(No Model.)

R. B. SHELDON.

SPRING HOE FOR GRAIN DRILLS, SEEDERS, &c.

No. 357,862. Patented Feb. 15, 1887.

Fig. 1.

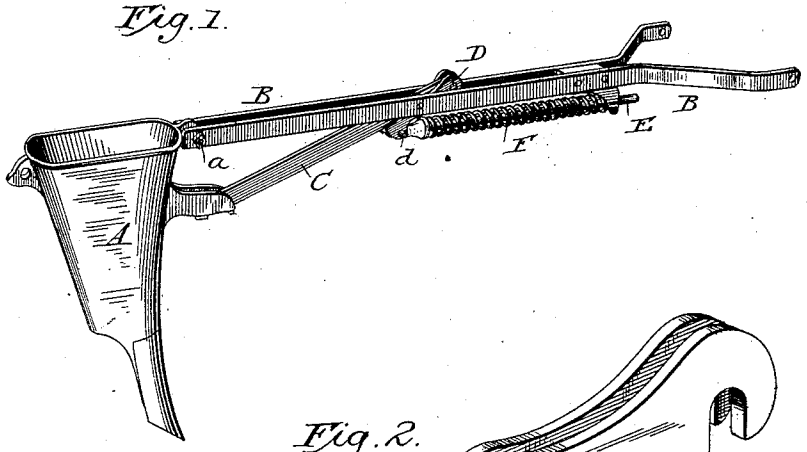


Fig. 2.

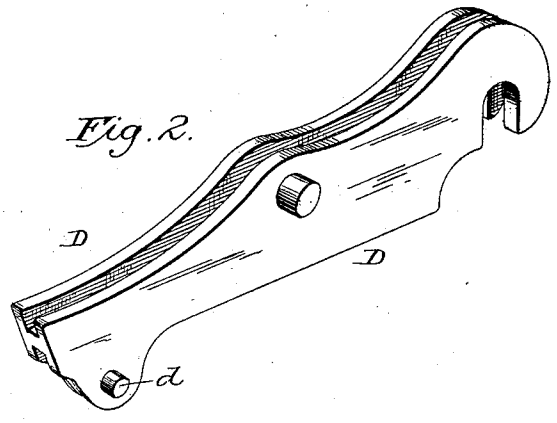


Fig. 3.

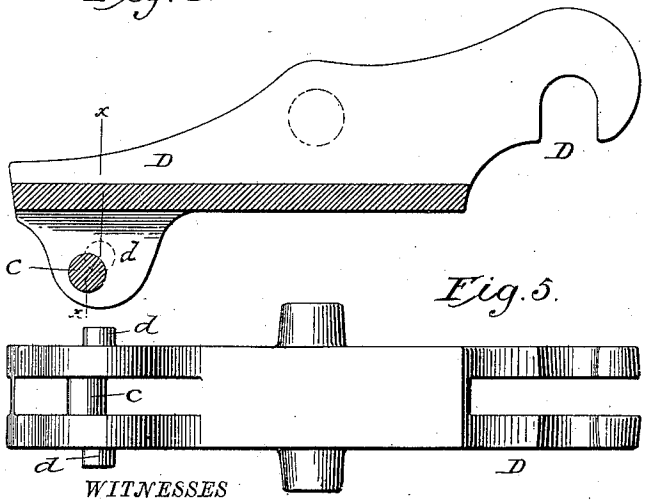


Fig. 4

ON LINE X—X

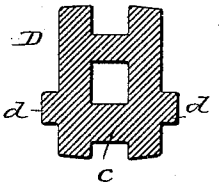


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

RICHARD B. SHELDON, OF SHORTSVILLE, NEW YORK, ASSIGNOR TO THE EMPIRE DRILL COMPANY, OF SAME PLACE.

SPRING-HOE FOR GRAIN-DRILLS, SEEDERS, &c.

SPECIFICATION forming part of Letters Patent No. 357,862, dated February 15, 1887.

Application filed September 3, 1886. Serial No. 212,622. (No model.)

To all whom it may concern:

Be it known that I, RICHARD B. SHELDON, of Shortsville, in the county of Ontario and State of New York, have invented certain Improvements in Spring-Hoes for Grain-Drills, Seeders, &c., of which the following is a specification.

My invention relates to improvements in the details of a yielding drill tooth or hoe which is at present known in the art, the improvement having in view a reduction in the cost of construction, as well as other incidental advantages.

In the accompanying drawings, Figure 1 represents a drill-hoe complete. Fig. 2 is a perspective view of the part to which my improvement relates. Fig. 3 is a longitudinal section of the same through its center. Fig. 4 is a transverse section on the line *x x* of Fig. 3. Fig. 5 is a bottom plan view of the same.

Referring to Fig. 1, A represents a drill tooth or hoe connected at its upper end by a pivot, *a*, to the rear end of a drag-bar, B.

C represents an arm or brace pivoted to the hoe *b* and extending thence upward through the drag-bar to the upper end of a central pivoted link, D, the lower end of which is urged backward by the pressure of a rod, E, encircled and actuated by a spiral spring, F. The spring, acting through the intermediate parts, tends to maintain the hoe in its normal position; but whenever the hoe encounters a dangerous resistance it overcomes the spring, and the link D, turning on its pivot, releases the arm C, allowing the point of the hoe to swing backward.

The foregoing parts are in their general construction and arrangement of the ordinary character, and are not broadly claimed herein.

My improvement relates solely to the peculiar construction of the lever D. Heretofore this lever has been cast with the central trunnions, the longitudinal slot, and the notches in one end, as shown in the drawings, but without the pivot *c* and the studs *d*.

My improvement consists in forming the entire link complete and ready for use in one piece with the pivot *c* to receive the end of the rod E, and with the external studs or projections, *d*, which are intended to co-operate with an implement used to compress the spring when assembling the parts at the time of their manufacture.

I commonly arrange the parts, as shown in the drawings, with the studs *d* thrown slightly out of line with the pivot *c;* but this is not an important feature. By casting the pivot *c* and studs *d* integral with the body of the lever I am enabled to avoid the expenditure of time and labor which would otherwise be required in drilling the lever and applying the pivot and studs thereto, secure the required position of the parts with precision in every case, and give to the device a strength greater than it would otherwise possess.

I am aware of the construction represented in Letters Patent to J. S. Heath, No. 281,874, and I lay no claim thereto, my invention consisting in the improved construction herein recited, whereby the expense of manufacture is reduced and other advantages obtained.

Having thus described my invention, what I claim is—

1. The herein-described lever D, having the pivot *c* and studs *d* formed integral therein.

2. As a new article of manufacture, the herein-described link D, cast complete in one piece with the grooved body, the central trunnions, the notched arms at one end, and the pivot *c* and stud *d* at the opposite end.

In testimony whereof I hereunto set my hand, this 30th day of July, 1886, in the presence of two attesting witnesses.

RICHARD B. SHELDON.

Witnesses:
FRED A. TITUS,
OLIVER S. TITUS.