

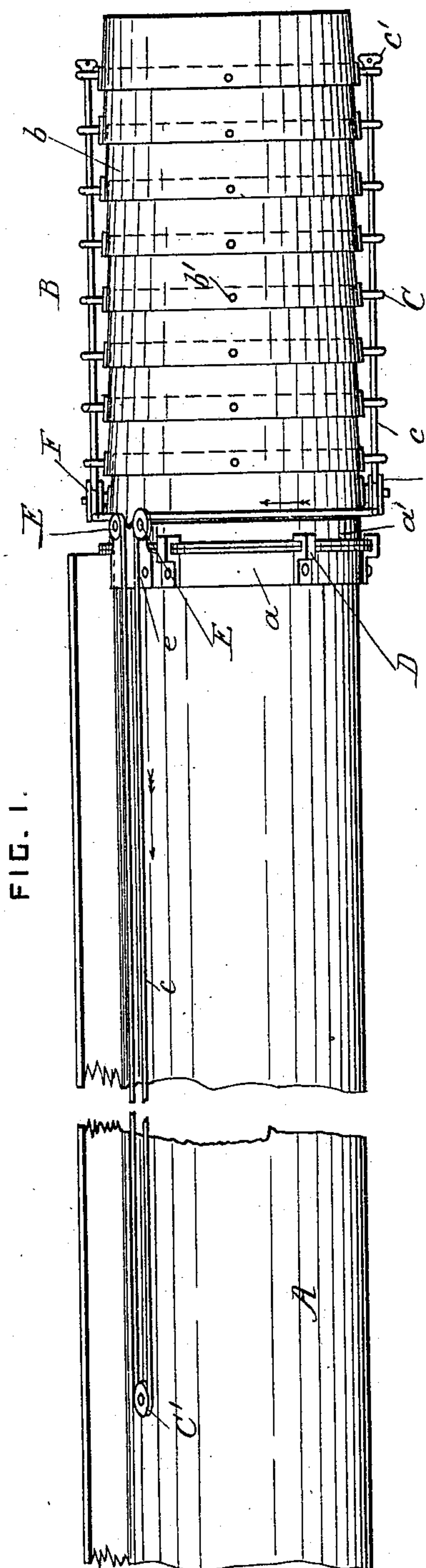
(No Model.)

A. E. PRICE.

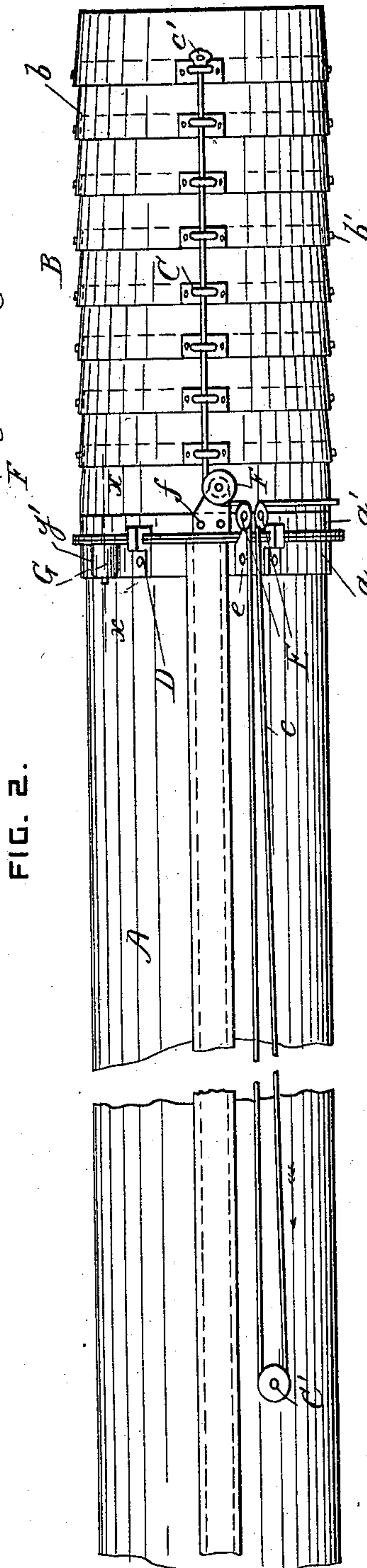
DEFLECTOR PIPE FOR PNEUMATIC STRAW STACKERS.

