

No. 838,145.

PATENTED DEC. 11, 1906.

I. E. STEELE.

STACKER.

APPLICATION FILED JUNE 7, 1906.

3 SHEETS—SHEET 1.

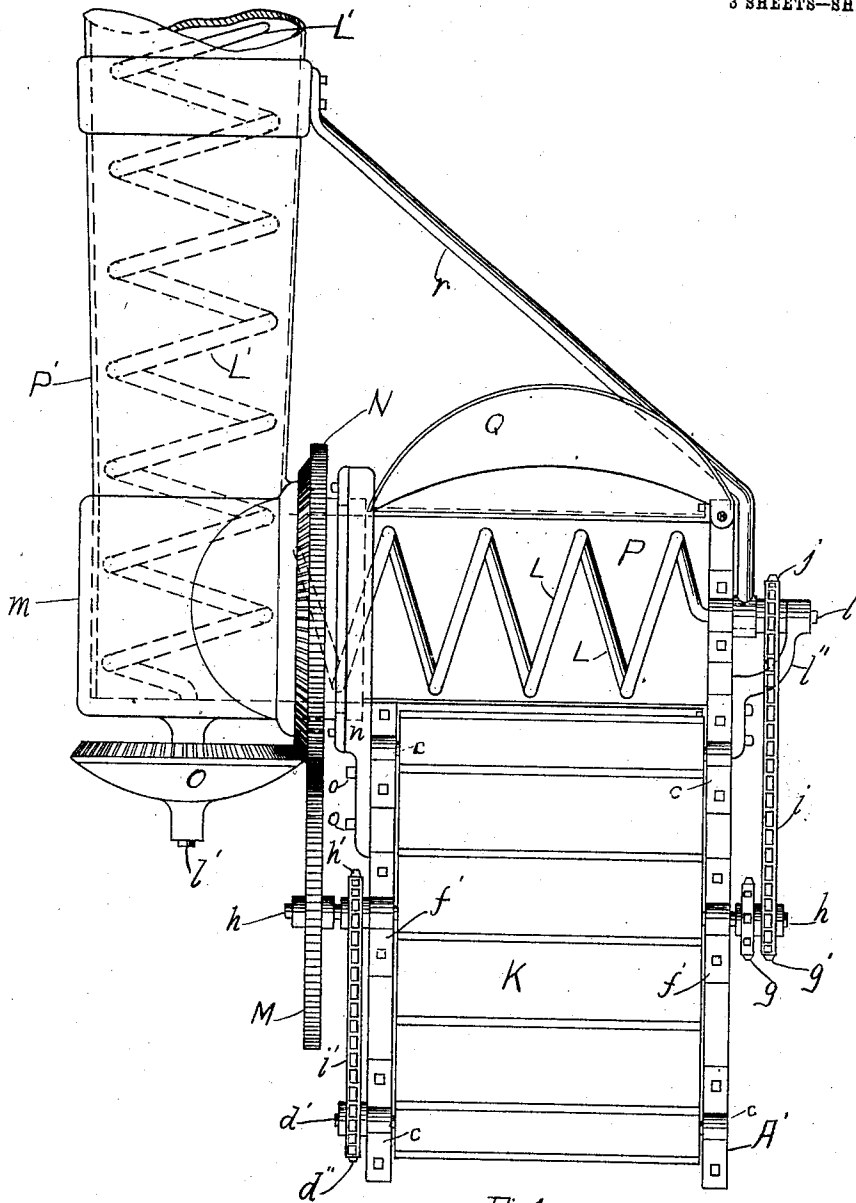


Fig 1

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W. H. Gardiner

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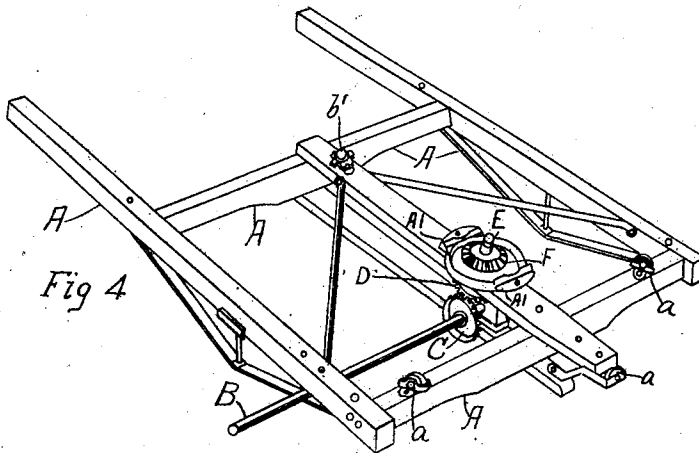
