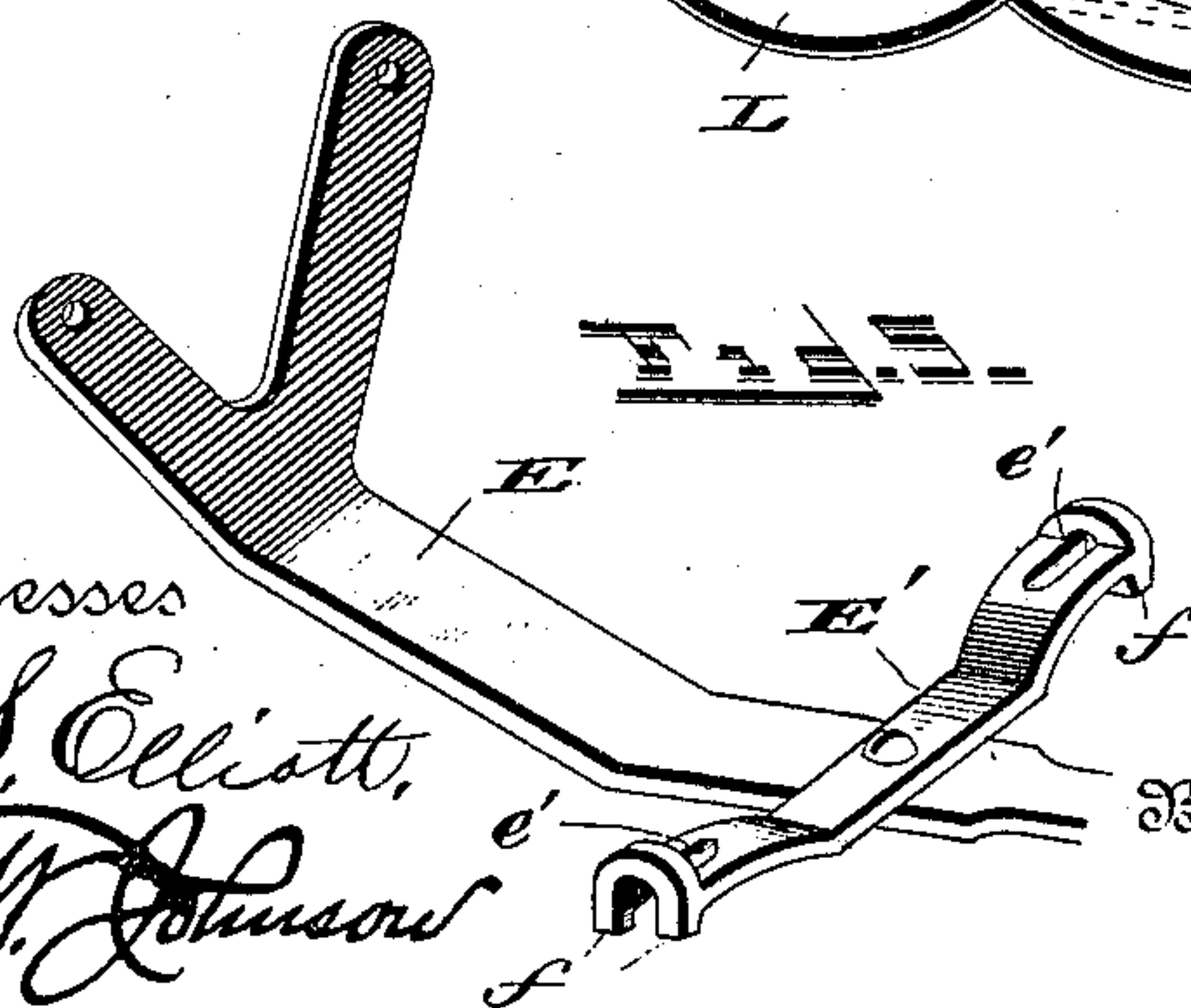
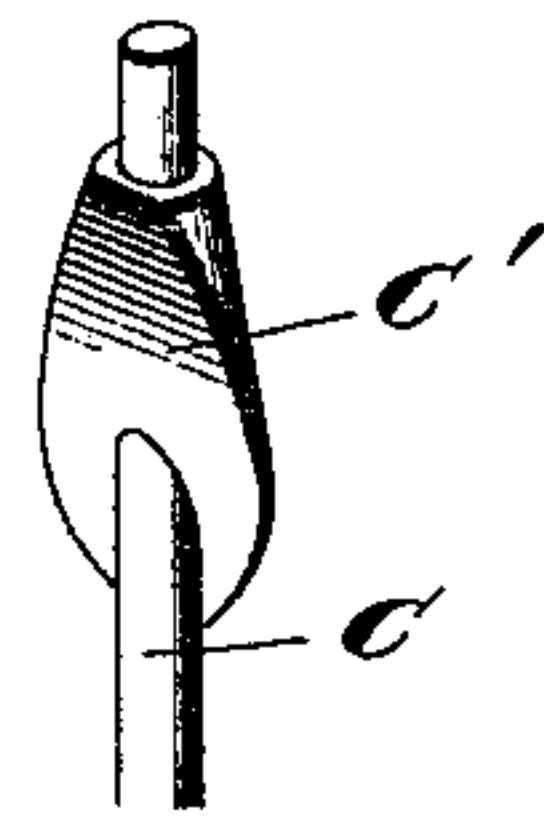
