

No. 662,813.

Patented Nov. 27, 1900.

C. H. PETTIJOHN.

STRAW STACKER.

(Application filed June 6, 1899.)

(No Model.)

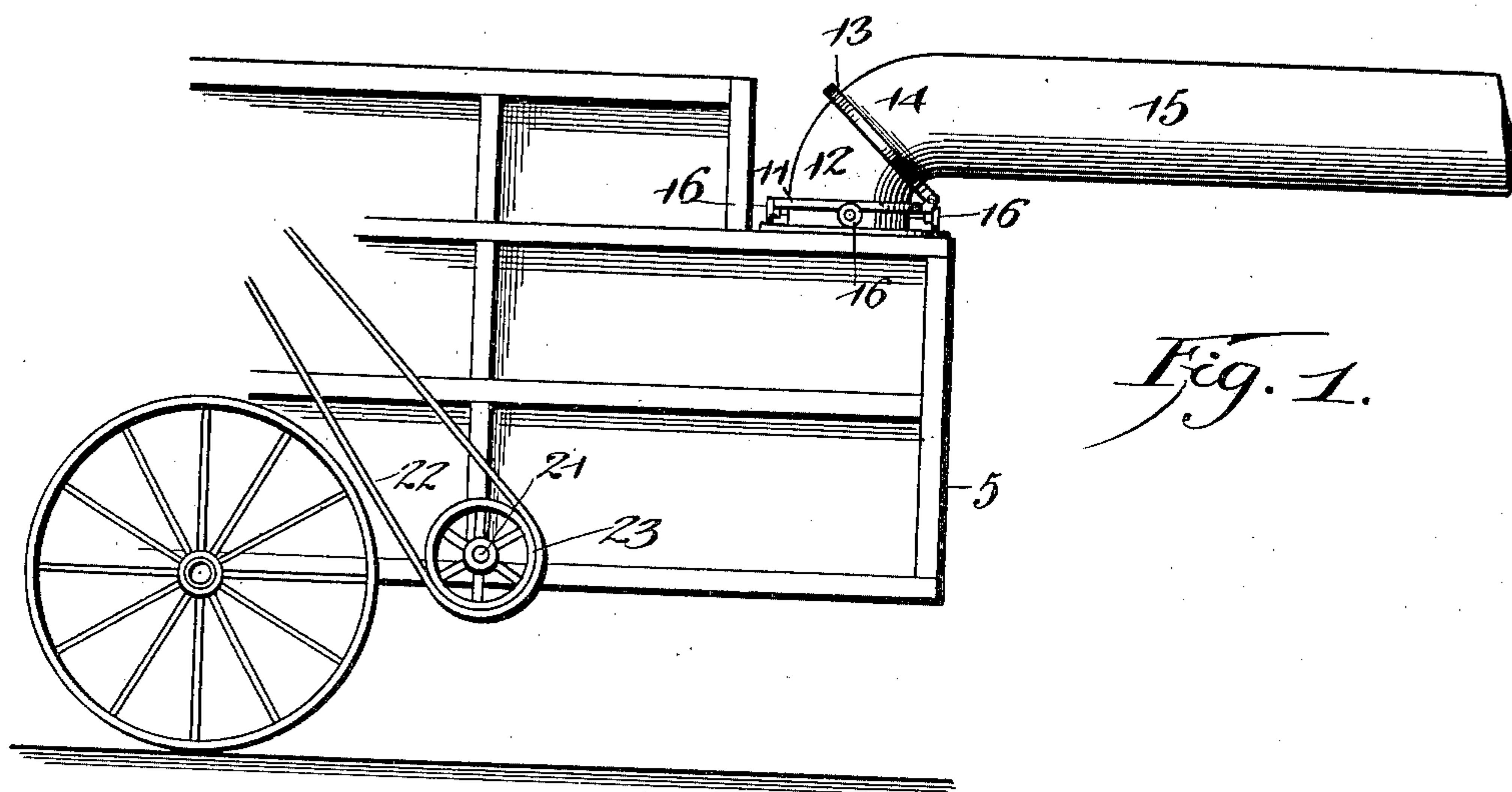


Fig. 1.

