(No Model.) 2 Sheets—Sheet 1.

J. N. WILSON.

THRASHING MACHINE.

No. 482,709. Patented Sept. 13, 1892.

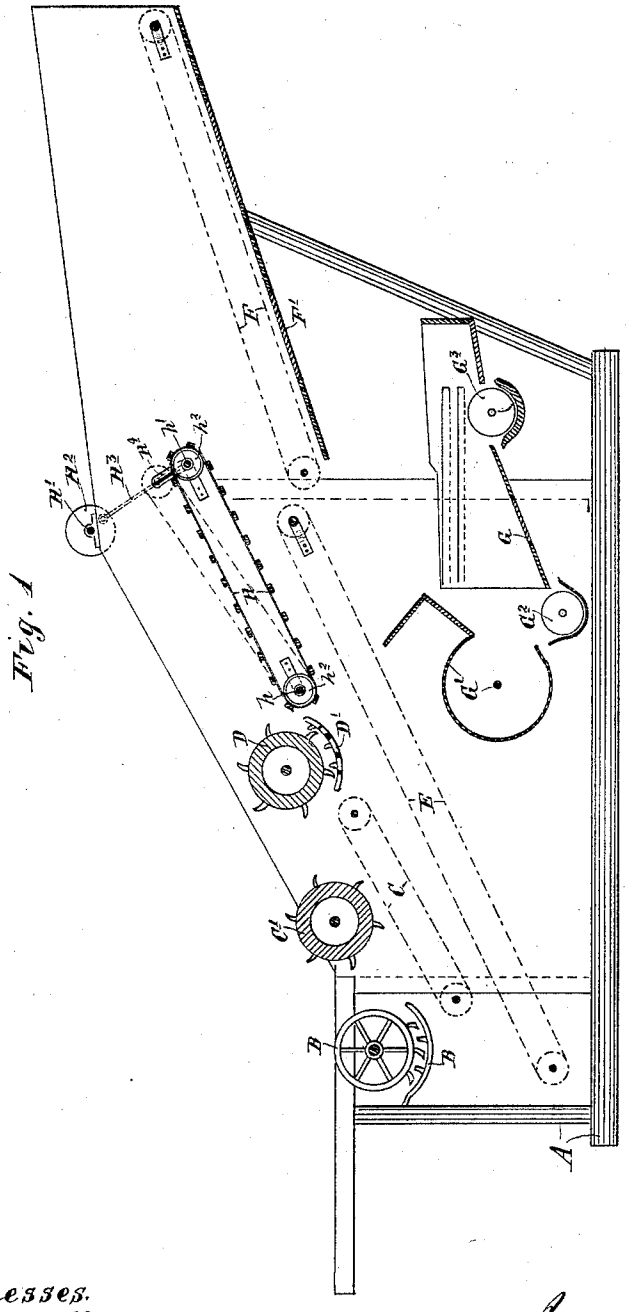

Fig. 1.

Witnesses.
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Inventor.
James N. Wilson
By his attorney.
Jas. F. Williamson,

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.)

2 Sheets—Sheet 2.

J. N. WILSON.

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Fig. 3.

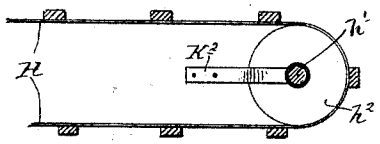


Fig. 2.

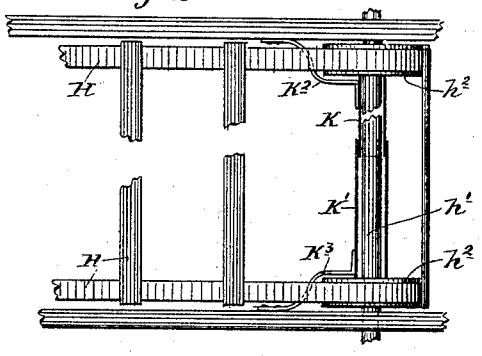


Fig. 4.

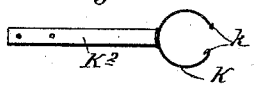


Fig. 5.

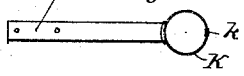


Fig. 7.

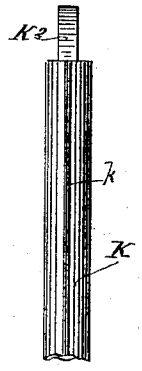
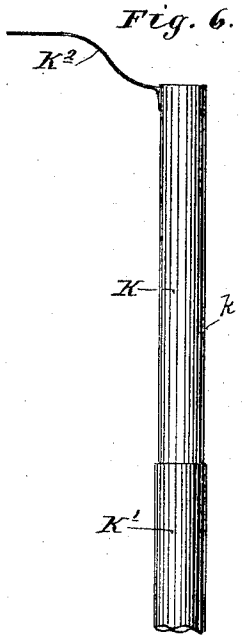


Fig. 6.



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Emma F. Elmore
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Inventor.
James N. Wilson
By his Attorney.
Jas. F. Williamson

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES N. WILSON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO THOMAS A. WHITWORTH, OF SAME PLACE.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,709, dated September 13, 1892.

Application filed January 22, 1892. Serial No. 418,897. (No model.)

To all whom it may concern:

Be it known that I, JAMES N. WILSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Thrashing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to thrashing-machines, and has for its object to provide an improved construction for the purpose.

To this end the invention consists of certain novel devices and combinations of devices, which will be hereinafter fully described, and which will be defined in the claims.