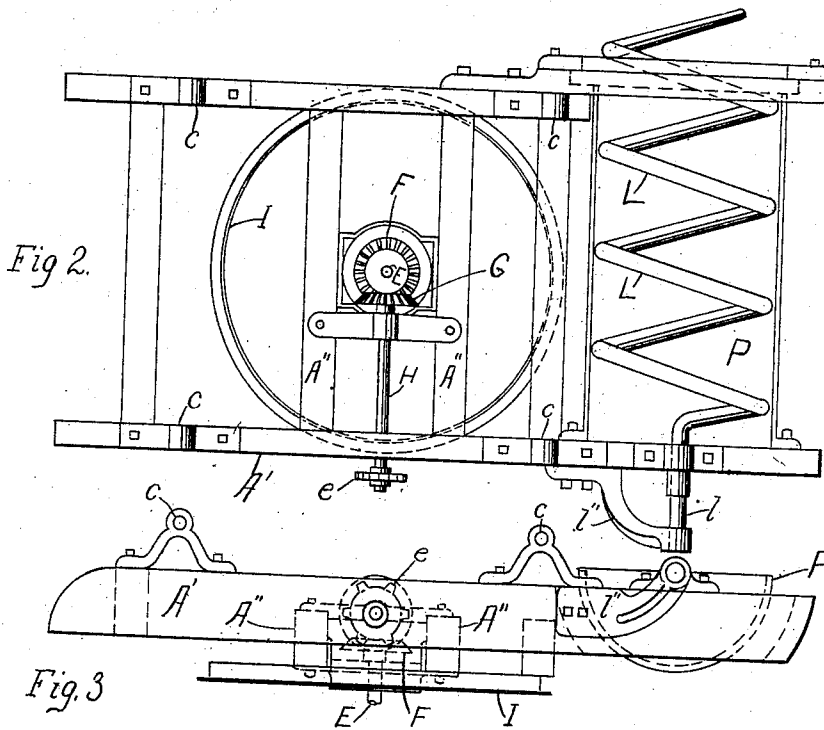
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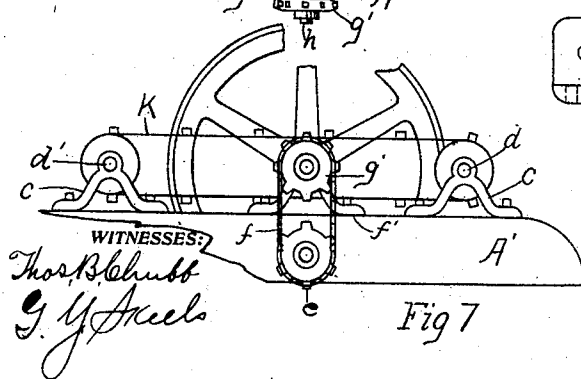
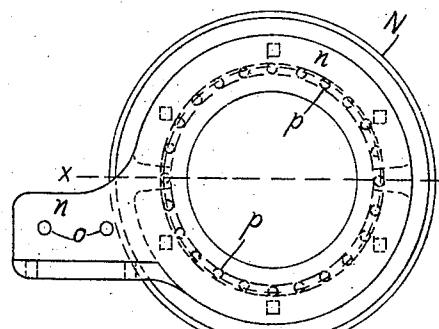
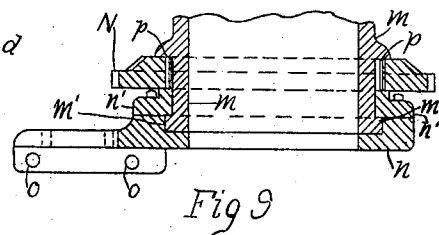
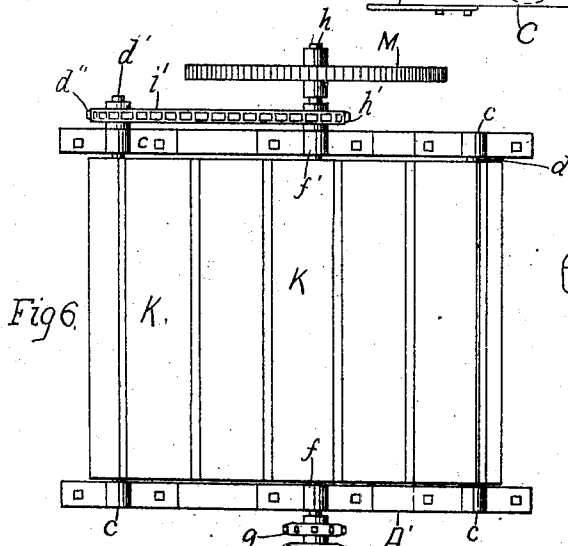
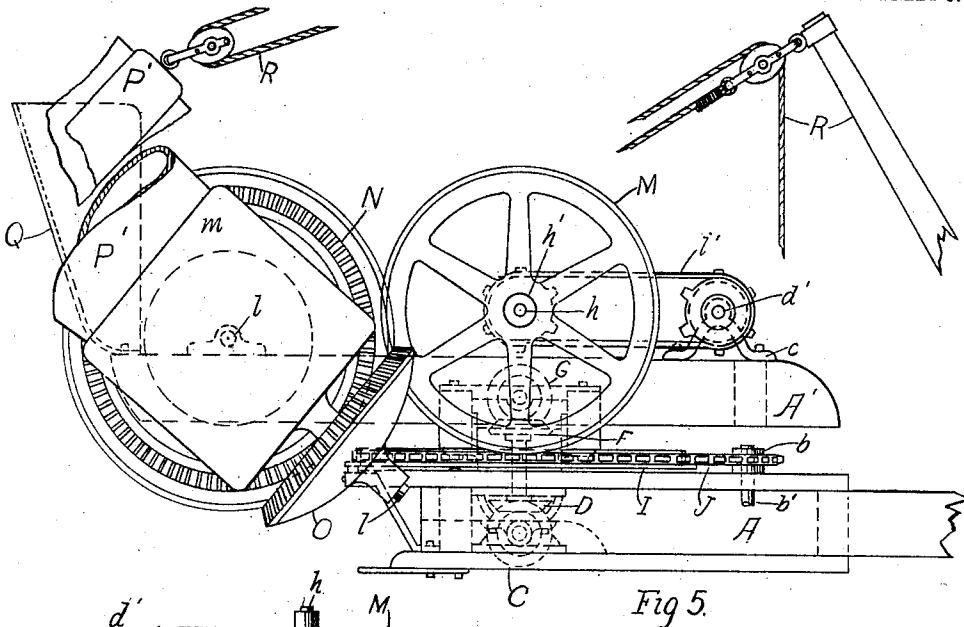
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

