

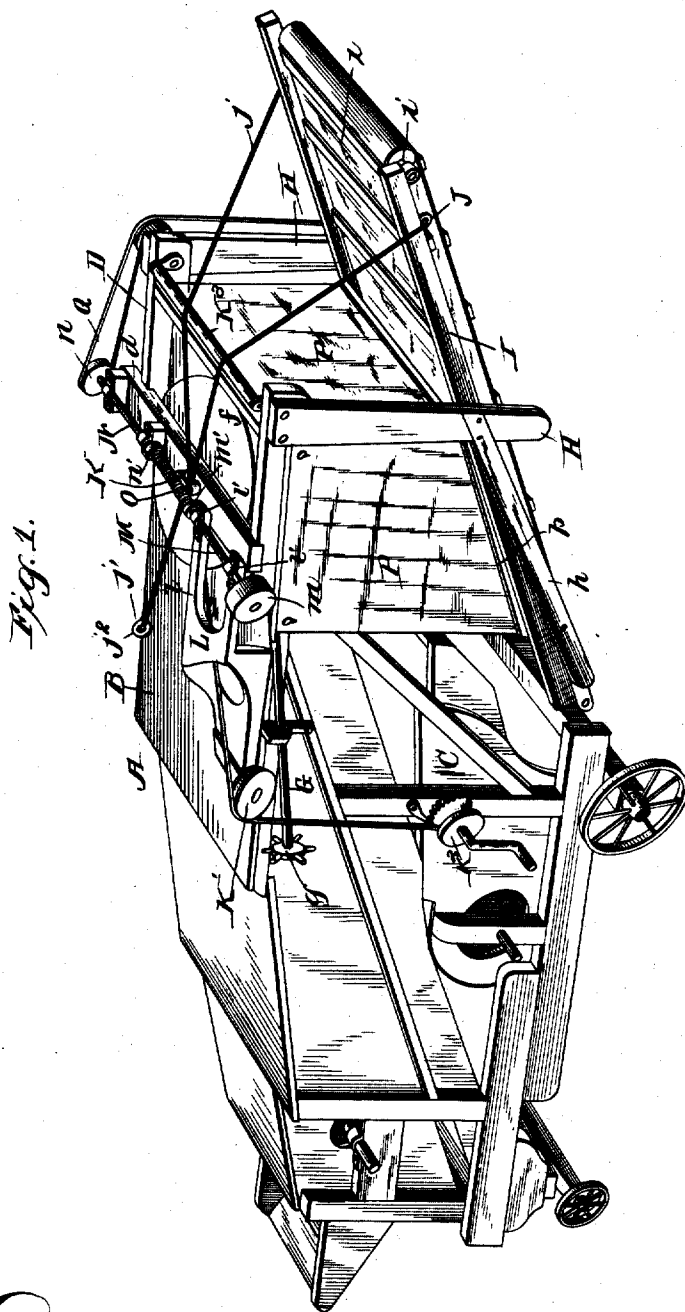
(No Model.)

3 Sheets—Sheet 1.

A. REASON.
THRASHING MACHINE ATTACHMENT.

No. 479,156.

Patented July 19, 1892.



Witnesses

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D. O. Walphaupter.

