

No. 632,595.

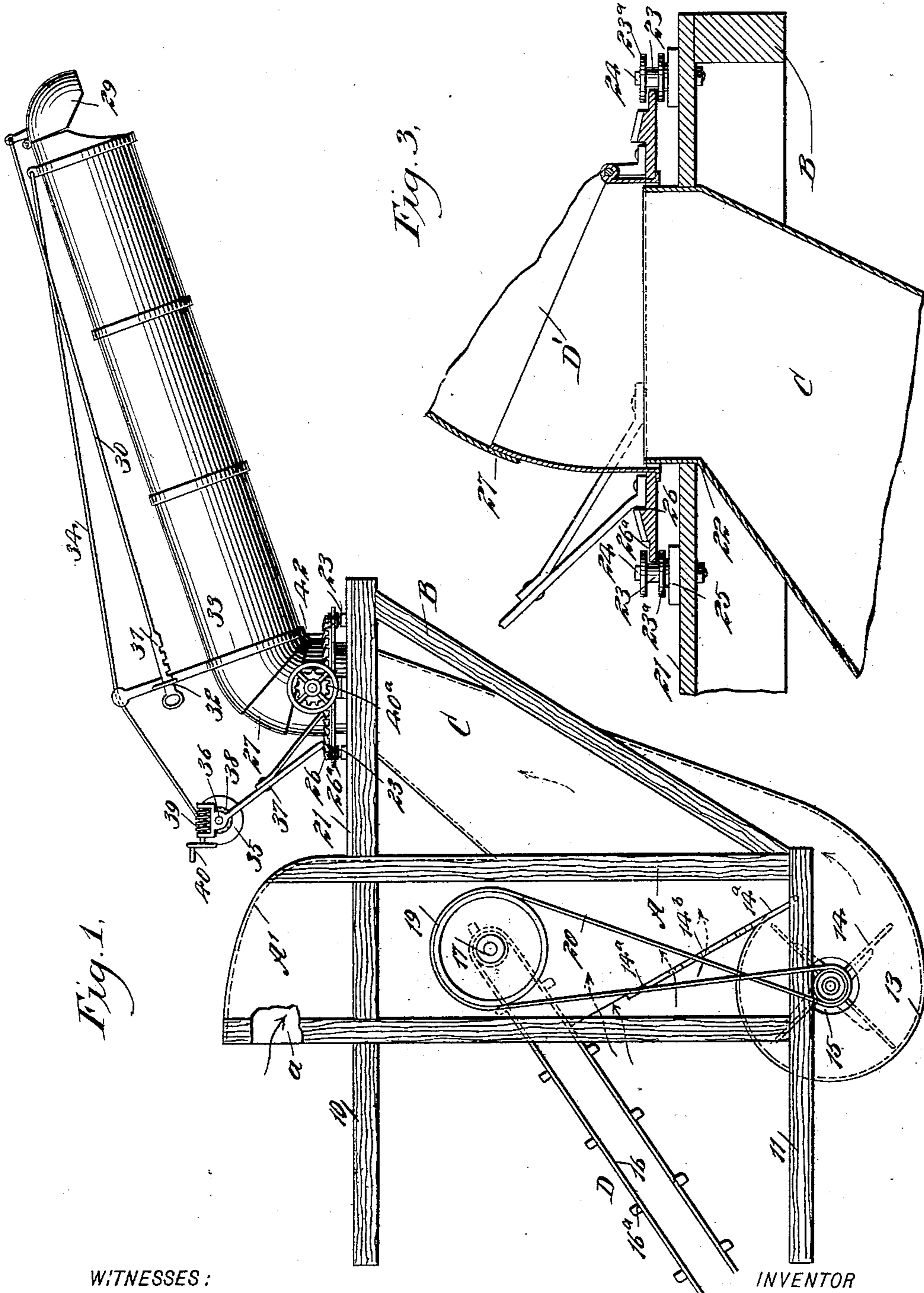
Patented Sept. 5, 1899.

