

D. LIPPY & Z. S. STOCKING.

Grain and Clover Thrashers.

No. 156,641.

Patented Nov. 10, 1874.

FIG. 1.

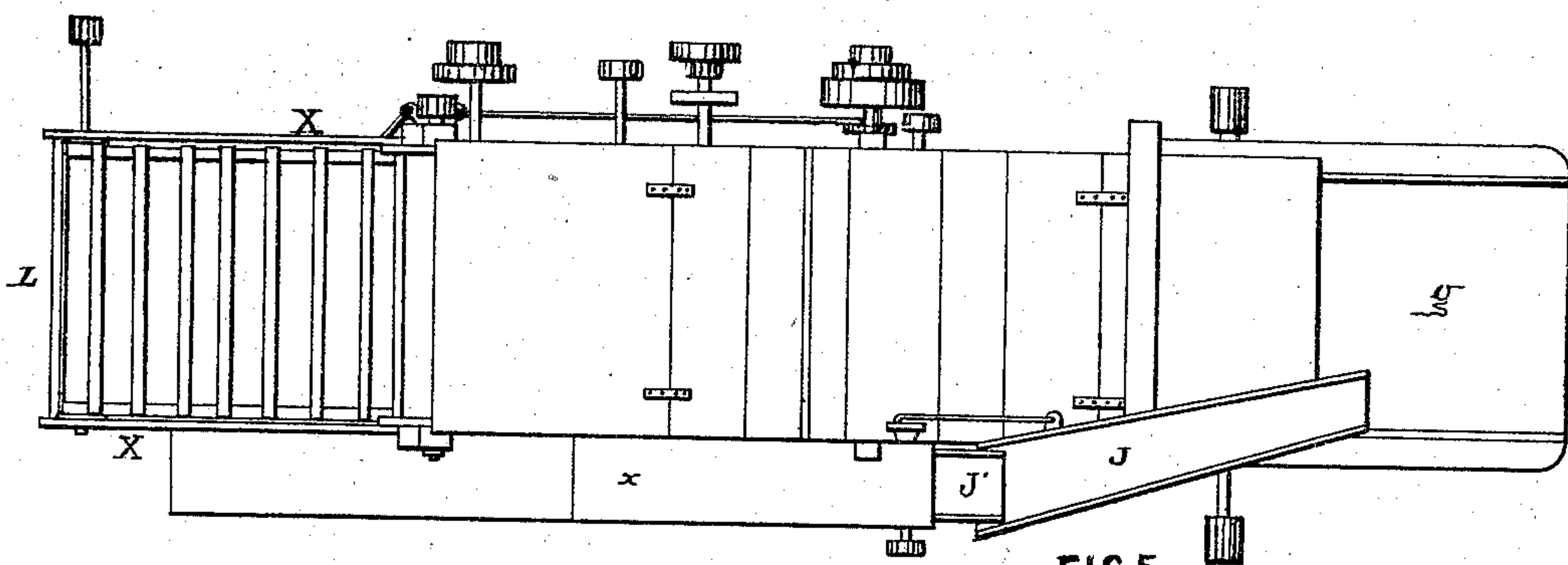


FIG. 5.