Inventor

By his Attorneys, *Albert Reason*

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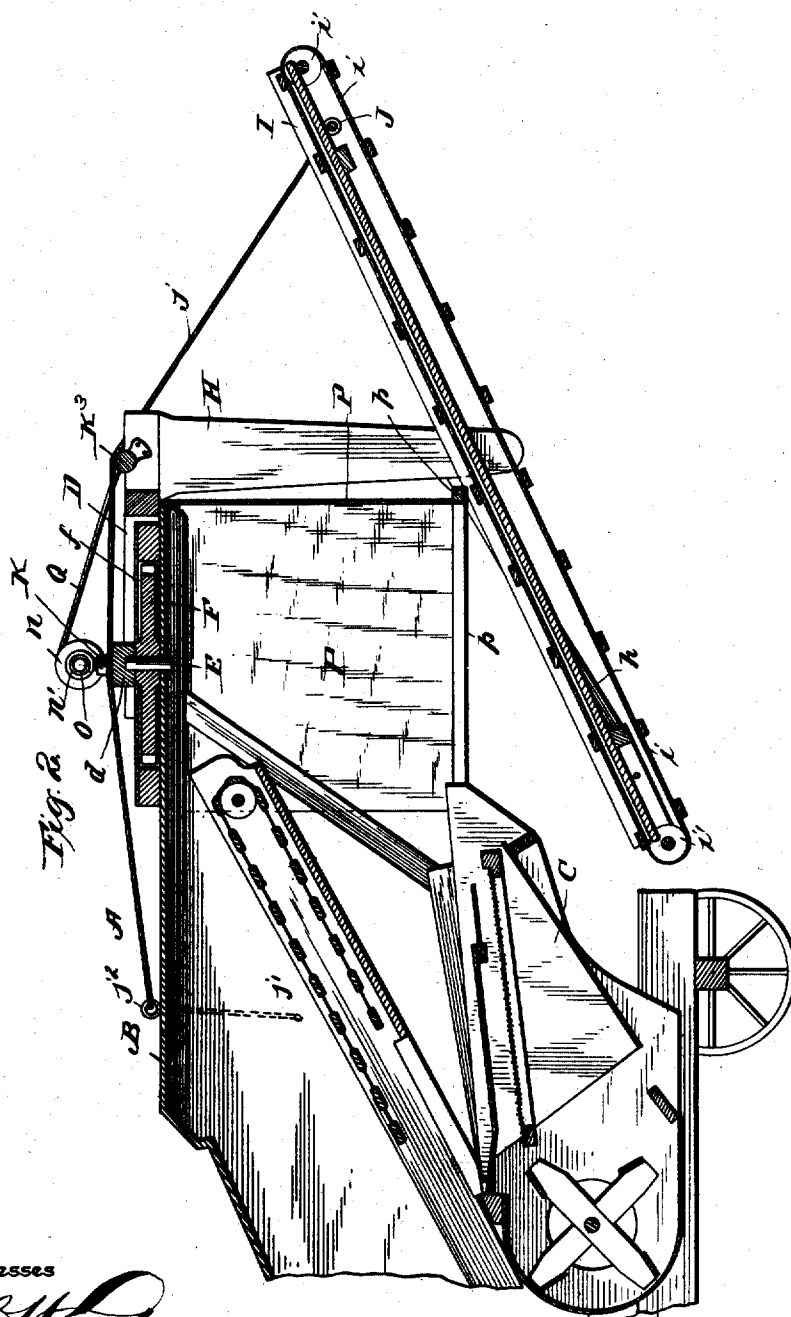
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3 Sheets—Sheet 2.

A. REASON.
THRASHING MACHINE ATTACHMENT.

No. 479,156.

Patented July 19, 1892.