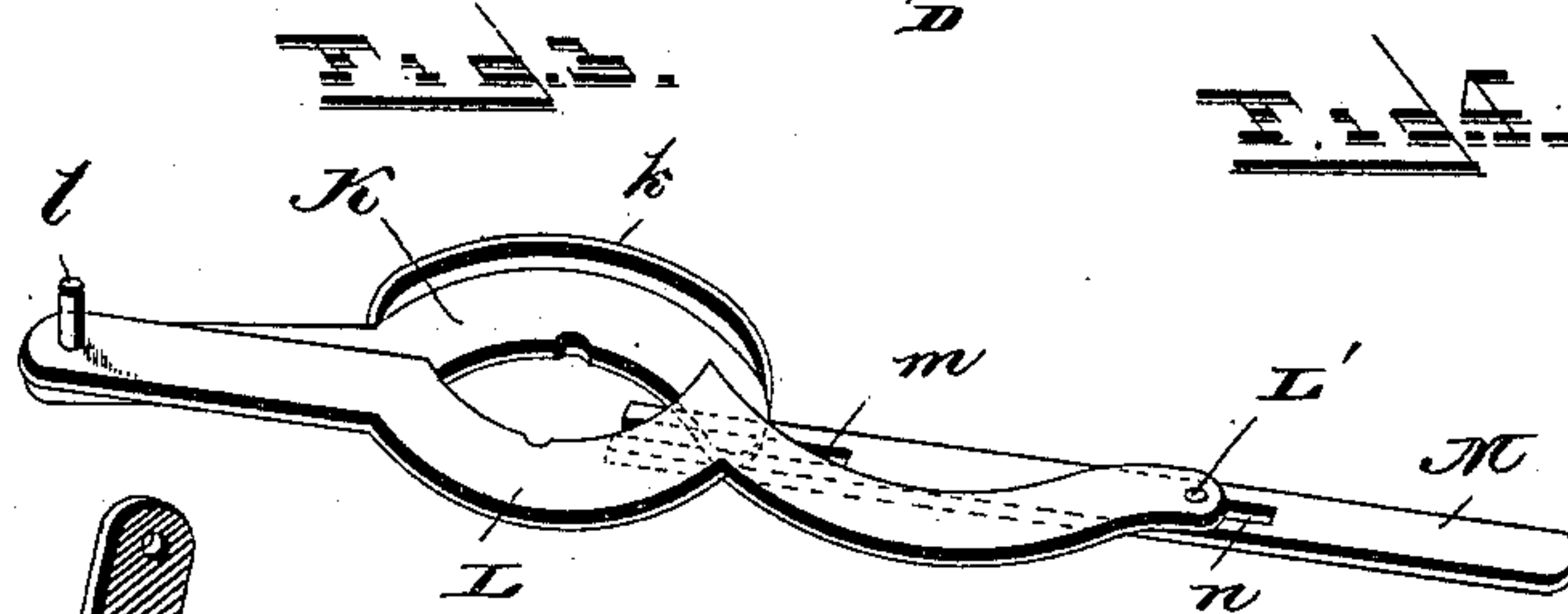
