

No. 754,865.

PATENTED MAR. 15, 1904.

F. W. HASCH.
SIEVE.

APPLICATION FILED JULY 11, 1903.

NO MODEL.

Fig. 1.

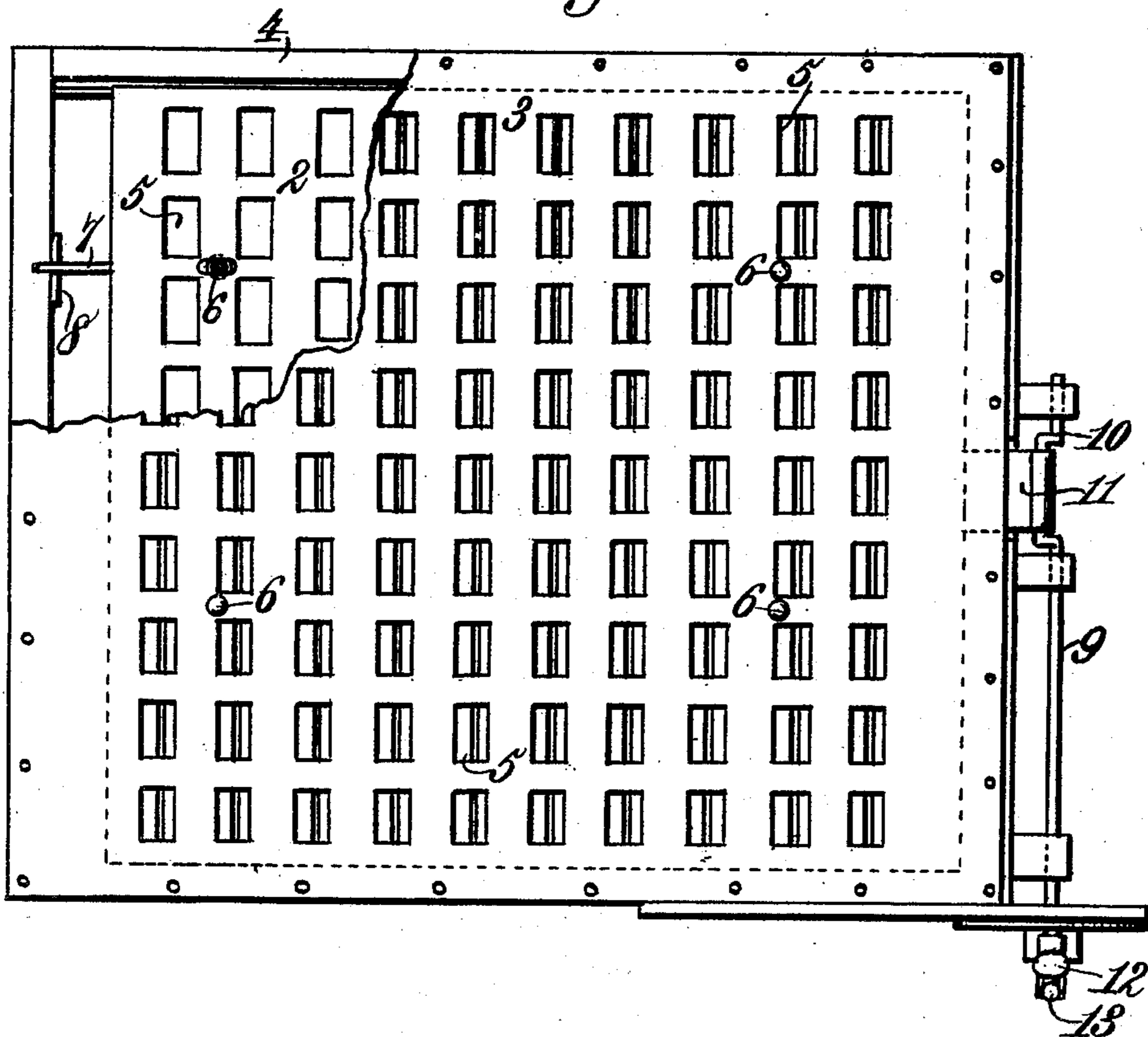


Fig. 2.

