

LLOYD DAY.

Improvement in Corn-Shellers.

No. 115,939. *Fig. 1.*

Patented June 13, 1871.

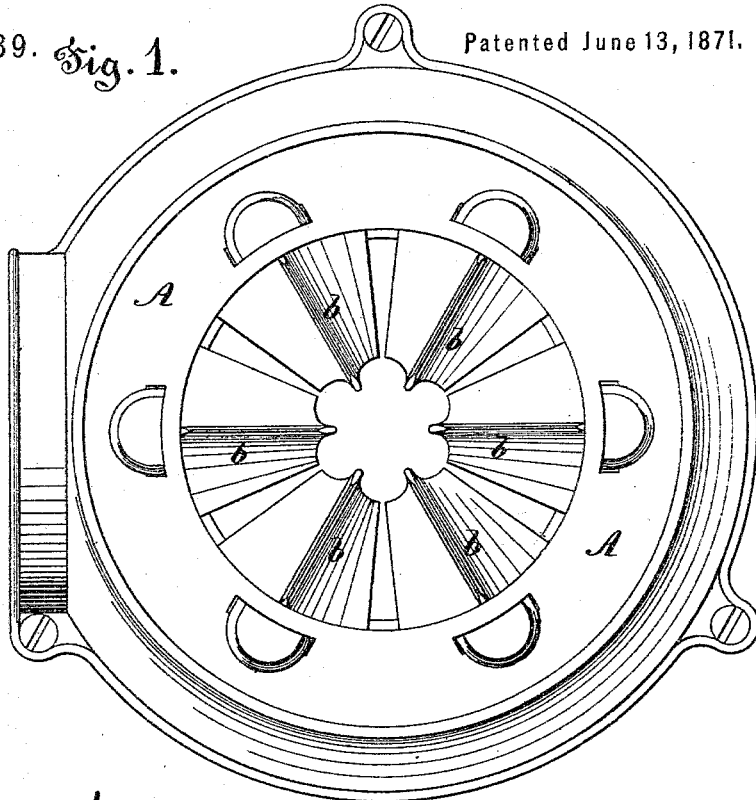
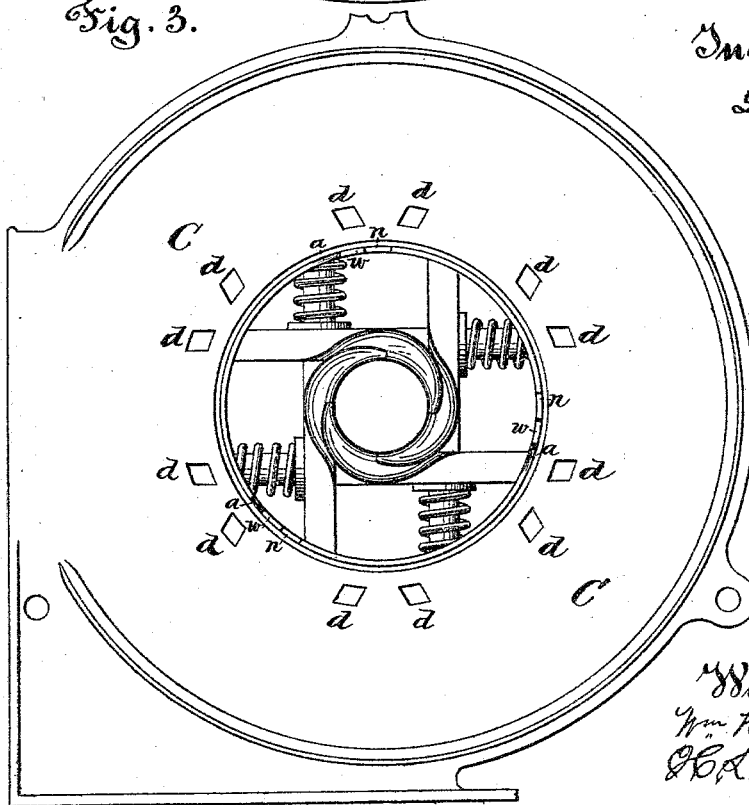


Fig. 3.

Inventor.

