

No. 614,392.

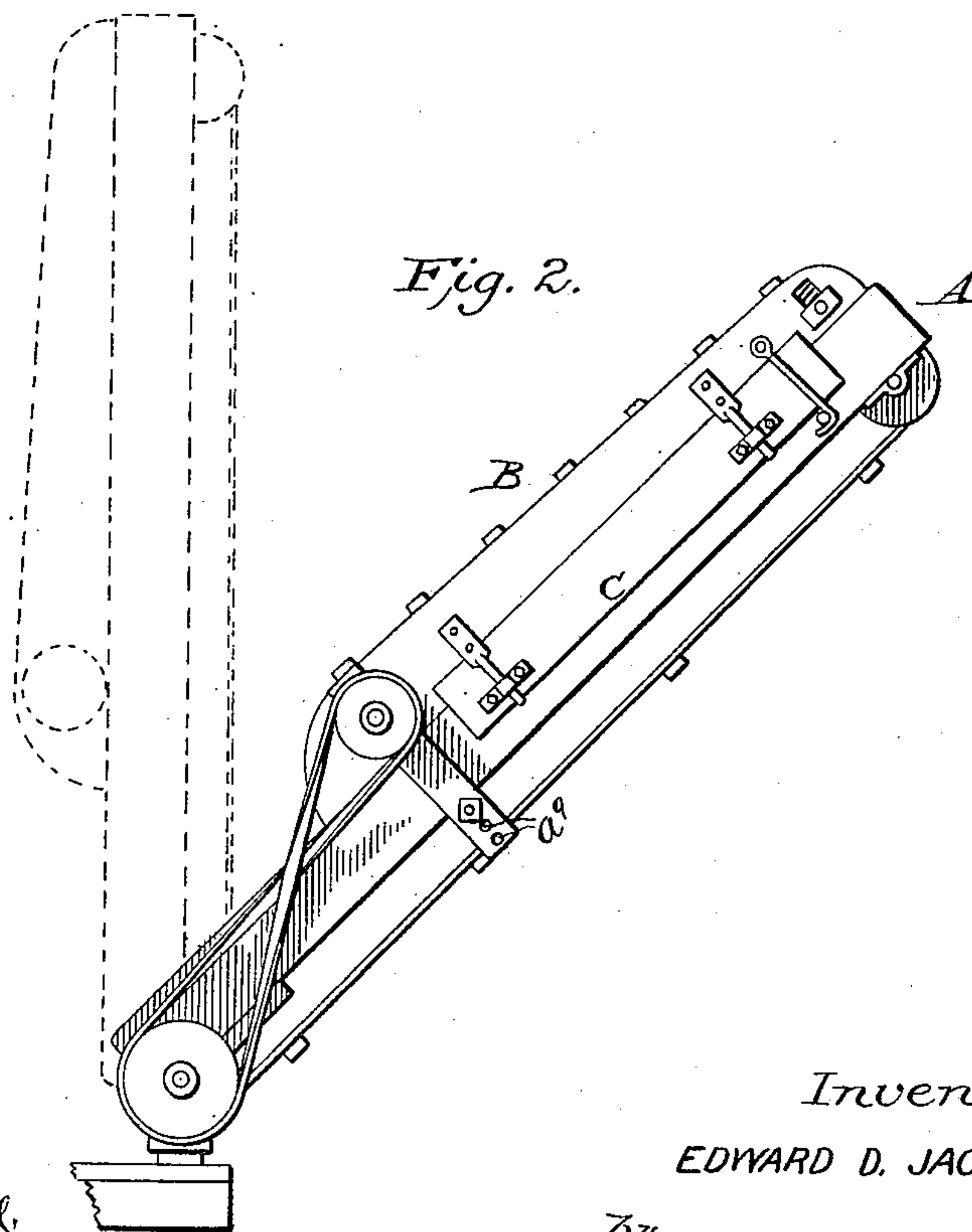