H. STEIN.
STRAW STACKER.

(Application filed Jan. 18, 1899.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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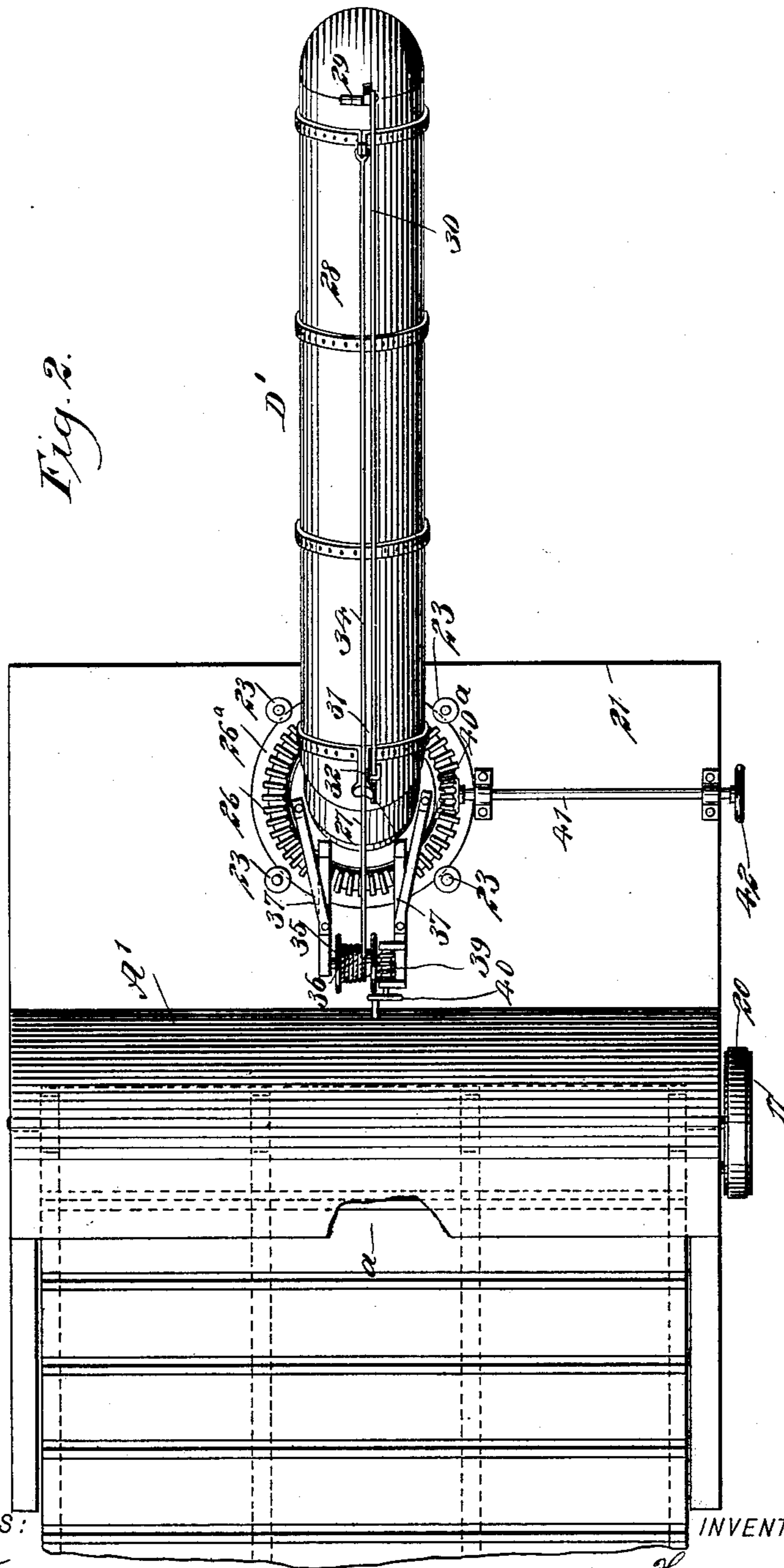