IRA E. STEELE, OF HARTLEY, IOWA.

STACKER.

No. 838,145.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed June 7, 1906. Serial No. 320,586.

To all whom it may concern:

Be it known that I, IRA E. STEELE, a citizen of the United States, residing at Hartley, in the county of O'Brien and State of Iowa, have invented new and useful Improvements in Stackers, of which the following is a specification.

My invention relates to improvements in stackers for threshing-machines or shredders, and particularly to the kind known as "swinging stackers," although the invention may be applied to the separator of any kind of threshing-machine or any shredder.

The object of the invention is the production of a new and useful device for carrying the straw or fodder from the tail end of a separator or shredder to any desired place.

The invention consists in the novelty of construction and arrangement of parts, and particularly in the novel application of an auger or worm for carrying the straw, as will be specifically described, and pointed out in the claims.

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

Figure 1 is a plan view of my invention. Fig. 2 is a partial plan view, the apron and one of the worms being omitted. Fig. 3 is a side elevation of Fig. 2. Fig. 4 is a perspective view of the usual frame which is made use of in supporting my device. Fig. 5 is a view of my invention in side elevation, some of the parts being omitted for the sake of clearness. Fig. 6 is a plan view of apron and frame. Fig. 7 is a detail view showing frame and apron in side elevation. Fig. 8 is a detail view showing in side elevation the frame for supporting the rim-wheel which operates the second worm. Fig. 9 is a partial cross-sectional view of the same on line *xy*.