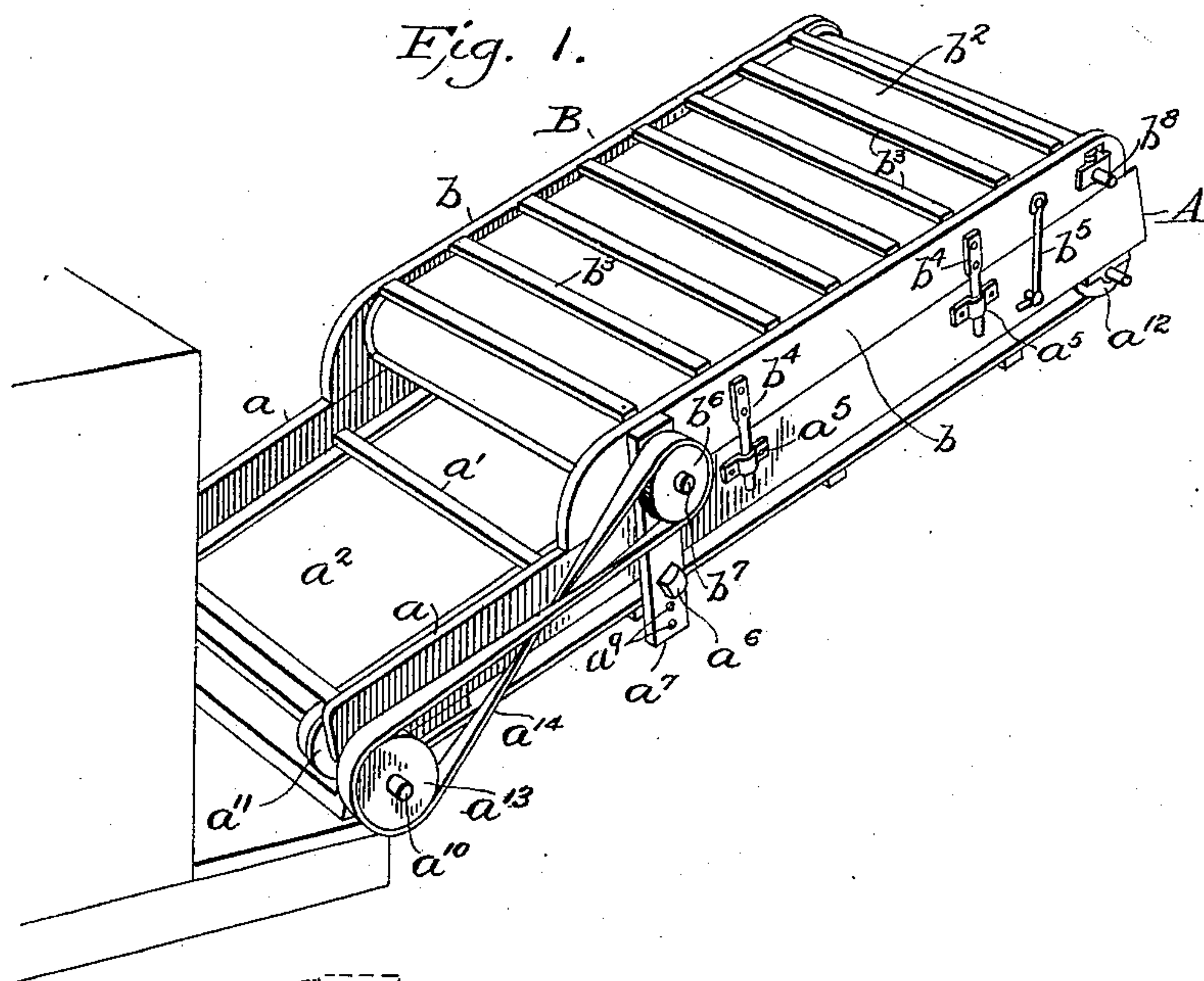
Patented Nov. 15, 1898.

