

A NEW DREDGING MACHINE.

The object of the invention herewith illustrated is to obviate the difficulties experienced in operating dredges of ordinary construction, and provide a dredge whose buckets can be held down to their work with more or less force.

A is a crane rigidly made and swinging on an inclined axis. D is a friction wheel having a strap brake and lever. At E are tubular shafts held in suitable guides. These carry the dredge buckets. The operation of the apparatus is as follows: The chains J L H being connected with suitable drums driven in the ordinary manner, the crane is moved into the required position by pulling more upon one of the chains J L than upon the other. The strap is tightened on the wheel D by the lever. The buckets G G' are now opened by sustaining the weight mainly by the chain J, which permits them to hang by the bars j, while the weight of the bars F and frame H, resting on the pivot, throws the buckets open. The buckets are lowered by slackening the chains J and L, and when in contact with the surface to be excavated, if the weight of the buckets and superimposed parts is not sufficient to hold the buckets down to the work, an additional downward pressure is created by drawing the chain M. The chain L is now drawn, and, in unwinding from the sheave r, it winds the chain n upon the sheaves m, thus drawing up the frame H until the buckets are closed, when the chain M is slackened, and the load is raised by drawing equally on the chains J L. When the load is sufficiently high to dump, the strap on the drum D is loosened, and the crane moved in the required direction by pulling more upon one of the chains J L than upon the other. The chain L is slackened, while the chain J is held taut, which permits the frame H to drop and throw the buckets open.

The advantages claimed for the invention are, that by using a crane which is not capable of vertical motion, an amount of force may be put upon the buckets which is limited only by the strength of the parts and weight of the dredge. The crane can be effectively and quickly stopped and held in any desired position, and may as easily be released. It is peculiarly adapted to work in sand, and in other places where the earth offers resistance to the excavating buckets. Patented through the Scientific American Patent Agency, October 24, 1876, by Mr. C. O. Davis of Portland, Me.

IMPROVED CARPET STRETCHER.

We illustrate herewith a new and ingenious device of especial utility to housekeepers, as it is calculated to save much of the tedious and arduous work of putting down carpets. It is light, simple in construction, durable, and inexpensive. It is easily operated, and is warranted by the patentee not to injure the finest carpet. It consists of a simple arrangement of a lever, by a gentle motion of which a broad spur seizes the carpet and draws it forward to its place, while a smaller spur at the rear sets through the carpet to the floor, holding the carpet fast, and thus giving the operator the free use of both hands to handle hammer and tacks. The lever, E, is then folded back and down upon the push bar, A, so that it will be entirely out of the way while the carpet is being fastened down. The device is manufactured of steel and malleable iron, thus assuring its durability.

