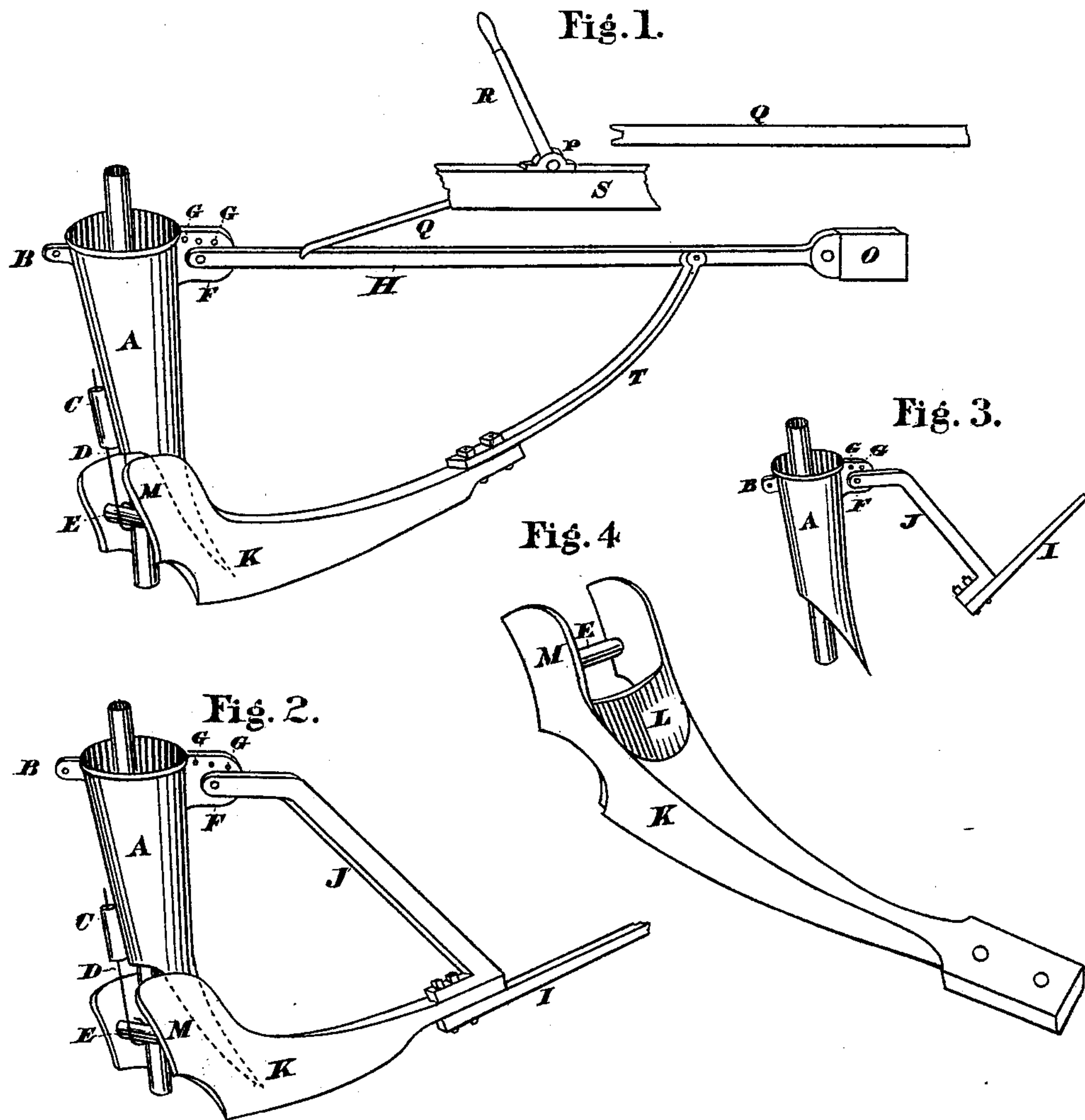


J. T. WEST.
Shoes for Grain-Drills.

No. 218,412.

Patented Aug 12, 1879.



WITNESSES.

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IMPROVEMENT IN SHOES FOR GRAIN-DRILLS.

Specification forming part of Letters Patent No. **218,412**, dated August 12, 1879; application filed February 27, 1879.