E. D. JACOBS.
STRAW STACKER.

(Application filed Dec. 11, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 3.

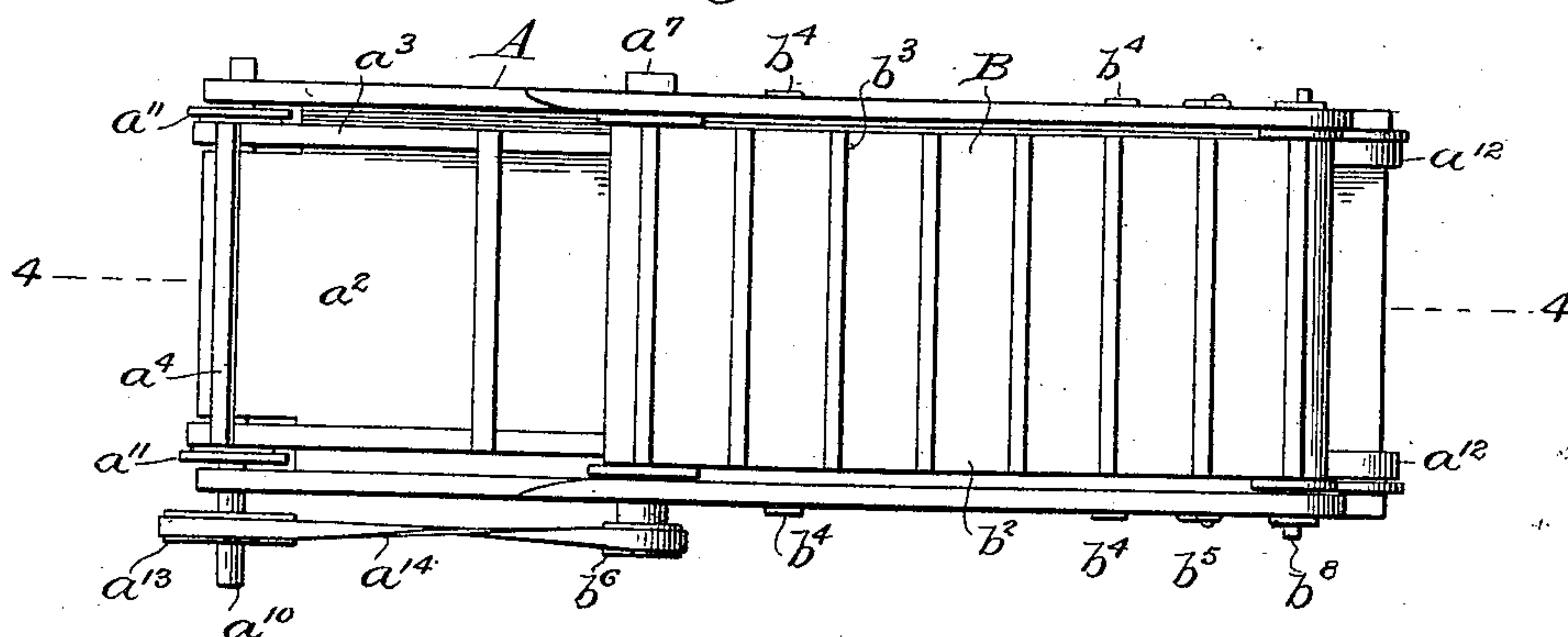


Fig. 4.