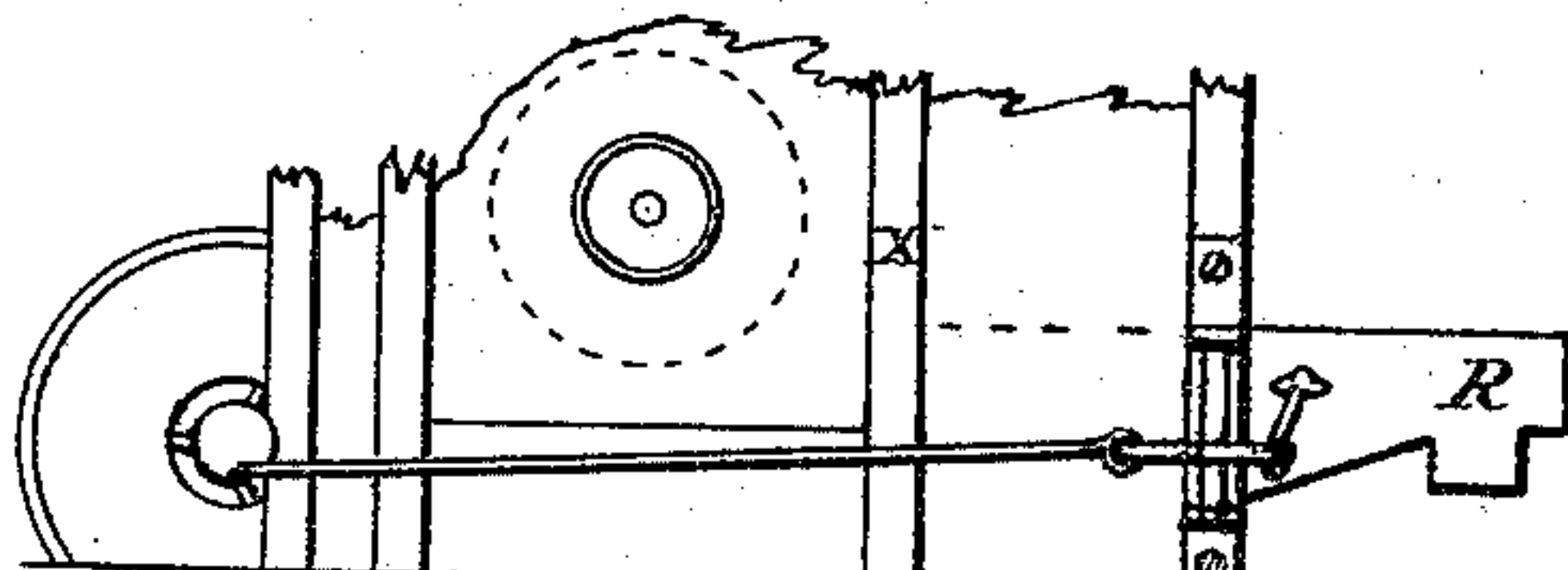
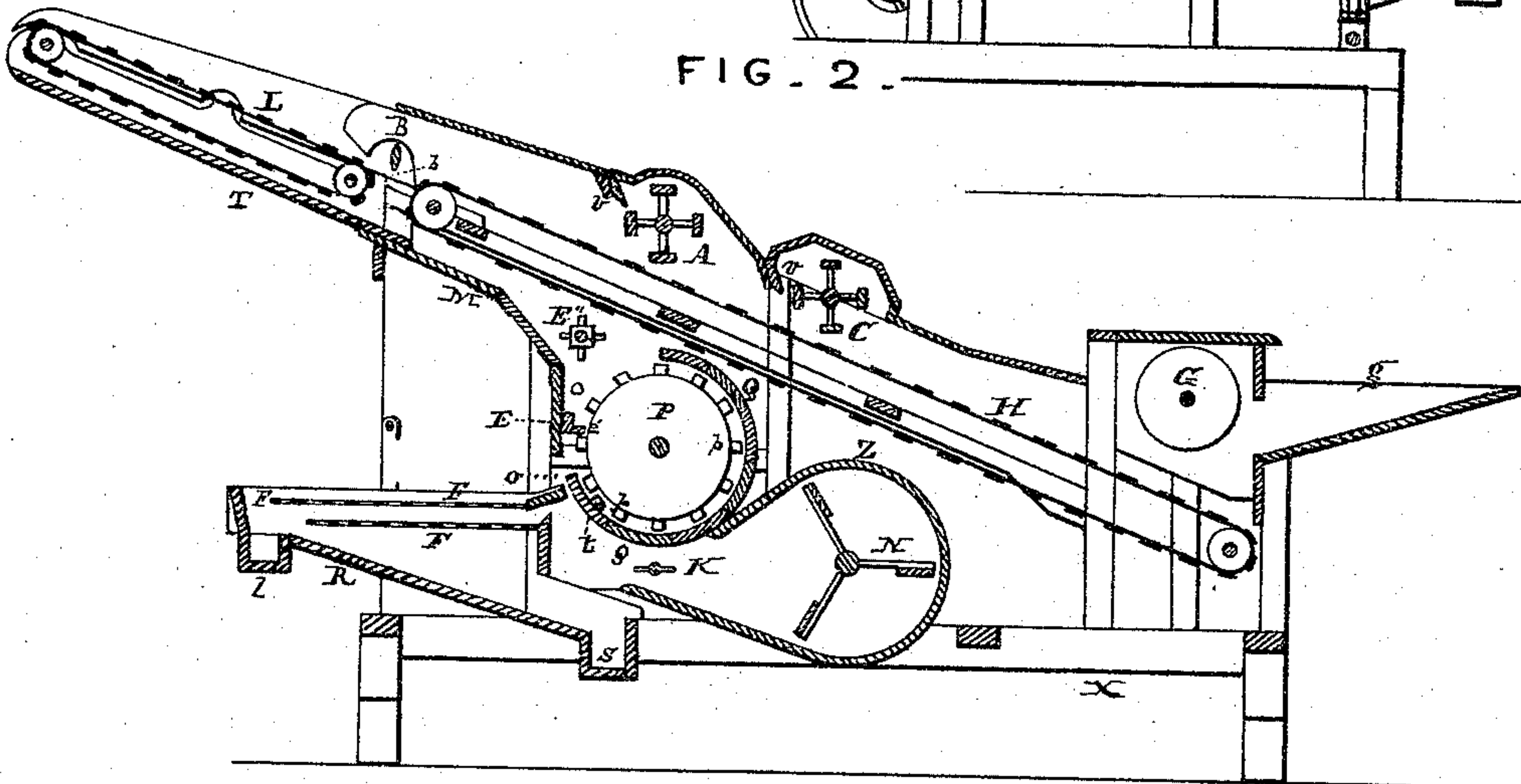