No. 557,020.

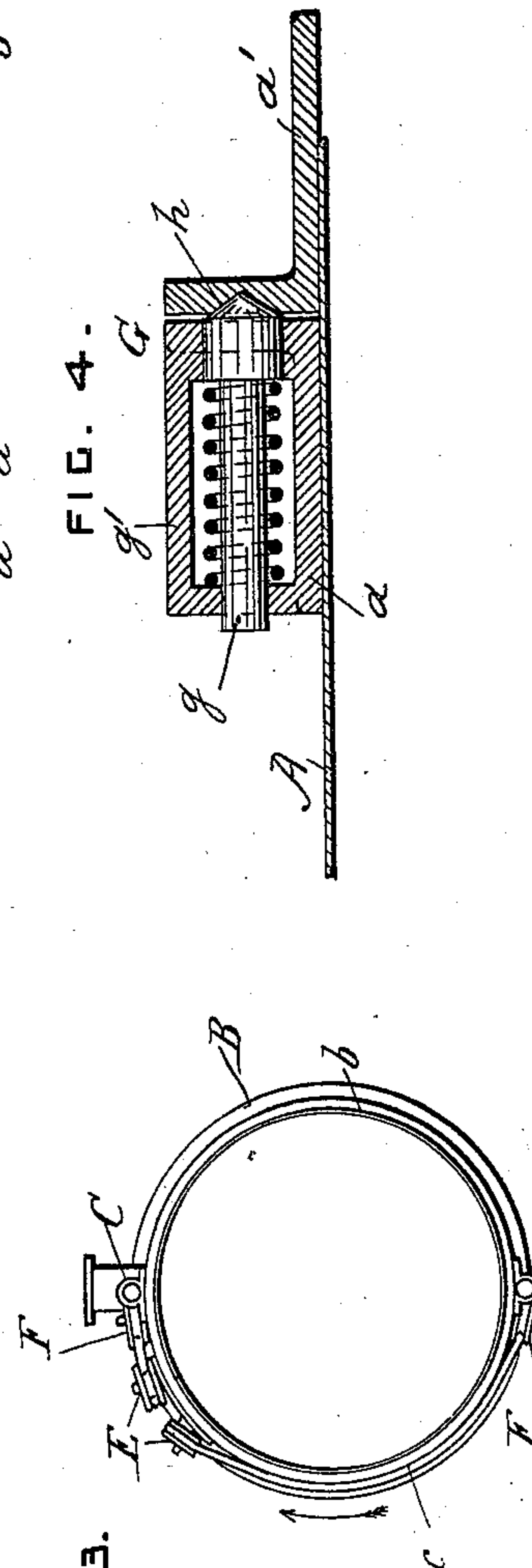
Patented Mar. 24, 1896.



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Witnesses.

Witnesses
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Inventor

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UNITED STATES PATENT OFFICE.

ABRAHAM E. PRICE, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR TO
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DEFLECTOR-PIPE FOR PNEUMATIC STRAW-STACKERS.

SPECIFICATION forming part of Letters Patent No. 557,020, dated March 24, 1896.

Application filed August 9, 1895. Serial No. 558,709. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM E. PRICE, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Deflector-Pipes for Pneumatic 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 deflectors such as used on the discharge-pipes of pneumatic straw-stackers; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of the deflector-pipe. Fig. 2 is a plan view of the same. Fig. 3 is an end view of the deflector-pipe. Fig. 4 is a section taken on the line *x x* in Fig. 2.

A is a portion of the discharge-pipe of a pneumatic straw-stacker of any approved construction.

B is a deflector or deflector-pipe connected to the discharge-pipe and operating to direct the straw onto the stack. This deflector is formed of articulated conical segments *b* pivotally connected together at opposite sides by the pins *b'*.

C are eyes secured to the segments, and *c* is an endless flexible connection, such as a cord or chain, which passes through the said eyes and is provided with buttons *c'* or is otherwise operatively connected to the eyes on the end segment. The lower part of the cord *c* is supported and kept taut by any approved devices for that purpose. In the drawings a sheave C' is shown supported from the lower part of the discharge-pipe for that purpose. The deflector is operated by pulling the cord *c* or by revolving the sheave C' or other similar device which carries the cord. This deflector is specially intended for use on straw-stackers which have telescopic discharge-pipes; but it may also be used on discharge-pipes which are not telescopic. When used on a telescopic discharge-pipe, the cord *c* is preferably supported and actuated as fully

shown and described in my application for Letters Patent, Serial No. 546,512, filed April 20, 1895.

