No. 773,184. PATENTED OCT. 25, 1904.

J. O. BASHORE.

STRAW STACKER.

APPLICATION FILED JAN. 25, 1904.

NO MODEL. 3 SHEETS—SHEET 1.

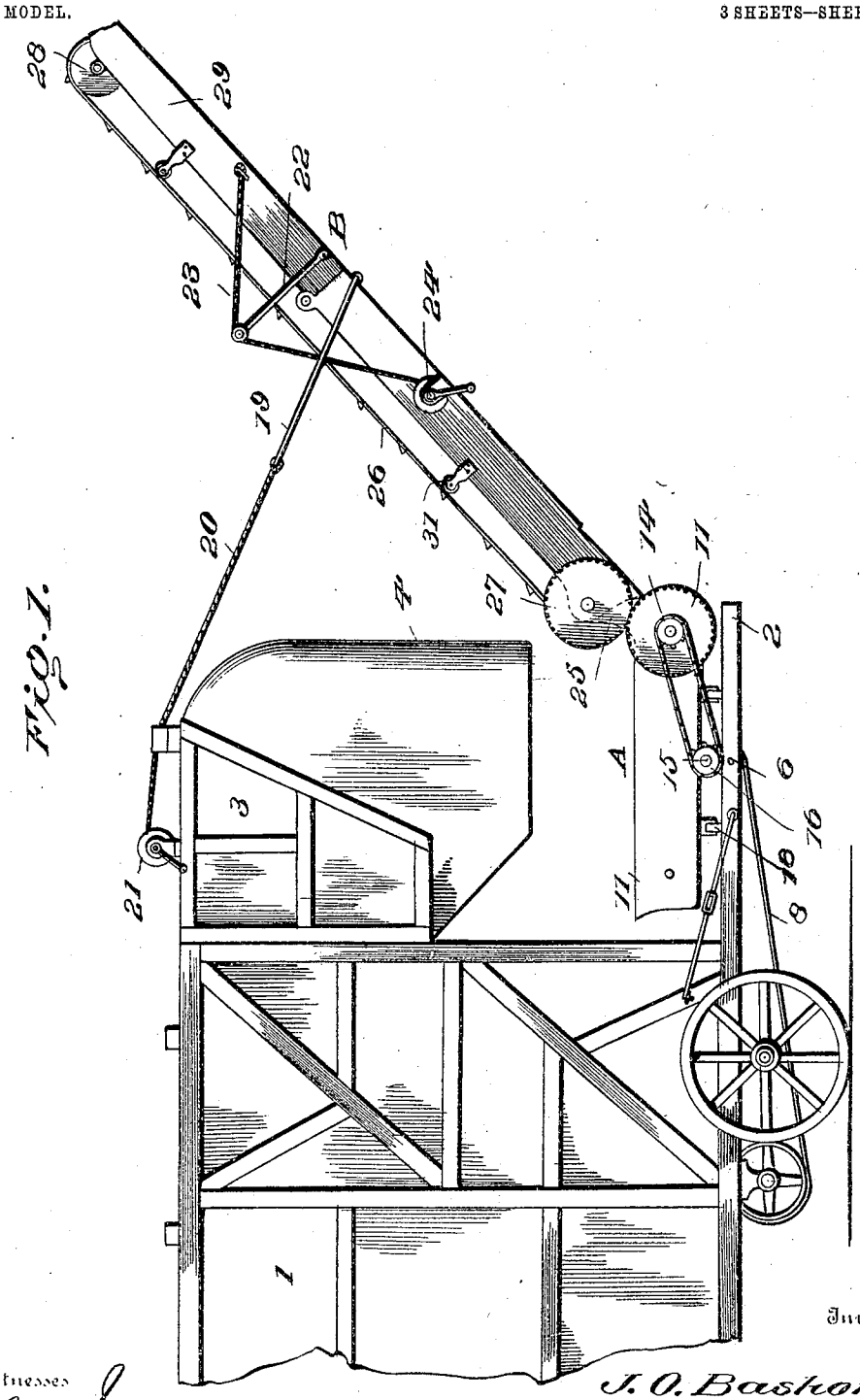


Fig. 1.

Witnesses

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NO MODEL. 3 SHEETS—SHEET 2.

