

(No Model.)

J. RUMELY.
THRASHING MACHINE.

No. 277,512.

Patented May 15, 1883.

Fig 1 -

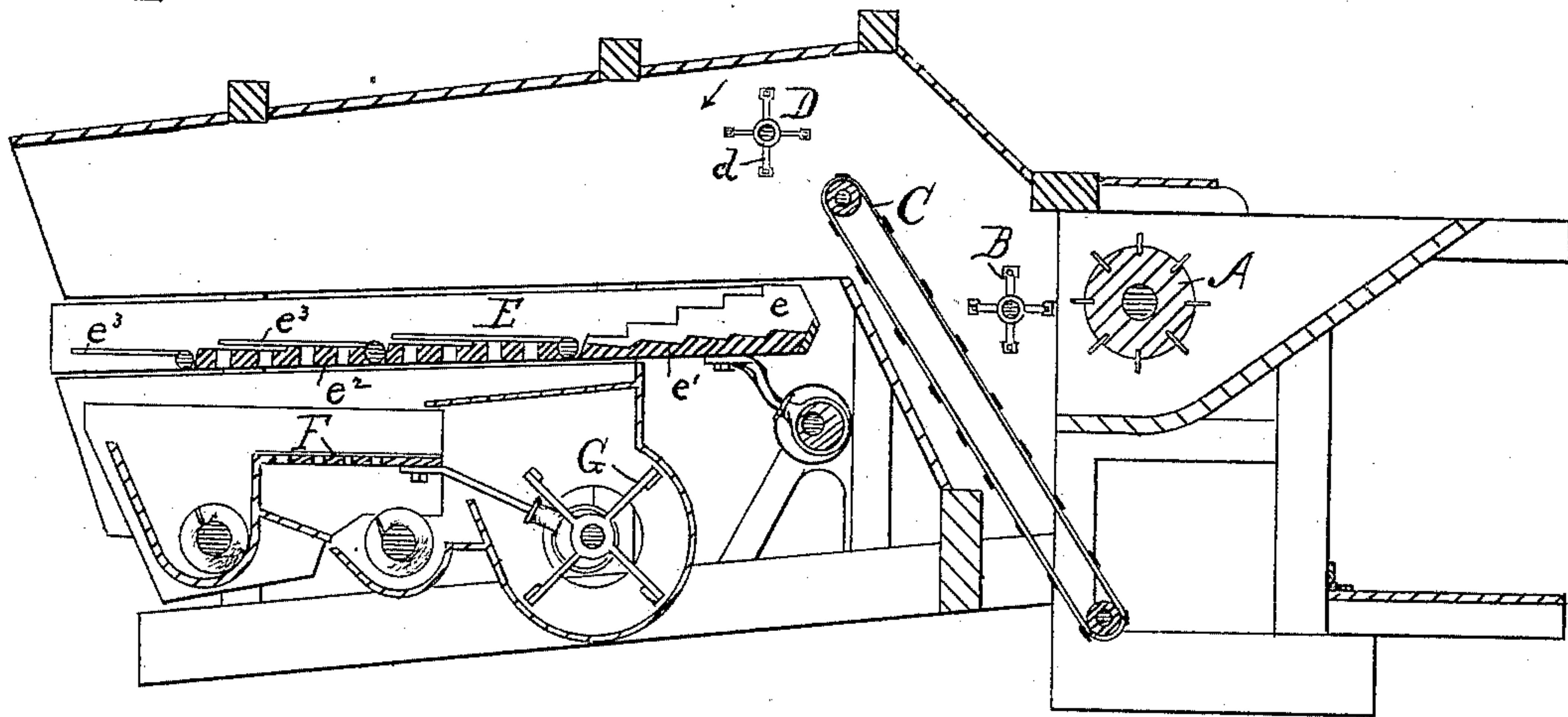


Fig 2 -

