

(No Model.)

A. E. PRICE.
PNEUMATIC STRAW STACKER.

No. 576,740.

Patented Feb. 9, 1897.

FIG. 1.

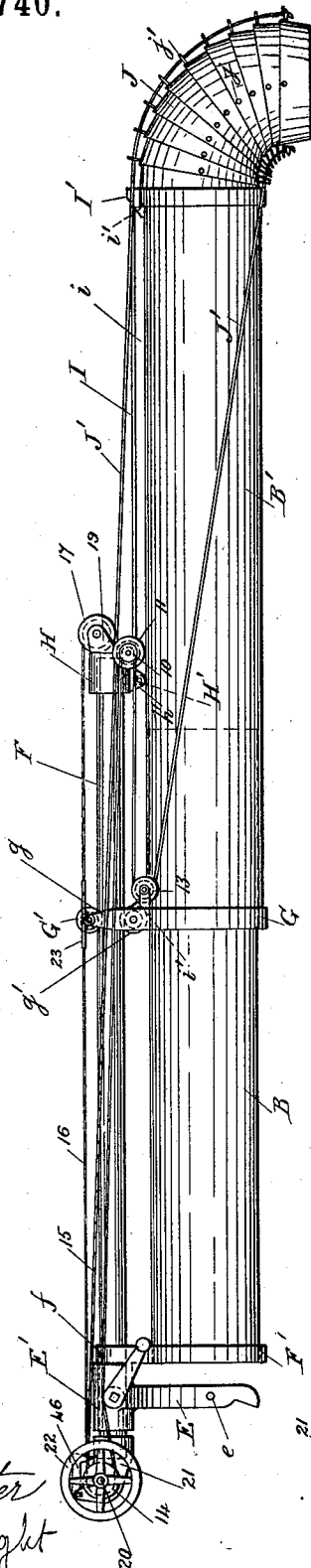


FIG. 2.

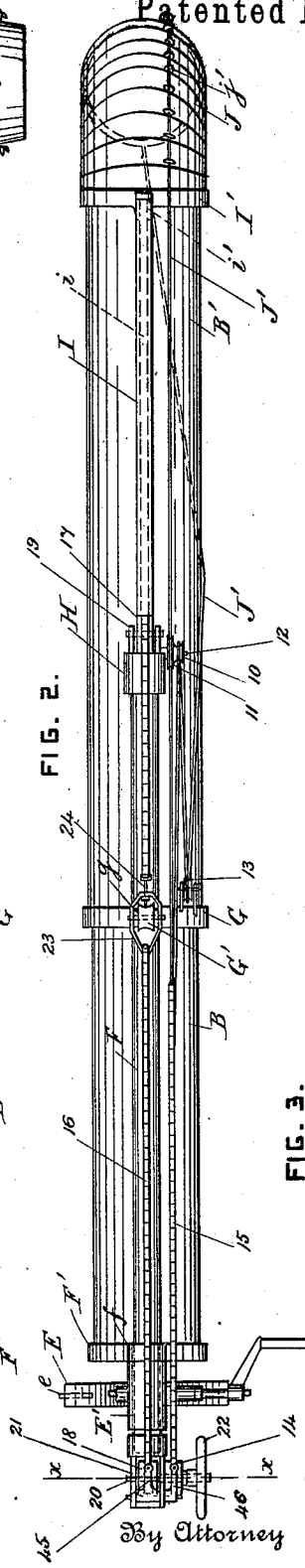
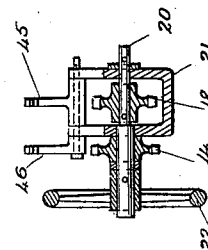


FIG. 3.



Witnesses

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PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 576,740, dated February 9, 1897.

Application filed April 20, 1895. Serial No. 546,512. (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 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 pneumatic straw-stackers, and more particularly to the means for operating the deflector-pipe on the end of the discharge-pipe when the said discharge-pipe is made telescopic.

This invention 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 a straw-stacker discharge-pipe provided with a deflector-pipe and means for operating it according to this invention. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section taken on line *xx* in Fig. 2.

B is the discharge-pipe, provided with an outer slidable section B'.

F is a support, preferably tubular, which is secured in the socket E' of a forked bracket E by suitable clamping-bolts, and which extends parallel with the inner pipe-section to a point a little beyond its end.

F' is a ring secured to the lower end portion of the pipe-section B and provided with a socket *f*, which is clamped to the support F close in front of the socket E'.

The forked bracket E is provided with pins *e* for pivoting it and the discharge-pipe to a supporting-base of any approved construction.

G is a ring secured to the lower end portion of the outer pipe-section B' and provided with arms *g*, which extend upwardly around and above the support F.

G' is a roller journaled between the arms *g* above the support F, and *g'* is a roller journaled between the said arms under the support F.

H is a cap clamped to the upper end of the support F and provided with downwardly-projecting arms *h'*.

H' are rollers journaled on pins projecting

laterally from the arms *h'*, the rollers being arranged between the said arms.

I is a plate secured parallel with the outer pipe-section B' by means of the distance-piece *i* and suitable rivets or bolts. The distance-piece *i* is preferably of wood, and the edges of the plate I project over it on each side and engage with the rollers H'.

