

J. B. PADON.

Re-Winnowing Attachment for Thrashers.

No. 136,175.

Patented Feb. 25, 1873.

Fig. 1.

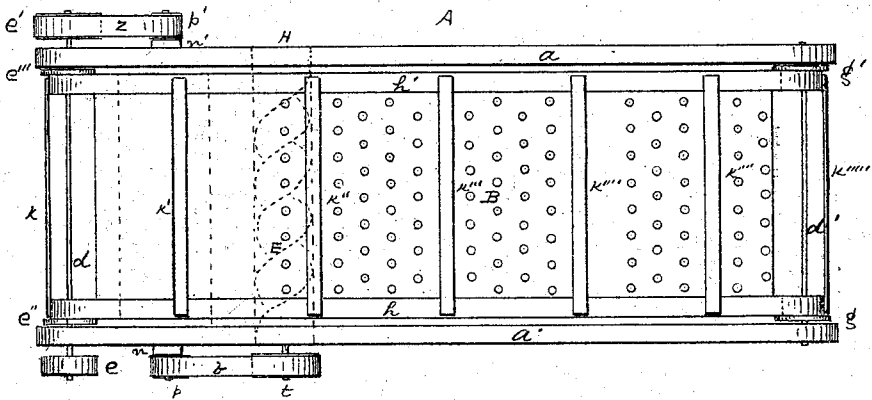
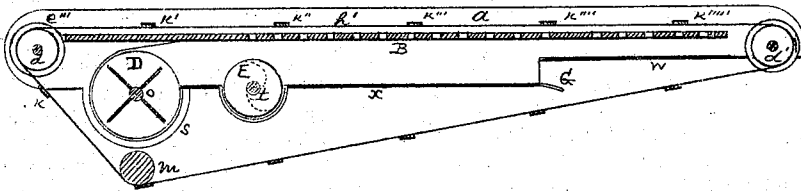


Fig. 2.



WITNESSES

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IMPROVEMENT IN RE-WINNOWING ATTACHMENTS FOR THRASHERS.

Specification forming part of Letters Patent No. 136,175, dated February 25, 1873.

To all whom it may concern:

Be it known that I, JOHN B. PADON, of Troy, Madison county, State of Illinois, have invented a new and useful Attachment for Grain-Separators and Thrashing-Machines, of which the following is a full, clear, and exact description, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 represents a top plan of same. Fig. 2 represents a longitudinal sectional view of same.

Similar letters indicate like parts.

In the ordinary grain-separating and thrashing machines no inconsiderable quantity of grain passes off in the straw and in the chaff, and is thereby lost, as the quantity will not repay the labor of passing the straw again through the machine. To save this loss, and yet not increase the labor, is the object I have in view in the attachment to such machines hereinafter to be described.

It consists of a frame, A, formed of two side pieces, *a a'*, Fig. 1, *a*, Fig. 2, connected by a sufficient number of cross-pieces, and having between them a perforated bed, B.

This bed is preferably, in order to save weight, made of wood covered with sheet metal on its upper surface, the metal and wood being perforated, as seen, the perforations being made sufficiently large to allow the grain to pass readily through them, and being countersunk on the upper surface so as to present a somewhat roughened bed to the passing straw, and thereby more surely catching the grain in the straw. At either end of the frame is a shaft, *d d'*, the former having upon it four pulleys or rollers, *e e' e'' e'''*, the two former being outside of the side pieces, while the latter are inside, while on *d'* are two rollers, *g g'*, both inside of the side pieces. On the rollers *e'' e'''* and *g g'* are two endless belts, *h h'*, connected by slats *k k' k''*, &c., these belts also passing under the roller *m*, Fig. 2, beneath the frame, and having its bearings in the arms *n n'*, Fig. 1, attached to the side pieces. These arms *n n'* also afford bearings to the shaft *o*, Fig. 2, of the fan D, the shaft having on either end a pulley, *p p'*, Fig. 1, and the fan being inclosed by a covering, *s*, as seen in Fig. 2. Beneath the bed B, and having its bearings in the side pieces, is the shaft *t* of the worm E, Figs. 1, 2, inclosed as seen in Fig. 2. The side pieces *a a'* are made with an offset, as seen in Fig. 2, so that the plate *w*, which connects the lower

edge of the end of the frame, is above the plate *x*, which connects the lower edge of the remainder of the frame, there being a space between the bed B and the plate *w*, and a considerably broader or deeper space between such bed and the plate *x*.

This frame is attached in any suitable manner to the thrashing-machine directly beneath the chute or other device, through which the straw is discharged after being thrashed, in such manner that this straw shall fall upon the bars of the endless belts, the apparatus being set at, say, an angle of forty-five degrees. The pulley *e* is connected by a belt with the power driving the thrasher, which thus drives the belts, and, by means of a belt, *z*, connecting the pulleys *e'* and the pulley *p'* on the end of the fan-shaft, sets the fan in motion, a belt, *b*, on the other end of the fan-shaft communicating motion to the pulley of the worm-shaft *t*. The straw then falling upon the bars *k k'*, &c., is carried along and thrown from the upper end of the frame into the receptacle placed beneath it to receive it; but in its course over the bed B it drops the grain not already thrashed or separated from it through the openings in the bed onto the plates *w* and *x*, whence it falls into the well of the worm E, which by its motion expels it at the side of the frame at H, Fig. 1. The fan D, being in rapid motion, blows the chaff and other impurities through the opening G between the plates *x* and *w*. The continual dropping of the straw on the bars *k k'*, &c., gives them a vibratory movement, thus aiding in freeing the grain from the straw.

As already stated, this apparatus is attached to the thrasher or separator in any suitable manner, and, if desired, it may be rendered adjustable to any desired angle by a very obvious and simple arrangement of pulleys. In general, however, I find that at an angle of forty-five degrees the apparatus gives the best results.

What I claim as my invention, and desire to secure by Letters Patent, is—

The frame A, perforated bed B, plates *x* and *w*, belts *h h'* having bars *k k'*, &c., fan D, worm E, and operating-pulleys, the several parts being combined, constructed, and arranged for joint operation substantially as shown and specified.

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