FIG. 2.



WITNESSES.

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INVENTORS:

David Lippy,  
Zalmon S. Stocking,

BY Cox and Cox ATTY'S

2 Sheets--Sheet 2.

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FIG. 3.

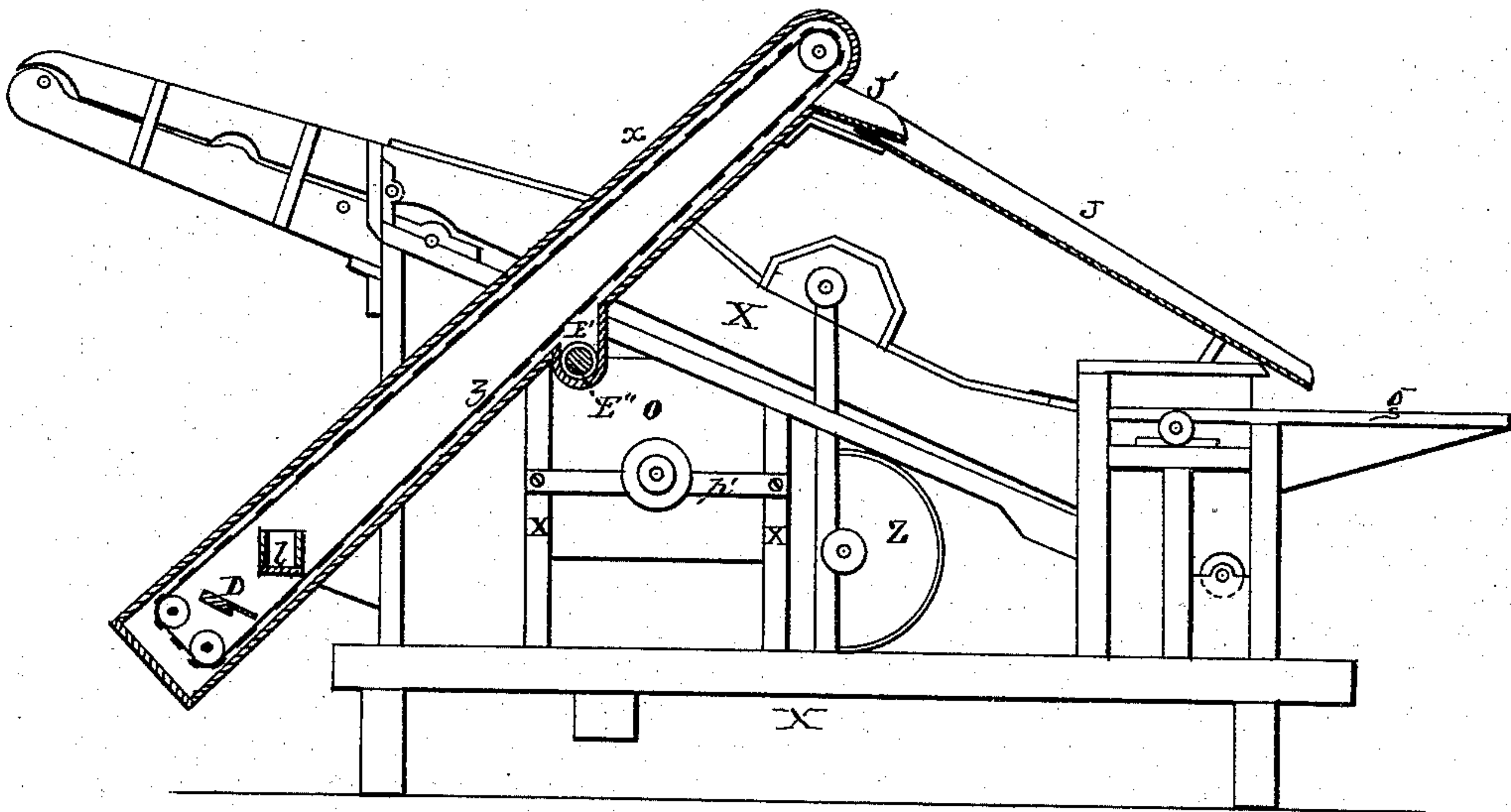
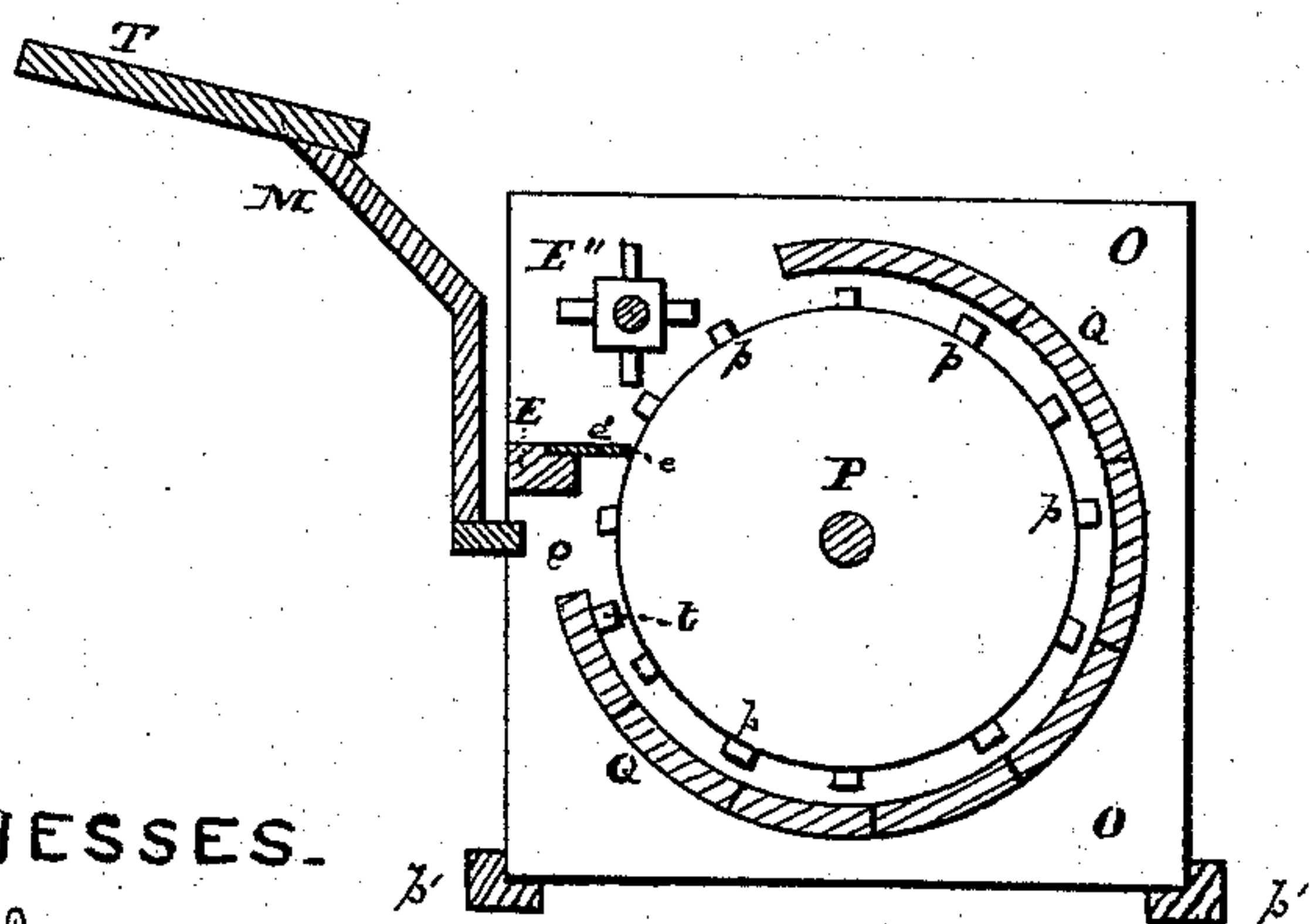