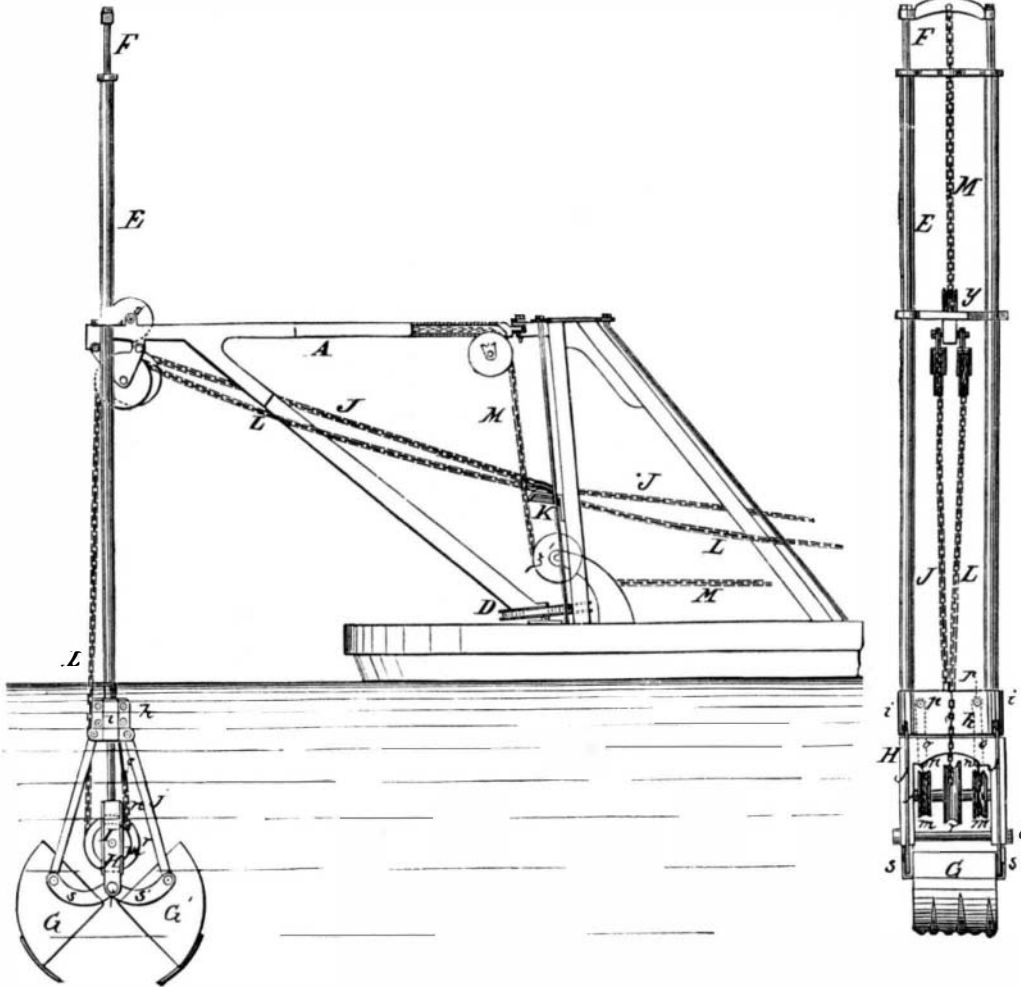
Patented June 13, 1876. For further information relative to sale of the patent address to E. W. Bullard, P. O. box 16, Worcester, Mass.

Suspended Animation in Vegetables.

Captain Nares, of the late English Polar Expedition, reports the curious fact that wheat left in the arctic regions by Captain Hall in 1871 was planted in 1876, and it germinated and produced healthy plants under glass. Captain Young, of the Pandora, has also a rose tree, which has completely survived the intense polar cold. The plant to all appearances died on being subjected to the low temperature, and showed no sign of life until warm latitudes were regained, when it put forth leaves again, and became as flourishing as ever. It would seem as if, in both the above cases, the cold acted as a means of suspending animation in the vegetable, and that the latter resumed its functions at the point where they were arrested, on the cause of its insensibility being removed, without regard to its habits peculiar to the period of the year

when the revival was effected. "American research has proved that the seeds of certain plants, if gathered in one climate and sown in another, will germinate earlier or later, and with more or less vigor, according as the new climate is warmer or colder than the old. And even a perceptible change of climate is not required to show these results; a difference of a few degrees only in latitude is sufficient to do so. For example, wheat from Scotland, sown in the south of England, will germinate and ripen much more quickly than wheat of exactly similar quality gathered in the south and planted in the same latitude in which it was grown.

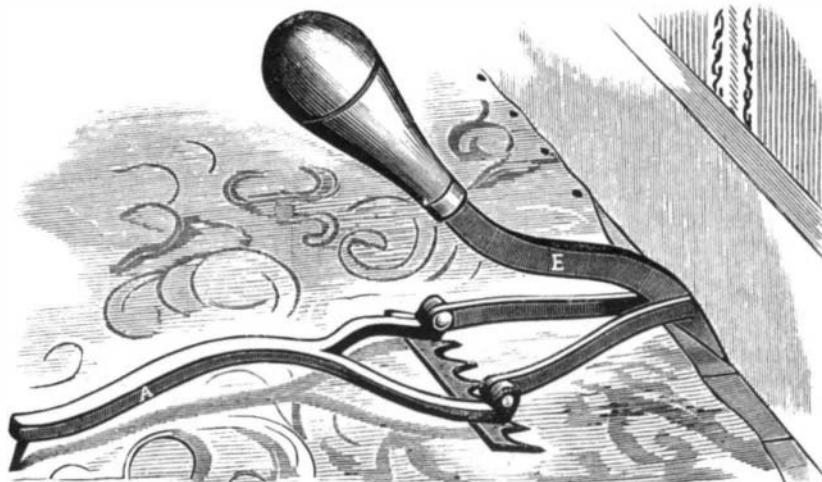
"This fact is of the utmost importance to agriculturists. To secure early growing wheat, it is only necessary to take

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care that the seed is gathered in a colder climate than that in which it was sown. The process is perfectly practicable, as it might be so arranged that the wheat sown in the north should not be consumed, but preserved for seed for the next season in the south. The same thing is noticeable among other plants, and florists and horticulturists might take advantage of this circumstance to produce both earlier and stronger plants than they do now, without the appliances for forcing."