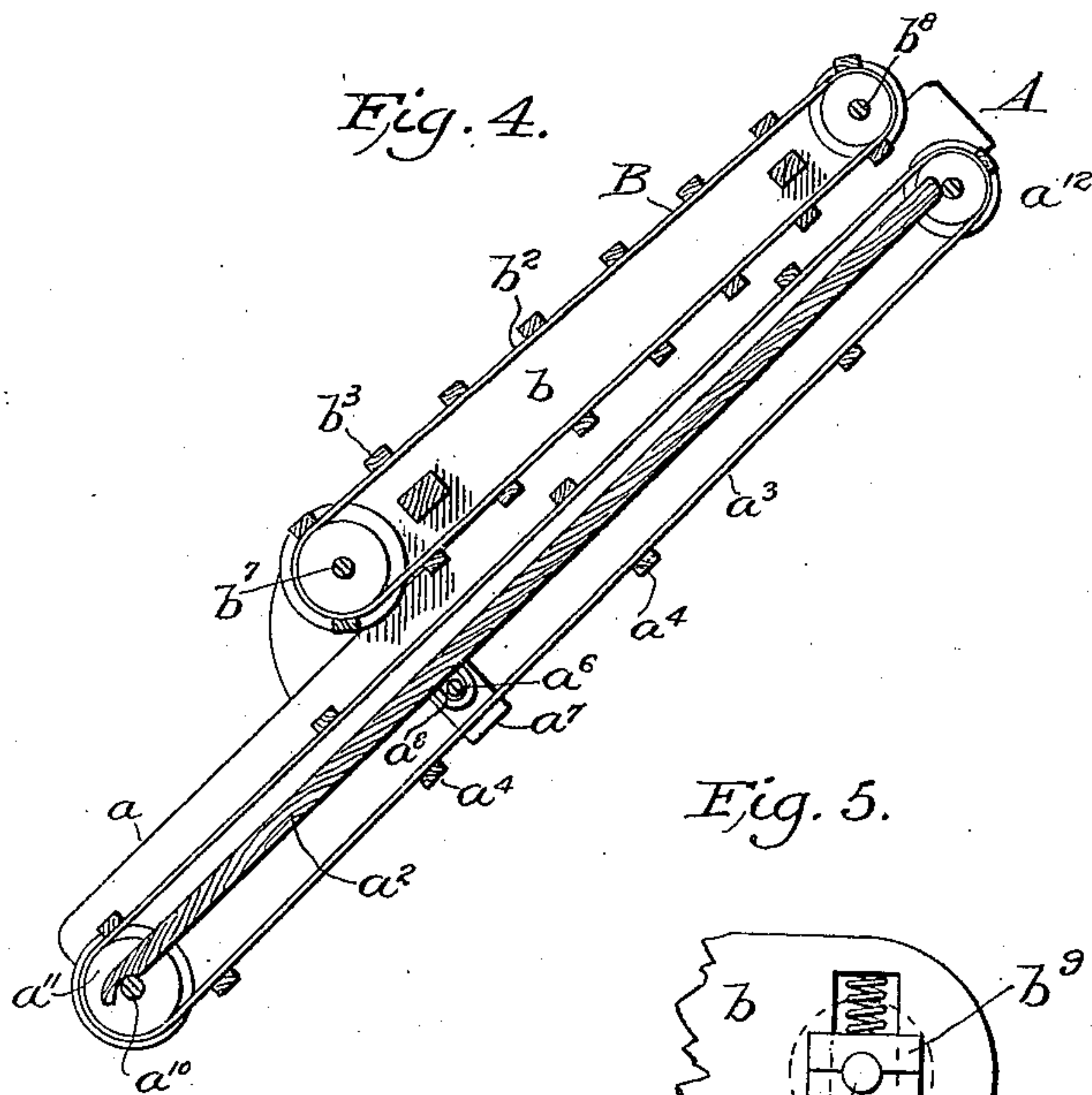
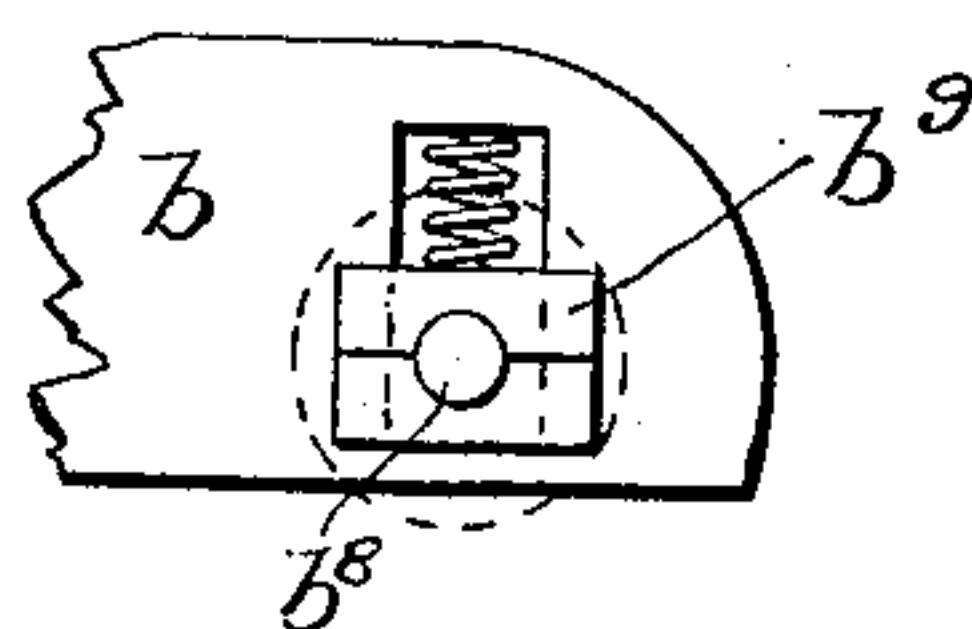