In the accompanying drawings, like letters referring to like parts throughout, Figure 1 is a longitudinal vertical section through the entire machine, some parts being removed and other parts shown in diagram only. Fig. 2 and 3 are respectively views in plan and in section illustrating the application of my shafting-shield to the wheel-shafts for operating the endless carriers, the shield in Fig. 2 being sectioned. Figs. 4 and 5 are end views of one of the sections of the shafting-shield, illustrating the construction, adapting the same to be sprung over the shaft. Fig. 6 is a plan view of the shafting-shield detached, a part of one section being broken away; and Fig. 7 is a back view of a part of the same for illustrating the joint.

A is the framework of the separator; B B′, the thrashing-cylinder and concave; C, in dotted lines, a separating endless carrier receiving from the thrashing-cylinder and concave, and C′ a toothed beater co-operating therewith.

D D′ are a separating-cylinder and concave receiving from the separating-carrier C.

E in dotted lines represents the grain belt or apron; F, the straw-carrier; F′, the grain-deck underlying the same; G, the riddle-shoe; G′, the fan-case; G^2, the clean-grain conveyer, and G^3 the tailings-conveyer.

All the parts so far described may be of the ordinary well-known construction.

H is a separating-carrier, receiving from the separating-cylinder D and concave D′, and is mounted with freedom for a swinging or oscillating motion in the vertical plane at its delivery end. The said carrier swings on its lower carrier-wheel shaft *h* as a pivot, and the oscillating motion is imparted to its delivery end by means of a crank-shaft H′, mounted on the top of the frame. The said shaft H′ has crank-disks H^3 at its opposite ends, which are connected by rods H^3 to the opposite ends of the upper carrier-wheel shaft *h′*. The ends of the said carrier-wheel shaft *h′* are extended outward through slots H^4 in the side board of the separator-frame. The oscillating motion thus imparted to the said separating-carrier H is very effective in its separating action on the stock. Inasmuch as the whole frame of the said separating-carrier H swings in the vertical plane by a rapid motion it will lift up the straw as the frame rises and drop away from the same on its downward movement, thus allowing the grain to drop out from the straw.

Referring now to Figs. 2 to 7, inclusive, which illustrate my shafting-shield, I have shown the same as applied to the upper carrier-wheel shaft, on which is mounted the separating-carrier H. K K′ represent a pair of telescoping parts composed of sheet metal, which incase the shaft *h′*, supporting the carrier-wheels h^2. The two members of this divided shield are also split or divided longitudinally and provided with interlocking flanges *k* on their meeting edges, which construction adapts the same to be sprung over the carrier-wheel shaft and to be secured in position on the shaft with a tight joint by the engagement of the said interlocking flanges *k*. The open position of either section before it is placed on the shaft is shown in Fig. 4. The appearance after the flanges are interlocked is shown in Figs. 5 and 7. The section K is provided with a bracket-like arm K^2, and the section K′ has a similar arm K^3, by which arms when secured to the frame the said parts of the shield are supported and held in a fixed position on the shaft, as shown in Fig. 2.

The fact that the shield is made in two telescoping sections and that each section is divided longitudinally adapts the shield for ready application to different-sized machines

which have been already set up. If put on when the machine is being built, the shield might be a single undivided shell and be slipped over the shaft before the last carrier-wheel is applied. However they may be constructed or applied, whether in single pieces or telescoping sections, the outer ends are fitted to work with a tight joint against the inner faces of the carrier-shaft wheel. To insure this result of a tight joint, the wheel may, if so desired, be provided with grooves or flanges, in which or under which the ends of the shield may work. It will be found sufficient, however, for all practical purposes to have the ends of the shield simply work, as stated, against the faces of the carrier-wheels.

The shield may be of tubular shape, as shown, or of any other suitable form for which there is sufficient clearance between the upper and lower surfaces of the carrier.

In my machine I apply a shield of this kind to all the carrier-shaftings, and I find the same to be very effective in avoiding wrapping. When a shield of this sort is applied it is impossible for the straw or fiber to wrap around the shaft of the carrier-wheels. Clogging or interference with the proper action of the machine from this cause is by my device entirely prevented.

This improvement is of special value toward the successful operation of thrashing-machines when thrashing flax and when thrashing grain which is damp.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a thrashing-machine, the combination, with a carrier-frame pivoted at its receiving end, of an endless separating-carrier over which the stock is passed mounted on said frame and a constantly-running shaft having an eccentric or crank connection with the delivery end of said carrier-frame for imparting to the same an oscillating motion in the vertical plane.

2. In a thrashing-machine, the combination, with the separating-carriers and their supporting-shafts, of shields inclosing the said shafts and supported in a fixed position with reference thereto, whereby the straw or fiber cannot wrap about the said shafts.

3. The combination, with the carrier-supporting shafts, of shields inclosing the said shafts fixed against rotary motion constructed in two sections telescoping with each other at their inner ends and working at their outer ends with a close joint against the faces of the carrier-wheels, substantially as described.

4. A carrier-shaft shield for inclosing the shaft, divided longitudinally for permitting the same to be placed over the shaft when in working position, substantially as described.

5. The combination, with the carrier-shaft, of a shield for inclosing the shaft, constructed in two telescoping sections divided longitudinally, whereby the same may be sprung over the shaft and fitted to any width of carrier without the removal of the wheels, substantially as described.

6. The combination, with the carrier-shaft, of a shield for inclosing the same, constructed in two telescoping sections divided longitudinally to permit the same to be sprung over the shaft and provided with interlocking flanges on the meeting edges of their divided parts, and means for securing the said sections against rotary motion on the shaft when in position, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES N. WILSON.

Witnesses:
JAS. F. WILLIAMSON,
EMMA F. ELMORE.