(No Model.) 2 Sheets—Sheet 1.

H. A. GORE.

HAND SEED SOWER.

No. 390,292. Patented Oct. 2, 1888.

FIG. 1.

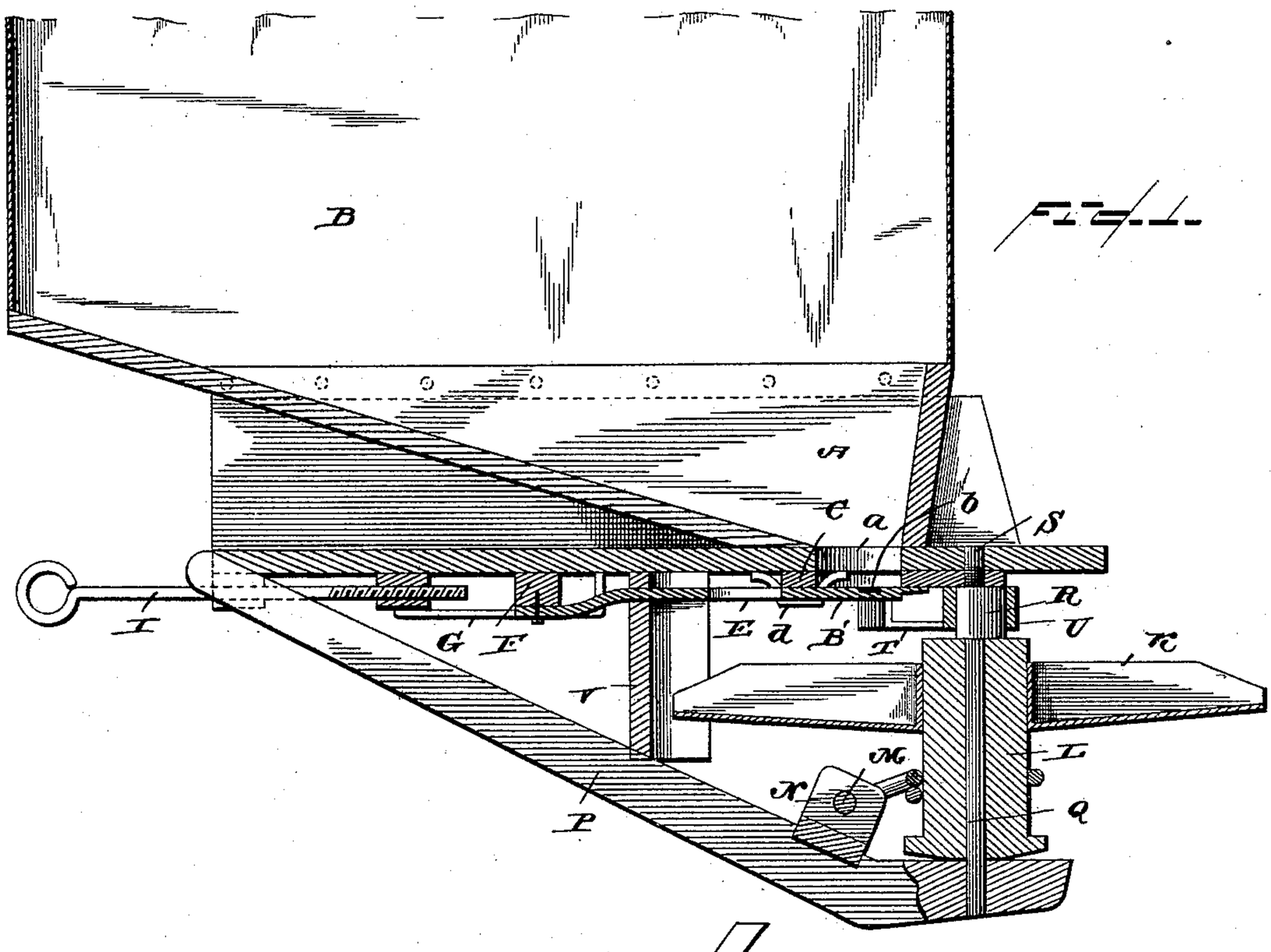
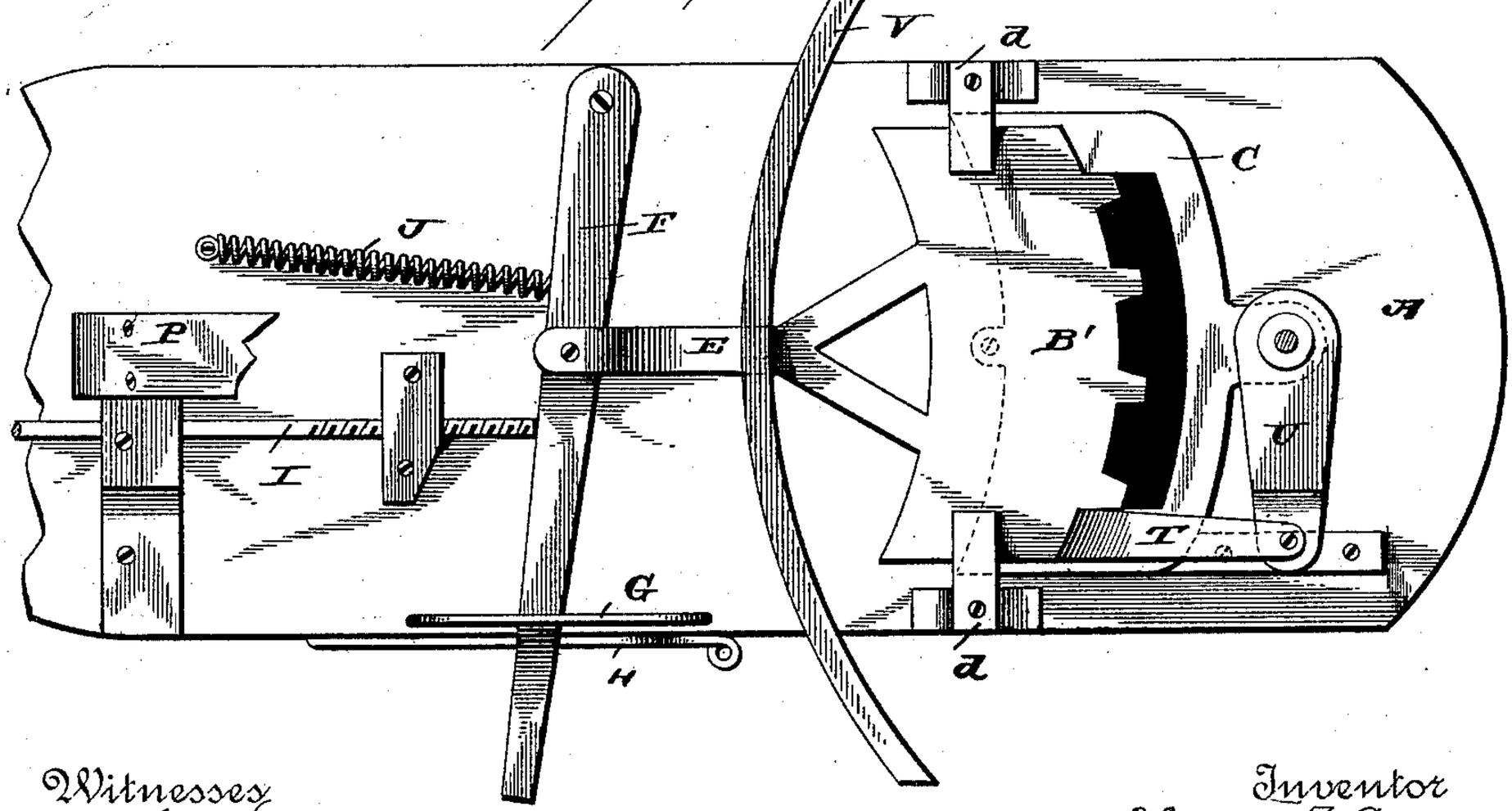


