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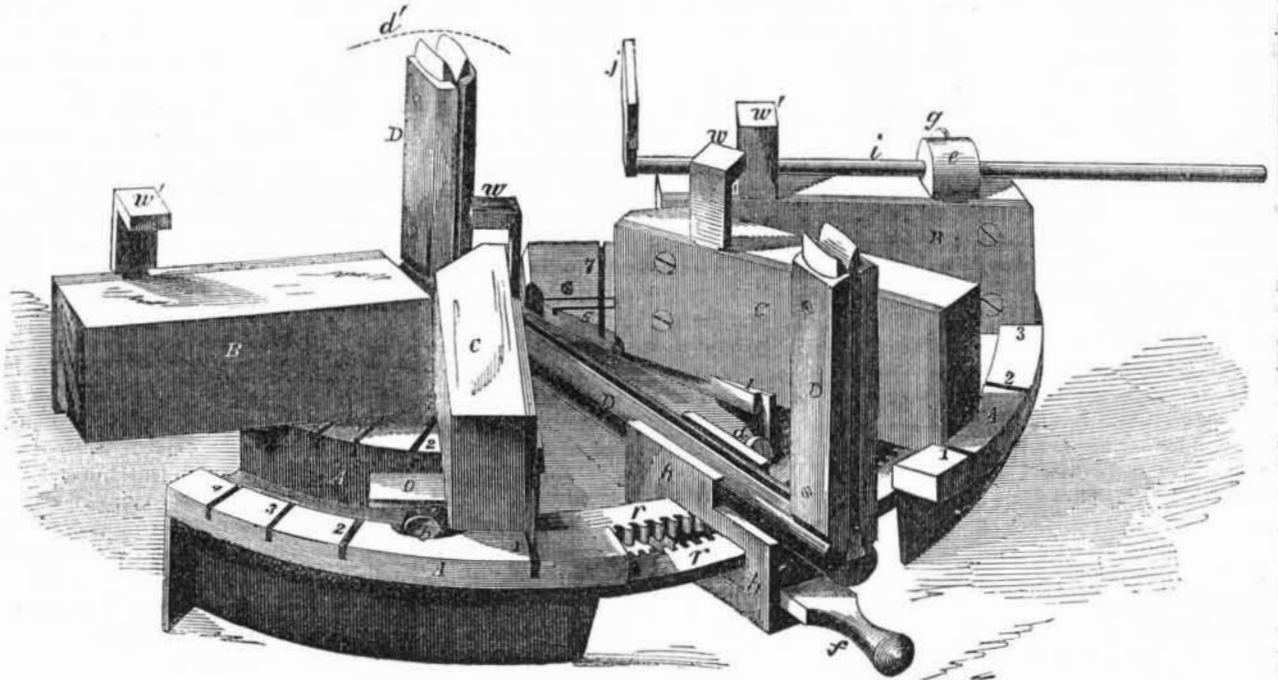
Improvement in Miter Boxes.

The annexed engraving is a perspective view of a new miter box, for which a patent was granted to Matthew Spears, on the 16th of May last year.

A A are two supporters of a quadrant form with a number of grooves or slots in their faces, running at different angles to receive the flanges of the rests. These two supporters are like wings, and can be drawn closer together or further apart, for their work; B B and C C are four rests. Their bottom flanges fit into the grooves 1, 2, 3, 4, 5, 6, 7, inclusive, in each supporter, A. The wedges, *w' w' w w*, with clamp heads, pass down through an opening in each rest, and fasten them in the grooves of the supporters. D D D represent the saw guide; it can swing to each side, as shown, by the dotted line, *d'*, to allow of a bevel edge being cut on stuff. The thumb screw, *d*, binds the axis of the saw guide in its box, *h h*. The supports have two thin metal racks, *r r*, connected to them by set screws in a countersunk channel. They are curved and run under the box, *h h*, of the axis of the saw guide, where there is a small pinion between the racks, which separates them and allows them to be moved from side to side. The wedge, *f*, is for binding them. Each support or stuff platform, A, is capable of being moved out like a wing, to expand or contract the box for the working of different stuffs. The rod, *i*, running through an eye on the top of one of the rests can be fixed in by the set screw, *g*, or taken out at pleasure. It is a gauge measure to cut stuff to any length, and used in the machine with that rest. The stuff to be mitered is laid between the rests and against them on the face of supports. If there was a piece of stuff shown in the box to be mitered, it would cover the axis, D, of the saw guide, and lie on it. All the rests are not always required in the miter box, as now shown, but sometimes they are all used according to the work to be done. The rests, B B, are placed in the slots, 1, 1, for sawing smaller angles than the edges of the supporters, A A, make with one another when closed. Slots 2, 2 and 7, 7 are used with the rests in mitering for an angle, and its supplement, without altering the machine, only once setting. Slots 3, 3, are used in mitering wide or large lumber by opening out the supports wide to a straight line, and tipping the saw guide down till it touches one of the supports. Slots 4, 4, are used when the machine is closed to miter for a right angle. Slots 5, 5, are used in cutting stuff to any angle to which the machine is set. Slots 6, 6, are used when the machine is closed for sawing lumber for a right angle or square.

This miter box miter for any angle, and its supplement, by once setting; it also miter and cuts for a right angle, and cuts to any angle to which it is set. It miter to a right angle with the plane surface of the machine. It can saw a felly or any circular stuff at a straight line from the outer edge to the center of the same circle. It can be set rapidly

SPEAR'S PATENT MITER BOX.