To all whom it may concern:

Be it known that I, JOHN T. WEST, of Alleville, in the county of Todd and State of Kentucky, have invented a certain new and useful Improvement in Shoes for Converting Hoe Grain-Drills into Slide-Drills, and vice versa; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

Figure 1 is a perspective view of the device, showing a hoe grain-drill when converted into a slide-drill by putting on the shoe and link connecting it with the drag-bar. Fig. 2 is a perspective view showing a spring drag-drill converted into a combined drill by the combination of the hoe, shoe, and link, the two latter being secured to the spring by bolts at one end, while the upper end of the link connects with the hoe, the lower end of which sets in the hollow of the shoe, which makes it a slide-drill, and by taking off the shoe it becomes a hoe-drill. Fig. 3 is a perspective view showing a spring slide-drill when converted into a spring hoe-drill by means of a link bolted to the spring connecting it with the hoe. Fig. 4 is a perspective view of the shoe, showing the hollow or depression in the top for the point of the hoe and the pin in the jaws for holding it up.

This my invention relates to a certain new and useful improvement in shoes for converting hoe grain-drills into slide-drills, and vice versa, the object of which is to provide a cheap and simple device by means of which hoe grain-drills may be converted into slide-drills by the addition of a shoe of peculiar construction especially adapted to the different kind of drills, thereby obviating the necessity of owning more than one kind of a drill, which, if it be a hoe-drill, may be converted into a slide-drill by the addition of a shoe, as shown in Fig. 1 of the drawings, or may be again changed into a hoe-drill by removing the shoe; but if it be used on what is generally called a "spring-drill," the same kind of shoe is made to fit it, with an additional link to connect the hoe with the spring, as shown in Fig. 2, to make it a combined hoe

and slide drill, but which may be readily changed into a hoe-drill by removing the shoe. This shoe is made adjustable, and is adapted to all kinds of machines, it being made of cast-iron of uniform size, but sufficiently thick on the top at the back end to allow of a hollow or depression large enough to receive the point of the hoes, and to admit of jaws wide enough apart to permit the gum conducting-pipe to pass between them, with a pin behind it to answer as a catch for the hook, or any other mechanical device that may be used for holding it up against the hoe.

This my invention will be more fully illustrated in detail in Figs. 1, 2, 3, and 4 of the drawings, in which—

A represents the hoe of a hoe-drill, which is made in form as shown in the drawings. B is a lug by which it is raised from the ground when not in use. C is a hollow tube or lug cast on the heel of the hoe for holding the shoe up against the hoe. D is a hook, one end of which hooks around the pin E in the jaws of the shoe, while the other passes up through the lug C, with a key through the end above it to hold the shoe in its place. F are jaws or lugs by means of which the hoe is hinged to the drag-bar H, so as turn back if obstructed. G G are small holes in the lugs F in which to insert a wooden pin to hold the hoe in position, which pin must be sufficiently weak to break in case of serious obstruction, to prevent damage to the hoe. H is the drag-bar by which the hoes are hinged to the cross-bar O of the machine, which, in hoe-machines, may be made as shown in Fig. 1; but in such machines the front end of the shoe is connected with the bar H by means of the connecting bar or link T, which is bolted to the shoe and bar H, as shown in Fig. 1. J is an improved connecting bar or link for first converting a spring slide-drill into a hoe-drill, and afterward by adding the shoe it becomes a slide-drill, as shown in Fig. 2. P is a rock-shaft over the drag-bar in Fig. 1, to which the short springs Q Q are secured in front, while the rear ends rest upon the drag-bar H to regulate the pressure upon the bar or hoes when in use. R is a lever by which the pressure is regulated, and when set may be held in position by any suitable mechanism. S is the bear-

ing-rail of shaft P. K K K are the shoes for converting different kinds of drills into slide-drills at the option of the operator. These shoes are made of cast-iron, and in form as shown in the drawings, but are of uniform size, in order to suit the different kind of drills, but sufficiently thick on the back at the rear end to admit of a hollow or depression large enough to receive the point of the hoes, and also to admit of jaws at the sides wide enough apart to permit the gum conducting-pipe to pass between them, with a pin, E, cast in the jaws behind it as a catch for the hook, by which it is held up against the hoe.

M are the jaws, and L is the hollow or depression in the top.

These last-named shoes K, although made thick on the back or top, are beveled down at the sides nearly to an edge below, but not so

sharp as to cut, but rather rounded, to act as a slide to press down roots and other trash rather than cut or tear them up.

Having thus fully described the nature and object of this my invention, what I claim as new, and desire to secure by Letters Patent in shoes for converting hoe grain-drills into slide-drills, is—

The adjustable shoe K, made of cast-iron, and in form as above described, with its jaws M, pin E, and depression or hollow L, in combination with the hook D and bar T, substantially as herein described, and for the purpose set forth.

JOHN T. WEST.

Witnesses:

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