Lloyd Day



Witnesses.

Wm. Howard.
H. A. Perrine.

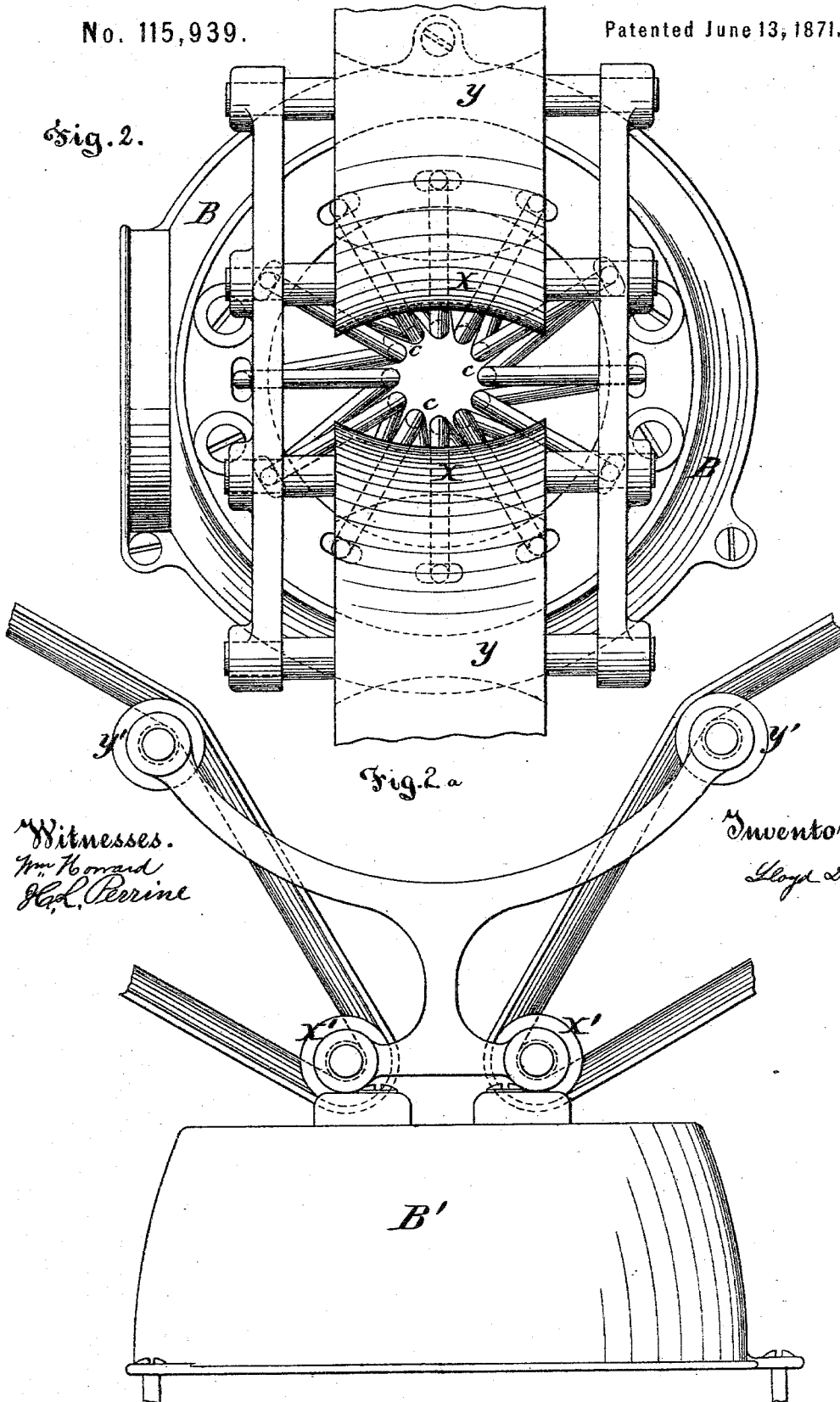
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Fig. 2.



