

E. MOCK.

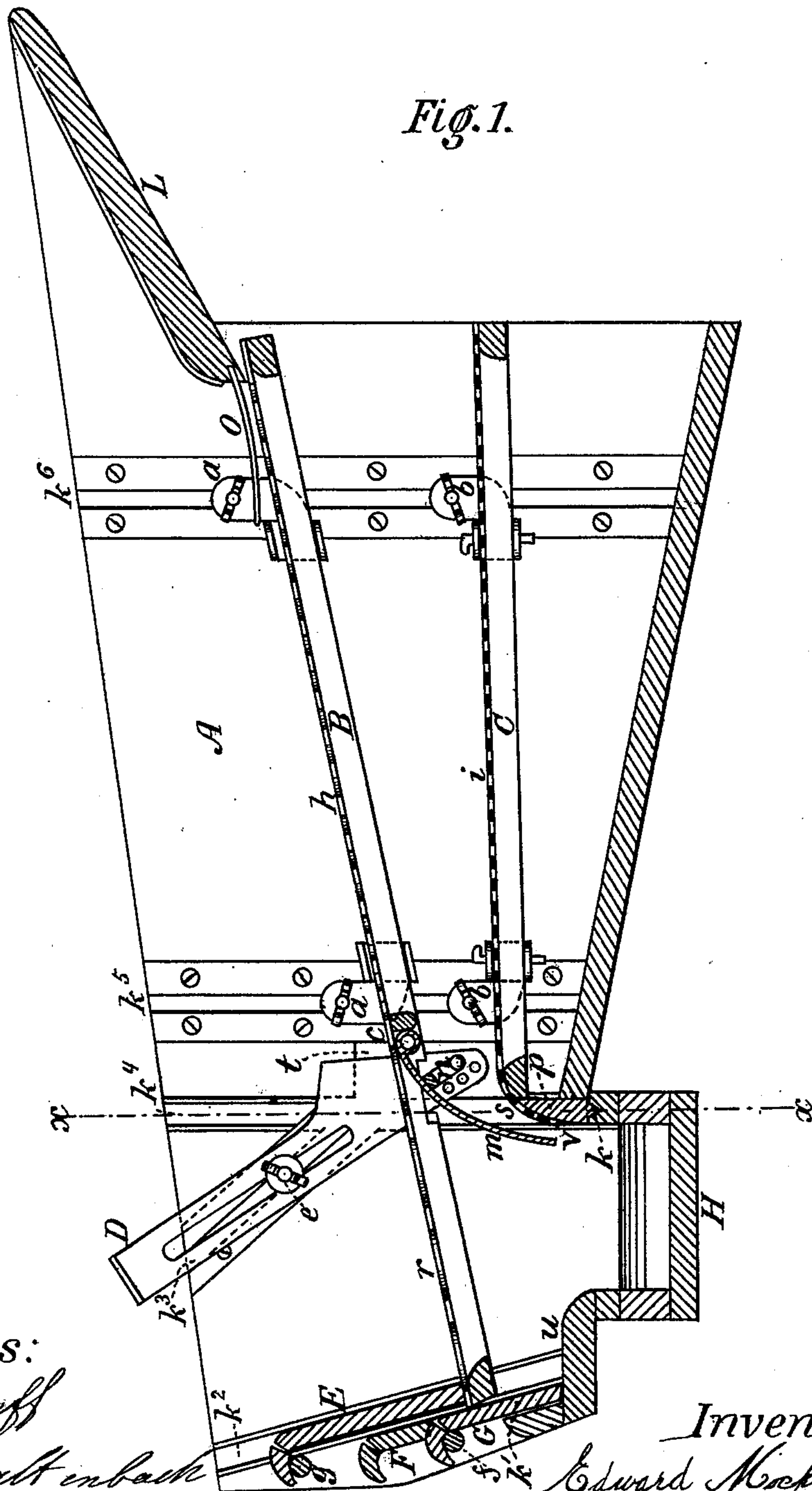
2 Sheets—Sheet 1.

Separator-Shoe for Thrashing-Machine, &c.

No. 220,032.

Patented Sept. 30, 1879.

Fig. 1.



Witnesses:

D. Graff
Cha. Valtinbach

Inventor:

Edward Mock

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Fig. 2.