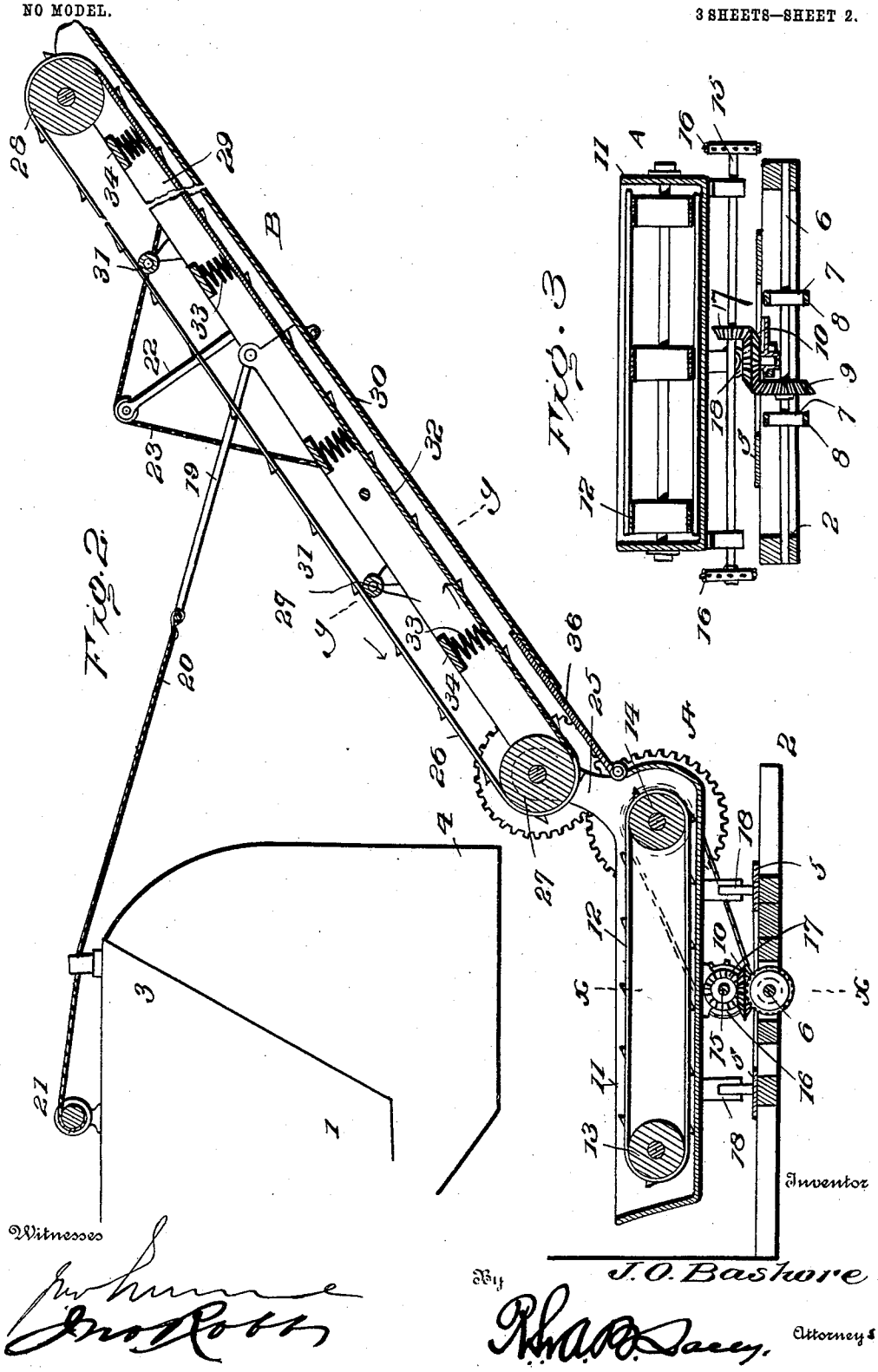


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NO MODEL. 3 SHEETS—SHEET 3.

FIG. 4.

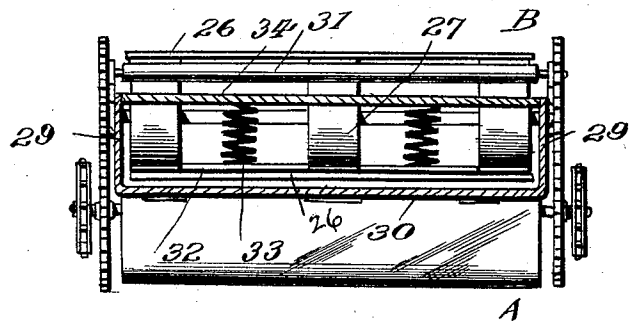
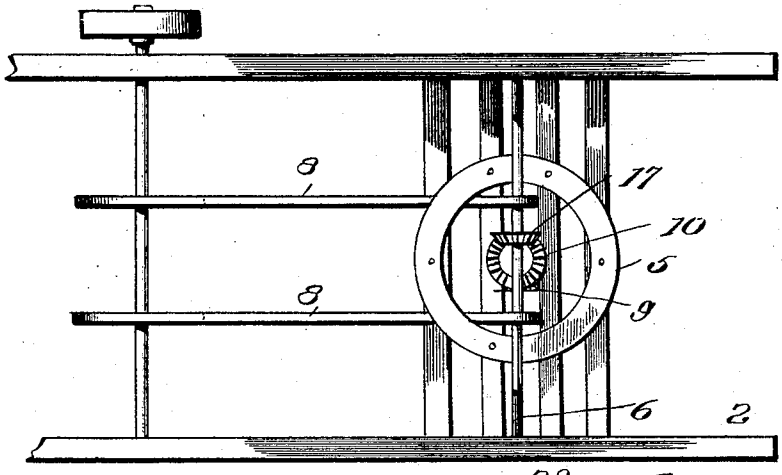