Witnesses.
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No. 115,939. *Fig. 4.*

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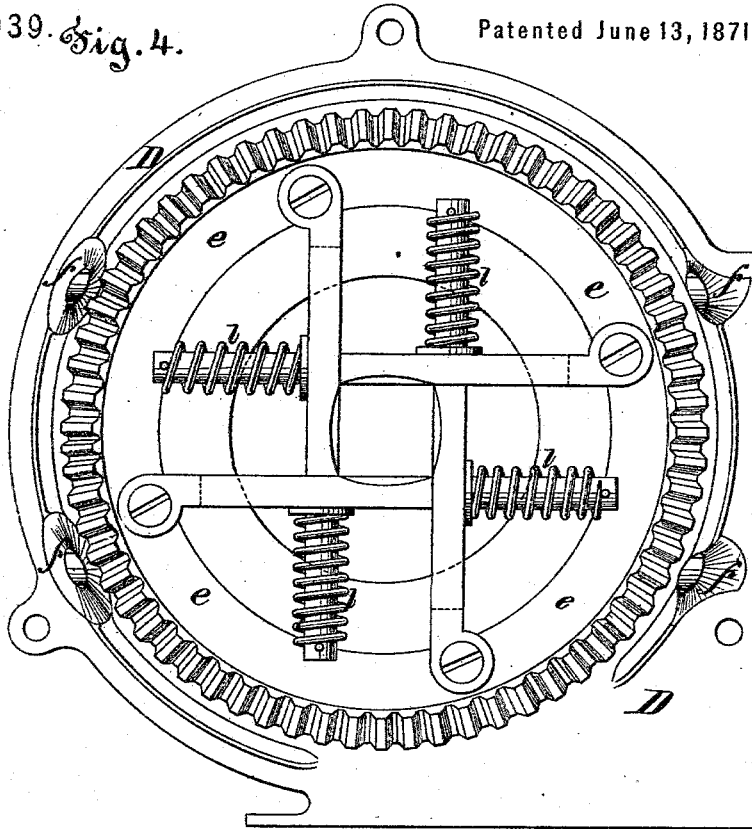
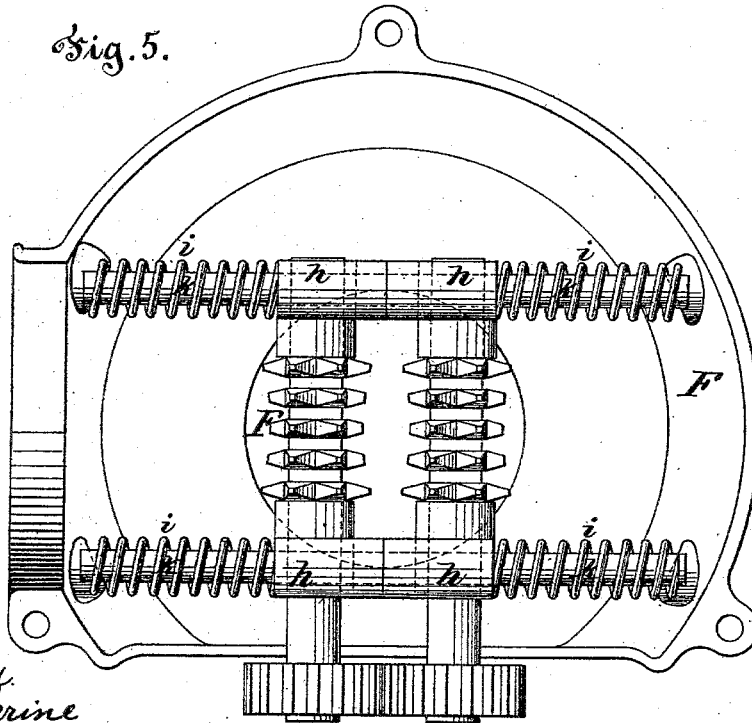


Fig. 5.



Witnesses.
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Fig. 11.