Fig. 5.



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UNITED STATES PATENT OFFICE.

EDWARD DANIEL JACOBS, OF MANCHESTER, PENNSYLVANIA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 614,392, dated November 15, 1898.

Application filed December 11, 1897. Serial No. 661,543. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DANIEL JACOBS, a citizen of the United States, residing at Manchester, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Straw-Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to straw-stackers.

The object is to provide a conveyer of such construction that the same may be elevated to any angle from one approximately horizontal to one approximately vertical and which will operate at all angles of adjustment with efficiency, readiness, and ease to convey straw from the thresher to the place of deposit; furthermore, to provide means in connection with the conveyer for preventing escape of chaff, dirt, or the like from the conveyer; furthermore, to provide means by which the conveyer will automatically adjust itself to varying bulks of straw, thereby preventing damage to the conveyer-belt, and, finally, to provide a conveyer which shall be simple of construction, efficient and durable in use, and which will be adapted for connection with ordinary forms of threshers without necessitating any change in the structural arrangement of the latter.

The invention consists in the novel construction and combination of parts of a conveyer, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate corresponding parts, I have illustrated a form of embodiment of my invention, it being understood that other forms of embodiment may be employed without departing from the spirit of the same, and in the drawings—

Figure 1 is a view in perspective, showing the conveyer in position with relation to a thresher. Fig. 2 is a view in side elevation, showing the normal or operative position of the conveyer in full lines and its highest adjusted position in dotted lines. Fig. 3 is a view in plan of the conveyer. Fig. 4 is a view in longitudinal section, taken on the line 4 4,

Fig. 3; and Fig. 5 is an enlarged detail view showing a form of spring-boxing for the forward shaft of the supplemental conveyer.

Referring to the drawings, A designates a conveyer suitably connected with a thresher, the conveyer comprising side pieces a , a flooring a^2 , and an endless conveyer-belt a^3 . As these parts may be of any approved construction, a detailed description thereof is deemed unnecessary.

Mounted upon the conveyer-frame is a supplemental conveyer-frame B, comprising side pieces b and an endless conveyer-belt b^2 , in this instance made of flexible material—such as canvas, cotton, or the like—and carrying the usual bars or slats b^3 . The conveyer-belt a^3 is here shown as constructed of two endless straps or ropes carrying bars a^4 ; but it is to be understood that, if desired, this conveyer may also be made of a sheet of flexible material, such as canvas, cotton, or the like.

The supplemental conveyer B is shorter than the main conveyer and is held in place with relation to the conveyer A in this instance by bolts b^4 , rigidly secured to the supplemental conveyer-frame and engaging keepers or staples a^5 on the sides a of the main conveyer, an ordinary hook, as b^5 , being employed for keeping the two conveyer-frames assembled at their forward portions as against accidental separation due to pressure of the straw being fed through the conveyer, the rear portions of the two frame being held together by a rod a^6 , which passes through hangers a^7 and through staples or keepers a^8 on the under side of the conveyer A, as will be understood by reference to Fig. 1.