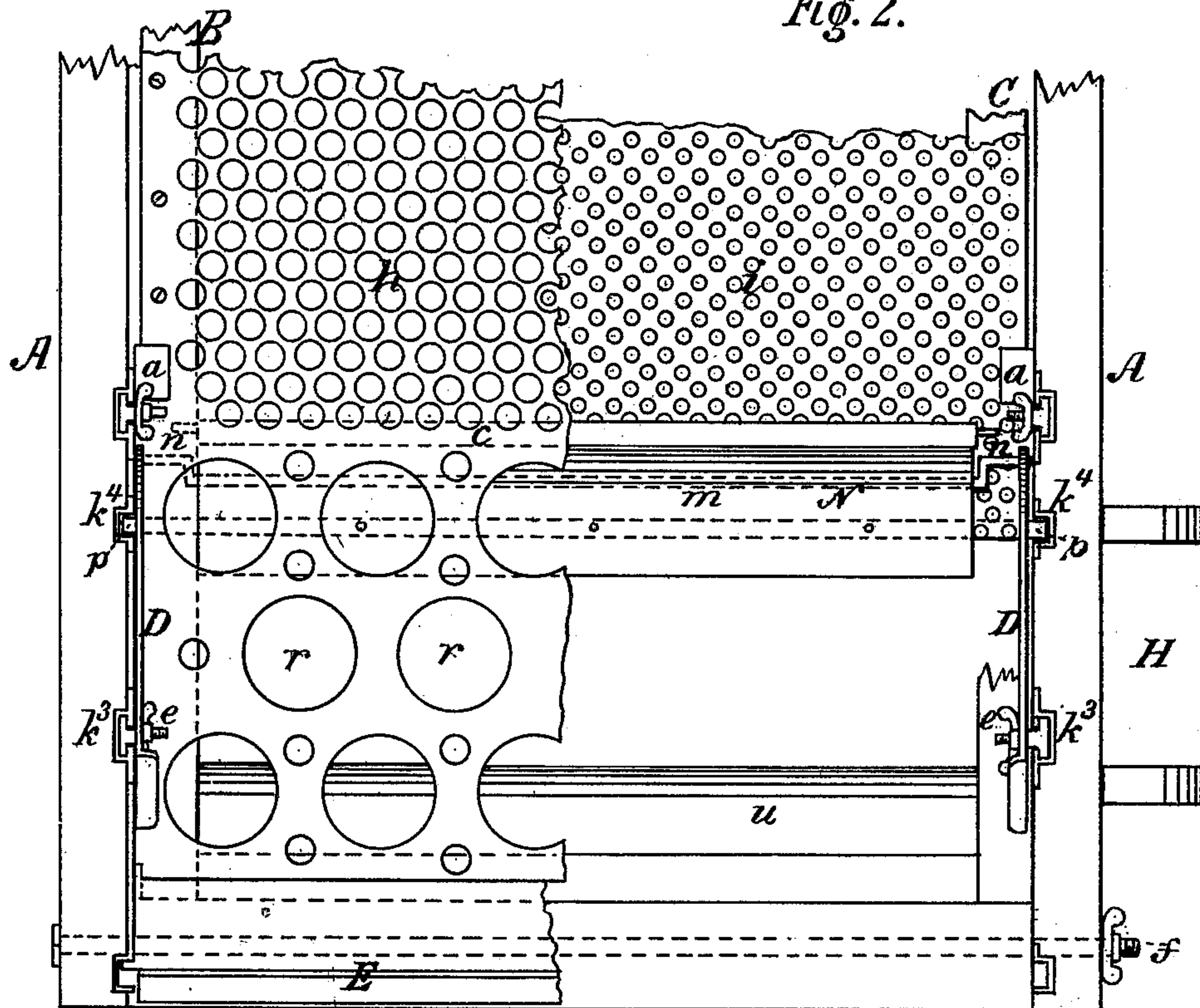
