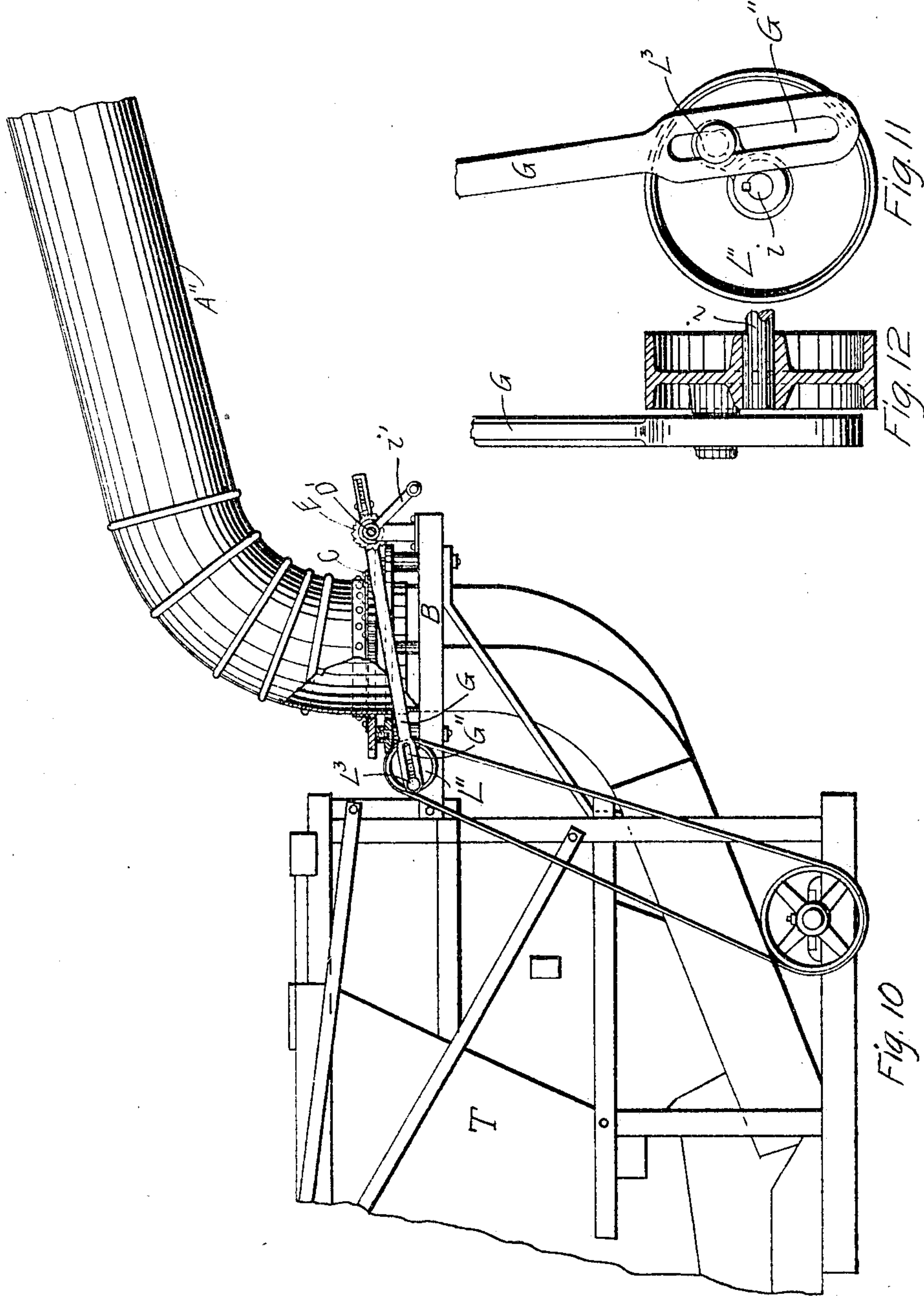


No. 799,210.

PATENTED SEPT. 12, 1905.

N. WEILER.
SWINGING STACKER.
APPLICATION FILED OCT. 15, 1904.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

NICK WEILER, OF SIOUX CITY, IOWA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO CHARLES W. SWANSON AND ONE-FOURTH TO LYMAN J. RANDOLPH, OF SIOUX CITY, IOWA.