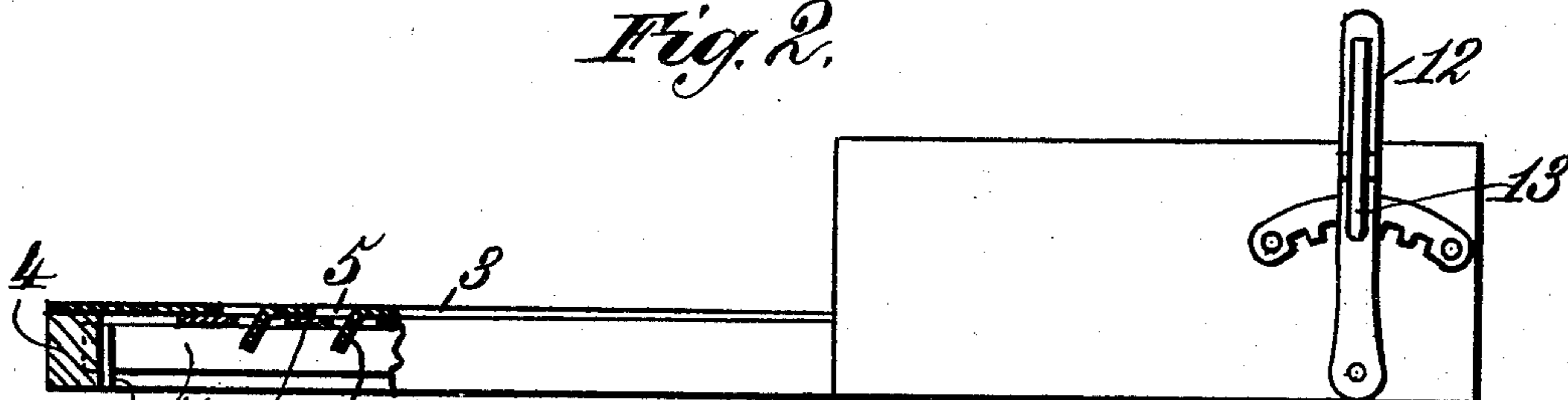


Fig. 4.

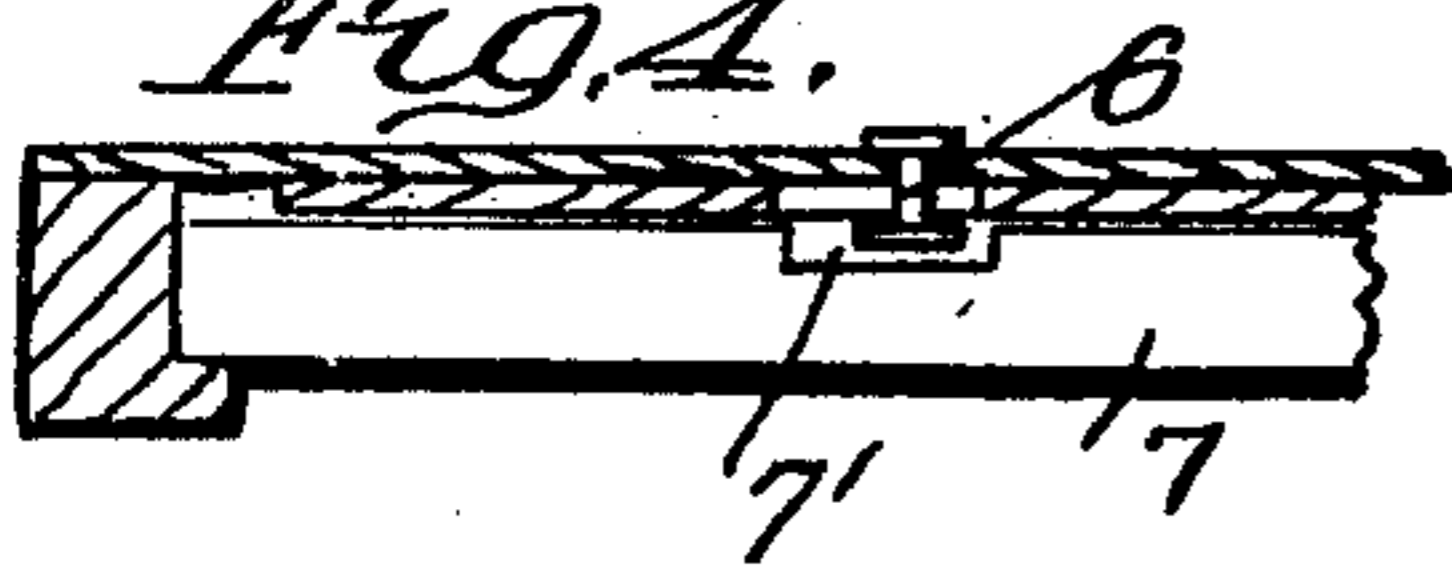
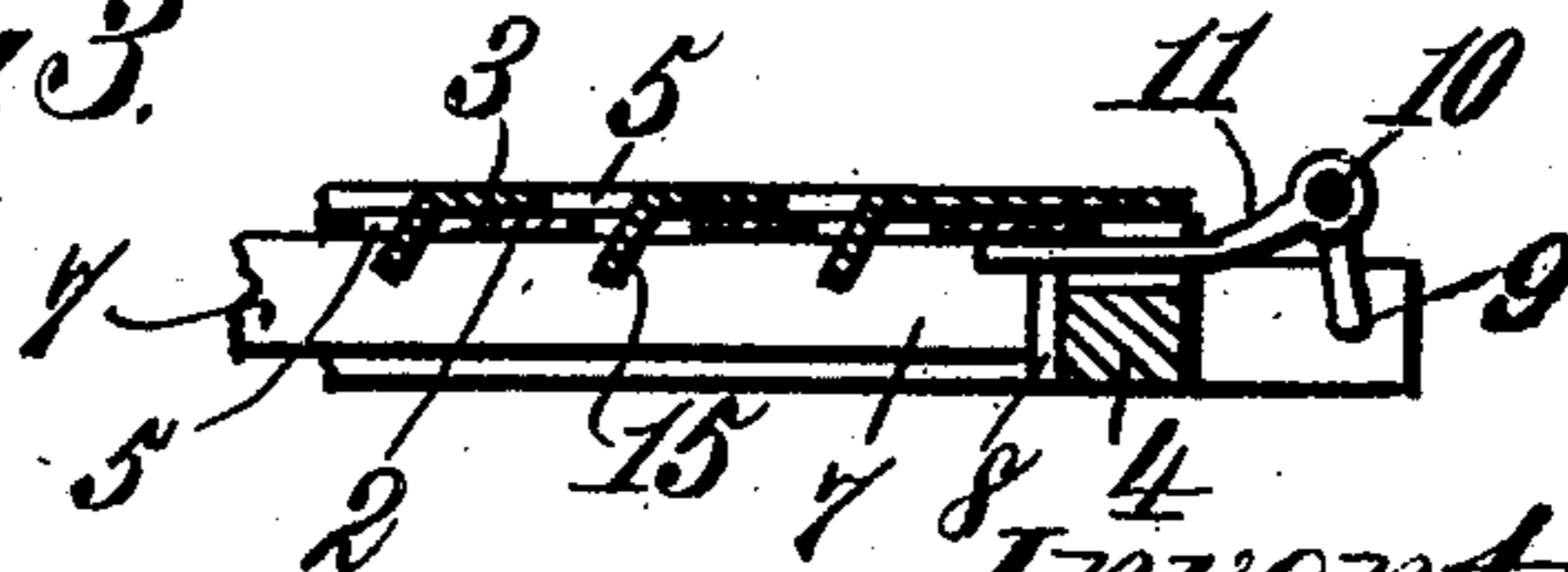


