

J. SMITH:
Seed-Drill Teeth

No. 35,634.

Patented June 17, 1862.

Fig. 1.

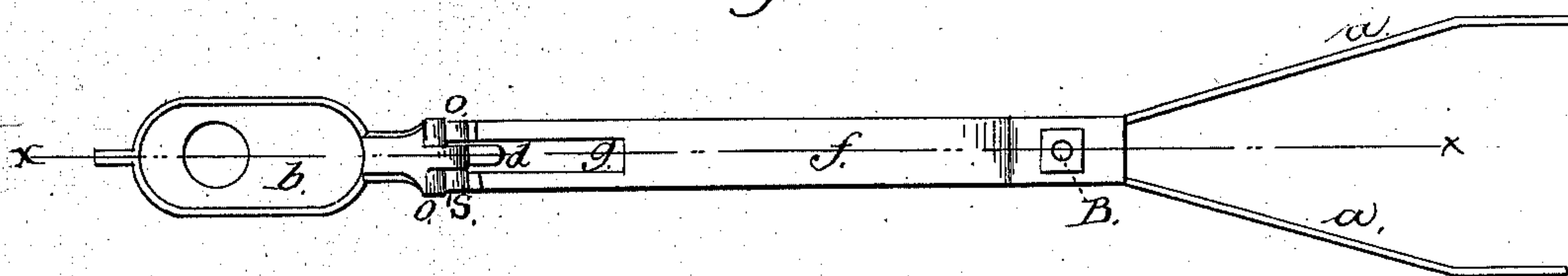


Fig. 2.