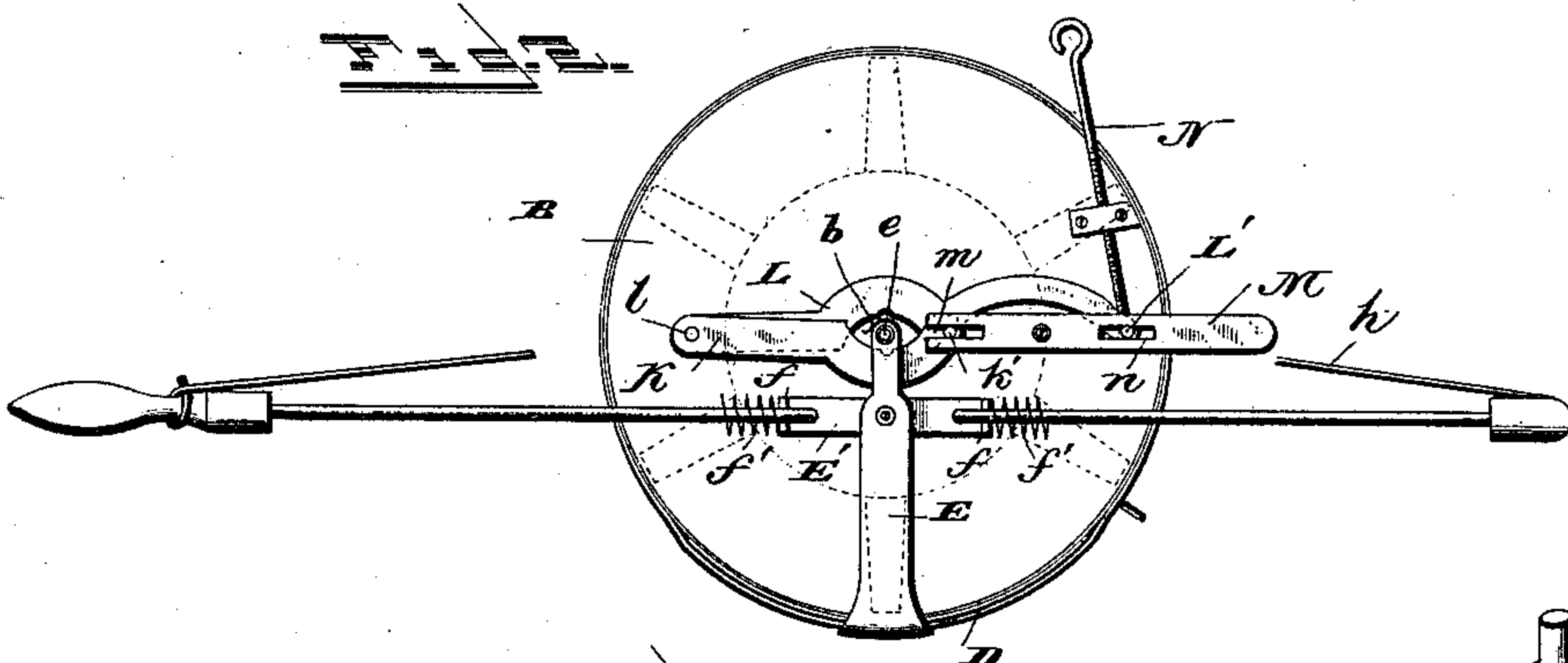
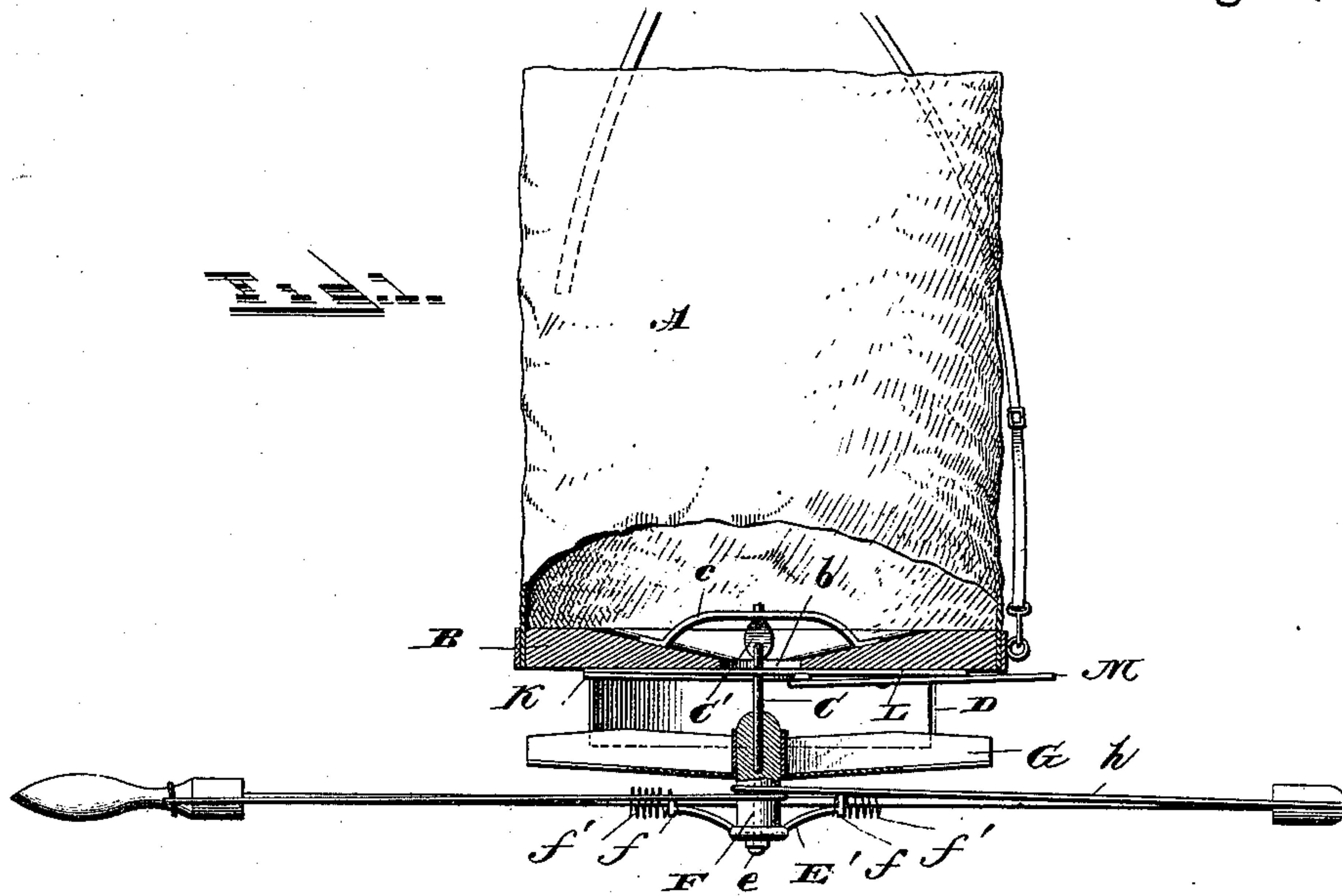