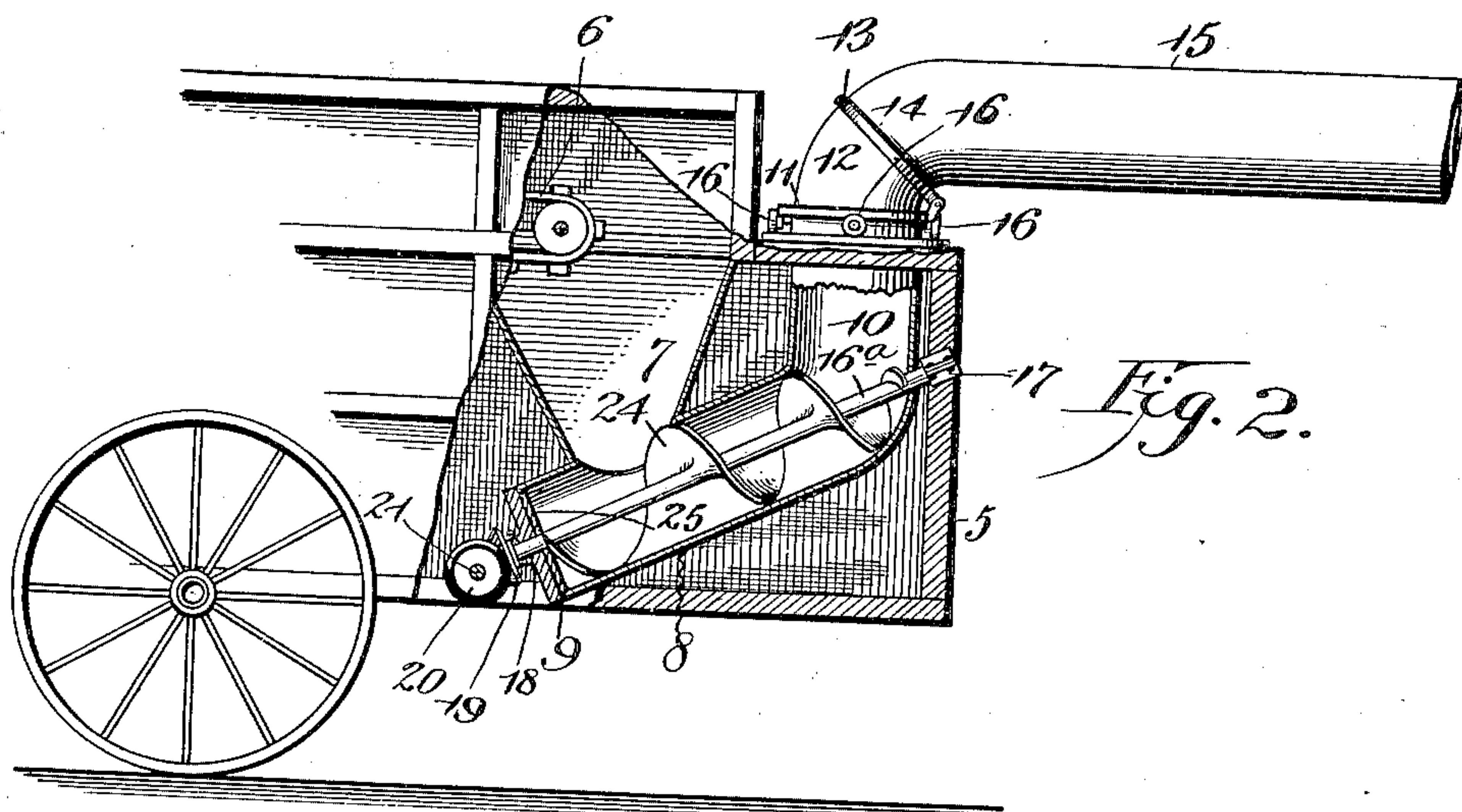


Fig. 2.

Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLES H. PETTIJOHN, OF LITCHFIELD, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO WARREN A. WATTS, OF SAME PLACE.

## STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 662,813, dated November 27, 1900.

Application filed June 6, 1899. Serial No. 719,600. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. PETTIJOHN, a citizen of the United States, residing at Litchfield, in the county of Montgomery and State of Illinois, have invented a new and useful Straw-Stacker, of which the following is a specification.

This invention relates to threshing-machines, and more particularly to the straw-delivering mechanism thereof, and specifically has reference to a stacker connected with the discharge end of the threshing-machine and adapted to positively engage the straw and force it through the delivery-tube as distinguished from the usual method of blowing the straw through the tube by means of a fan.

The object of the invention is to provide a simple and efficient structure for this purpose in which a slow speed may be employed, this slow speed practically eliminating the objectionable suction which interferes with the proper working of the other parts of the machine. With my construction, moreover, the delivery of the straw from the delivery-tube is obtained in a manner which prevents the flying of the chaff and dirt, greatly reducing the objectionable features of work at the stacker.

By the peculiar shape of my compression-worm I am enabled to positively grasp the straw and compress it during its passage through the worm, thus insuring its proper delivery from the delivery-tube.