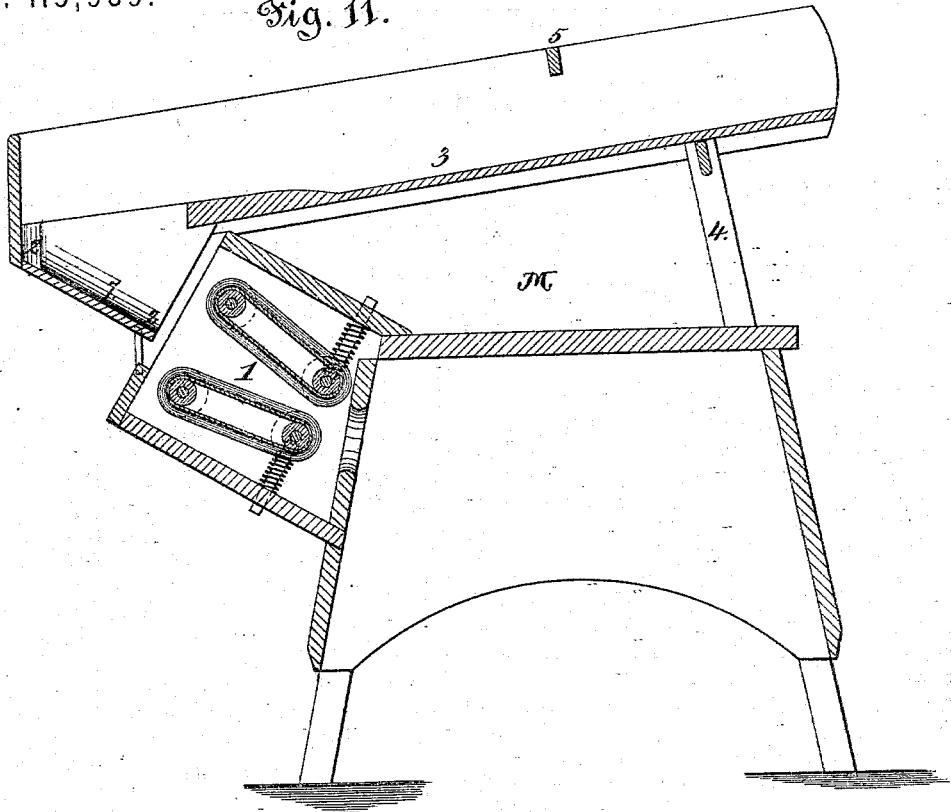
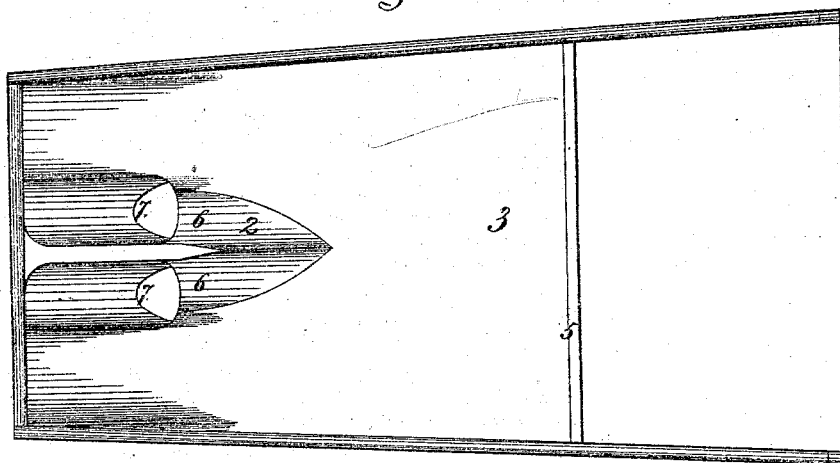


Fig. 12.



Witnesses.

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UNITED STATES PATENT OFFICE.

LLOYD DAY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. 115,939, dated June 13, 1871.

To all whom it may concern:

Be it known that I, LLOYD DAY, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Corn-Shellers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of a corn-sheller which may be used either as a hand or power sheller, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a front view of my corn-sheller with funnel-shaped guides and without feeding-rollers. Fig. 2 is a similar view with feeding-rollers, and showing a spiral-wire spring-guide in place of the funnel-shaped guides. Fig. 2^a is a side view of the feeding-rollers. Fig. 3 is a front view of the sheller with the front case removed. Fig. 4 is a rear view of the shelling apparatus. Fig. 5 is a front view of the back case, showing the escaping or relieving-rollers. Fig. 6 is a longitudinal vertical section of the sheller, the guides being removed, and only showing one of the palms. Fig. 7 is a front view of the palms as arranged when four or less number are used. Figs. 8 and 9 are views of the palms. Fig. 10 shows the guide to be attached either to the case or bearing-plate. Fig. 11 is a longitudinal vertical section of the frame with inclined plane and channels for feeding the corn to the sheller. Fig. 12 is a plan view of the inclined plane and channels.