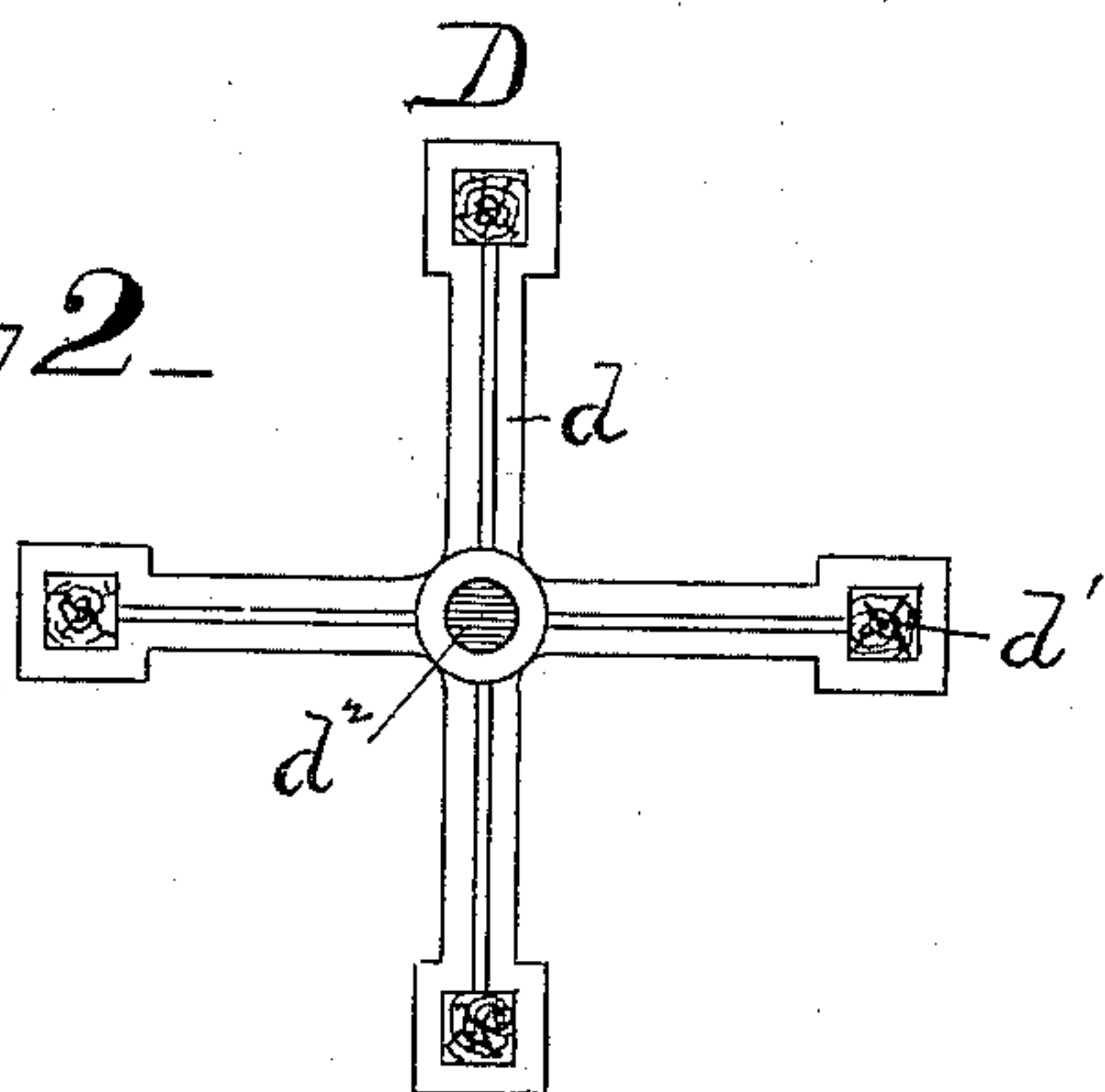
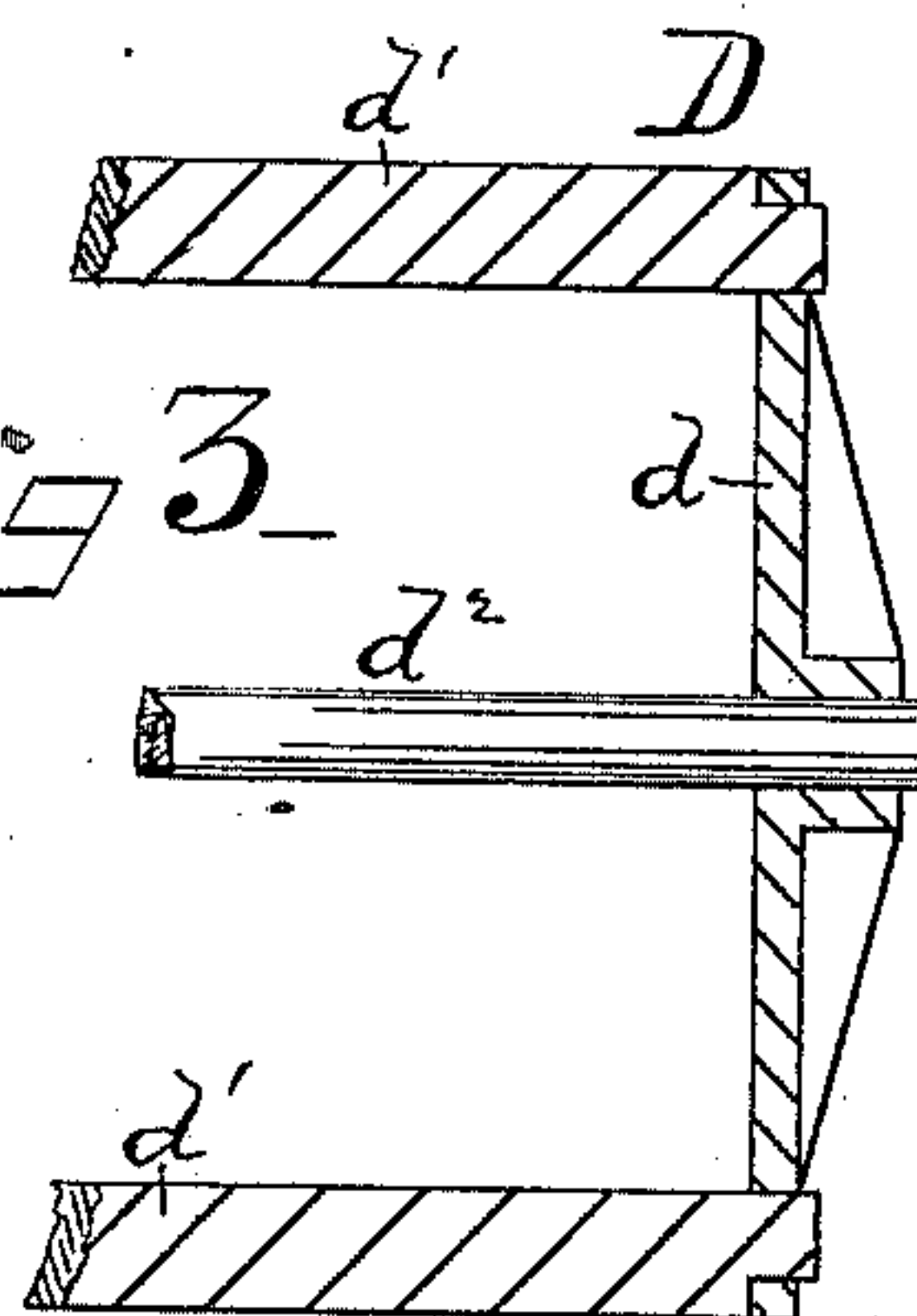