In the drawings the frame A, Fig. 4, which is common to most stackers, supports my invention and furnishes the platform or base upon which it is adapted to turn. The shaft B is one of the shafts of the thresher and furnishes the power for the operation of the stacker. At the inner end of the shaft is secured a cogged wheel C, adapted to mesh with a bevel cogged wheel D, secured to the lower end of an upright shaft E. Near the upper end of the upright shaft is secured a bevel cogged wheel F, which meshes with a bevel-wheel G, secured to the inner end of a horizontal shaft H. The frame A', Figs. 2 and 3, supporting said shaft, rests upon the

frame A, the timbers A'' being adapted for support in the clamps AI in the central part of said frame A. Upon the frame A, to which the clamps are secured, is supported a wheel I, made of angle-iron and adapted to turn upon rollers *a a*, pivotally secured to the frame, the wheel I being secured within the timbers of the frame and concentric with the shaft E. A chain J passes around the wheel I and over a sprocket-wheel *b*, secured to a shaft *b'*, adapted to turn in the frame A. This shaft may be operated by hand or by any suitable means as it is desired to turn the stacker from one point to another. The upper frame A', supporting the aprons and worms, rests upon this wheel I and moves with it as it is desired to change the direction of the stacker. To the upper surface of the frame A' are secured bearings *c c* to support the shafts *d* and *d'*, over which the apron K works. At the outer end of the shaft H is secured a sprocket-wheel *e*, bearing a chain *f*, which passes over a sprocket-wheel *g*, secured to a shaft *h*, supported in bearings *f'* upon the frame A'.

To the outer end of the shaft *h* on the same side of the machine is secured a similar sprocket-wheel *g'*, bearing a chain *i*, which operates the worm L by means of a sprocket-wheel *j*, secured to the shaft *l* of the worm. To the opposite end of the shaft *h* is secured a sprocket-wheel *h'*, bearing a chain *i'*, which passes over a sprocket-wheel *d''*, secured to the shaft *d'*, and operates the apron. A cogged wheel M is secured to the end of the shaft *h* opposite the sprocket-wheels *g* and *g'* and adapted to mesh with a bevel rim-wheel N, the beveled cogs of which mesh with a bevel-wheel O, secured to the shaft *l'* of the second worm L', which operates at right angles to the first worm. The rim-wheel N revolves about a frame *m*, pivotally secured by flange *m'* within a plate *n*, which is fixed to the frame A' by means of the bolts *o o*. The flange *m'* is held in position by the clamps *n'*, secured to the plate *n*. Between the inner surface of the rim-wheel N and the outer bearing of the frame *m* are inserted rollers *p p* to reduce the friction of the surfaces. The rim-wheel N being thus secured to the frame of the machine and operating the bevel-wheel O is not affected by raising or lowering of the stacker or second worm. The first worm operates in an open trough P and carries the straw after receiving it from the apron to the

second worm, which is inclosed in a stacker-pipe or chute P', flaring toward the outer end to prevent clogging of the straw.

A shield Q at the rear of the trough P prevents the straw from passing over the worm. The chute P' is supported in the usual manner by means of brace and tackle R, connected to the separator, and may be secured at any height by adjustment of the tackle and brace. The outer end of the chute is steadied by means of a brace r, secured at one end to the chute, the opposite end forming a ring and freely encircling the shaft l of the worm L, the outer end of the shaft being supported by a bracket or brace l'. The stacker-pipe P' slides into the frame m and is secured thereto, the frame m being adapted to turn within the plate n as the stacker-pipe is raised or lowered.

The worms require far less power for their operation than the means heretofore used for disposing of the straw, and no blower is necessary in connection with the machine.

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

1. A stacker for threshing-machines or shredders consisting of an auger or worm operating longitudinally with the machine, a chute or pipe for carrying the straw in which said worm operates, a bevel-wheel secured to the shaft of said worm, a bevel rim-wheel with which said bevel-wheel is adapted to mesh, a frame pivotally secured to the frame of the stacker to support said pipe and the rim-wheel, and means connected with the ma-

chine for the operation of the rim-wheel, substantially as described.

2. A stacker for threshing-machines or shredders consisting of an auger or worm and a pipe or chute for carrying the straw in which said worm operates, a pivoted support for said chute secured to the frame of the machine and adapted to permit the outer end of the chute to be raised and lowered, and means connected with the machine for the operation of said worm, substantially as described.

3. A stacker for threshing-machines or shredders consisting of an auger or worm operating at right angles to the machine, a trough or pipe for carrying the straw in which said worm operates, means connected with the machine for the operation of said worm, a chute or pipe at right angles to said worm to receive the straw or fodder therefrom, a worm in said chute or pipe for carrying the straw or fodder, a bevel-wheel secured to the shaft of said worm, a bevel rim-wheel with which said bevel-wheel is adapted to mesh, a frame pivotally secured to the frame of the stacker to support said pipe and the rim-wheel, and means connected with the machine for the operation of said rim-wheel, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IRA E. STEELE.

Witnesses:

M. J. HUGHES,
H. C. GARDINER.