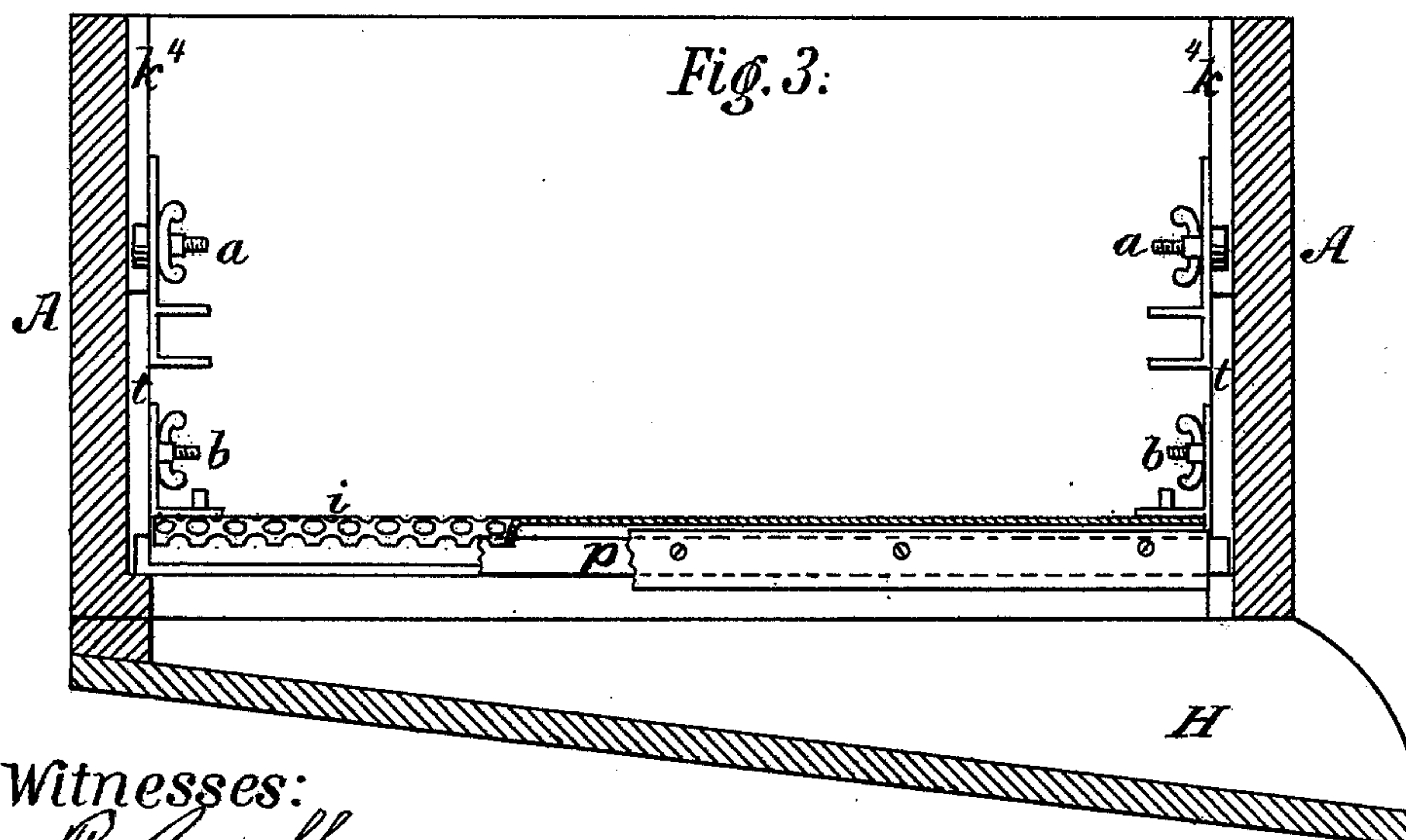