Fig 3 -



WITNESSES -
J. Everett Brown
A. Munday,

INVENTOR -
John Rumely
By *Munday, Evans & Adcock*
his Attys

UNITED STATES PATENT OFFICE.

JOHN RUMELY, OF LA PORTE, INDIANA, ASSIGNOR TO MEINRAD RUMELY,
OF SAME PLACE.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 277,512, dated May 15, 1883.

Application filed November 22, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN RUMELY, of La Porte, La Porte county, State of Indiana, have invented certain new and useful Improvements in Thrashing-Machines, of which the following is a specification.

This invention relates to the separating devices in that class of thrashing-machines known as "vibrators." In this class of thrashing-machines the grain is separated from the straw by what is commonly known as a "vibrating separator," upon which the straw and grain are delivered as they come from the cylinder by some intermediate carrying mechanism. As this vibrating separator necessarily occupies a nearly-horizontal position in the machine, and as the straw and grain are delivered to it together, considerable difficulty has heretofore been experienced from portions of the grain being carried or blown through the machine with the straw, owing in a great measure to the vibrating separator being located directly in the air-current produced by the cylinder.

The invention is designed to effect a more thorough separation of the grain from the straw than has been heretofore accomplished; and it consists in the novel arrangement and construction of the devices, as hereinafter fully set forth—that is to say, the invention consists in an impervious inclined endless-apron carrier located between the cylinder and the vibrating separator, and extended above the latter, so as to protect it from the blast of the cylinder and provide a protected air-space behind the carrier, through which the grain and straw may fall onto the vibrating separator when delivered from the carrier, and thus allow the grain by its greater gravity to become partially separated from the straw and chaff before reaching the vibrating separator. I also provide an open beater at the top of the carrier, adapted to carry the straw over it and to allow the grain to fall through it upon the nearest part of the vibrating separator, while the straw of course is carried somewhat farther. I arrange the vibrating separator about twenty inches below the top of the inclined carrier, so as to allow about that space for the gravitation separation of the grain and straw

before they reach the vibrating separator; but of course it will be understood that this distance may be varied within reasonable limits without departing from the essential feature of my invention.

The accompanying drawings show at Figure 1 a longitudinal vertical section of a thrasher having my present improvements embodied in its construction, and at Figs. 2 and 3 enlarged details of the upper beater.

The same letters of reference indicate the same or corresponding parts wherever they appear in the drawings.

In said drawings, A represents the cylinder; B, the beater in the rear thereof; C, the endless apron; D, the upper beater at the head of the apron; E, the vibrating separator, having notched vertical partitions *e*, a partially-close and partially-perforated floor, *e'* *e*², and two or more series of vibrating rods, *e*³; F, the vibrating riddle, and G the fan.

As indicated in the drawings, the endless apron extends some distance above the plane in which the incoming material issues from the cylinder and its accompanying beater, so that the material is not blown directly through the machine by the draft created by the cylinder.

The upper beater, D, is constructed of radial metal arms *d*, preferably four in number, at each end, and slats *d'*, extending from the arms at one end to the corresponding arms at the other end, all being mounted upon a shaft, *d*², which is actuated in any suitable manner to revolve in the direction indicated in the drawings, so the current of the feed will pass over it as an overshot wheel. By this construction of the beater—viz., the open-frame feature thereof—great efficiency in separating is attained, caused in part, at least, as I believe, by the opportunity which is given the grain to fall through the beater instead of riding over it, as it would be compelled to do if the beater were constructed solid or close in the usual manner. From this beater the straw or grain drops or falls upon the separator. The latter is arranged at a considerable distance below the beater—some twenty inches or over—in order to give time for further separation, my theory being that the

grain, which is proportionately more heavy than the straw, will fall more quickly than the latter if an opportunity like that allowed by this arrangement is given. The space
5 wherein this gravitating separation occurs is protected from air-currents, as will be noticed, that created by the thrashing-cylinder passing over it, and that from the fan being excluded by the close portion of the floor of the
10 vibrating separator. These features I have found by actual use very beneficial in the operation of the machine, tending as they do to prevent loss of grain through imperfect separation.

15 I claim—
In a thrashing-machine, the combination of

the cylinder and the vibrating separator, with an inclined endless-apron carrier located between said cylinder and separator, and extended above the latter, substantially as described, and an open beater at the top of said carrier adapted to carry the straw over it and permit grain to fall through it, whereby the grain and straw are partially separated before they reach the vibrating separator as they fall
25 through the protected space behind said carrier, substantially as specified.

JOHN RUMELY.

Witnesses:

ADOLPH MAYER,
JOSEPH J. RUMELY.