FIG. 5.



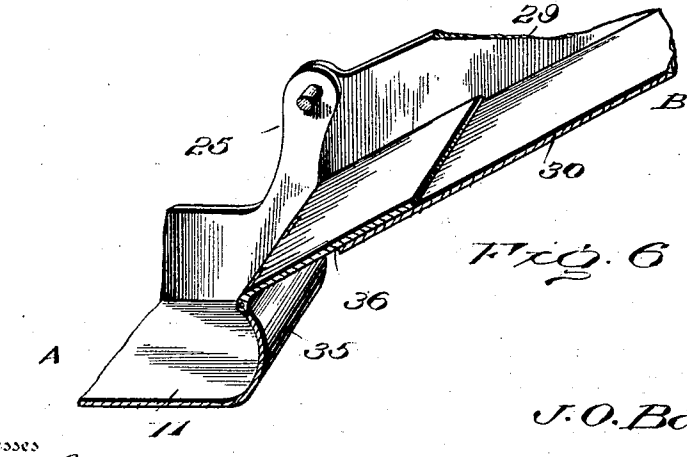


FIG. 6.

Witnesses

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No. 773,184. Patented October 25, 1904.

UNITED STATES PATENT OFFICE.

JAMES O. BASHORE, OF VANDYKE, PENNSYLVANIA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 773,184, dated October 25, 1904.

Application filed January 25, 1904. Serial No. 190,567. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. BASHORE, a citizen of the United States, residing at Vandyke, in the county of Juniata and State of Pennsylvania, have invented certain new and useful Improvements in Straw-Stackers, of which the following is a specification.

This invention has relation to the type of agricultural machinery for stacking straw as the same is delivered from the separator without requiring any intermediate handling, thereby preventing the necessity for shutting down the thresher and separator to clear away straw or other accumulation.

An essential feature of the invention is to prevent contact of the return portion of the endless conveyer with any portion of the stack, which is highly objectionable in retarding the work and detracting from the efficiency of the machine.

A further purpose of the invention is to prevent rolling of the straw in the event of the same being damp and the consequent choking of the stacker, the latter being provided with a yieldable plate to adapt itself to the bulk of straw passing through the stacker at any given time.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a stacker embodying the invention, showing the same applied to a separator, the rear portion of the latter only being shown. Fig. 2 is a central longitudinal section of the parts illustrated in Fig. 1, showing the same on a larger scale. Fig. 3 is a cross-section on the line X X of Fig. 2. Fig. 4 is a transverse section on the line Y Y of Fig. 2. Fig. 5 is a view of the platform provided with the turn-table as seen from the bottom side. Fig. 6 is a detail perspective view of the compensating joint between the bottom plate and the stacker proper.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The separator is indicated at 1 and may be of any make or design and is provided at its rear end with an extension 2, forming a support or platform for the stacker, which is mounted thereon, so as to receive an oscillatory movement necessary to effect an equal distribution of the straw upon the stack. An extension 3 projects from the upper rear portion of the separator and overhangs the support 2 and provides convenient means for delivering the straw upon the horizontal portion of the stacker. A hood 4 is attached to the rear extension 3 and may be of textile, metal, or other material, the purpose being to provide a guard to prevent currents of air from scattering the straw and blowing the same over the horizontal carrier.

The rear extension 2 may be of any substantial construction and is provided with a ring or circular track 5, constituting an essential part of the turn-table between the stacker and the part 2. A shaft 6 is journaled transversely of the support 2 and is provided with band-pulleys 7, to which power is applied from a portion of the drive-gearing of the separator by means of drive-belts 8. A bevel gear-wheel 9 is secured to the shaft 6 and is in mesh with crown-gearing of a twin bevel gear-wheel 10, mounted coaxially with the center of the turn-table and the axis of the stacker.