FIG. 4.



WITNESSES.

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*Dennis Linney*

INVENTORS:

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# UNITED STATES PATENT OFFICE.

DAVID LIPPY, OF MANSFIELD, AND ZALMON S. STOCKING, OF CLEVELAND,  
OHIO.

## IMPROVEMENT IN GRAIN AND CLOVER THRASHERS.

Specification forming part of Letters Patent No. **156,641**, dated November 10, 1874; application filed  
July 6, 1874.

*To all whom it may concern:*

Be it known that we, DAVID LIPPY, of Mansfield, Ohio, and ZALMON S. STOCKING, of Cleveland, Ohio, have invented a new and useful Improvement in Machine for Thrashing Grain and Hulling and Cleaning Clover, of which the following is a specification:

The invention relates to an improvement in machines for thrashing grain and hulling and cleaning clover; and consists in the novel construction and arrangements of mechanism hereinafter described, by which the clover-seed is removed from the clover-heads and effectually cleaned and separated, the devices being so arranged that by throwing off the belt which actuates those designed for treating the clover the machine may be employed for thrashing grain. The object of the invention is to provide an efficient means of hulling, separating, and cleaning clover-seed and its analogues, and also to provide a machine for thrashing grain, the two being associated in a single machine which is capable, with a slight change, of use for either purpose.

In the accompanying drawings, Figure 1 is a plan or top view of a machine with our improvements. Fig. 2 is a longitudinal vertical section of the same, the elevator *x* removed. Fig. 3 is a side elevation with the elevator *x* attached, the latter in section. Fig. 4 is a detached view of the clover-beater and appurtenances. Fig. 5 is a detached view of the devices for vibrating the shoe R.