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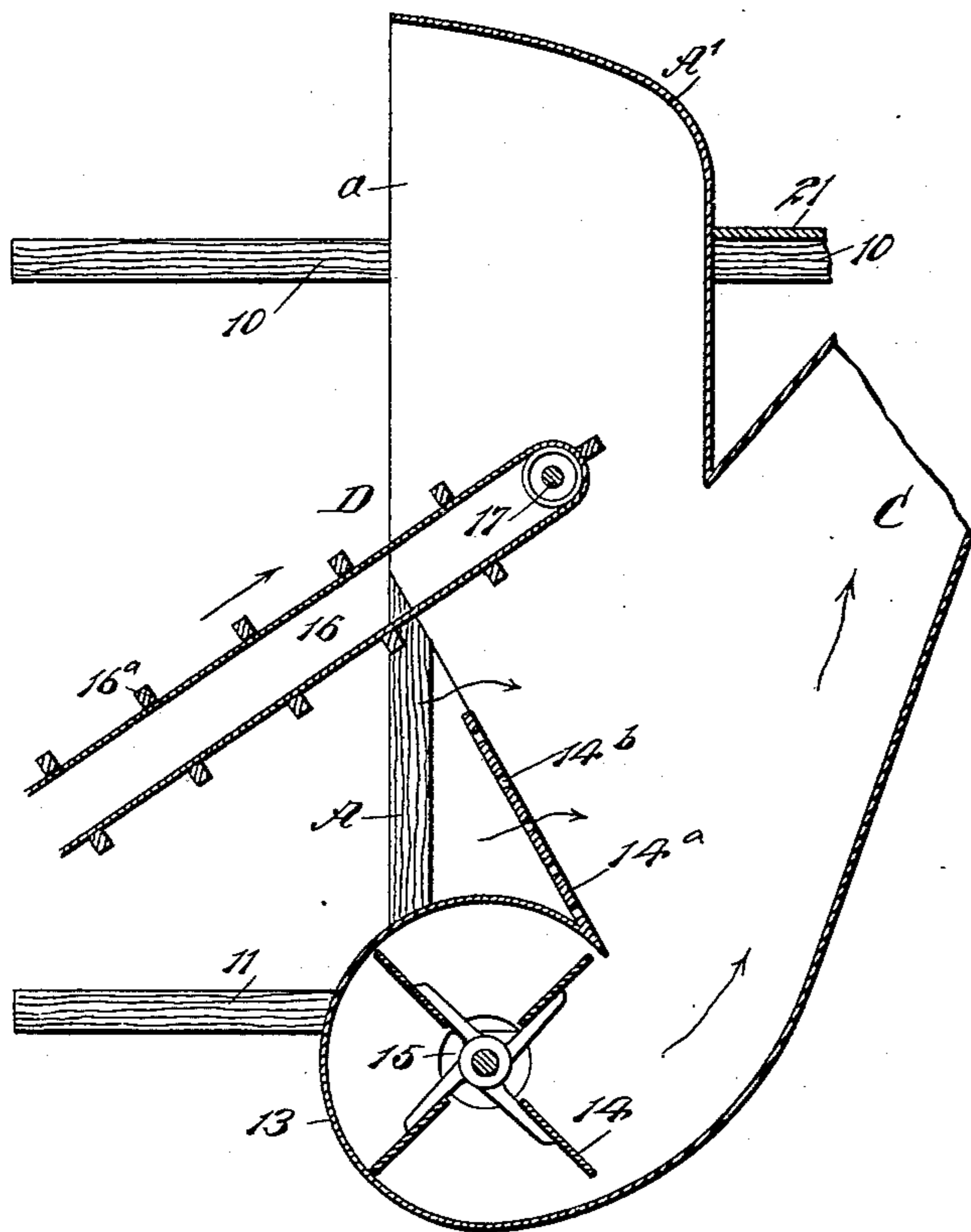
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3 Sheets—Sheet 3.