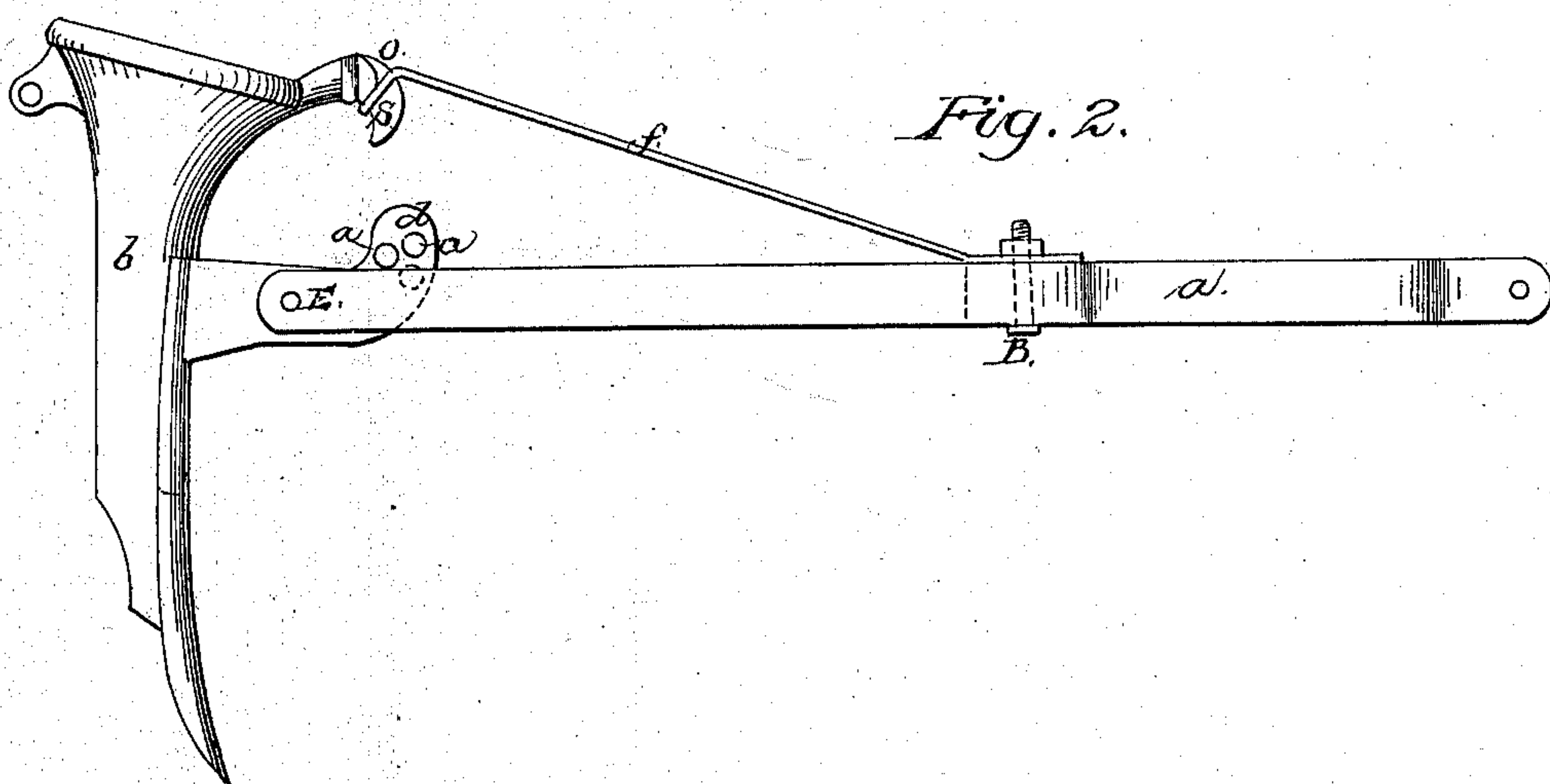
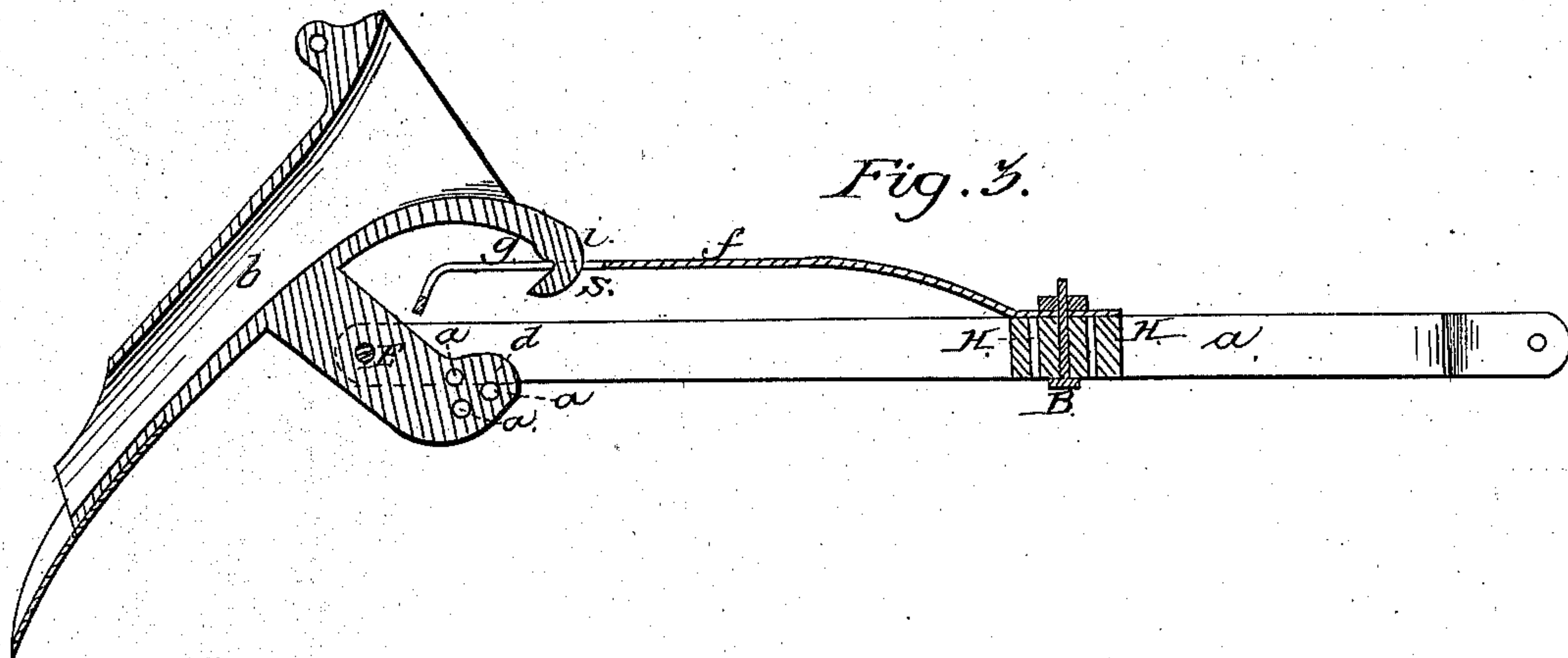


Fig. 3.