(No Model.)

S. SMOKER.
BROADCAST SEED SOWER.

No. 408,542.

Patented Aug. 6, 1889.



Witnesses

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By his Attorneys

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UNITED STATES PATENT OFFICE.

SAMUEL SMOKER, OF GOSHEN, INDIANA.

BROADCAST SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 408,542, dated August 6, 1889.

Application filed April 11, 1889. Serial No. 306,781. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SMOKER, a citizen of the United States of America, residing at Goshen, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Broadcast Seed-Sowers; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front view of my improved broadcast seed-sower, said view being partly in section. Fig. 2 is a bottom view showing the seed-distributing mechanism, the distributing-wheel being removed, but indicated thereon in dotted lines. Fig. 3 is a detail perspective view of the means employed for regulating the seed-opening. Fig. 4 is a detail perspective view of the stirrer. Fig. 5 is a detail perspective view of the supporting-arm attached to the bottom of the seed-carrier.

This invention has relation to certain new and useful improvements in that class of broadcast seed-sowers which are operated by hand; and it consists in the details of construction and novel arrangement of the parts, as will be hereinafter fully set forth and claimed.

In the accompanying drawings, A refers to the grain-container, to which is secured near its top one end of a strap, the opposite end of which is secured by means of a hook to an eyebolt attached to the bottom board, to the periphery of which the lower edge of the bag or flexible holder is secured. This bottom B is made up of a disk of wood or other light material, and the lower surface thereof is perfectly plain, while the upper surface is cut away to provide a concave. The disk is provided centrally with an opening *b*, through which the seed passes to the distributing-wheel, and this opening is circular.