In the drawings forming a portion of the specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a side view of the discharge end of a threshing-machine. Fig. 2 is a view similar to Fig. 1, a portion of the frame of the thrasher being broken away to show the location of the compression-worm therein, the worm-casing and the adjacent chute being shown in section.

Referring now to the drawings, 5 represents the casing at the rear end of the threshing-machine, which casing incloses a delivery-apron 6, adapted to deliver straw from the threshing mechanism to a chute 7, whose lower contracted end opens into a slanting cylindrical casing 8, closed at its lower end 9 and having its upper end 10 turned upwardly

and vertically and connected by means of a swivel-joint 11 with an elbow-section 12, which in turn has a slide connection 13 with the downwardly-curved end 14 of a delivery-tube 15. Suitable friction-rollers 16 are employed in connection with the swivel connection 11 in the usual manner and form no portion of this invention.

Passed longitudinally and centrally of the cylindrical casing 8 is a shaft 16, having a bearing 17 at one end in the frame 5 of the thrasher, said shaft being passed outwardly through the wall of the upturned end 10 of the casing. The opposite end of the shaft 16 has a bearing 18 in the rear end 9 of the casing, which rear end is fixedly connected with the frame 5 in any desired manner. The lower end of the shaft 16 projects outwardly beyond its bearing and on its lower extremity is provided with a bevel-gear 19, meshing with a similar gear 20 upon a shaft 21, carrying a belt 22, through the medium of a pulley-wheel 23, said belt leading to and adapted for operation from a suitable portion of the threshing-machine. Upon the shaft 16 and concentric therewith is a worm 24, which worm has a diameter equal to the inner diameter of the casing 8 and extends from the lower end of the casing to that point of the upturned end 10 through which the shaft 16 passes, the diameter of the worm beyond the upper end of the straight portion of the casing being reduced to conform to the curve of that portion of the casing lying between the slanting portion and the upturned end 10. As will be seen in Fig. 2 of the drawings, the pitch of the worm diminishes constantly from the lower end upwardly, and the lower end of the worm terminates in a disk 25, which completely fills the lower end of the casing and rotates with the worm. Thus it will be seen that the shaft 16 being rotated through the medium of the belt 22 and its connections therewith and the apron being in operation to discharge the straw into the hopper 7, said straw will enter the casing 8, at the lower end thereof, and will engage the worm at the point of its greatest pitch. The shaft 16 being rotated in a proper direction, the straw will be forced upwardly through the casing 8, and as it passes along the worm will be compressed



and will be discharged into the upturned end 10 in a compressed condition. Further operation of the worm 24 will discharge additional straw against the lower portion of that 5 previously discharged, and thus will the straw be gradually forced upwardly and into the delivery-pipe 15, and thence outwardly through its discharge end, from which it will drop in accordance with the adjustment of 10 the discharge-pipe.

It will be readily understood that I may locate the casing 8 either longitudinally or transversely of the threshing-machine and that it may be either inclosed by or outside 15 of the frame of the machine, and in connection therewith that I may employ any means for delivering the straw thereto and for receiving the straw therefrom, and that I may, furthermore, employ any desired material 20 for any of the parts without departing from the spirit of my invention.

Having thus described the invention, what is claimed is—

1. In a straw-stacker, the combination with 25 delivery mechanism, of a casing adapted to receive material therefrom, a portion of said casing being adapted to receive a worm, and a second portion leading therefrom and lying at an angle thereto, and a conveying-worm 30 having a straight axis and disposed within the first-named portion of the casing and projecting into and transversely of the second portion, said worm having a varying pitch and having that portion transversely of the 35 casing reduced in diameter to fit against the outer curve of the upturned portion.

2. The combination with delivery mechan-

ism, of a casing adapted to receive material therefrom and having a turned discharge end and a conveyer-worm in said casing, said 40 worm having a straight axis and extending into and transversely of the turned portion and adapted to engage said material and force it through the casing.

3. The combination with delivery mechan- 45 ism, of a casing adapted to receive material therefrom, said casing having its discharge end turned at an angle thereto, a conveyer-worm within the casing extending into and transversely of the turned end and having its 50 diameter reduced therein, said worm having a straight axis, and said worm being adapted to receive and force said material through the casing.

4. The combination with delivery mechan- 55 ism, of a slanting casing having its upper end turned at an angle thereto, a conveyer-worm rotatable in said casing and projecting at one end into and transversely of the turned end of the casing, and within which turned 60 end it is reduced in diameter to fit the outer curve of the upturned end, the pitch of said worm diminishing constantly from its lower to its upper end to engage the said material and compress and force it through the casing 65 and the axis of the worm being straight.

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

CHARLES H. PETTIJOHN.

Witnesses:

EDGAR SANDERS,  
FREDRICK ANDRUS.