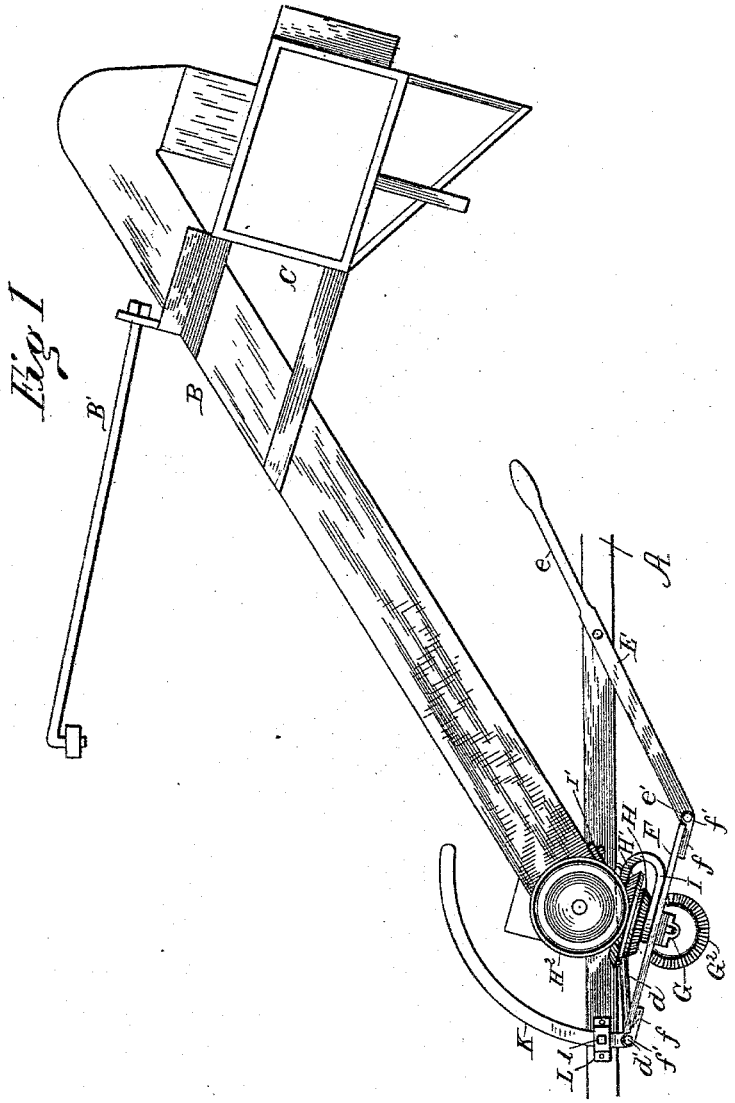
(No Model.) 2 Sheets—Sheet 1.

J. A. & D. JAMES.

ATTACHMENT FOR THRASHING MACHINES.

No. 490,075. Patented Jan. 17, 1893.

Fig 1



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(No Model.) 2 Sheets—Sheet 2.