Witnesses

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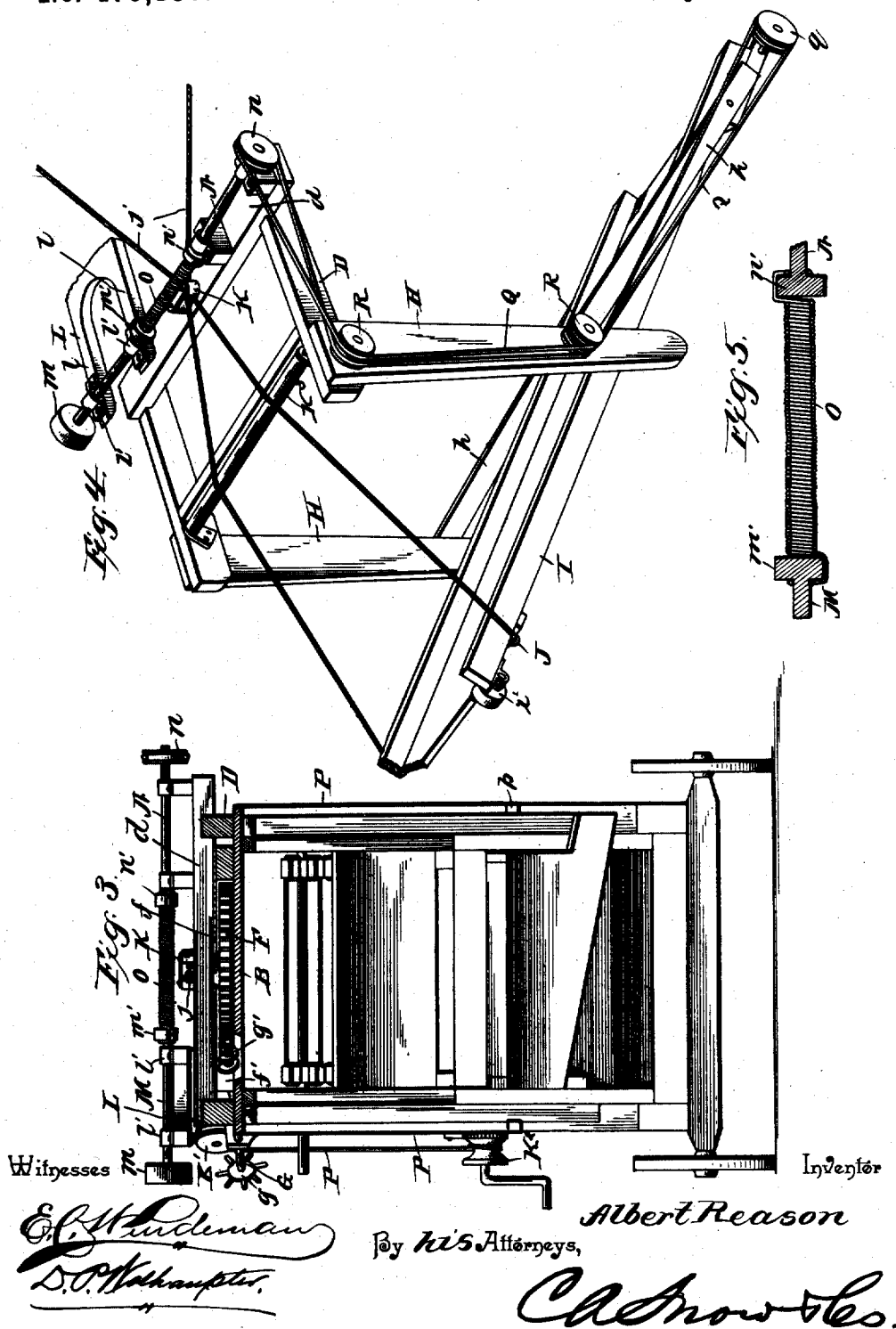
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3 Sheets—Sheet 3.

No. 479,156.

Patented July 19, 1892.



UNITED STATES PATENT OFFICE.

ALBERT REASON, OF PINCKNEY, MICHIGAN.

THRASHING-MACHINE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 479,156, dated July 19, 1892.

Application filed April 26, 1892, Serial No. 430,694. (No model.)

To all whom it may concern:

Be it known that I, ALBERT REASON, a citizen of the United States, residing at Pinckney, in the county of Livingston and State of Michigan, have invented a new and useful Thrashing-Machine Attachment, of which the following is a specification.

This invention relates to straw-carrier attachments for thrashing-machines; and it has for its object to provide an improved carrier and stacker attachment for thrashing-machines which is directly connected with the thrasher at the delivery end thereof, so as to receive the straw from the machine and carry the same to the point of attachment.

To this end it is the main object of this invention to provide an improved swinging attachment which may be adjusted at any angle to either side of the thrasher and to any point of elevation, according to the height of stack, and also to provide special and improved means for operating and adjusting the carrier upon the thrasher.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a thrashing-machine provided with a swinging carrier attachment constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view through the attachment and the rear end of the thrashing-machine. Fig. 3 is a vertical transverse sectional view of the same. Fig. 4 is a detail in perspective of the rotating table-frame and the carrier-frame carried thereby. Fig. 5 is an enlarged detail view of the universal shaft-coupling.