When the discharge-pipe A is telescopic, it cannot be revolved upon its axis except by expensive and complicated mechanism, and as the deflector-pipe moves in a vertical plane only when secured to the discharge-pipe the straw cannot be discharged sidewise at an angle when the discharge-pipe is not revoluble. In order to overcome this difficulty the deflector-pipe is made revoluble upon the axis of the discharge-pipe, and the discharge-pipe is not revoluble. The deflector-pipe is revolvably connected to the discharge-pipe in any approved manner. An angle-shaped ring *a* is secured to the discharge-pipe and an angle-shaped ring *a'* is secured to the deflector-pipe. D are hook-shaped clips secured to the ring *a* and engaging with the flanges of the two said rings.

E are two guide-sheaves carried by a bracket *e*, which is secured to the ring *a*. These sheaves are preferably arranged at the top of the discharge-pipe and a little to one side of its center.

F are two guide-sheaves carried by brackets *f*, which are secured to the ring *a'* and are preferably arranged one upon each side of the deflector-pipe.

The operating-cord *c* passes over the sheaves E and F, as shown in the drawings.

G is a friction catch or brake of approved construction for preventing the deflector-pipe from revolving too freely. This catch preferably consists of a spring-pressed bolt *g* provided with a conical head and carried in a socket *g'* on the ring *a*. The head of this bolt engages with a conical hole *h* in the face of the ring *a'* and prevents the deflector-pipe from revolving unless sufficient force is used to retract the bolt. As many similar holes *h* as desired may be formed in the ring *a'*.

The drawings show the deflector-pipe in its normal position on the discharge-pipe. The straw can be discharged at any desired angle in a vertical plane by pulling the cord *c*. When it is desired to discharge the straw sidewise at an angle, the deflector-pipe is first bent around to its full extent and the

cord *c* is pulled upon with increased force. This causes the deflector-pipe to revolve on the axis of the discharge-pipe against the resistance of the friction catch or brake *G*.

5 When the deflector-pipe has been revolved to the desired position the cord *c* can be pulled in the reverse direction to operate the segments of the deflector-pipe the same as if they were movable in a vertical plane.

10 The deflector-pipe can be revolved for nearly a full revolution and is revolved in the reverse direction to restore it to its original position. The sheaves *E* prevent the deflector-pipe from being revolved for a full
15 revolution, but as these sheaves are on top of the pipe and it is not often requisite to discharge the straw in an upward direction it is practically of no consequence that the straw cannot be thrown upward where the
20 said sheaves are located.

What I claim is—

1. The combination, with a non-revoluble discharge-pipe, of a revoluble and flexible deflector at the upper end of the said pipe,
25 and a single operating device—such as a cord running on guide-sheaves—affording a means both for bending and revolving the said deflector, substantially as set forth.

30 2. The combination, with a discharge-pipe, of a revoluble deflector formed of articulated segments connected by pivots at their sides, and a single operating device, such as a flexible connection, attached to the deflector be-

tween the said pivots and operating to bend and revolve it, substantially as set forth. 35

3. The combination, with a discharge-pipe, and guide-sheaves supported at its upper end; of a revoluble deflector formed of articulated segments, guide-sheaves carried by the said deflector at its sides, and a flexible
40 connection passing over the said guide-sheaves and operating to bend and revolve the deflector, substantially as set forth.

4. The combination, with a discharge-pipe, and a revoluble deflector; of a spring-actuated bolt carried by one of the said parts
45 and engaging with conical holes formed in the other said part, said bolt operating as a friction-brake to prevent the deflector from revolving until sufficient force has been ex-
50 erted to retract the bolt, substantially as set forth.

5. The combination, with a non-revoluble discharge-pipe, and an angle-shaped ring secured on its upper end portion; of a revoluble
55 deflector-pipe provided with an angle-shaped ring bearing against the aforesaid ring, and means for supporting the deflector and permitting it to revolve upon the axis of the discharge-pipe, substantially as set forth. 60

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

ABRAHAM E. PRICE.

Witnesses:

ALF. N. RUSSELL,
WM. WALLACE.