These hangers are provided with a plurality of openings a^9 , by which arrangement the space between the two conveyer-belts may be increased, as by removing the rod from one set of openings in the hangers a^7 and inserting them in another set of openings below the first set the conveyers will be moved apart the requisite distance. The conveyer-belt a^3 is driven in this instance by a shaft a^{10} , connected with a suitable source of power, (not shown,) the shaft being provided with the usual sheaves a^{11} , around which the conveyer a^3 passes to and around similar sheaves a^{12} at the forward end of the conveyer A, as usual. The shaft a^{10} carries a pulley or sheave a^{13} ,

around which passes a belt a^{14} to and around a pulley or sheave b^6 , carried by the supplemental conveyer-belt shaft b^7 of the conveyer B, the belt a^{14} being crossed, as shown in Fig. 1, in order that the two shafts b^7 and a^{10} may rotate in opposite directions, so that the opposed faces of the two conveyer-belts may both run in the same direction. The forward shaft b^8 of the conveyer B is mounted in spring-pressed journal-boxes b^9 , (clearly shown in Fig. 5,) by which arrangement the shaft b^8 will be allowed to yield, so as automatically to adjust itself to varying thicknesses of bulk in the discharge of the grain. The diameter of the sheave b^6 is so proportioned with relation to the diameter of the sheave a^{13} that the speed of the sheave b^6 shall be about one-third faster than that of the sheave a^{13} , this difference in size of the two driven sheaves giving a corresponding increase in the speed of the respective conveyer-belts—that is to say, the supplemental conveyer-belt will travel one-third faster than the main conveyer-belt. The object of this arrangement is to prevent any choking of the conveyer, as if a bulk of straw passes up the conveyer and it is of such size as of itself to tend to clog the inlet-space between the two conveyers the upper conveyer-belt will sweep away from the top of the mass of straw the quantity that would serve to choke the conveyer, so that it will be impossible ever to choke this conveyer. In order, further, to effect this rapid operation of the upper conveyer-belt, the slats on the upper conveyer are closer together than those of the lower conveyer, in this instance being spaced about one-half as far apart as those of the lower conveyer. In addition to its function of preventing choking of the conveyer the upper conveyer will tend to discharge the straw outward from the forward end of the conveyer some distance into the air instead of letting it drop down immediately off the end of the conveyer, and this will be found highly advantageous, as it will prevent any accumulation of straw immediately contiguous to the discharge-mouth of the conveyer.

As before stated, the upper conveyer-belt constitutes, in effect, an apron which will effectually prevent any escape of chaff or small broken straw from the conveyer when the

same is moved to the position indicated by dotted lines in Fig. 2 in addition to its function of preventing the straw from falling back to the rear portion of the conveyer.

Where the conveyer-frames are separated for the purpose of increasing the space between the two conveyer-belts, as described, there might be a tendency for chaff or short straw to escape between the sides a and b of the conveyer-frames, and to obviate this I provide a covering for the meeting edges of the two frames, which may be a piece of sheet metal, as shown at C in Fig. 2, or may be a piece of cloth or canvas secured over the two frames at this point.

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

1. The combination with a conveyer, of a combined shield and supplemental conveyer arranged over the conveyer proper, and means for driving the belt of the supplemental conveyer at a higher rate of speed than that of the conveyer proper, substantially as described.

2. In a straw-stacker, the combination with the conveyer proper, of a combined shield and supplemental conveyer arranged over the conveyer proper, means for driving the belt of the supplemental conveyer at a higher rate of speed than that of the conveyer proper, and means for preventing escape of material between the meeting edges of the two conveyer-frames, substantially as described.

3. The combination with a conveyer, of a combined shield and supplemental conveyer arranged over the conveyer proper, means for permitting the conveyer-belt shaft at the discharge end of the supplemental conveyer to yield, thereby to adjust the conveyer to varying thicknesses of bulk in the discharge of straw, and means for driving the belt of the supplemental conveyer at a higher rate of speed than that of the conveyer proper, substantially as described.

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

EDWARD DANIEL JACOBS.

Witnesses:

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