Fig 4.



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UNITED STATES PATENT OFFICE.

HERMAN STEIN, OF GEORGETOWN, MINNESOTA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 632,595, dated September 5, 1899.

Application filed January 18, 1899. Serial No. 702,524. (No model.)

To all whom it may concern:

Be it known that I, HERMAN STEIN, of Georgetown, in the county of Clay and State of Minnesota, have invented a new and Improved Straw-Stacker, of which the following is a full, clear, and exact description.

The object of the invention is to provide a straw-stacker capable of being expeditiously and conveniently applied to any threshing-machine, the said stacker being so constructed that a current of air drawn from the outside of the stacker will be directed beneath the falling chaff and straw, thus facilitating the passage of the said chaff and straw through the flue connected with the receiving-chamber and out through a chute connected with said flue.

A further object of the invention is to so construct the chute of the stacker that it may be readily adjusted laterally or vertically and to provide said chute with a hood capable of adjustment and adapted to control the direction in which the straw and chaff shall fall.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the stacker. Fig. 2 is a plan view thereof, and Fig. 3 is an enlarged vertical section through a portion of the flue connecting with the frame and that portion of the outlet-chute that is adapted to receive material from said flue. Fig. 4 is a vertical section through the receiving-chamber, hood, and fan, and a vertical section through a portion of the flue.

The body of the stacker contains a vertical receiving-chamber A, the said chamber being adapted to receive the straw and chaff from the threshing-machine to which the stacker is applied, the straw entering through an opening *a* at the front upper portion of the chamber, the upper portion of said chamber being in the nature of a hood A', while the chaff, as will be hereinafter described,

enters the chamber A below the entrance of the straw. Beams 10 and 11 are projected forwardly from the front of the chamber A, and said beams are adapted to be attached to the outside rear portion of the threshing-machine and be secured thereon in any approved manner, and when the attachment is applied to the threshing-machine the forward portion of the chamber A will be in contact with the rear portion of the threshing-machine.

A tapering flue C is located at the rear of the receiving-chamber A, being in communication with the said receiving-chamber between the bottom and a point above the center. The flue may enter the chamber A at the central portion of its back or may be of any desired width, and the lower end of the tapering flue C is in direct communication with a fan-casing 13, which fan-casing is located at the bottom portion of the receiving-chamber A. The fan 14 may be of any desired construction, and the air is taken in through openings 15 in the side surfaces of the fan-casing, as shown in Fig. 1. The front of the chamber A is open except at its lower portion, which is closed by boards or plates 14^a, in which apertures 14^b are produced, and such construction serves to facilitate the passage of material to the flue C. The currents of air obtained by the use of the fan are directed across the bottom of the chamber A upward into the flue C, and said currents cause auxiliary currents of air to be directed to the flue, the auxiliary currents entering the chamber A through the apertures 14^b in the lower closed front portion of the said chamber, as is shown in Fig. 1.

A carrier D is provided to conduct the chaff into the receiving-chamber A. This carrier is constructed of belts 16 and slats 16^a, and said belts and slats are carried around suitable drums or pulleys located on a shaft 17, that passes through the upper portion of the receiving-chamber A, while the lower portion of the carrier passes over drums or pulleys mounted in bearings attached to the lower end of a carrier-frame in any approved manner. Thus when the attachment is applied to a threshing-machine the lower portion of

the chaff-carrier will be within the rear portion of the threshing-machine. The upper shaft 17 of the carrier is provided with a pulley 19, having a belt connection 20, with a suitable pulley mounted upon the fan-shaft, the pulley 19 being at one end of the shaft 17. The fan is run by direct belt connection with the separator or threshing-machine.

The tapering flue C is contracted at its upper end and is secured within the frame B, projected from the rear of the receiving-chamber A, and a platform 21 is erected upon the upper portion of the frame B, upon which platform an operator may stand. An opening 22 is made in said platform 21, as shown in Fig. 3, the said opening receiving the upper end of the tapering flue C. A series of friction-wheels 23 is mounted upon vertical spindles 24, arranged around the opening 22, and said wheels 23 are held above the platform 21 by washers 25 or their equivalents, each wheel being provided with marginal flanges 23^a. A ring bevel-gear 26 constitutes a foundation for a chute D', the chute being connected with the gear 26 by a telescopic elbow-section 27, enabling the chute to be raised or lowered, and the ring bevel-gear 26 is provided with an outer marginal flange 26^a, that enters between the flanges of the friction-wheels 23, engaging with the body portions of said wheels, as is particularly shown in Fig. 3. The body portion of the chute is designated as 28 and is best shown in Fig. 2. This body portion of the chute is provided with a hood 29, which hood is pivoted at the outlet end of the chute, and said hood is adapted to direct the straw and chaff to any desired point, as may be required in the proper formation of a stack.