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Fig 2

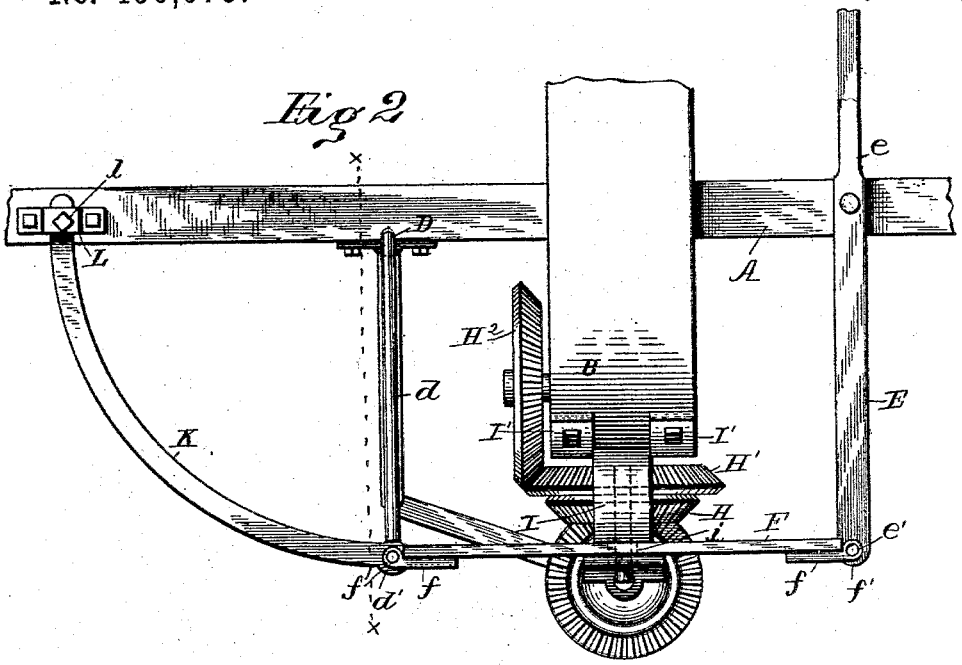
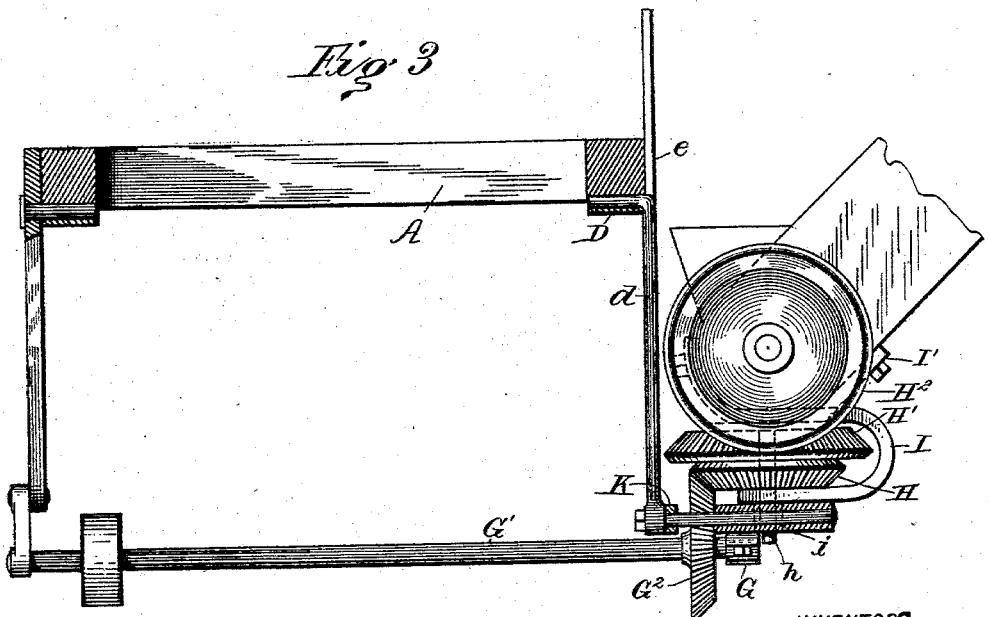


Fig 3



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JOHN A. JAMES AND DAVID JAMES, OF COFFEYVILLE, KANSAS.

ATTACHMENT FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 490,075, dated January 17, 1893.

Application filed May 11, 1892. Serial No. 432,609. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. JAMES and DAVID JAMES, citizens of the United States, residing at Coffeyville, in the county of Montgomery and State of Kansas, have invented certain new and useful Improvements in Grain-Weighing Attachments for Thrashing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in supports for grain weighing attachments for thrashing machines and it consists in the construction and arrangement of parts hereinafter described and definitely pointed out in the claims.

The object and purpose of this invention is the provision of an improved support for the elevator and automatic weighing device, usually employed in connection with thrashing machines.

A further object is to construct the support that it may be radially adjusted and elevated to carry the same and the lower end of the elevator up a sufficient distance to avoid the danger of encountering obstructions, while the thrashing machine is in transit.

These objects are attained by the construction illustrated in the accompanying drawings wherein like letters of reference indicate corresponding parts in the several views and in which:

Figure 1 is a side elevation showing a portion of a thrashing machine with a weighing apparatus and the support therefor, the latter being in an elevated position, Fig. 2 is an enlarged detail elevation of the support, and Fig. 3, is a sectional elevation on the line *x x* of Fig. 2.

In the drawings A represents the sill or base of a thrashing machine, B the conveyers spout and C the automatic weighing apparatus, which may be of any desired and well known construction.

In this class of apparatus the conveyers spout and weigher embody constructions more or less weighty and as a rule require rigid attachments to the machine which is objectionable. In the present invention the heretofore existing objections are overcome by constructing the supporting and attaching device in the following manner. To the under side of the sill of the machine is journaled a cross bar D having depending ends *d* supporting at their lower ends outwardly extending horizontal bars *d'*, cylindrical in cross section. At a point some distance in the rear of the bar D is pivotally secured a hanger E having a hand piece on its upper end above the pivoted connection. The lower ends of the depending portions *d* and the lower end of the lever E are on the same horizontal plane and the lever has a horizontal supporting rod *e'* extending outwardly from said lower end.

F represents a supporting plate having reinforcements *f* on its end which are formed at their ends with eyes *f'*, through which the rods *d'* and *e'* pass and loosely held by suitable means, thereby forming a hinged connection between the lower end of the lever and rod D and the table or plate F.

On the under side of the plate F is formed a journaled bearing G in which a transfer shaft G' is journaled, the shaft having a suitable pulley thereon by which power is transmitted thereto. On the shaft G' adjacent to the plate F is a beveled pinion G^2, which meshes with a horizontal beveled gear H secured to the under side of an oppositely beveled gear H' mounted on the lower end of the conveyers spout B. The gear H' meshes with a beveled gear H^2 mounted on the actuating shaft of the elevator apron.

