

P. & P. J. SCHMITT.

Drill Tooth.

No. 80,671.

Patented Aug. 4, 1868.

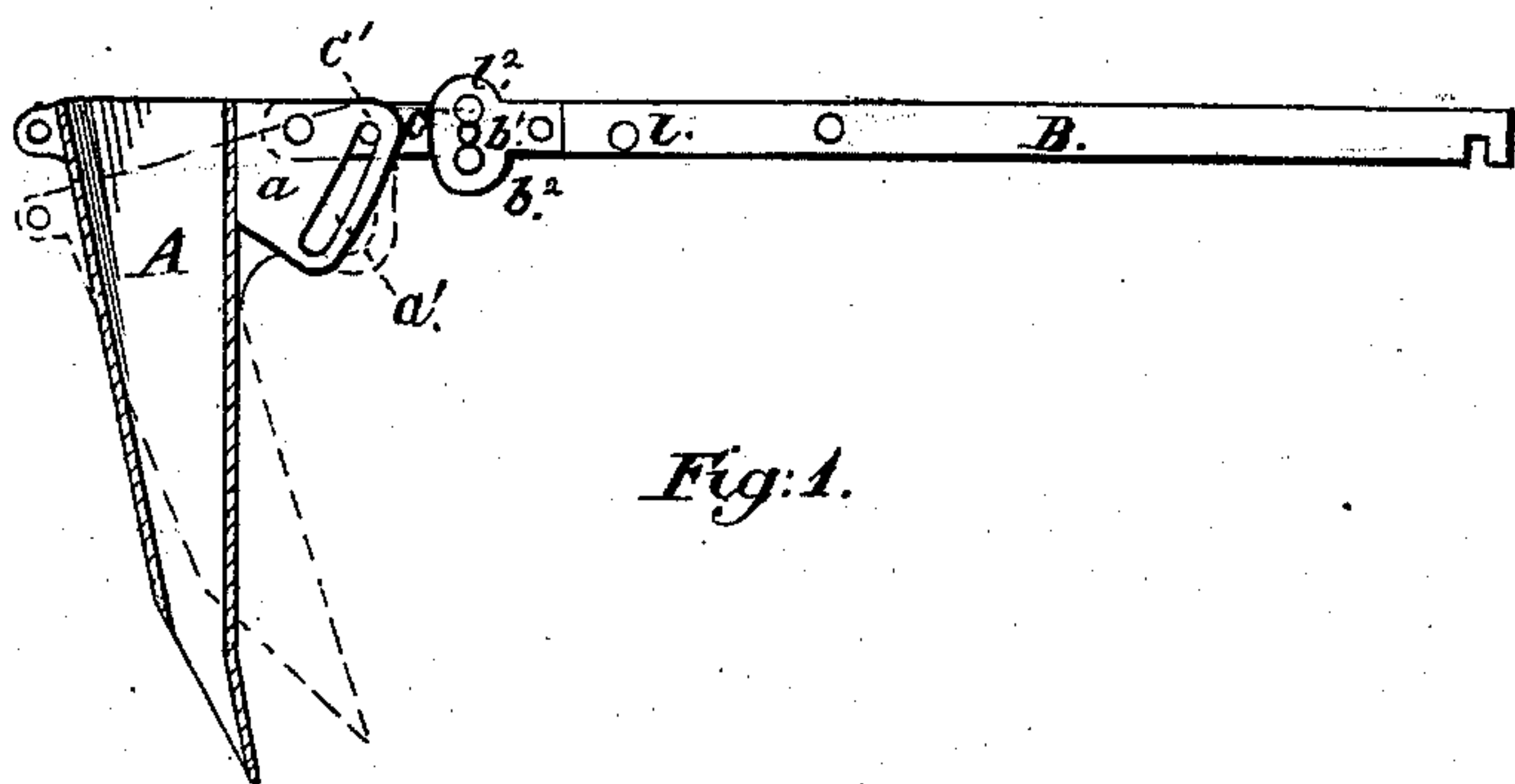


Fig. 1.



Fig. 2.

WITNESSES:

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# United States Patent Office.

PETER SCHMITT AND PETER JACOB SCHMITT, OF WATERLOO, ILLINOIS.

*Letters Patent No. 80,671, dated August 4, 1868.*

## IMPROVEMENT IN GRAIN-DRILL SHOE.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, PETER SCHMITT and PETER JACOB SCHMITT, of Waterloo, in the county of Monroe, and State of Illinois, have made certain new and useful Improvements in Grain-Drill Shoes; and we do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates more particularly to the coupling by means of which the seed-shoe is attached to the other parts of the drill. The device consists of two coupling-links, that are attached to the traction-rod, by means of a single pivot-pin, which allows a vertical play of the parts, and a similar attachment between the back ends of the said links and the lug projecting from the front side of the shoe. A rivet-pin, connecting the two links, passes through a segmental slot in the shoe-lug, and permits the shoe to tip, when the machine is backed, but which holds the shoe in the proper position for dropping the seeds when it is drawn forward. A wooden pin is passed through holes in the links, and one of a series of adjusting-holes in the end of the traction-rod. By means of this connection, the shoe is adjusted at any inclination required, and the adjusting-pin is allowed to break should any hard obstacle be encountered by the point of the shoe.

To enable those skilled in the art to make and use our improved drill-shoe, we will proceed to describe its construction and operation.

Figure 1, of the drawings, is a sectional side elevation of the improved shoe, and its traction-rod, one of the connecting-links being removed in this view for the exhibition of the construction of the parts.

Figure 2 is a plan of the same, but showing both connecting-links.

The shoe A is a metallic tube, through which the grain or seeds drop to the ground, and is of the usual construction. Affixed to the forward side of this shoe, and near its top end, is the lug *a*, through which the traction force is transmitted, from the traction-rod B and links C, to the shoe A.

There should be two of the links C, one of which will be placed on either side of the said rod and lug, and pivoted thereto by means of the pins *b* and *c*, in such a manner as to permit a vertical play of the parts, except when restrained by the pins *b'* and *c'*.

The pin *c'* is of metal, and secured in the links by riveting or otherwise, and arranged to move up or down in the segmental slot *a'*, of the lug *a*, so as to allow the shoe to tip, as represented by the dotted lines in fig. 1, when the machine is backed.

The pin *b'* should be of wood, which will enable it to be broken when the point of the shoe encounters a root, or stone, or other hard substance. Several holes, *b''*, should be provided in the back end of the rod B, so as to set the links in such a position as to guide the point of the shoe more or less deep, as may be required.

Having described our invention, what we claim, is—

1. The shoe A, when provided with a slotted lug, *a*, and combined with the rod B and links C, as herein described and shown.
2. The rod B, when provided with adjusting-holes *b''*, and coupled with the links C, by means of the joint-pin *b*, and the wooden pin *b'*.
3. The arrangement of the curved slot *a'*, pin *c'*, and links C, substantially in the manner herein shown and described.

PETER SCHMITT,  
PETER JACOB SCHMITT.

Witnesses:

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JOSEPH HARST.