Test of Fire Hose and Couplings.

We learn that an exhaustive test has been completed at the navy yard, Washington, D. C., by a board appointed by the Secretary of the Navy, of which Captain O. C. Badger

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was president, to establish a standard for hose and couplings. A great variety of hose was submitted, and subjected to one of the most elaborate tests that has ever been made, and the result was the approval and acceptance of hose, for ship use, made by the Eureka Fire Hose Company, of New York, and the "Work" patent coupling, made by the Allen Fire Department Supply Company, of Providence, R. I., as standards in the future, for naval purposes.

The Human Hair.

Hall's *Journal of Health* has an excellent article on this generally interesting subject, in the course of which it condemns in its usual unequivocal way the numberless hair restoratives; and as a simple remedy for baldness it proposes the following wash: Pour three pints of hot water on four handfuls of the stems and leaves of the garden "box," boil it for fifteen minutes in a closed vessel, then pour it in an earthen jar, and let it stand ten hours; next strain the liquid and add three tablespoons of cologne water; wash the head with this every morning: it is cleansing and tonic, and if the root bulbs of the hair are not destroyed (which is the case where the scalp looks smooth and shiny, and then there is

no remedy), the hair will begin to grow with vigor. If this wash fails after a few weeks' perseverance, the baldness may be considered incurable, because the structure of hair growth is destroyed.

But a more certain and more easily understood method of restoring the hair, when such a thing is possible, is to strive to secure a larger share of general health: keeping the scalp clean in the meanwhile, by the judicious application of a moderately stiff brush and a basin of plain old fashioned soap-suds: for, as a general rule, baldness arises from one of three things: inattention, which brought on a decline of health, dirt, or stupidity.

The girls of Brittany and the lower Pyrenees, says the *Journal*, repair to the annual hair fairs in droves, where each one waits her turn for shearing, with her rich long hair combed out and hanging down to the waist. The most valued head of hair brings five dollars and down to twenty cents, according to quantity and quality. The weight of a marketable head of hair when first taken from the head is from twelve to sixteen ounces, or from three-quarters of a pound to a pound, under twelve not being accepted, and over a pound, or sixteen ounces, especially if silken and long, bringing fabulous prices. Rare qualities have been sold at double the price of silver, weight for weight. Two hundred thousand pounds of hair are shorn from the heads of young girls every year, to supply the demands of the Paris and London markets, and from these we derive our supplies.

The hair growers seem to be rather a degraded set of people, living in mud huts, in filthy community, with garments so patched and worn as to scarcely hold together by their own weight. For once at least, fashion bows to profit, and the richest and most luxuriant head of black hair is accounted an incumbrance. Caps are worn by these people, so as to conceal the hair almost entirely; hence there is no need for combs and pins and plaits and ties, and as a consequence no hair is strained at its root, nor is it distorted by being pulled against the grain—against its natural direction.

The Manillans have the longest, blackest and most glossy hair in the world. They do not wear caps at all, but allow the hair to fall back behind in its own natural looseness. Taking these two facts together, it would seem that one condition for having a fine head of hair is that it should never be on a strain, and should hang pretty much in the direction of its growth, or if diverted at all, as from over the face, it should be in a gentle curve over and behind the ears, with a loose ribbon to keep it from spreading too much at the back of the neck, the hair hanging its length down the back.

The lessons learned from the study of fine natural growths of hair is that the hair of children should never be plaited, or braided, or twisted, or knotted. Nothing should ever be put on it except simple pure water, and even this not until the scalp is cleaned. The hair should be kept short, and should be always combed leisurely and for some considerable time, at least every morning, and neither brush or comb ought to be allowed to pass against the direction of the hair growth.

And if at times any falling off is observed, and it is desirable to arrest it sooner than mere cleanliness and improved health would do it, one of the most accessible wash-

es is boiling water poured on tea leaves, which have already been used and allowed to stand twelve hours, then put in a bottle. It should be of moderate strength.

A wine glass of spruce beer and three quarters of a wine glass of rum or whiskey, with brown sugar to taste, taken in a tumbler of hot water every alternate night, is said to be an excellent cure for lumbago.