No. 683,997. Patented Oct. 8, 1901.

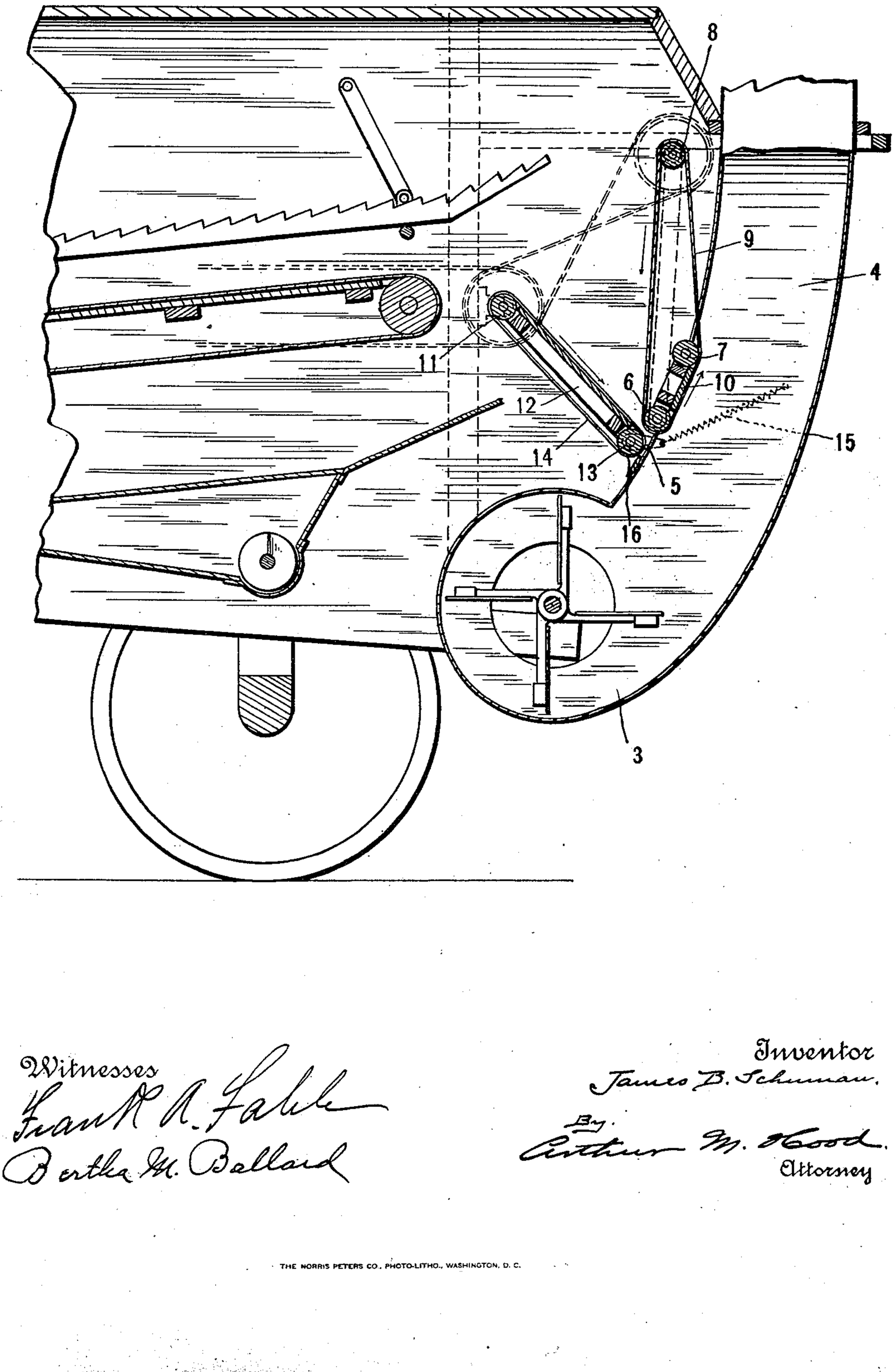
J. B. SCHUMAN.