To the concave of the disk B is secured a metallic cross-bar *c*, which has a central opening forming a bearing for the upper end of the pin C, which extends from the hub of the distributing-wheel. Immediately below

its upper end the pin C, which passes through the cross-bar *c*, has formed thereon an enlargement C', one side of which has an inclined plane surface which gradually widens from its upper end downwardly. The opposite side of this enlargement is conical, and this device serves as an agitator for the seed or grain, so as to prevent it from clogging above the opening *b*.

To the rear side of the disk B is secured a depending metallic plate D, which will serve as a shield to keep the seed from being thrown against the body of the operator. The disk has also securely attached thereto an arm E, which extends downwardly from its point of connection with the disk and then parallel therewith, said arm having at its end an opening through which passes a screw *e*, which enters the lower end of the hub F, carrying the distributing-wheel G. To the arm E, at a suitable point, is loosely pivoted a bow-guide E', the ends of said bow-guide being slightly raised and provided with openings *e'*, through which the bow passes. This pivoted arm E is also provided with lugs *f*, which serve to hold the ends of the coiled springs *f'* thereon, said springs contacting with the inner surfaces of the knobs attached to the ends of the bow. Around the hub F the cord *h* passes, and when the rod is reciprocated this cord will cause the distributing-wheel secured to the hub to rotate alternately in opposite directions.

To the under side of the disk B are pivoted two castings or plates K and L, they being secured to the under side of the disk by a pivot or wood-screw *l*, which passes through the ends of the castings into the under side of the disk. One of these castings K is provided with an upwardly-projecting flange *k*, which will lie adjacent to the under side of the disk B, and provide a space within which the oppositely-curved portion of the other plate may lie. The casting K is provided opposite its pivoted end with a downwardly-projecting pin *k'*, and the free end of the casting L has formed thereon a pin *L'*, these pins being adapted to engage with slots *m* and *n*, formed in a pivoted lever M, secured to the under side of the disk B, and by moving this lever M upon its pivot the castings K and L may be separated to

form a larger or smaller opening, as may be desired, below the central opening *b* in the disk B, thus regulating the supply of grain or seed upon the distributing-wheel.

- 5 N refers to a set-screw secured in a suitable bearing attached to the under side of the disk B, by means of which the movement of the lever M may be limited.

I am aware that prior to my invention it has been proposed to employ a rotary distributing-wheel, pivoted guide for an operating-bow, double seed-slides, and a bow having springs; and I do not, therefore, claim such construction, broadly, as my invention; but

- 15 What I claim as new, and desire to secure by Letters Patent, is—

1. In a hand broadcast-seeder, constructed substantially as shown and provided with a distributing-wheel and operating means, of a pin C, which forms an upper bearing for the hub of the distributing-wheel, said pin having formed thereon above the seed-discharge opening an enlargement, one side of which is inclined, while the opposite side is rounded, and a transverse metal bearing secured to the upper face of the hopper-bottom and receiving the end of the pin above the enlargement, substantially as shown, and for the purpose set forth.

30 2. The combination, in a broadcast seed-sower adapted to be operated by hand, substantially as shown, of the castings K and L, pivoted to the under side of the disk, said

castings being provided with projecting pins *k'* and *L'*, one of said castings having a circular flange *k*, and a pivoted operating-lever M, having slots *m* and *n*, with which the pins engage, substantially as shown, and for the purpose set forth. 35

3. In a hand broadcast-seeder, a bow-guide pivoted to the supporting-arm E, said bow-guide having V-shaped openings *e'*, with projecting lugs *f f*, and through which the bow passes, said lugs holding thereon the spiral springs *f'*, substantially as shown, and for the purpose set forth. 40 45

4. In combination with a hand seed-sower of the class described, a flexible container A, disk B, having a central concave and opening *b*, seed-regulating slides K and L, pivoted to the under side of the disk B, a hub carrying a seed-distributing wheel, said hub having an upwardly-projecting pin C, with an enlarged portion *C'*, an arm E, carrying a pivoted bow-guide and forming a support for the lower portion of the hub, and a shield D, attached to the disk B, the parts being organized substantially as shown, and for the purpose set forth. 50 55

In testimony whereof I affix my signature in presence of two witnesses. 60

SAMUEL SMOKER.

Witnesses:

JOHN F. B. KAUFFMAN,
JOHN P. BLOUGH.