

(No Model.)

W. & H. B. CRAGGS.
PRESS DRILL.

No. 434,504.

Patented Aug. 19, 1890.

Fig. 1.

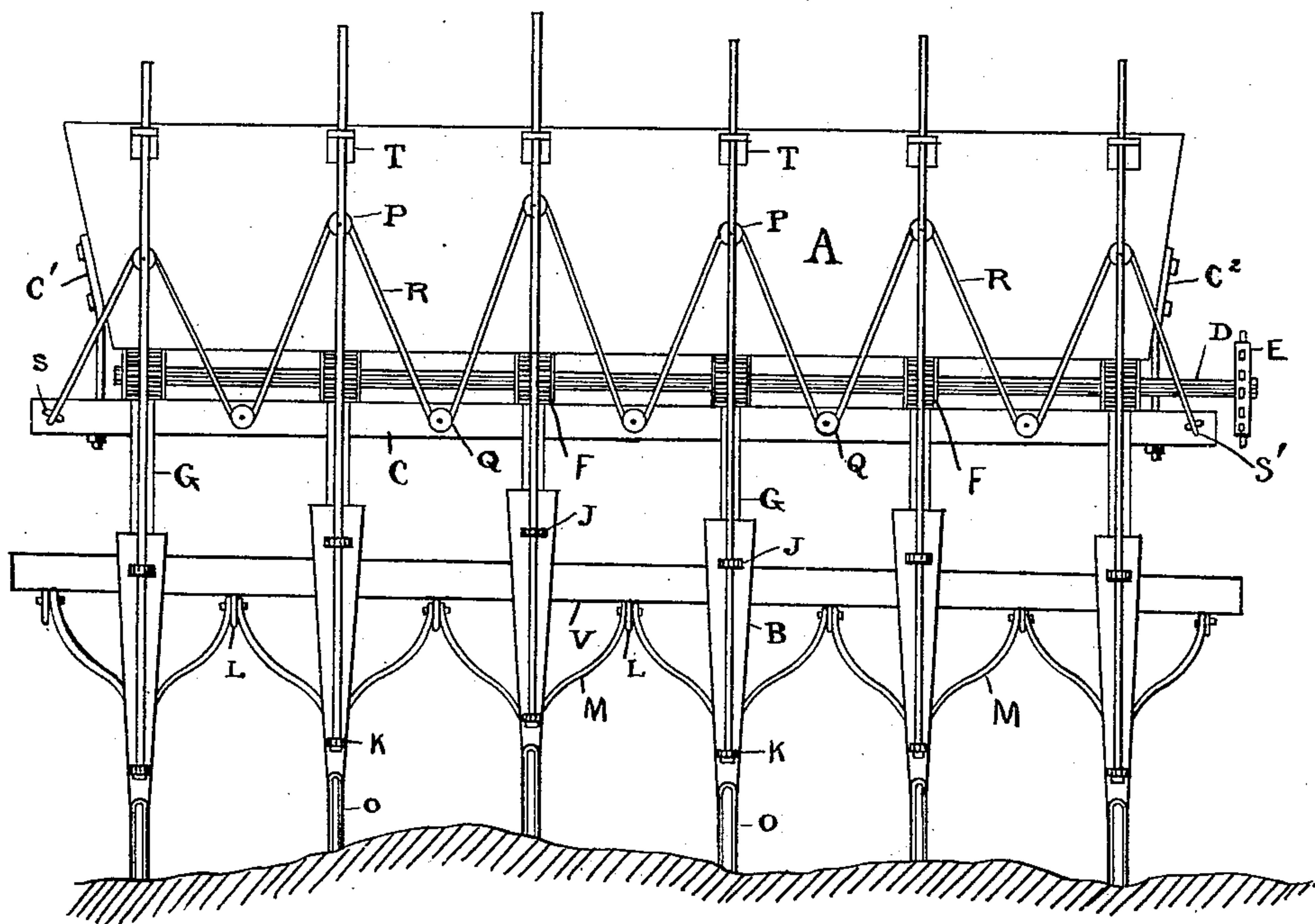
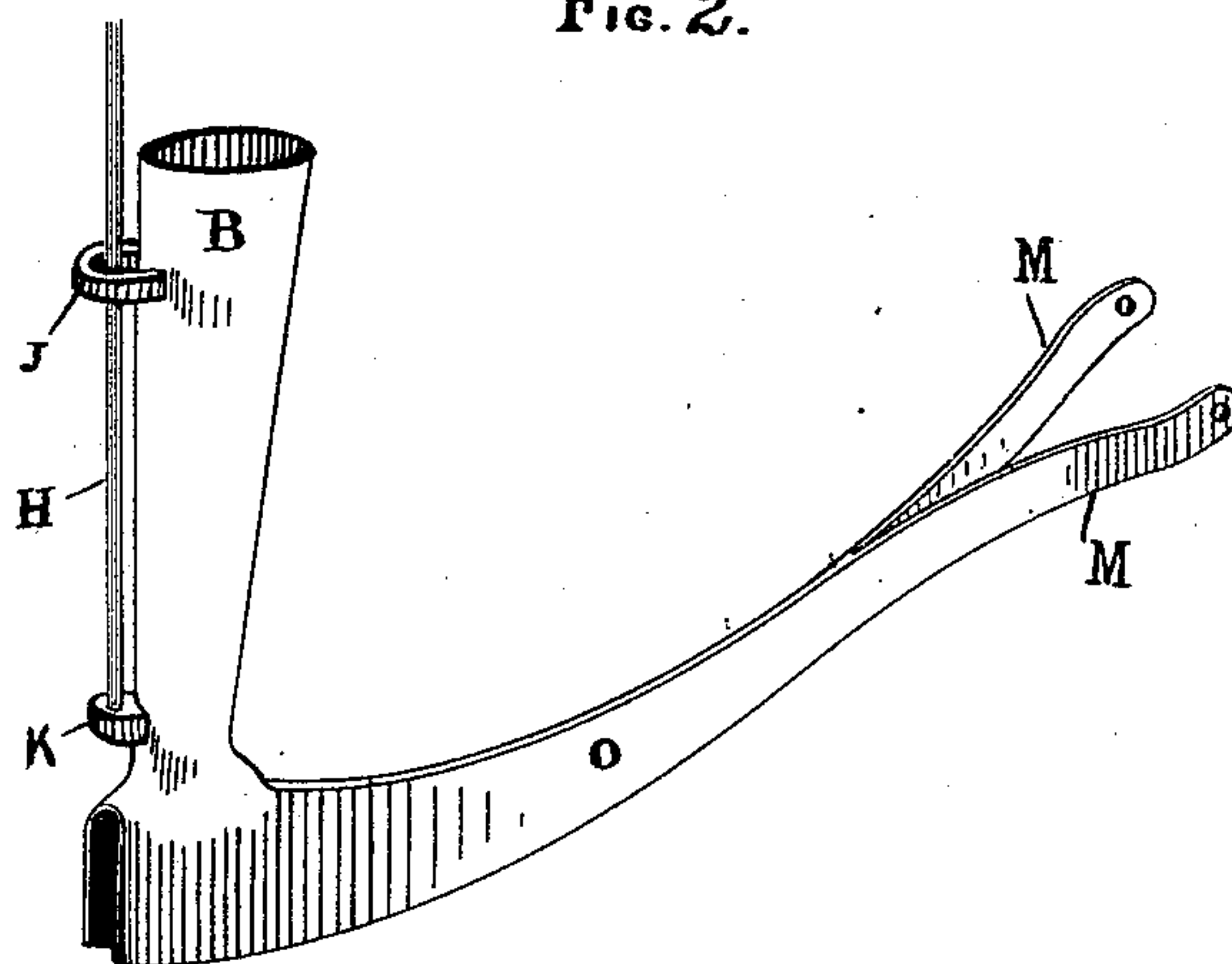


