

Science and Art.

Griffith's Screw Propeller.

The inventor of this propeller (illustrated on page 352 of Vol. XII of the SCIENTIFIC AMERICAN), in a communication to the London *Mechanics' Magazine*, states that Chief Engineer Isherwood of our navy, labors under a mistake in supposing that by rounding the corners of the common screw-propeller and providing it with a spherical base, a Griffith's propeller is made. The broader part of the blade of his screw is placed nearest the center, whereas in common propellers the thread is cut away at the center. He asserts, that careful experiments have convinced him that the center of the screw is the most effective propelling part. This opinion is different from that generally entertained, it therefore should receive due consideration from our marine engineers. The Griffith's screw, as represented in our columns, is widest at the center; it has been applied to the *Niagara* and *Merrimac* frigates, and has acquired a very high reputation.

Improved Seed Planter.

There is no bank so safe, no speculation so surely remunerative, no investment so good as Mother Earth, she always gives a good return for labor or the seed deposited with her; she is not very exacting, for if we do but plow and harrow, plant and till, we shall be sure "to enjoy the kindly fruits of the earth in due season." To enable us to do this the better, mechanism steps in, and so we have that large class of inventions known as agricultural machinery, to which the subject of our engraving belongs. It is a seed-planter, invented by E. L. Lyon, East Randolph, N. Y., and patented by him August 31st, 1858. Fig. 1 is a perspective view, and Fig. 2 a section of one of the seed-boxes, which can be attached to any pair of wheels at a very low cost, the merits of the invention being its cheapness, simplicity and certainty of action.

A, represents an axle, and B, B, the wheels that are placed on its ends, and may be attached permanently to it; C, are shafts or thills, the back part of which are attached to the axle and have a driver's seat, D, placed on them.

To the inner sides of the wheels, B, B, radial bars, E, are attached. These bars are of rectangular form, and their outer ends project a suitable distance beyond the peripheries of the wheels, B, said ends being rounded, or of curved form. On each bar, E, a seed-box, F, is placed. These seed-boxes are of rectangular, flat form, placed flatwise on the wheels, and are allowed to slide freely on the bars, the boxes being retained properly in place by the end-pieces, a, of the said boxes, the end-pieces bearing against one side of the bars, E.

In the inner end piece, a, of each seed-box, an opening, b, is made. These openings are covered by a flap or lid, c, and the ends of the outermost end-pieces, a, have a semi-circular recess, d, made in them, adjoining the bars, E. Corresponding recesses, e, are also made in the bars, E, near their outer ends, one recess in each bar, and smaller recesses, f, are also made in the bars, E, at points some distance nearer their inner ends.

G, G are two curved rods, the upper ends of which are provided with loops or sockets, and fitted loosely on the axle, A, the loops or sockets being allowed to turn freely thereon. To the lower ends of the rods, G, covering shares, H, are attached, one to each. The covering shares are connected by a rod, I, to which a lever, J, is attached, said lever having its fulcrum on the axle, A, and its front end extending up through a foot, K, in front of the seat, D.

The operation is as follows: As the machine is drawn along, the seed-boxes, F, are moved on the bars, E, by their own gravity, the seed-boxes falling or passing down to-

wards the inner ends of the bars, E, when over or above the hubs of the wheels, and passing down towards the outer ends of said bars, as they pass below the hubs. This movement of the seed-boxes distributes the seed, for when the seed-boxes are at the outer parts of the bars, E, and consequently below the hubs of the wheels, the recesses, f,

will fill with seed, for said recesses will then communicate with the interior of the seed-boxes, and as the seed-boxes pass above or over the hubs of the wheels, they, in falling, will bring the recesses, d, in the outermost end-pieces, a, of the seed-boxes in register with the recesses, e, so that when they again pass below the hubs the recesses, d, will pass

any further information can be obtained from the inventors by addressing them as above.

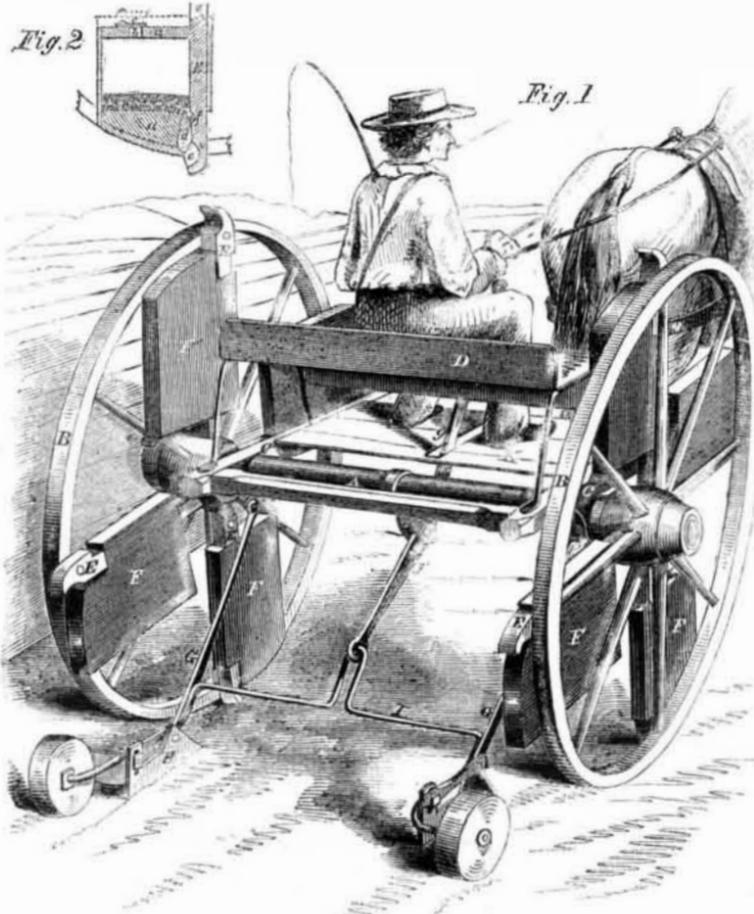
Introduction of Carpets.