FIG. 2.



Witnesses
"H. Tschiel"
D. E. Dupuy.

Inventor
Henry A. Gore.

By his Attorneys
Smith & Sheehy

(No Model.) 2 Sheets—Sheet 2.

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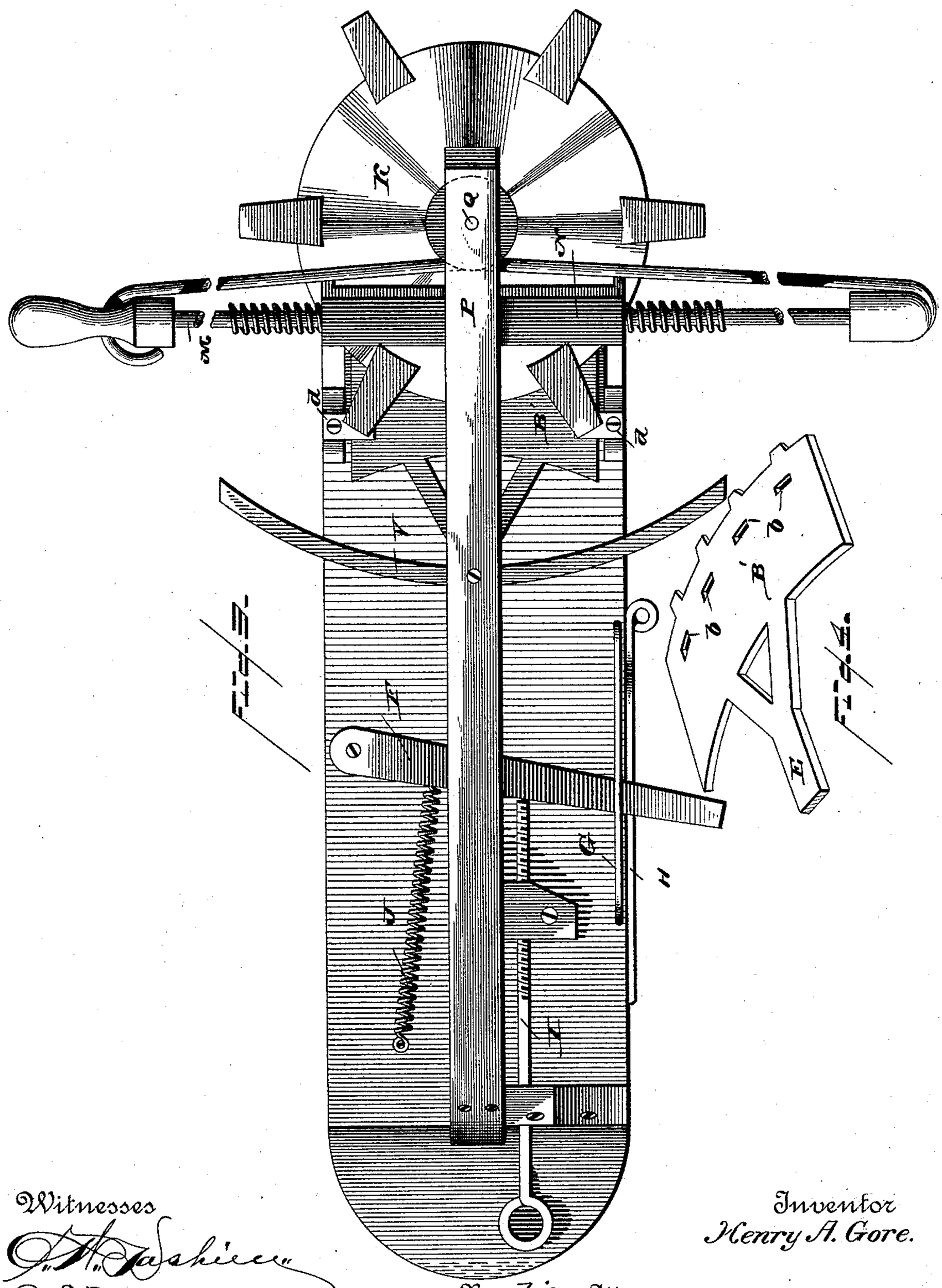

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UNITED STATES PATENT OFFICE.

HENRY A. GORE, OF GOSHEN, INDIANA, ASSIGNOR OF TWO-THIRDS TO EDWARD W. WALKER AND HIRAM W. RU TON, OF SAME PLACE.

HAND SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 390,292, dated October 2, 1888.

Application filed May 25, 1888. Serial No. 275,040. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. GORE, a citizen of the United States, residing at Goshen, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Hand Seed-Sowers; and I do 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 has relation to improvements in hand broadcast seeders.

An important desideratum in this class of devices has been to provide means for preventing wear and destruction of the expensive parts which so frequently require repairing, and the consequent taking apart of the machine to remove and replace the same, and also to provide means which will permit of a free and easy discharge of the grain or seed from the hopper to the distributing-wheel without clogging or banking up of the same at the throat. These objects are accomplished by the devices shown and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical sectional view of a seeder embodying our improvements. Fig. 2 is an inverted plan view of the same with the hopper partly broken away and the grain-wheel and operating-rod removed. Fig. 3 is an inverted plan view of the same with the grain-wheel and operating-rod in position, and Fig. 4 is a perspective view of the seed-slide or grain-plate removed.