A represents the front case of the sheller, showing the entrance to the shelling apparatus, said entrance being formed by a series of guides, *b b*, which constitute the receiving-funnel. These guides are provided with ribs to prevent the ears of corn from turning, and to conduct them to the palms. They are made in six or more sections, of concave and triangular form, with one or more ribs, *O*, to each, as shown at *M M*, Fig. 10. These ribs have

an inclination sidewise to aid in preventing the ears from turning, and are arranged to approach the palms in funnel-shape, with wings on the back or under side, so as to form a neck around the funnel when the sections are placed together. The whole is controlled and rendered flexible and adjustable by a spiral-wire ring or a gutta-percha ring, *q*, around the neck of the funnel, or by other form of springs; and at the outer extremes of the several parts of the said funnel are one or two clasps or hooks to each, which pass through slots in the casing *A*, acting as hinges, and allowing the funnel to distend and contract with facility; or each section may have a rear point, *p*, falling in somewhat reflexive form over and back of the circle described by the outlines of the funnel, to slide in slots or grooves in the casing as the funnel distends or contracts, and from each section of the so-formed funnel, near the neck thereof, is a shank falling backward and downward, and dividing into two legs, the extreme of each having a foot or clasp, as shown at *p' p''*, Fig. 10, to fall into niches or slots *d d*, formed for that purpose in the center plate or circular stationary bearing *C*, as shown in Fig. 3. Said feet or clasps act as hinges as the funnel distends and contracts again to the pressure of the elastic springs. These guides may be used both while feeding by hand and as a power-sheller. These funnel-shaped guides may be dispensed with, and in lieu thereof I substitute two or more feeding-rollers near the shelling-palms. These rollers *x x* are concave from end to end, as shown in Fig. 2, and may be fluted or serrated, or used with belts to convey the ears of corn to the shelling apparatus; and on the inside of the said feeding-rollers, next to the palms, a spiral-wire spring, *c*, may be used, if desired; or a feeding apparatus may be formed with two series of concaved rollers, the two series standing apart at one end thereof and approaching near together at the entrance of the shelling apparatus; or, simply, two of said rollers *x x* near each other at the entrance of the shelling apparatus, and two others, *y y*, at a distance of about six to ten inches away, standing apart wide enough to admit an ear of corn freely, one of each pair being connected by the cut belts, as shown at *x' y'*, Fig. 2^a, the

end of the plane, which is shaken by the machinery, if desired, to pass the ears of corn gradually down said inclined plane to the receiving-channels, which slide them rapidly, point endwise, into the suction-like motion of the funnel and rollers, which constitute the feeding apparatus. Above the inclined plane 3 is a fender, 5, for the ears of corn to pass under, only one ear thick. 6 6 show the increased grade down which the ears of corn slide into the end 7 of the reversing-channels, which immediately drop them into the suction of the feeding apparatus. The whole shelling machinery is attached to a frame or stand in any suitable manner, and connected with gearing, all of which may be incased, if desired, in a frame of such dimensions as to contain one, two, or as many series of palms and feeders as may be required to perform any amount of work necessary, and arranged with one or more hoppers or inclined planes, and as many reversing-channels as series of palms, to guide the ears of corn endwise to the feeding-rollers and belts 1 1, Fig. 11; or the ears of corn may be guided or given to the feeding belts and rollers by hand without reversing-channels, if desired; and, in either way, in such position as to receive them horizontally, vertically, or at any intermediate inclination or elevation desired; and thus the power used may be hand, steam, or other power, and applied in any desired or required degree.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The shelling-palms K L, constructed as herein shown and described, consisting of the slotted shanks *w* with extended fingers *s'*, and provided with curved tines *s* on the upper side of said shanks, substantially as and for the purposes herein set forth.