SWINGING STACKER.

No. 799,210.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed October 15, 1904. Serial No. 228,644.

To all whom it may concern:

Be it known that I, NICK WEILER, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented a new and useful Improvement in Swinging Stackers; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to swinging stackers for threshing-machines; and the object of my invention is to provide means for simply and automatically turning the stacker from side to side during its operation.

The invention consists in the novelty of construction and combination and arrangement of parts, as will be specifically described, and pointed out in the claims.

I have fully illustrated my invention in the accompanying drawings, in which—

Figure 1 is a view in side elevation, showing the stacker ready for attachment to the threshing-machine. Fig. 2 is a plan view of the sector and parts used in turning the stacker. Fig. 3 is an enlarged view of upper end of bar and the pawl used in the operation of the worm-wheel. Fig. 4 is a cross-sectional view of the same. Fig. 5 is an enlarged detail view of bearing for rod attached to said pawl. Fig. 6 is a detail view of left ratchet-tooth. Fig. 7 is an enlarged view showing in side elevation the lever used in the adjustment of the pawl. Fig. 8 is a side view of inside ratchet-wheel. Fig. 9 is a side view of eccentric used in the operation of the ratchet. Fig. 10 is a side view of section of thresher and side view of blower attached to same, showing my invention as applied to the blower. Fig. 11 is an enlarged view of slotted end of bar and the wheel used in the operation of the blower. Fig. 12 is a view of the same, showing the wheel in section.

Referring now to the illustrations, in which like parts are designated by similar letters of reference, A is the body or frame of the stacker, having the carrier *aa* to conduct the straw in the usual manner, operating on the rollers *b* and *b'*. The carrier is operated by a sprocket-wheel *c*, secured to one of the rollers *b'*, a chain *b''* connecting said sprocket-wheel with another sprocket-wheel *d*, secured to a shaft *e*, having at its opposite end a bevel-pinion *f*, which meshes with a bevel-pinion *g*

on the end of the rod *C''*. This pinion is connected with the operating machinery in the manner presently described.

The above parts are no part of my invention, being common to all swinging stackers, and are described merely to show the connection of the parts.

Beneath the body of the stacker and on which the stacker swings is a frame B, pivotally supporting a sector C, having a cross-bar *C'*, in the middle of which is a pivot-bolt *C''* on which the sector is adapted to turn. The sector is also supported upon rollers *g' g'*, secured in bearings attached to the frame. One-half the circumference of the sector is cogged, the rest being plain, and the outer rim of the whole circumference is supplied at regular intervals with the round holes *h h*. The teeth of the sector are adapted to engage a worm-wheel D on a shaft *D'*, which operates within bearings *i i*, secured to the frame. At the outer end of said shaft are secured two parallel ratchet-wheels E and *E'*. These ratchets have teeth facing in opposite directions and are operated alternately by the pawl F, having two ends or points *j* and *j'*, the teeth of which face oppositely to correspond with the ratchets which they respectively engage. The pawl is pivoted laterally at its fork within the hollow end of the bar G by means of a bolt *G'* and is also pivotally secured to a rod H just above the fork. Near the pivoted end of the rod is secured a lug *k*, and between this lug and the opposite inner end of the bar a coil-spring *l* encircles the rod and is adapted to hold the pawl in engagement with the ratchets. The lower end of the bar G is forked, as seen in Fig. 9, the forked end straddling an eccentric I, secured to a shaft J, which is adapted to turn in suitable bearings in the frame. At the inner end of the shaft is secured a bevel-pinion K, which is adapted to mesh with another bevel-pinion L, secured to the lower end of the pivot-bolt *C''*. At the outer end of the shaft J is secured a pulley *L'*, to which a belt from the thresher may be attached for operating the stacker.

As the shaft revolves the bar G is agitated or slightly swung back and forth by reason of the forked ends straddling the eccentric. This causes the end of the pawl, which engages one of the ratchets, to move with the bar and turn the ratchet and the shaft *D'*.