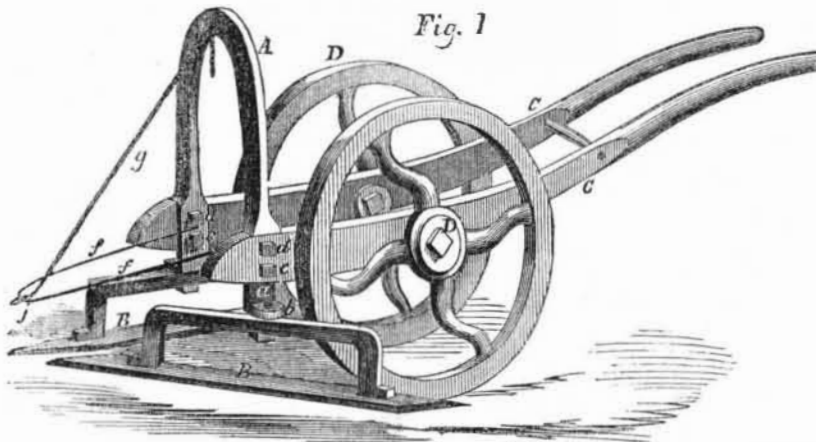
to miter to any angle. The rests, it will be understood, fit into all the grooves and are shifted from one to the other, for the mitering of any kind of stuff. In this figure all the rests are placed on the supports. It will be understood that the one support, A, is just a duplicate of the other, and that they swing or turn on an axis, the cap of which supports the extreme end of the saw guide, D,

below *d'*, so that the supports spread out from that axis which is the center of the circle, described by the edge of the supports. It is not possible to describe all its uses, that is, how to miter all the different kinds of work which it is capable of performing, by reference to the figure, as the positions of the rests and supports admit of so many changes; but the joiner will obtain a cor-

rect idea of the nature and construction of the machine, and its adaptability, from the engraving and description.

More information may be obtained by letter addressed to J. W. Robinson, Concord, N. H., who is sole agent for the United States, and who manufactures and keeps them for sale. One of these machines may be seen in this office.

ROBINSON'S HAND CULTIVATOR.



The accompanying engraving is a perspective view of an improved cultivator, designed for garden or field cultivation, and particularly adapted to drill sown wheat and other small grains. The patentee is Jonathan A. Robinson, of Fremont, N. H.; it was patented on the 20th of last February. The machine or implement consists of cutters attached to the two ends of a yoke of such height as to pass over the tops of the plants, the knives being adjusted to run as near the plants as may be desired, and the whole being made to travel on wheels.

A is a yoke or bow, to the lower ends of which are secured the cutters, B B, each being allowed to swivel around the point, *a*, the nut, *b*, serving to hold them secure when placed in the required position. By this method of adjusting the cutters, they are made to cut more or less distant from the rows of plants.

C C are the handles for guiding the machine. They carry short shafts, D, on which are the wheels; *c c* are square headed pins which pass through the lower ends of the handles, and screws into the end of the yoke

bow, which allows the bow a limited motion to make the cutters dip more or less beneath the surface; *a* shows another square headed pin which passes through a slot in the butt of the handle (one for each handle,) and also screws into the yoke, A, the length of its slot. The yoke is by these pins set in position for the purpose of adjusting the dip of the cutters. By tightening this screw the cutters are held in place.

A device is employed to make each cutter move at an equal distance from the row of grain, or whatever it may be; *j* is the guide point, it is held over the center of the space between the points of the cutters by a bent wire, *f f*, which is attached to each arm of the yoke, and is supported by a chain, *g*, from the apex, *i*, of the yoke, A. The machine is used by wheeling it forward like a barrow, the guide point, *j*, being kept at the exact distance from the row. It will be observed that as the cutters can be set and adjusted to any distance to and from the plants, the weeds and grass can be cut up very near the rows.

Mr. Robinson informs us that he has had

small carrots with this machine, the points of the cutters being 1 1/4 inches apart, and he walked right along, hoeing them perfectly. As the cutters are adjusted to cut a little more than half way to the adjoining row, the work is done thoroughly, no unhoed space being left between the rows. The cutters being set at an acute angle, they cut the weeds easily. They can also be adjusted to take the earth away from, or carry it up to the rows.

More information may be obtained by letter addressed to the patentee and manufacturer, at Fremont, N. H.

Baking Ham.

Most people boil ham. It is much better baked, if baked right. Soak it for an hour in clean water and wipe it dry, next spread it all over with thin batter, and then put it into a deep dish with sticks under it, to keep it out of the gravy. When it is fully done, take off the skin and matter crusted upon the flesh side, and set it away to cool. You will find it very delicious, but too rich for dyspeptics.—[Exchange.]

The King of Prussia has ordered a great Medal for Science, and a golden Cosmo Medal, to be presented to Lieutenant Maury, for the Wind and Current Charts.

Atlantic Telegraph.

The Halifax papers assert that the money has been subscribed in London to construct a line of submarine telegraph between some part of the British possessions in America and Ireland.

Bad Place for Doctors.

The Grand Jury of Orange county, Fla., in their general presentment, made at the late term of their court, mentioned the fact, that out of a population of four hundred in the county, there has not been a single death in twelve months.