Referring by letter to the said drawings, A indicates a hopper, and B a seed-bag, which may be of the form such as usually employed in this class of machines, the hopper having a transverse slot, *a*, at its forward lower end for the discharge of the seed. Around this seed-opening *a* is secured a wear-plate, C, which has an opening or slot coinciding with the opening in the hopper, and beneath this wear-plate is arranged the reciprocating seed-slide B′, which is properly supported in position by means of the guide-arms *d*, there being one arranged so as to overlap a sufficient distance the opposite side of the said seed-plate. This seed-plate is of a peculiar construction, which, instead of having the usual projections on its upper side for agitating the seed, is provided with depressions *b*. By having these depressions instead of projections it will be seen that the plate may be smoothly planed, so as to permit of a tight joint against the plate, and to this feature of the invention I attach importance.

The seed-slide may be provided with the usual rearwardly-extending arm E, which is attached to a pivoted lever, F, which has one end pivoted to the bottom of the hopper, its opposite end being confined in a guide, G, which is secured to the hopper on the opposite side of the bottom.

Secured to one of the side walls of the hopper is a spring-catch, H, which is shouldered, and is designed to engage the pivoted lever F, and hold the same when it has been pushed forward to its fullest extent, thereby holding the machine out of operation through the medium of its connection with the seed-slide.

I indicates the gage-rod usually employed, which extends rearwardly of the pivoted lever in threaded bearings, and is designed to bear at its forward end against the said lever and limit the movement of the latter. The pivoted lever has also connected with it a coil-spring, J, which has its opposite end secured to the hopper, so as to keep the lever normally pressed against the gage-rod.

K indicates the grain-distributing wheel, which may be of the form usually employed, and has fixed to its axis a spool, L, around which is wound the usual rotating rope or leather, which has its opposite ends attached to the ends of the reciprocating rod M, which is provided with buffer-springs, and has its bearing in a bracket, N, beneath the hopper.

P indicates a longitudinal brace, which is secured at its rear end to the hopper, and it has its forward end extended beneath the spool of the grain-wheel to furnish a bearing therefor. Through this spool is passed a vertical shaft or spindle, Q, the lower end of which passes through the brace P, and the upper end has formed on it an eccentric, R, which passes through an eye in the pitman, which is connected with the seed-slide, as will be herein-

after more fully set forth. The upper end of this spindle terminates in a reduced portion, S, which passes through the forward lower wall of the hopper, and also through an eye in the forward end of the wear-plate, as more fully shown in Figs. 1 and 2 of the drawings. The seed-plate is provided at one end with a forwardly-extending rigid arm, T, and this arm is pivotally connected with the eccentric on the spindle Q by means of a pitman, U.

V indicates the usual grain-guard, which is curved transversely and secured beneath the hopper in rear of the grain-wheel.

In operation it will be seen that when the operating-rod M has been reciprocated the grain-wheel will be rapidly rotated in opposite directions, which will cause the spindle of the spool to rotate in a similar direction, and through the medium of its eccentric R will reciprocate the pitman U, which latter will impart a lateral vibration to the seed-plate, the discharge-opening being regulated by means of the gage-rod I. This operation will cause the grain or seed which has been placed in the bag or hopper to fall into the grain-wheel and be distributed broadcast.

The bag may be provided with a suitable shoulder-strap, whereby the device may be removably carried by the operator and the rod brought within convenient reach of his hand.

It should be here stated that the pitman is of wood, (although metal may be used,) as by the employment of such in connection with the metal spindle and the metal arm of the seed-plate the usefulness of the parts is prolonged and the harsh engagement of them obviated.

In machines as heretofore constructed the seed-slide has been provided with a forward loop, which of course has been of metal, and the metal eccentric on the spool-shaft has been brought in direct engagement therewith, which causes a rapid wearing of the parts, and when the loop of the plate becomes worn it is necessary to remove the entire plate and many of the parts in order to repair and replace.

Having described my invention, what I claim is—

1. In a broadcast seeder, a laterally-reciprocatory seed-plate having a smooth upper side provided with indentations to serve as agitators for the seed, substantially as specified.

2. The combination, in a broadcast seeder, of a laterally-reciprocating seed-plate having a smooth upper side provided with indentations to serve as agitators for the seed, a rotative seed-wheel, the spool-spindle passing through the same and having an eccentric at its upper portion, the arm secured to the said slide, and the pitman connecting the arm with the eccentric of the spindle, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY A. GORE.

Witnesses:
G. S. WARREN,
WALTER B. PIATT.