The stacker proper comprises a horizontal carrier A and an inclined carrier B, the two being jointed to admit of the part B being raised and lowered at its delivery end according to the height of the stack. The horizontal part A is mounted to oscillate about a vertical axis in coincident relation with the center of the turn-table and the twin gear-wheel 10. The carrier A comprises a framework 11 and an endless apron or belt 12, mounted at its ends upon rollers 13 and 14 at opposite ends of the framework 11. A shaft 15 is journaled

transversely of the frame 11 and its end portions are provided with sprocket-gears 16, from which power is taken for operating the endless aprons or belts of the stacker members A and B. A bevel gear-wheel 17 is secured to the shaft 15 and is in meshing relation with the other crown-gearing of the twin bevel-gear 10. The arrangement of the gearing is such that power applied to the shaft 6 is transmitted to the shaft 15 no matter what relative position the stacker may occupy. Rotary supports or pulleys 18 are secured to the under side of the frame 11 and travel upon the circular track 5 and reduce the friction to the smallest amount possible.

The carrier or stacker member B is preferably composed of sections which are articulated or hinged to admit of folding upon the separator, so as to reduce the length of the machine for purposes of storing and transportation. The carrier B is hinged or pivotally connected to the carrier-section A to admit of its outer or delivery end being raised or lowered. A bail 19 is connected to the section B, and a rope or cable 20 connects said bail with a windlass 21 upon the separator, and by means of which the stacker is adjusted vertically at its delivery end. Standards 22 project from one of the sections of the carrier, and ropes or cables 23, spanning the joint between adjacent sections, pass over pulleys at the outer end of the standards 22 and have one end connected to one section and the opposite end connected to a windlass 24, applied to the opposite section. This construction admits of independent adjustment of the relative outermost section of the carrier, besides bracing the hinged joint formed between adjacent sections. Standards 25 project from the outer or rear corners of the frame 11, and the carrier member B is hinged or pivoted thereto. The member B is composed of a framework and an endless apron or belt 26, supported upon rollers 27 and 28 at opposite ends of the framework.

The framework of the member B comprises side pieces 29 and a bottom 30, the latter constituting a support and a guard. The endless apron 26 is located wholly above the bottom 30 of the framework and is spaced therefrom a distance to provide ample room or passage for the straw in transit to the stack. The upper run or portion of the endless apron is supported intermediate of the rollers 27 and 28 by rolls 31, journaled to the upper ends of standards projected from the side pieces of the framework 29. A plate or frame 32 is spaced from the bottom 30 and is arranged parallel therewith and is yieldably mounted to admit of automatic movement to compensate for the bulk of straw passing between it and the bottom 30, thereby preventing rolling or bunching of the straw in the event of the same being damp. This plate or frame 32 is sustained by means of springs 33, which may be of any type and connected at one end to cross-pieces 34 and at the opposite end to the plate or frame 32. The plate or frame 32 is composed of a series of slats or strips which are transverely spaced to receive the belts or parts comprising the apron 26. This construction is shown most clearly in Fig. 4, which illustrates the parts comprising the apron and frame arranged approximately in the same plane and alternating. The slats or strips comprising the frame 32 are preferably supported solely by means of the springs 33, which admit of their yielding to accommodate the bulk of straw passing over the bottom 30 and in the space formed between said bottom and the parts 32 and 26.

The bottom of the frame 11 is upturned at its rear end, as indicated at 35, and a plate 36 is hinged thereto and overlaps the lower portion of the bottom 30 to provide a compensating joint, whereby the formation of a space between the parts 30 and 35 is obviated in the various adjustments of the carrier-section B. Inasmuch as the plate 36 is hinged out of line with the axis of the part B, there is a relative sliding movement between the overlapped portions of the plates 36 and 30 when moving the outer end of the part B up or down, as will be readily comprehended.

Having thus described the invention, what is claimed as new is—

1. In a straw-stacker, the combination of a frame comprising a bottom and side pieces, an endless apron located wholly above and spaced from the bottom of the frame to provide a passage-way for the straw, a second frame about in the plane of the lower portion of the said endless apron, and springs exerting pressure upon said second frame to admit of yielding thereof, substantially as described.

2. In a straw-stacker, the combination of a frame comprising a bottom, an endless apron located wholly above and spaced from said bottom and comprising a series of spaced belts, slats arranged in the spaces formed between the belts and about in the plane thereof, and springs yieldably supporting said slats, substantially as specified.

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

JAMES O. BASHORE. [L. S.]

Witnesses:
JAMES W. GRONINGER,
CHARLES W. BASHORE.