Witnesses:
A. B. Little
Geo. Hortbucht

Inventor:
Jno. Smith
By A. W. Zunkerhoff
his attorney

UNITED STATES PATENT OFFICE.

JONATHAN SMITH, OF TIFFIN, OHIO.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. 35,634, dated June 17, 1862.

To all whom it may concern:

Be it known that I, JONATHAN SMITH, of Tiffin, Seneca county, and State of Ohio, have invented new and useful Improvements in Seed-Drills; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a top view of hollow drill-tooth *b* with drag-bar, pin, and spring *f* when in operation. Fig. 2 is a top view of the same. Fig. 3 is a vertical section of the same through the line *x x* of Fig. 1 when its point is thrown back by meeting with obstructions in its passage when in use.

The nature of this invention consists in so combining with the drag-bar and drill-tooth of seeding-machines wherein pins are used in the ordinary manner to hold the drill-tooth in position a yielding spring, for the purposes hereinafter named, the construction and operation of the same being as follows, viz:

Drag-bar *a* is composed of two bars of iron, laterally arranged and sufficiently wide apart to admit the upward-inclining projection *d* of drill-tooth *b* between them, and to which they are attached at their inner ends by an iron pin or bolt, *E*, and with their opposite ends from their connection with spring *f* sufficiently spread for proper connection with the front part of the frame-work of the machine. Between the bars forming the double drag-bars *a*, immediately in the rear of their forward expansion and firmly combined therewith, is a metallic block or plate, *H*, provided with two or more holes for bolt *B*, for the purpose of adjusting spring *f*, whereby the shovel or point of drill-tooth *b* may be thrown forward or backward, thereby causing the seed to be deposited at greater or less depth, as desired. The rear end of spring *f*, formed of a thin steel bar of any desired width, is provided with a long slot, *g*, for the reception of projecting and downward inclining neck *s* of drill-tooth *b*, which projecting neck *s* is provided with bearings *o*, which rest on the spring *f* at the sides of slot *g* in such position as to form a partial deadlock between spring *f* and projection *S* of drill-

tooth *b*, so that more than the ordinary resistance of the earth when in use will be necessary to change the vertical position of tooth *b* in reference to the surface of the earth, and at the same time allow extraordinary resistance at the lower point to throw bearings *o* forward on spring *f* through slot *g*, and thereby reverse its inclination, and allow tooth *b* to pass over such resistance by turning on bolt *E*. The upward-curved projection *d* of tooth *b* is also provided with different holes *a* to receive a wooden pin, producing as varied the same effect resulting from the change of bolt *B* in block *H*. The spring *f*, being alone used for the purposes before named, might become useless by breaking, and thereby cause delay in the use of the machine, while by using the projection *d*, in combination with spring *f*, pins can be at once inserted at *a*, and the immediate use of the machine be continued as before.

Having thus fully described the construction and operation of my invention, what I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In combination with spring *f* and curved neck *S* of tooth *b*, or their equivalents, block *H*, placed between the bars forming drag-bar *a*, and provided with two or more holes for the purpose of adjusting the position of drill tooth or boot *b*, as and for the purposes set forth.

2. I do not claim the spring *f* nor curved hook *S* as my invention, as those are well-known devices; but I do claim, in combination with a seed-drill boot held in position or operated by a spring, providing said boot with suitable projections, and such projections with adjusting-holes and pin to retain the boot in position when in use in case said spring should by any means be rendered inoperative, as and for the purposes set forth.

In testimony whereof I have hereunto subscribed my name in presence of two subscribing witnesses.

JONA. SMITH.

Witnesses:

A. W. BRINKERHOFF,
A. T. BARNES.