PNEUMATIC STACKER.

(Application filed Dec. 19, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1



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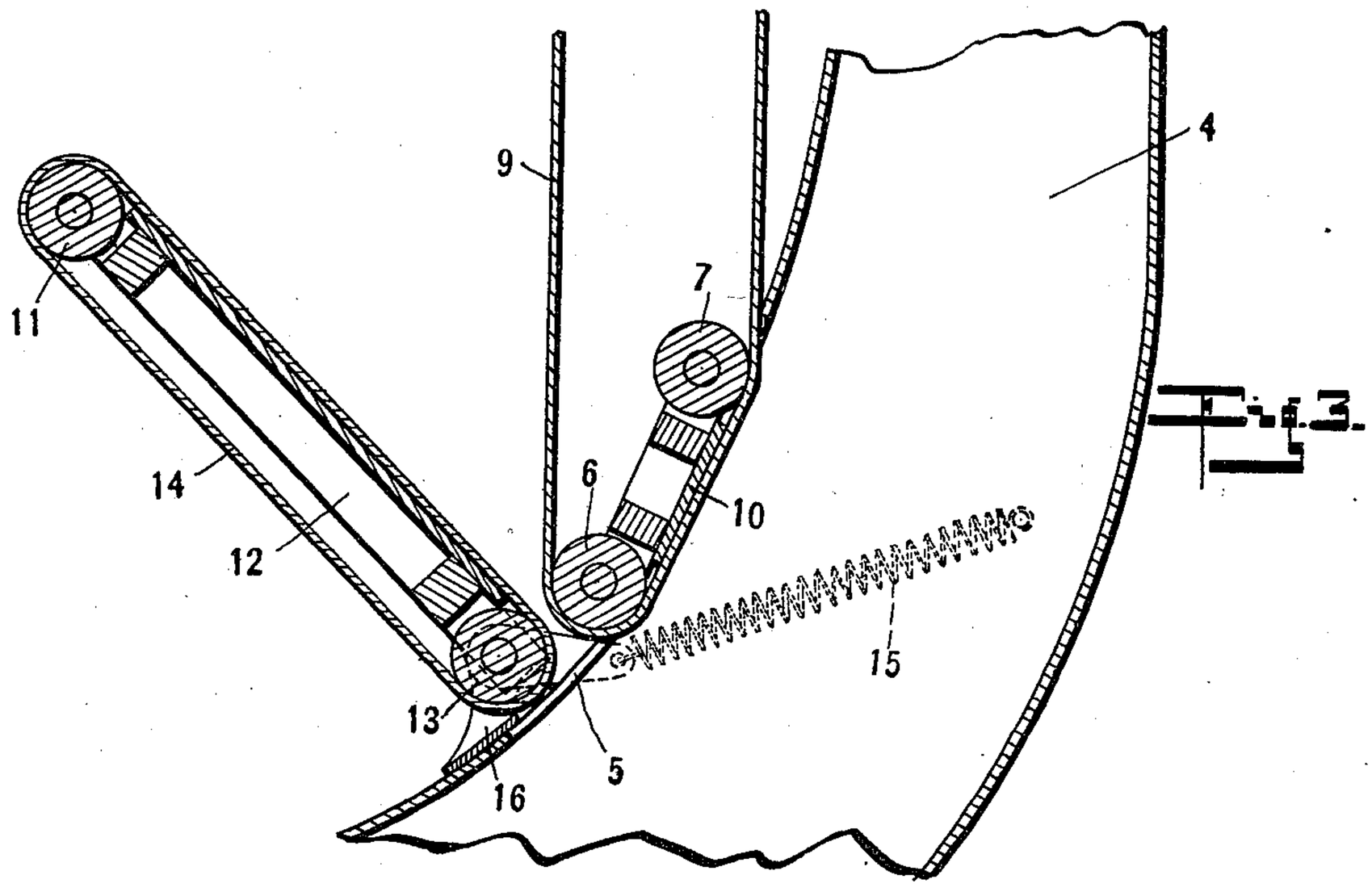
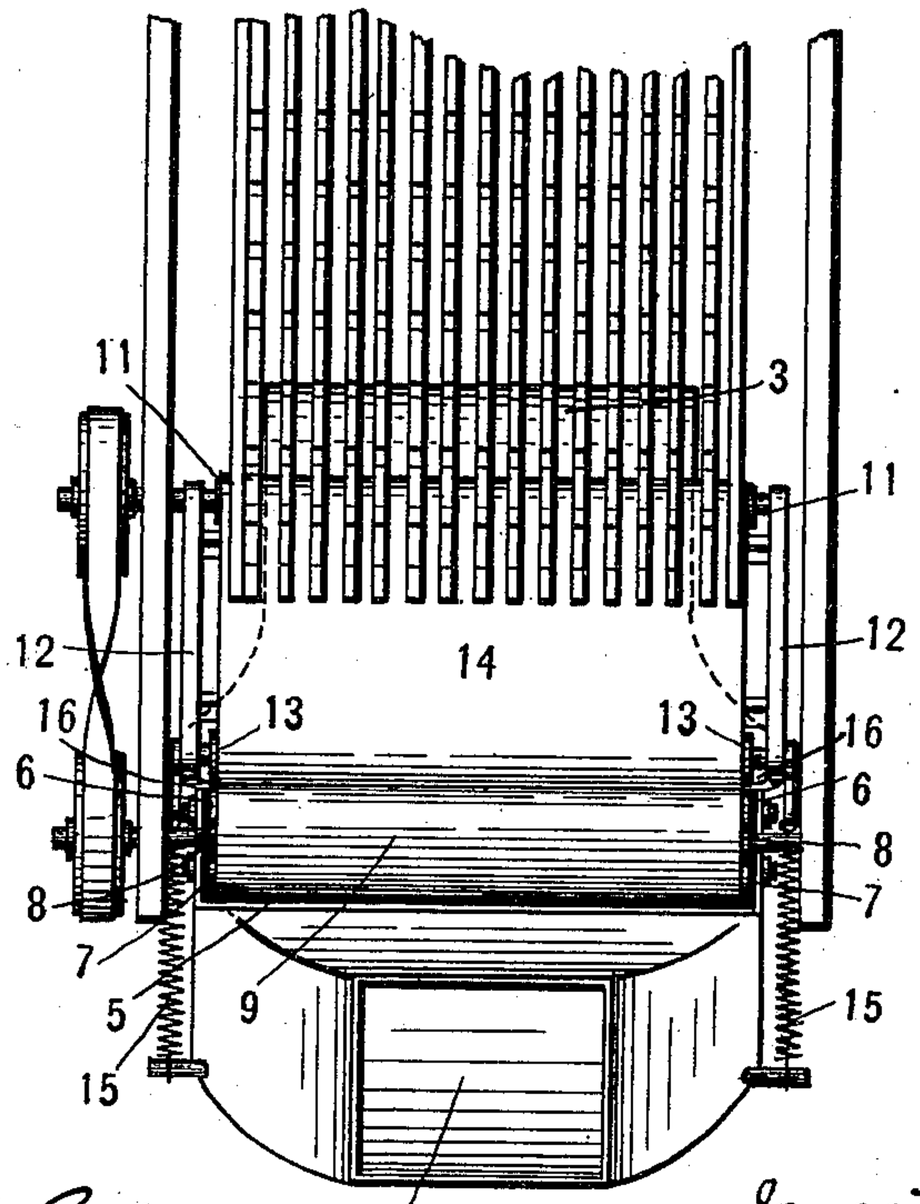


Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES B. SCHUMAN, OF COLUMBIA CITY, INDIANA, ASSIGNOR OF THREE-FOURTHS TO AUGUSTIN BOICE, OF INDIANAPOLIS, INDIANA.

PNEUMATIC STACKER.

SPECIFICATION forming part of Letters Patent No. 683,997, dated October 8, 1901.

Application filed December 19, 1900. Serial No. 40,354. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. SCHUMAN, a citizen of the United States, residing at Columbia City, in the county of Whitley and State of Indiana, have invented a new and useful Pneumatic Stacker, of which the following is a specification.

My invention relates to an improvement in means for introducing straw into a pneumatic stacker-tube from a separator.

The accompanying drawings illustrate my invention.

Figure 1 is a longitudinal vertical section. Fig. 2 is a sectional plan. Fig. 3 is an enlarged vertical section of parts shown in Fig. 1.

In the drawings, 3 indicates a fan and fan-casing of any desired form, and 4 indicates the discharge-tube leading therefrom. Formed through the rear wall of tube 4 in front of fan 3 is an opening 5, through which the straw is to be inserted. Mounted adjacent perforation 5 are two rollers 6 and 7, which extend substantially the entire width of spout 4. Located above rollers 6 and 7 is a roller 8, and extended over the three rollers is an endless belt 9. That portion of the belt 9 extending between roller 8 and roller 6 is substantially vertical, while that portion extending between rollers 6 and 7 lies just within spout 4 and extends parallel or substantially parallel with the axis thereof. This portion of the belt 9 is supported by a platform 10, which extends between rollers 6 and 7.

To the rear of belt 9 and at some distance therefrom I provide a roller 11, upon the shaft of which is pivoted a frame 12, which carries at its free end a roller 13. Extended over rollers 11 and 13 is an endless belt 14. Frame 12 is arranged to swing upon the shaft of roller 11, and the roller 13 thereof is normally but yieldingly maintained close to roller 6 by means of springs 15. Secured to frame 12 so as to move adjacent the lower end of opening 5 is a shield 16, which operates to keep closed that portion of opening 5 between roller 13 and fan 3.

In operation belts 9 and 14 are arranged immediately forward of the separating means of a separator in such position that the straw therefrom will be discharged into the V-shaped hopper formed by the two belts, and said belts are driven so that their adjacent portions will move in the same direction toward opening 5, that portion of belt 9 lying within the discharge-spout 4 also moving away from fan 3 and in the direction of discharge through spout 4. Springs 15 yield so as to regulate the size of opening between the two rollers 6 and 13, according to the amount of straw passing therebetween. As the straw enters or is forced through opening 5 into spout 4 the blast from the fan 3 turns the inserted ends upward and back against that portion of belt 9 within the spout. Said portion, however, is moving in the same line as the blast, so that it supports the straw and prevents the formation of any eddies immediately adjacent opening 5. By this means the inserted straw is maintained in the direction of the blast and prevented from being doubled upon itself, so as to choke the discharge-spout.

I claim as my invention—

1. In a pneumatic stacker, the combination with a fan, and discharge-spout leading therefrom, of a feed-belt leading into said spout in front of the fan, and means for driving that portion of the belt lying within the spout in the direction of blast.

2. In a pneumatic stacker, the combination with a fan, and discharge-spout leading therefrom, of a pair of feed-belts leading into said spout in front of the fan, and means for supporting the forward belt so as to cause that portion within the spout to move substantially parallel to the direction of the blast.

3. In a pneumatic stacker, the combination with a fan, and a discharge-spout having an opening leading into said spout in front of the fan, of a pair of rollers mounted adjacent said opening, a belt passing around said rollers and having a portion thereof lying within the spout, means for moving said belt so as to drive said portion in the direction of blast, a second belt mounted upon a swinging frame, adjacent the first belt, and yielding means for maintaining the free end of said frame adjacent one of said rollers.

4. In a pneumatic stacker, the combination with a fan, and a discharge-spout having an opening 5 leading into said spout in front of said fan, of a pair of rollers 6 and 7 mounted

adjacent said opening, a roller 8, a belt 9, passing around said three rollers and having that portion between rollers 6 and 7 lying within said spout 4, a roller 11, a frame 12 pivotally mounted thereon, a roller 13 carried by the free end of said frame, a belt passing around said rollers 11 and 13, means for yieldingly holding roller 13 adjacent roller 6, and a shield 16 carried by frame 12 adjacent opening 5, substantially as and for the purpose set forth.

JAMES B. SCHUMAN.

Witnesses:
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