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK W. HASCH, OF CECIL, OHIO.

SIEVE.

SPECIFICATION forming part of Letters Patent No 754,865, dated March 15, 1904.

Application filed July 11, 1903. Serial No. 165,162. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. HASCH, a citizen of the United States, residing at Cecil, in the county of Paulding and State of Ohio, have invented new and useful Improvements in Sieves, of which the following is a specification.

This invention relates to sieves especially adapted for employment in connection with threshing-machines; and the object of the invention is to provide a simple yet strong article of this character the mesh of which may be regulated when the threshing-machine in which it is mounted is in operation.

The device possesses other objects and advantages which will be set forth at length in the following description, while the novelty of the invention will be embraced by the claims succeeding such description.

It will be understood that I do not limit the invention to any particular use, although it has been found of decided utility in connection with threshing-machines. It may be employed with equal facility in many other connections which need not be specified.

The invention in one simple adaptation thereof is represented in detail in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of the sieve. Fig. 2 is a side elevation of the same with a portion removed. Fig. 3 is a sectional detail hereinafter more particularly described. Fig. 4 is a vertical sectional view of the sieve, the section being taken at one side of one of the strips 7 thereof.

Like characters refer to like parts throughout the several views.

The sieve or screen involves in its organization superposed plates 2 and 3, respectively, the upper plate being suitably fastened to a frame 4, made generally from some hard wood. The plates may be made from any desirable material—for example, galvanized iron or zinc. The plates or sheets 2 and 3 have oblong holes, (each denoted by 5,) which may be thrown into or out of registration by the adjustment of the lower plate or sheet. These oblong holes are illustrated as rectangular, although, of course, this is not essential. It is

important that the two sheets or plates should not spring apart in use, as in case they did the material being separated might find a lodgment therebetween. I provide a highly-effective means for preventing such spreading of the plates, consisting of rivets 6. These rivets are generally made from copper, although this is not necessary, and they pass through perforations in the upper and relatively stationary sheet or plate and are headed at their upper ends to fit solidly against the upper plate or sheet. The lower portions of the rivets extend through longitudinal slots in the lower or adjustable plate 2 and terminate in flattened feet or bases fitting against the under face of said lower plate or sheet. Not only do the rivets connected with the plates in the manner described prevent absolutely the springing apart of the same, but also avoid the presence of openings in the upper plate in which weeds, &c., can find a lodgment.