Referring to the accompanying drawings, A represents a thrashing-machine of any improved construction and provided with the rear top deck B, projecting beyond the straw-delivering end of the thrasher and above the under separating-shoe C, located in front of the ordinary fan of the thrasher.

Mounted to oscillate or swing upon the deck B and over the rear end of said deck is the swinging table-frame D, provided at the inner ends thereof with the transverse bol-

ster *d*, to which is fixedly secured the pivot-bolt E, projecting through and journaled in the deck B, so as to provide means for allowing the said table-frame to freely oscillate in its swinging movement upon the top of said deck.

Securely keyed to the pivot-bolt E, directly under the bolster *d*, is the horizontal gear-wheel F, from which motion is imparted to the swinging table-frame to oscillate or swing the attachment when desired. The gear-wheel F is inclosed within the inclosing casing *f*, entirely inclosing the top and outer rim of the gear-wheel, so as to securely hold the said wheel in position, and therefore the entire table-frame, fixedly upon the top of the deck B, so that the same will evenly oscillate back and forth over the deck upon which the same rests and is supported, so as to relieve the frame from the weight of the carrier supported thereby.

The inclosing casing *f* is provided in one side thereof with the opening *f'*, within which is journaled one end of the adjusting-shaft G. The said shaft G is suitably journaled in the top frame or deck of the thrasher and held off from one side of the same, so that it may be operated at the proper time by suitable means for turning the same. The said shaft is provided at its outer end on one side of the thrasher with the wheel *g*, from which the shaft receives its motion by hand, while the other end of the shaft within the opening *f'* in the casing *f* is provided with a screw *g'*, meshing with the rim of the gear-wheel F, and thus serving not only to rotate said wheel to swing the frame, but also holds said frame in its adjusted position.

Secured to the opposite outer ends of the swinging table-frame D are the opposite depending supporting standards or arms H, to the lower ends of which are secured the opposite parallel inwardly-extending pivot-arms *h*, which are inclined downwardly, so as to project under the separating-shoe C and sufficiently under the straw-delivering end of the thrasher, so as to place the lower end of the straw-carrier frame I in a position to receive the straw from the thrasher.

The straw-carrier frame I is of the ordinary construction and is provided with the usual endless belt *i*, working over the upper and

lower belt-shafts i' at the upper and lower ends of the frame, respectively. The extreme lower end of the carrier-frame I is pivoted between the inner ends of the pivot-arms h under the delivering end of the thrasher and extends from its point of pivot between and beyond the depending supporting-standards H, so as to carry the straw to the point of discharge, as desired. It will be readily seen by the connection of the carrier-frame with the swinging table-frame that the same may not only be adjusted and swung to either side of the thrasher in any direction and still have its inner lower end under the delivering end of the machine, but also that the said carrier can be adjusted to any height or angle desired, according to the height of stack.

Secured to the under side of the carrier-frame I and near the outer end thereof are the opposite eyes or guides J, through which pass the carrier-frame adjusting-cord j , passing under said outer end of the said frame I. The said adjusting-cord j is fastened at one end, as at j' , to the body of the thrasher at one side thereof and passes from such point through the eye j^2 , secured to the top of the thrasher. From the eye j^2 the adjusting-cord extends to the center and top of the bolster d and between the guide pulleys or rollers K, secured to the top and center of said bolster, thence to one side of and under the outer end of the frame I, as described, and is returned back through the central guide pulleys or rollers K and upon the opposite side of the thrashing-machine. The free end of the adjusting-cord j is led from the central guide-rollers over the offstanding guide pulley or wheel K', supported at one side of the deck B directly opposite the guide or eye j^2 , and said cord below the pulley or wheel K' is connected to the winding-drum K² upon one side of the thrashing-machine body, and which provides means for shortening or lengthening the cord to raise and lower the outer end of the stacker-frame I to adjust the angle or pitch of the same. It will be seen that by centering the opposite portions of the adjusting-cord upon the top and center of the table-frame bolster the said cord can be easily lengthened or shortened without interference from the swinging table-frame in any position that the same may be turned. In order to prevent the opposite portions of the adjusting-cord j encircling the outer end of the carrier-frame from chafing upon the swinging table-frame, a supporting-roller K³ is journaled in the outer swinging ends of the table-frame D to allow the cord to freely play thereover when the same is adjusting the outer end of the carrier-frame.