2. The arrangement of the spiral springs *l l* upon the extended fingers *s'* of the palms K L, as and for the purposes described.

3. In combination with the stationary annular plate D and revolving annular plate *e*, the middle plate C, when provided with recesses *n n*, inclined planes *a a*, and slots *d d*, substantially as and for the purposes herein set forth.

4. In combination with the shelling-palms K L and escaping-rollers F F, the yielding guides *b b*, when all such parts are constructed as described, and arranged to operate substantially in the manner and for the purposes specified.

5. The arrangement, in relation to the shelling-palms K L, constructed as described, of the relieving or escaping rollers F F, as and for the purposes described.

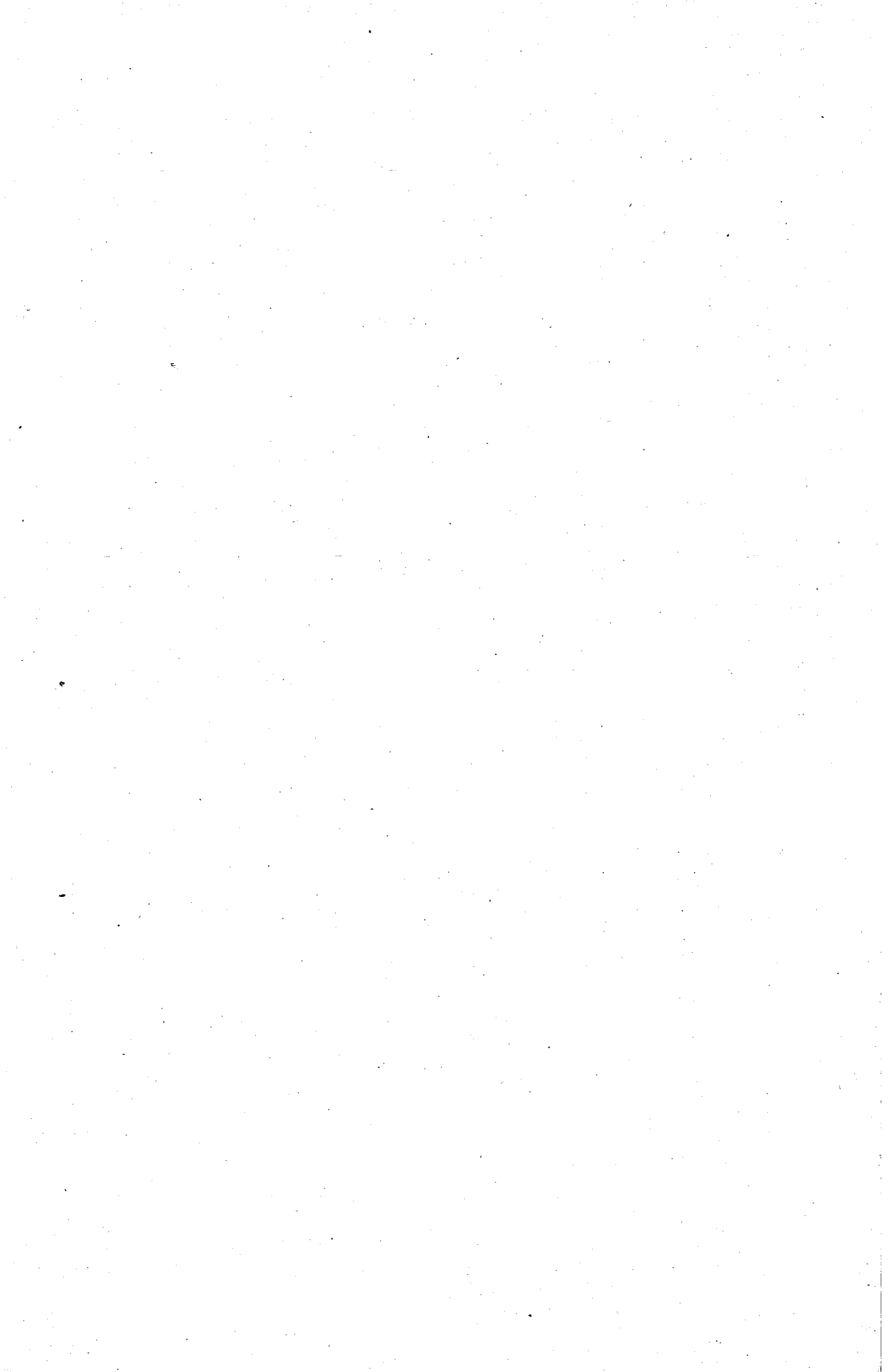
6. In combination with a corn-sheller constructed substantially as described, the feeding attachment herein shown in Figs. 11 and 12 of the drawing, when the several parts thereof are constructed and arranged to operate substantially in the manner specified and set forth.