Carpets were in use, at least of some kind, as early as the days of Amos, about 800 B.C. They were spread on the ground, on which persons sat who dwelt in tents; but when first used in houses, even in the East, we have no record. In the twelfth century, carpets were articles of luxury; and in England it is mentioned as an instance of Becket's splendid style of living, that his sumptuous apartments were every day in winter strown with clean hay or straw, about A.D. 1160. The manufacture of woollen carpets was introduced into France from Persia in the reign of Henry the IV., between 1589 and 1610. Some artisans, who had quitted France in disgust, came to England, and established the carpet manufacture, about 1750. With us, as with most nations, Persia and Turkey carpets, the former especially, are most prized. Our famous Axminster, Wilton, and Kidderminster manufacture is the growth of the last hundred years. The weaver's engine (often called the Dutch loom) was brought into use in London from Holland in or about the year 1676; since then the general principle of the loom has been infinitely varied by mechanical ingenuity. There are about 250,000 hand looms in Great Britain, and 75,000 power-looms, each being equal to three hand looms, making twenty-two yards each per day. The steam-loom was introduced in the year 1807.—*English Exchange*.

Iodine for Browning Iron.

Of all the liquids and substances which have been recommended for browning iron, we do not remember to have noticed iodine among the number. Having lately tested it in the form of a tincture for this purpose, we have come to the conclusion that it is superior to muriatic, nitric, or any of the other acids commonly used for this object.

LYONS' SEED PLANTER.

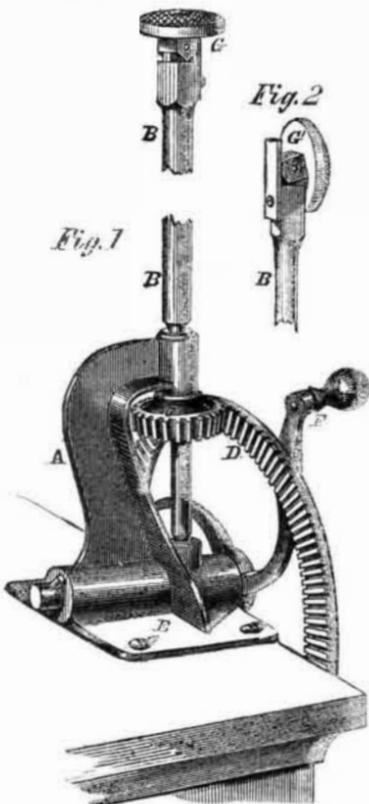


or fall in register with the recesses, e, in the bars, E, and the seed will be discharged into the holes in the earth made to receive it, by the projecting or outer ends of bars, E. The recesses, f, as the seed is discharged from the recesses, e, are filling with seed to be discharged at the succeeding revolution of the wheels. The shares, H, cover the seed; they may be elevated at any time by operating the front of the lever, which may be retained by any suitable catch or device.

This machine has been practically tested, and it operates well. Any proper number of seed-boxes may be attached to the wheels, according to the length of space desired between the hills or droppings. The seed-boxes may be constructed of sheet-metal, and the bars, E, may be of metal, or wood covered with metal plate.

Any further information can be obtained from the inventor as above, or by addressing Robert F. Ewing, box 1,932, Chicago, Ill.

Pease & Hayman's Peg Float.



and commiseration of his fellow men whose shoemaker has left one little peg sticking through the inside of the boot, for of all the pains man can endure we know of none so keen as that caused by such an accident. Of course when boots and shoes are pegged, a great number of them project through the boot, and when it is taken off the "last" these have to be cut away. Our illustration shows a device for this purpose, the invention of E. R. Pease and R. R. Hayman, of Poughkeepsie, N. Y.

Fig. 1 shows the method of its operation. A casting, A, which is flattened out at E for a base, is secured to the table, bench, or counter and this casting has a horizontal bearing in which an arbor runs that carries a bevel or face wheel, D. This can be rotated by the crank handle, F. A shaft, B, having on it a gear wheel, C, is supported in vertical bearings in the frame, A, and this carries a rasp, G, which when rotated in the boot cuts off all the pegs, and moreover it can be placed at right angles to its former position as seen at G', Fig. 2, and the foot of the boot or shoe being worked up and down on it, all the pegs in that part of the boot or shoe will be removed. The rasp, G, is pivoted to B and is kept in either position by a spring piece at the back.

This is a very useful invention for cord-wainers and is much more convenient than the common hand float now so generally employed. It was patented Jan. 11, 1859, and

That individual is truly entitled to the pity



INVENTORS, MILLWRIGHTS, FARMERS AND MANUFACTURERS.

FOURTEENTH YEAR

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