The machine consists of a frame, X, to which a feed-table, *g*, is secured, and from which the clover is moved by the feed-roller G to the endless apron H, by which it is carried under the beaters C and A, both of ordinary construction. From the upper end of the apron H the clover-stalks pass over upon the endless apron L, which operates as a straw-carrier, and conveys the stalks over the end of the frame. A steel cutter, *v*, is placed in an inclined position adjacent the separator A, and another in proper proximity to the beater C, by which the stalks or straw that may wrap about and clog the devices are severed and reduced to a condition to be transported with facility. At the point where the clover passes from the apron H to the apron L the heads of

the clover are separated from the stalks by the beater B, which is of oval form, and has a rapid rotary movement in the same direction as the endless apron. The heads of clover thus separated descend through the space *b* upon the inclined bottom board T, from which they pass onto the conductor M, hinged to the board T, and leading to the clover-hulling cylinder P. From the conductor M the clover-heads are dropped upon the deflecting-bar E, which is covered with a strip of leather, *e*, serrated in such a manner that the teeth *p* on the hulling-cylinder P may pass between the teeth *e* of the leather strip, thereby preventing the descent of the clover-heads below the leather, so that they pass over the hulling-cylinder P, which is nearly inclosed in a concave, consisting of the heads O and staves Q, the heads being properly attached to secure the staves in place. The huller P consists of a toothed cylinder, which rests in bearings on the removable slides *p'*, the teeth *p* of the cylinder passing between the teeth *t* on one of the staves Q. Thus the cylinder and its appurtenances may be removed from or inserted into the frame X at pleasure by simply slipping the belt that actuates it and removing one of the slides *p'*. After passing through the huller the clover-heads pass out through the exit *o*, through which they are blown by the operation of the fan N, over and upon the upper sieve F, through which the seed drops onto the lower sieve F; thence upon the inclined shoe R, descending thereon to the seed-box S, the shoe R being vibrated laterally by an eccentric connection with one of the revolving shafts (see Fig. 5) to speed the descent of the seed. A valve, K, at the mouth of the fan-chamber Z, serves to regulate the blast from the fan. The tailings of the clover-heads pass over the end of the upper sieve F into the chute *l*, and are kept in motion by the movement of the shoe R, which causes them to descend upon the endless apron *z* of the elevator *x*, by which they are carried upward and discharged into the inclined spout J', whence they descend through the chute J to the feed-table Q. The accumulation of stray chaff in the lower part of the apron *z* is prevented by the operation of the brush D, the edge of which



lightly impinges upon the apron, and also serves to prevent the tailings falling back. The larger portion of the tailings leave the elevator  $\alpha$  near the board M, and drop into a gutter, E', having in it a revolving screw, E'', with a very wide thread, which conducts the tailings onto the bar E to be rethrashed. The light chaff is blown from the machine off of the upper sieve F.

When it is desired to operate the device as a grain-thresher the belt which actuates the cylinder P is thrown off and the boards M elevated to occupy a vertical position, the effect of which is to permit the grain to fall directly from the board T upon the upper sieve F, and thence proceed onward, as the clover-seed does after it has reached the said sieve.

The boards M may, as in the present instance, be hinged to the board T, so as to be folded or extended, as desired, and the spout J' may be shaken by an eccentric attachment with any suitable shaft.

The machine is driven by means of belts,

the power being communicated preferably at the shaft of the beater C.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the endless apron H, beaters C and A, and cutters  $v$ , substantially as shown and described.

2. The combination of the endless elevator-apron  $z$  with the brush D, substantially as set forth.

3. The fixed inclined cutters  $v$ , for the purpose of stripping the revolving beaters A and C, substantially as set forth.

In testimony that we claim the foregoing improvement in thrashing-machines, as above described, we have hereunto set our hands and seals this 30th day of June, 1874.

DAVID LIPPY. [L. S.]  
ZALMON S. STOCKING. [L. S.]

Witnesses:

CYRUS SHUMWAY, Sr.,  
THOS. E. BURROWS.