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Witnesses:

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H. L. PERRINE.



A. M. DE SOUCHET.

Improvement in Water-Meters.

No. 115,940.

Fig. 1.

Patented June 13, 1871.

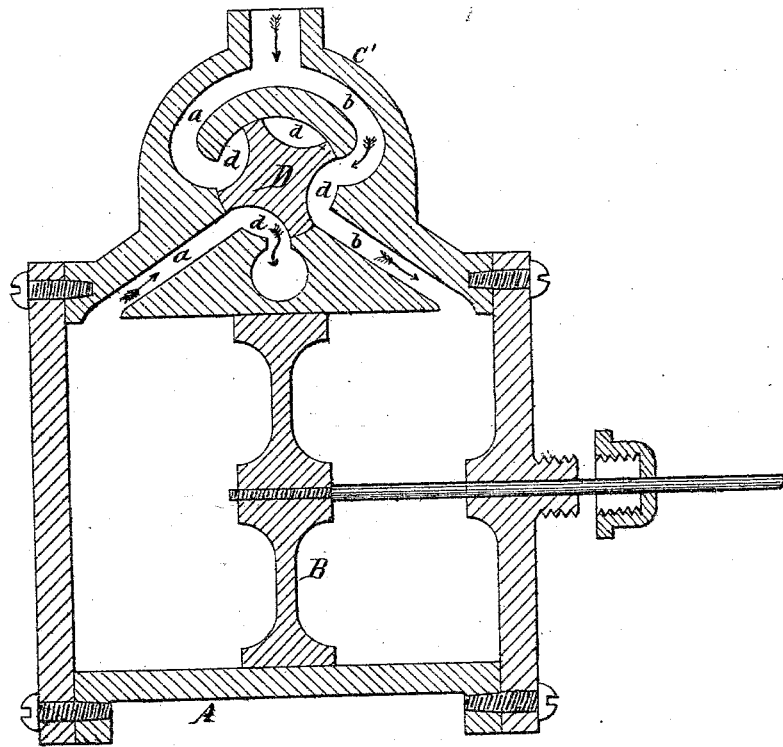


Fig. 4.

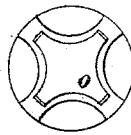


Fig. 2.

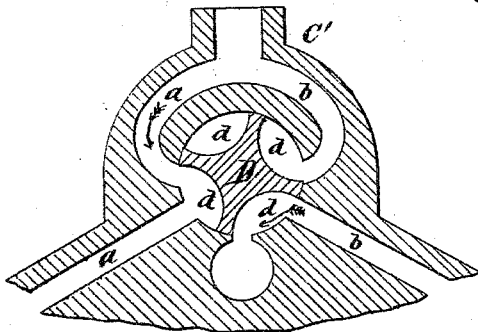
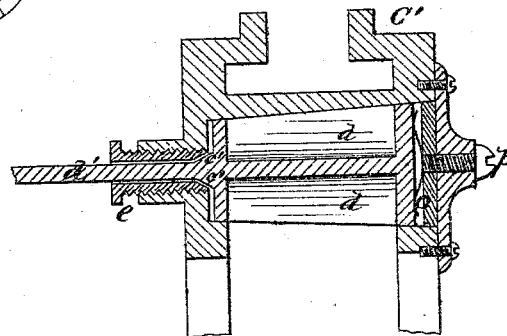


Fig. 3.



Witnesses.
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Atty.