils from oleaginous seeds, and of the grease from wool. In the latter case, the grease extracted becomes a useful product; it is a butyraceous substance, adapted for the manufacture of some kinds of soap

The suggestions respecting its application to the treatment of bones is a valuable hint to those who manufacture animal charcoal for sugar refining.