The worm-wheel D being secured to this shaft engages the teeth of the sector and causes it to revolve. As the stacker turns with the sector and it is necessary that the stacker change direction automatically, subject to the regulation of the operator, the means for changing the movement of the sector are as follows: A bent lever N is pivotally secured at its outer end at the point *m* in the frame, the bent or inner end extending over the sector. Secured at right angles to the outer end of the lever is a cam projection *n*, having a hollow rounded end into which projects a lug *o* on the side of the point *j'* of the pawl. On the under side of the lever N is a lug *p*, through which extends a bolt *p'*, pivotally secured at its outer end to a block *q*, secured to the frame. Near the outer end of the bolt is secured a lug *r*, and between this lug and the lug *p* a coil-spring *s* encircles the rod. Pins P and P' are adapted for insertion in the holes *h* in the rim of the sector. If we suppose the pins to be inserted in holes on opposite sides of the sector, as indicated in Fig. 2, and the sector to be turning in the direction shown by the arrow, the sector will continue in the same direction until the pin P strikes the lever N. The lever will then be pushed to the right, and the cam *n*, pressing toward the left on the lug *o*, will force the point *j'* of the pawl into engagement with the ratchet E', at the same time forcing the point *j* out of engagement with the ratchet E. The teeth of the ratchet E' facing in an opposite direction from those of the ratchet E, the movement of the worm-wheel will be reversed and the sector turned back in the opposite direction. The pressure of the spring *s* holds the lever N in whatever position it may be placed. The direction of the movement of the sector being changed as last indicated, it will continue in that direction until the pin P' strikes the lever from the opposite side, when the movement will be again reversed, and so on indefinitely. The movement of the sector is thus wholly automatic, and the length of the sweep of the stacker can be regulated by the adjustment of the pins in the holes.

In Fig. 10 is shown the same mechanism attached to a blower A'', except that for the pulley L' a pulley L'' is substituted, and to this pulley is secured a crank L³. The end of the bar G instead of being forked and straddling the eccentric has a slot G'', which incloses the crank. As the pulley turns the crank slides in the slot and imparts the same motion to the bar as the eccentric. A crank-arm *i'* is secured to the end of the shaft D' for turning the stacker by hand, if desired.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a swinging stacker, the combination

of an eccentric secured to a revolving shaft, a forked bar straddling said eccentric, a pawl with double points pivotally secured to said bar, ratchet-wheels with teeth facing in opposite directions adapted to be alternately engaged by said points of the pawl, a shaft and worm-wheel secured thereto to which said ratchets are secured, a sector to which the stacker is attached pivotally secured to the supporting-frame, said sector having teeth or cogs adapted to engage said worm-wheel and holes in the rim thereof for the insertion of pins, a lever extending over said sector and adapted for contact with said pins pivotally connected with the frame of the stacker, and a lug on said lever adapted to come in contact with said pawl whereby the points of the pawl are moved with reference to the ratchets, substantially as described.

2. In a swinging stacker, the combination of a revolving shaft connected with the operating part of the machinery, an eccentric secured to said shaft, a forked bar straddling said eccentric, a pawl with double points pivotally secured to said bar, ratchet-wheels with teeth facing in opposite directions adapted to be alternately engaged by the points of said pawl, a shaft and worm-wheel secured thereto to which said ratchets are secured, a sector to which the stacker is attached pivotally secured to a supporting-frame, said sector having teeth or cogs adapted to engage said worm-wheel, and means for causing the points of said pawl to alternately engage the teeth of said ratchet-wheels whereby the movement of said worm-wheel is changed and the direction of the sector is reversed, substantially as described.

3. In a swinging stacker, the combination of a sector to which the stacker is attached pivotally secured to a supporting-frame, said sector having teeth or cogs on the edge thereof and holes in the rim for the insertion of pins, a revolving shaft, a worm-wheel secured thereto and adapted to engage the teeth of said sector, ratchet-wheels secured to said shaft having teeth facing in opposite directions, a pawl with double points adapted to alternately engage the teeth of said ratchet-wheels, means for the operation of said pawl, pins for insertion in the holes on the sides of said sector, a lever pivotally secured to the supporting-frame, whereby one end of the lever is adapted to come in contact with said pins and the other end with said pawls and move the points of the pawls with reference to said ratchets, substantially as described.

In witness whereof I have hereunto affixed my signature in the presence of two witnesses.

NICK WEILER.

Witnesses:

H. C. GARDINER,
J. A. BARCLAY.