Secured upon the thrasher-deck B and at one side of the same is the bearing-bracket L, provided with rearwardly-extending bearing-arms l , having upon the outer ends thereof the bearing-boxes l' . A short drive-shaft section M is journaled in the boxes l' and is provided at one end on one side of the thrasher-

body with the belt-pulley m , which may be connected with suitable belting for revolving said shaft, while to the other end of the shaft-section M is secured the collar m' . A corresponding drive-shaft N is journaled upon the top and one end of the table-frame bolster d upon the end thereof opposite to the bearing-bracket supporting the main drive-shaft M. The said supplemental drive-shaft section N carries upon the outer end thereof the belt-pulley n , while upon the inner end thereof and terminating short of the inner end of the adjacent shaft N is secured the collar n' , to which is securely fastened one end of the flexible coiled-spring coupling O, the other end of which is likewise securely fastened to the collar m' of said adjacent drive-shaft section. Now it will be readily seen that the shafts M and N are directly connected together to form a sectional drive-shaft, so that when the shaft M is rotated the corresponding shaft N is rotated therewith. It will also be apparent that, while the said spring-coupling serves to directly connect the two shafts together at the same time, it provides a universal coupling without the use of knuckle-joints or gearing of any kind. As the oscillating table-frame is swung in any direction, it necessarily carries the shaft N thereon, so that the same assumes various angles with respect to the drive-shaft M, which is fixedly mounted in the bearing-bracket L; but by the use of the coiled spring, which will bend and give to any position of the shaft N, a connection is provided which connects the two shafts firmly together and allows the same to simultaneously revolve, and thus provides a universal coupling, which avoids the friction and other disadvantages of gearing.

Secured to the extreme outer end and sides of the thrasher-deck B, adjacent to said end, are the depending curtains P, having weighted lower ends p and designed to inclose the delivering end of the thrasher over the lower half of the straw-carrier, so that the same will confine the wind from the fan and prevent the same from blowing the straw and chaff off from the carrier. The said curtains are buttoned or otherwise suitably and removably connected to the deck of the machine, so that they may be readily removed and placed in position when desired. It will be observed that the side and end curtains have their edges meet each other to form an entirely-closed space at the outer end of the thrasher and within the swinging frame of the carrier attachment. No matter what position the carrier-frame may assume the said curtains still hang in the same relative position to each other, so that the straw will be carried under the same and out to end of the carriage, said curtains thus adjusting themselves to any angle of the attachment.

In order to provide for transmitting motion from the supplemental drive-shaft N to the carrier-belt i , a connecting-belt Q is connected with the belt-pulley n upon one end of the

shaft N and with the pulley *q* upon the outer end of the lower belt-shaft *i'*. The said belt Q is led from the said pulleys over the upper and lower pairs of guide-pulleys R, mounted at the upper and lower ends of one of the depending supporting-standards H upon one side of the swinging frame, and said upper and lower pairs of guide-pulleys are so disposed as to separate the connecting-belt Q and cause the same to follow the construction of the swinging-frame, so that the motion of the belt will be uninterrupted in whatever position the said frame may be swung or adjusted.

Now it will be readily seen from the foregoing that an improved carrier attachment for thrashing-machines is provided, which, while accomplishing all the purposes of separate carriers and stackers, at the same time provides an attachment which, on account of its improved construction and adjustments, possesses many advantages which will readily suggest themselves to those skilled in the art.