Fig. 2.



WITNESSES.—

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PRESS-DRILL.

SPECIFICATION forming part of Letters Patent No. 434,504, dated August 19, 1890.

Application filed June 4, 1890. Serial No. 354,282. (No model.)

To all whom it may concern:

Be it known that we, WESLEY CRAGGS and HENRY B. CRAGGS, citizens of the United States, residing at Kilbourn, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Press-Drills; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in press-drills.

The object of the invention is to provide means whereby the runners of the drill may do their work independent of one another.

In the accompanying drawings, Figure 1 represents a rear view of the invention. Fig. 2 is a perspective view of one of the runners of the device.

In Fig. 1, A represents the seed-box as ordinarily placed on machines of this class.

F F are the feeders, D the shaft, and E the sprocket-wheel, which are employed in the operation of the device.

C represents a beam, making part of the frame-work which is hung from the seed-box A by hangers C' and C², and B B represent the shanks or boots of runners O.

G G show rubber spouts for conveying the seed from seed-box by way of feeders to the runners and thence into the ground.

The parts above described are commonly placed on machines of this class.

The peculiar construction of this device may be readily understood by the following: To the lower portion of the shank B of the runners is cast a lug K, through which passes a long iron or steel rod H, with a nut or burr screwed on the lower end to hold it in position, and also near the upper extremity of the shank B is a similar lug, but which is made much larger and which has cut in the interior a slot, in which may play the rod H, as in Fig. 2. The rod H extends upward and passes through a hole in a bracket T, which is in the form of an inverted L and which is bolted or otherwise attached to the seed-box A. This bracket, as will be seen, forms a guide for the said rod H, which rod is designed to move up and down with the motion of the runners of the

machine as the said runners pass along over the uneven ground. The runner O at its forward end is split and spread, forming two lobes or ears, making a V-shaped crotch. In Fig. 1 these lobes or ears M are shown as coming quite close together, but having inserted between the said ears M of each separate runner a hanger L, which is bolted firmly to a beam V, to which beam the tongue of the machine is attached. A pivot serves to hold the ears M M and hanger L firmly together and at the same time allow of a free movement of the runners up and down. The object of this peculiar construction of runner is to do away with the heavy and cumbersome iron parts necessarily used on machines of this character when the old construction is used. The object of this is to secure an upright position of the runner, that it may not be forced sideways and out of line of the general course of the machine. The hereinbefore-described rod H, at back of shank B, will also be seen to keep the runner in an upright position by the rod H fitting snugly in the slot in lug J.

The more important feature of my invention may be readily understood from the following: Journaled to the rod H, opposite the seed-box A, is a pulley P, over which passes a rope, chain, or steel cable R. This cable or chain R is designed to pass downward at an angle under the pulley Q, which is also journaled to the beam C of the frame, and when the said cable or chain has been passed over and under all of the respective pulleys of the series the ends of the said cable R are attached to eyes S and S' near the ends of said beam C. The pulleys P P and Q Q may be provided with guards or shields, if necessary, to keep the rope or cable R from slipping therefrom.

The operation of the device is as follows: When the drill is drawn over the ground, the runners O, as a matter of course, rise and fall with the uneven surface of the field. In Fig. 1 the machine is shown on uneven ground. Thus the runners are at different heights. When a runner strikes a higher portion of the ground than the others, the said runner is immediately raised, thus drawing on the chain or cable R; but the weight of the other runners and the strain of the cable R keeps

the before-mentioned runner at a certain pressure in the ground, so that it cuts through and does its work as desired; also, when one runner passes down into a hollow the tension of the cable presses the said runner down, so that it may also cut the surface of the ground, as before.

What we claim as new, and desire to secure by Letters Patent, is—

10 1. In a press-drill, the combination, with the runner O, with its shank B and lugs K and J, of the bracket T, and rod H, provided with the pulley P, substantially as set forth.

15 2. In a press-drill, the beam C, provided with the pulley Q, in combination with the runner O and shank B, with its lugs K and J, and the rod H, provided with the pulleys P

and cable R, secured at either end by eyes S and S' to beam C, as described.

3. In a press-drill, the combination, with the runner O, provided at its forward end with ears M, pivotally connected to the hangers LL in working-connection with the beam C, provided with the pulley Q, of the rod H, provided with pulley P, and the cable R in connection therewith, substantially as set forth and described.

In testimony whereof we affix our signatures in presence of two witnesses.

WESLEY CRAGGS.

HENRY B. CRAGGS.

Witnesses:

JOHN H. SCHULTE,

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