The beveled gears H and H^2 are carried by and secured to the lower end of the conveyers spout B by a metallic U shaped bracket I. This bracket is constructed of a wide strip of metal having on its lower ends a reinforcing bushing *i*, which passes through an aperature in the center of the plate F. The upper part of the plate I is bent as stated in a U shape around the periphery of the outer faces of the gear wheel H and H', it is then carried back and bent up around the lower end of the conveyers spout and secured thereto by suitable bolts. The upper end of the plate I is increased in width and has the ears I' on opposite sides which extend forward and are bent up on to the under side of the conveyers spout to which they are rigidly secured by suitable bolts. By this means it will be seen that the plate I formes a support for the conveyers spout and weigher and permits the interpo-

sition of the gears H and H′ between the lower end of the spout and the plate F, and by virtue of the bushing seated in the aperture the lower side of the plate is allowed to rest on the upper face of the plate F and held securely in place against lateral movement.

The wheel H′ and the wheel H are rigidly secured together, while from the bottom of the wheel H projects a vertically disposed shaft *h* passing through the bushing into a point below the plate F, the bushing forming a bearing for the shaft *h*.

K is a curved arm extending out from the lower end of the shaft D to which it is pivotally secured, its upper end resting in a guide L secured to the frame of the machine and carrying a locking bolt *l*.

In operation the shaft G′ is rotated transmitting motion to the elevator apron through the train of gear. The upper end of the elevator trough has a bracing bar B′ extending back and pivotally secured to the machine so that during the operation of the elevator the elevator trough with its connections may be turned in a horizontal plane either to or from the machine, the gear wheel at the same time continuing in engagement. When it is desired to elevate the lower end of the conveyer with its actuating means the handle is forced down forcing the plate F into the position in Fig. 1 the arm K riding up through the guide L and in this position is locked by the binding nut *l*. In this position the parts are arranged for transportation. It will be observed that the weight at the end of the conveyer spout will have a tendency when thrown back toward the machine as shown in Fig. 1 to carry the plate F up therefore diminishing the amount of weight to be forced up by the lever. To prevent this action when the device is in operation the guide L is locked to hold the plate in position shown in Fig. 2.

The above described construction is limited to the application at one side of the thrashing machine, but the support may be duplicated on the opposite side and for this purpose and for any other desired purpose the conveyer spout with its attachments are made removable from the plate F. The act of removing the same consisting in simply disengaging the bushing from the plate by raising it therefrom and removing the brace B′.

By hinging the plate F and mounting the plate I thereon as described the shaft of the wheel H is prevented from binding in its bearing and the plates are at all times in engagement with each other, irrespective of the inclination of the plate F.

I am aware that many minor changes in the construction and arrangement of the device may be made without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I desire to secure by Letters Patent is:—

1. In an elevator attachment for thrashing machines the combination with the frame of a machine, of a supporting plate, hinged connections between the ends thereof and frame, a bearing plate loosely mounted on the said supporting plate, a conveyer on the bearing plate, a lever arm on one of the hinged connections and means for retaining the supporting plate in an adjusted position, substantially as described.

2. In a thrashing machine attachment the combination with the machine, an elevator, and a weighing device supported thereon, of a support for the elevator consisting of hangers hinged to the machine, a plate pivoted to the lower end of the hangers uniting the same, a connection between the plate and elevator, a curved arm on one of the hangers, a guide on the frame through which the curved arm passes and means for securing the arm in an adjusted position, substantially as described.

3. In an elevating attachment for thrashing machines the combination with the frame of the machine, of an elevator, a support for the same consisting of a swinging plate, means for holding the plate in an adjusted position, a transverse shaft carrying a beveled gear, a train of gear interposed between the plate and elevator, and a curved supporting plate on the elevator, extending above and below the gear, and resting on the swinging plate, substantially as described.

4. In an elevator attachment for thrashing machines, the combination with the elevator and frame, of a swinging support, mounted on the frame, a curved plate on the support, a bushing on the lower portion of the plate, a connection between the upper portion of the plate and the elevator, gear wheels between the lower and upper portions of the plate, a shaft on the wheels passing through the bushing, a seat formed on the support in which the bushing rests, a counter shaft journaled in the support, a gear wheel thereon, meshing with said other gear, means for rotating the counter shaft, and a gear wheel on the elevator, substantially as described.

5. In an elevator attachment for thrashing machines the combination with the frame, and elevator, of a support for an elevator consisting of depending pivoted arms secured to the frame, a plate on the arms, a connection between the plate and elevator, mechanism for driving the elevator, a lever for moving the plate and a curved arm on the support engaging the frame, and means for retaining the arms in an adjusted position, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. JAMES.
DAVID JAMES.

Witnesses as to John A. James:
WM. A. PUFFER, Jr.,
CHAS. A. FROST.

Witnesses as to David James:
J. F. SAVAGE,
H. W. TODD.