The under plate or sheet 2, as will be evident, is supported for sliding movement below the companion plate 3, it being sustained along its opposite edges by the side bars of the frame 4, and means hereinafter described are provided for shifting said under plate with respect to the other one in order to adjust the mesh of the sieve or the effective area of the holes or openings therein. Naturally a sieve of such a large area as that in use in a threshing-machine sustains considerable of a load, and I provide means to prevent the sieve from sagging, as will now appear.

Below the lower plate 2 are the longitudinal strips 7, disposed in parallelism and in practice arranged at comparatively close intervals. These strips are supported at their opposite ends by the cross-pieces of the frame 4. To furnish such a support, the cross-pieces are slotted to receive the ends of the strips 7, the latter adjacent to said ends fitting in slots in the plates 8, fastened suitably to the inner faces of said cross-pieces. These longitudinal strips 7, which are made of some heavy material, prevent sagging of the sieve and have recesses 7' in their upper edges to receive the bases of the rivets 6.

A rock-shaft 9 is supported by suitable bear-

ings upon one of the cross-pieces of the frame 4, and it has between its ends the crank portion 10, embraced by a sleeve at the outer end of the strap 11, said strap having its inner end 5 secured in some suitable way to the under side of the lower or adjustable plate. The cross-bar of the frame which supports the rock-shaft is apertured or notched in its upper edge to receive said strap, the side walls of the ap- 10 erture or notch preventing lateral motion of the strap. The connection between the rock-shaft and the lower screen-plate is a compact one. Besides this the frame protects the connecting-strap 11 from injury, which is an im- 15 portant consideration. By rocking the shaft 9 through the agency of suitable means, one simple form of which will now be set forth, the lower plate 2 can be operated to adjust the mesh of the screen. The shaft 9, in practice, 20 projects through the casing in which the screen is housed and carries at its outer end the hand-lever 12, so that the latter is readily accessible and can be manipulated while the machine in which the screen is installed is in action. This 25 hand-lever is suitably fastened to the shaft and carries a spring-actuated detent 13, the working portion of which is adapted to engage the spaces between the teeth of a sector 14, carried by the said casing. Normally the spring- 30 actuated detent holds the hand-lever in adjusted position; but when said detent is disengaged from the sector by the operator the hand-lever can be actuated to effect the adjustment of the lower plate.

35 The upper plate has pendent and inclined lips or offsets 15, which are provided to direct the air-blast through the openings in the screen. These lips correspond in number with the openings and are cut from the stock 40 of the upper one. Where these inclined lips are formed upon a lower and adjustable plate, a disadvantage ensues, as when said lower plate is adjusted the lips, with the upper plate, form pockets in which the material being 45 screened or separated can lodge. I provide lips upon the upper and stationary plate, so that no matter to what extent the lower one is moved no pockets can be formed between the lips and the plates.

50 The improved screen is simple in construction, thoroughly strong, and there is no possibility of the same sagging nor the plates thereof spreading apart. No pockets are formed by the inclined lips hereinbefore men- 55 tioned in connection with either of the plates

when the adjustable one is shifted. The adjustment of the lower plate can be effected outside of the machine, notwithstanding the weight of the grain on the same and while the machine is in motion. 60

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

1. A sieve consisting of a frame, a series of superposed plates carried thereby having 65 openings, the lower plate being adjustable with respect to the upper one to bring said openings into or out of registration, flat longitudinal strips set edgewise below the lower plate in parallelism with each other, with their 70 upper edges contiguous to the lower plate, and notched plates supported by the frame, and the notches of which receive the ends of said strips.

2. A sieve consisting of superposed plates 75 having openings, one of the plates being adjustable with respect to the other to bring said openings into or out of registration, a shaft having a crank portion, a strap provided with a sleeve to embrace said crank portion, said 80 strap being fastened to the adjustable plate, the frame of the sieve being apertured to receive said strap, and manually - controlled means for operating said shaft.

3. A sieve consisting of a frame, superposed 85 plates carried thereby having openings, the lower plate being adjustable with respect to the upper one to bring the openings in the plates into or out of registration, and the up- 90 per plate having depending angularly-disposed lips projecting downward through the slots in the lower plate, longitudinal flat strips set edgewise below the lower plate in parallelism with each other with their upper ends con- 95 tiguous to the lower plate, notched plates fastened to the frame, the notches of which receive the ends of said strips, a shaft having a crank portion, a strap provided with a sleeve to embrace said crank portion, said strap be- 100 ing fastened to the adjustable plate, a hand-lever secured to said shaft, a detent carried by the hand-lever, and a toothed sector in position to be engaged by the detent.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 105 nesses.

FREDERICK W. HASCH.

Witnesses:

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F. L. HAY.