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD MOCK, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SEPARATOR-SHOES FOR THRASHING-MACHINES, &c.

Specification forming part of Letters Patent No. **220,032**, dated September 30, 1879; application filed August 19, 1879.

To all whom it may concern:

Be it known that I, EDWARD MOCK, of Chicago, in the county of Cook and State of Illinois, have invented certain novel and useful Improvements in Separator-Shoes for Thrashing-Machines and Fanning-Mills, or for any other machines for the purpose of cleaning and separating any and all grain or seeds, or for any other purpose for which it may be used, of which the following is a specification.

In the accompanying drawings, forming part of this specification, Figure 1 is a longitudinal vertical section of a separator-shoe embodying my improvements; Fig. 2, a plan view of the rear portion of the same, and Fig. 3 a transverse vertical sectional view, taken through line *x x* of Fig. 1.

The same letters refer to the same parts of the shoe in all the figures.

A is the side of the shoe or sieve-supporting case or frame, provided with inclined receiving or feed board L, a tailings-trough, H, and inclined bottom, receiving and discharging the cleaned grain. The principal or top sieve, B, of sheet metal, extends the entire length of the shoe, and is formed with coarser perforations *r* where it projects over the tailings-trough, in order to permit the imperfectly-thrashed heads to escape through to the trough, (and thence to the return-elevator to be thrashed,) and finer perforations *h* over the rest of the surface, for sifting the grain through. This sieve is provided at each side with upwardly-projecting lugs, in which are set-screws *a a*, formed with enlarged outer ends, which project into vertical grooves *k⁵ k⁶* in the sides A of the shoe, which grooves are provided at each edge with a metallic wearing-plate, projecting over, as clearly shown in Fig. 2, so as to hold the enlarged head of the set-screw while permitting it to slide freely up and down.

It is only necessary to set the sieve at the desired angle or height and tighten the screws to retain it in place.

To the frame of sieve B and under said sieve, at *c*, forward of the inner side of trough H, is hinged a valve or deflecting plate, *m*, straight or curved in cross-section, and extending over beyond and below the rear edge of the lower sieve, *i*, to direct the material which passes over said sieve into trough H.

The valve or deflector *m* has a bar, *n*, running its entire length, the projecting ends *k* of which are held in perforations in the slotted adjusting-links D, which are adjusted by set-screws *e*, with enlarged heads, sliding in the inclined grooves *k* in the frame. The slots in the links D permit perfect freedom of adjustment of valve *m* in all positions of sieve B.

The sieve *i*, attached to frame C, (which is adjusted in a manner and by means—viz., by set-screws—similar to those employed in connection with sieve-frame B,) has finer perforations than sieve *h*. It is intended for the final separation. The rear end of frame C is rounded off, as shown at *s*, and the rear edge bent over, overlapping the beveled top of a dividing-board, *p*, on which it rests, and which serves to cut off the blast in this direction.

Dividers of different lengths are used for the different adjustments of frame C. The divider *p* is slid into its place by the vertical grooves *k⁴* in the sides A of the shoe, and is further retained by a head formed on its bottom edge, fitting into a V-shaped groove, *k*, in the supporting cross-piece of the frame. The curved rear edge of sieve *i* and the deflector *m* have left behind them, by the arrangement described, a clear space, *v*, adjustable in width by means of link D.

The tail-board of the shoe is constructed in several independently-adjustable parts, sliding in grooves, the uppermost section, as is shown, resting upon the rear end of sieve-frame B, so that the relative height of section E above the sieve is always the same, whatever the height or inclination of the sieve; or, if it becomes desirable, section E can be removed, as may also the sections F and G, shown placed one above another, and forming a single tail-board, and adjustable as to height independently of the sieve-frame B. Tension-rods F G, tightened by thumb-nuts and a permanent ledge, *k¹*, retain the tail-board sections in place.

By these means the rapidity of flow of the grain and the direction and effect of the blast can be regulated to a nicety. The deflector *m* prevents the tailings from being blown over, and at the same time can be adjusted to regulate the pressure of the blast upward through the top sieves, and each sieve, as well as the de-

flector and the tail-board, can be adjusted independently of the other parts.

The adjustment of the sieves is not limited to points set at intervals apart, but may be graduated to as small distances as may be desired.

The sides A of the shoe are not left open, as would be the case were they slotted, instead of grooved, for the adjustment of the sieves.

Having fully described my invention, what I claim is—

1. The combination of the sieve-frame B, provided with lugs and set-screws, and the shoe having vertical grooves formed in its sides, substantially as described.

2. The combination of the sieve-frame B and the deflector *m*, hinged thereto on its under side, and arranged to be capable of independent adjustment, substantially as described.

3. The combination, with the adjustably-inclined sieve-frame, of the vertically-adjustable tail-board section E, resting on the rear end of said sieve-frame, substantially as described.

4. The combination, with the sieve-frame C, beveled at its rear edge and arranged to overlap the divider, of the removable divider *p*, sliding in vertical grooves, substantially as described.

5. The combination of the sieve-frame B, having the finer sieve, *h*, on its forward portion, and the coarser sieve, *r*, on the portion extending over the tailings-trough, and provided with the adjustable deflector *m* of the sieve-frame C, beveled at its rear edge, and the divider *p*, substantially as described.

6. The divider *p*, formed with a head on its under edge, as described, fitting into a V-shaped groove, *k*, and arranged to slide in the vertical grooves *k*⁴ in the sides A of the shoe, in combination with the sieve-frame C, substantially as described.

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