It will of course be readily understood that the several machine elements arranged in the combinations herein expressed need not necessarily be so arranged, but may be employed in various arrangements and combinations, as may be found expedient in order to accomplish the same ends, and also that any particular element or construction of such element may be used for the same purpose, as herein described in connection with other mechanical devices to secure the same result. Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an attachment for thrashing-machines, a swinging carrier-frame pivotally connected with the machine-body over the delivering end thereof and depending below and under said delivering end, an endless carrier pivotally mounted within said depending frame, and means for swinging said carrier-frame, substantially as set forth.

2. In an attachment for thrashing-machines, the thrashing-machine having an extended rear top deck, a swinging table pivotally mounted upon and working over said deck, a depending frame portion connected with said table and extended under the delivering end of the thrasher, an endless carrier pivotally mounted in said depending frame portion, and means for swinging said table and adjusting said carrier, substantially as set forth.

3. The combination, with a thrashing-machine having a rear top deck, of a swinging table pivotally mounted upon and supported by said deck, opposite supporting-standards depending from the opposite outer ends of said table, opposite parallel pivot-arms projecting from the lower ends of said standards under the delivering end of the thrasher, an endless carrier pivotally mounted between the inner ends of said arms, and means for swinging said table and adjusting said carrier, substantially as set forth.

4. The combination, with a thrashing-machine, of a swinging carrier-frame depending below the delivering end of the thrasher and having a pivot-bolt working in the rear top deck of the thrasher, a horizontal gear-wheel secured to said pivot-bolt under said frame, an adjacent adjusting-shaft having a screw meshing with said gear-wheel to swing the frame, and an endless carrier pivotally mounted in said swinging frame and adapted to be adjusted therein, substantially as set forth.

5. The combination, with a thrashing-machine, of a swinging carrier-frame having a pivot-bolt journaled in the rear top deck of the thrasher, a gear-wheel secured to said pivot-bolt beneath said frame, an inclosing casing surrounding said gear-wheel and secured to the deck of the thrasher to hold the frame thereon, and an adjacent adjusting-shaft provided with a screw end projecting into said inclosing casing and meshing with said gear-wheel, substantially as set forth.

6. In an attachment for thrashing-machines, the thrasher having an extended rear top deck, a swinging table supported by said deck and having an end bolster provided with a pivot-bolt journaled in said deck, supporting-standards depending from the opposite outer ends of said table, rearwardly-inclined pivot-arms projecting from the lower ends of said standards under the delivering end of the thrasher, an endless carrier working between said standards and arms and pivoted at its lower end to said arms, a horizontal gear-wheel secured to said pivot-bolt under the bolster, an adjacent adjusting-shaft having the screw at one end meshing with said gear-wheel, and means for adjusting said carrier, substantially as set forth.

7. In an attachment for thrashing-machines, a swinging carrier-frame pivotally mounted upon the rear end of the thrasher and having a depending frame portion extended under said delivering end, an endless carrier pivotally mounted in said extended frame portion and provided with cord-guides near the outer end thereof, guide-rollers centrally mounted upon the carrier-frame upon the top of the thrasher, opposite cord-guides secured to opposite top sides of the thrasher, a winding-drum located beneath one of said guides, and an adjusting-cord connected fixedly at one end to one side of the thrashing-machine, passing under the outer end of the endless carrier, through the guides thereunder centered between the central top guide-rollers, passing around the opposite top guides, and connected at its free end with said winding-drum, substantially as set forth.

8. In an attachment for thrashing-machines, a swinging carrier-frame pivotally mounted upon the rear end of the thrasher and having a depending frame portion extending under the delivering end of the machine, an endless carrier pivotally mounted in said extended frame portion and having a belt-shaft provided with a pulley at one end, upper and

lower pairs of guide-pulleys mounted on one side of the depending frame portion, a drive-shaft fixedly journaled upon the frame of the machine, a corresponding adjacent drive-shaft journaled upon the top of the swinging frame and provided with a belt-pulley at one end, a flexible spring-coupling connecting the adjacent ends of said shafts, and a belt passing over said upper and lower pairs of guide-rollers and connected with the belt-shaft pul-

ley and said drive-shaft pulley, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT REASON.

Witnesses:

J. DROWN,

G. W. TEEPLE.