I' is a strengthening-ring secured to the upper end portion of the pipe-section B'. The rings I' and G both have pockets *i'* for receiving the ends of the distance-piece *i* and helping to secure it in position.

J is the deflector-pipe, secured to the upper end portion of the pipe-section B'. This deflector-pipe is preferably formed of articulated segments pivotally connected to each other at their sides by the pins *j*. The segments are provided with eyes *j'* on their upper and lower sides.

J' are cords or their equivalents, such as wire ropes or chains, for operating the deflector. These cords pass through the eyes and are secured to the eyes of the outer segment.

Guide-sheaves 10 and 11 are journaled on a pin 12, projecting laterally from one side of the cap H, and 13 is a guide-sheave carried by the ring G. A sheave 14 is supported at the lower end of the discharge-pipe and is preferably a chain-sheave. A drive-chain 15 engages with the sheave 14.

The lower cord J' passes around the sheaves 13 and 10 and has its end secured to the lower part of the drive-chain 15. The upper cord J' passes over the guide-sheave 11 and has its end secured to the upper part of the chain 15. It is obvious that the cords J' and chain 15 constitute a single continuous flexible connection passing around and over the sheaves 13, 10, 14, and 11, and having its ends secured to the deflector-pipe, as shown.

The deflector-pipe can be operated by pulling any part of either of the cords J' or the chain 15, irrespective of the position of the upper pipe-section, as the flexible connection, consisting of the said cords and chain, remains substantially at the same tension, whether the upper pipe-section is in or out.

For the purpose of telescoping the outer pipe-section B' an endless flexible connection, such as the drive-chain 16, is provided. The

lower part of the chain 16 is passed through the tubular support F and its ends are carried by the sheaves 17 and 18. The sheave 17 is journaled between the arms 19, projecting from the cap H, and the sheave 18 is secured on the shaft 20, which is journaled in the bracket 21, secured to the lower end of the support F.

A hand-wheel 22 is secured on the shaft 20 for operating the drive-chain 16. The upper part of the chain 16 is securely connected with the pipe-section B' by means of the yoke 23, which is coupled to the arms g of the ring G, and the screw-threaded bolt 24, which serves to take up the slack of the chain as it becomes worn and stretched.

A hooked catch 45 is pivoted to the bracket 21 and is dropped into engagement with the drive-chain 16 after the discharge-pipe has been telescoped to the required extent to prevent the pipe-section B' from slipping. A similar hooked catch 46 is pivoted to the bracket 21 and engages with the drive-chain 15 and supports the deflector-pipe. When the catch 46 is raised, the deflector-pipe drops to its position of greatest curvature by gravity.

The two chain-sheaves 14 and 18 are preferably both carried by the shaft 20, and the chain-sheave 14 is journaled loose on the said shaft. The two chain-sheaves 14 and 18 may be of the same or of different diameters.

The angle of the deflector-pipe may be changed by raising the catch 46 and pulling the chain 15 without disturbing the chain 16.

In telescoping the discharge-pipe both catches are raised and the deflector-pipe is permitted to fall forward by gravity until the telescoping has been effected. The deflector-pipe is then reset to the required angle.

I am aware of the invention of Gustaf A. Anderson in pneumatic straw-stackers, for which an application for Letters Patent is filed bearing the same date as this application, and I do not claim anything claimed therein by him.

What I claim is—

1. In a straw-stacker, the combination, with a telescopic discharge-pipe, and a deflector at its upper end; of a guide-sheave carried by the slidable pipe-section, two guide-

sheaves supported from the non-slidable pipe-section one above and the other below the aforesaid guide-sheave, and a single flexible connection passing over all the said guide-sheaves and having its ends operatively connected with the deflector, whereby the slidable pipe-section may be slid in or out without changing the position of the deflector, substantially as set forth.

2. In a straw-stacker, the combination, with a telescopic discharge-pipe, and a deflector-pipe at its outer end; of guide-sheaves carried by the stationary and slidable pipe-sections; a flexible connection having its ends attached to the upper and under sides of the deflector-pipe and supported by the said guide-sheaves at a substantially uniform tension; and a catch for engaging with the said flexible connection and sustaining the said deflector-pipe, substantially as set forth.

3. In a straw-stacker, the combination, with a telescopic discharge-pipe, and a deflector-pipe at its outer end; of guide-sheaves carried by the stationary and slidable pipe-sections; and a flexible connection partly formed of drive-chain, having its ends attached to the upper and under sides of the deflector-pipe and supported by the said guide-sheaves at a substantially uniform tension; and a pivoted hooked catch for engaging with the links of the said drive-chain and thereby sustaining the said deflector-pipe, substantially as set forth.

4. In a straw-stacker, the combination, with a discharge-pipe, and a deflector at its outer end; of the support secured parallel to the inner pipe-section and projecting beyond its upper end, guide-sheaves carried by the lower end portion of the slidable pipe-section and by the respective ends of the said support; and a single flexible connection having its ends operatively connected with the said deflector and passing around the said sheaves, substantially as set forth.

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

ABRAHAM E. PRICE.

Witnesses:

GEO. B. BEAVER,
ALICE C. SHEARER.