The hood 29 is adjusted through the medium of a rod 30, pivotally attached to the hood and having its inner end provided with a rack-surface 31, adapted for engagement with a keeper 32, through which the said inner end of the adjusting-rod 30 is adapted to pass. The keeper 32 is attached to an upright 33, secured to the chute D' near the elbow-section thereof, the said upright extending as far as desired above the upper surface of the chute. The upright 33 is bifurcated at its upper end to form a guide for a rope, chain, or cable 34 to be attached to the upper portion of the chute D' near its delivery end, and the rope, cable, or chain 34 after passing the upright 33 is conducted to a drum 35, secured upon a shaft 36, as shown in Fig. 2, the said shaft being mounted to turn in suitably-braced arms 37, attached to the elbow-section of the chute and extending upwardly and forwardly therefrom. The shaft 36 is provided with a worm-wheel 38, engaged by a worm 39, said worm being operated by a hand-wheel 40. Thus it will be observed that through the medium of the rod 30 the hood 29 may be readily adjusted by a person standing on the platform 21, and also that

the chute may be raised or lowered by manipulating the worm 39. Furthermore, the operator on the platform 21 or an operator at one side of the machine may swing the chute to the right or to the left through the medium of the pinion 40^a, meshing with the bevel-gear 26, as shown in Fig. 2, the pinion being preferably attached to a shaft 41, that extends out beyond one side of the machine, having a suitable hand-wheel 42 at its outer extremity.

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

1. In a straw-stacker, a chamber, means for connecting said chamber with a threshing-machine, the chamber being provided with an inlet for straw at its upper end, facing the threshing-machine, a carrier for chaff extending into the receiving-chamber below its straw-inlet, a flue connected with said chamber between its bottom and the point where the chaff enters said chamber, a fan located at the bottom portion of said chamber, being arranged to direct currents of air into said flue and into said chamber where the chamber connects with the flue, whereby the current of air is beneath the falling straw and chaff and facilitates the entry of said material to the flue and the passage of the material out from the flue, and a chute arranged to receive the material from the flue, as set forth.

2. In a straw-stacker, a frame adapted for attachment to a threshing-machine, a body-section supported by the frame, containing a receiving-chamber having an opening at its upper end facing the threshing-machine and adapted for the admission of straw, a carrier extending from the lower front portion of the frame, entering said receiving-chamber at a point below its straw-receiving inlet, the carrier being provided with slats for the carrying of chaff, a fan located at the bottom portion of the receiving-chamber, said receiving-chamber being provided with apertures in its front wall between the carrier and fan, a flue connected with the receiving-chamber below the point where the carrier enters said chamber, said flue being arranged to receive currents of air from the fan, together with the straw and the chaff from the receiving-chamber, a delivery-chute adapted to receive material from the flue, and means for adjusting the delivery-chute and controlling the direction in which the material is to be delivered therefrom, as set forth.

3. In a straw-stacker, a frame provided with means for attachment to a threshing-machine, a receiving-chamber for chaff and straw supported by said frame, a carrier for chaff having one of its ends supported outside of said receiving-chamber, its other end being supported within said chamber at a point below the inlet for the straw, a flue connected with said chamber, the chaff and straw

entering the chamber mingling at a point
above the upper portion of the rear or inlet
end of the flue, a chute connected with said
flue, a fan arranged to draw air from the at-
5 mosphere outside of the attachment and di-
rect a current of air into said flue and cham-
ber beneath the material falling to the en-

trance of said flue, and an apertured wall for
said chamber, located between the carrier and
the fan, substantially as described.

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Witnesses:

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R. G. PRICE.