

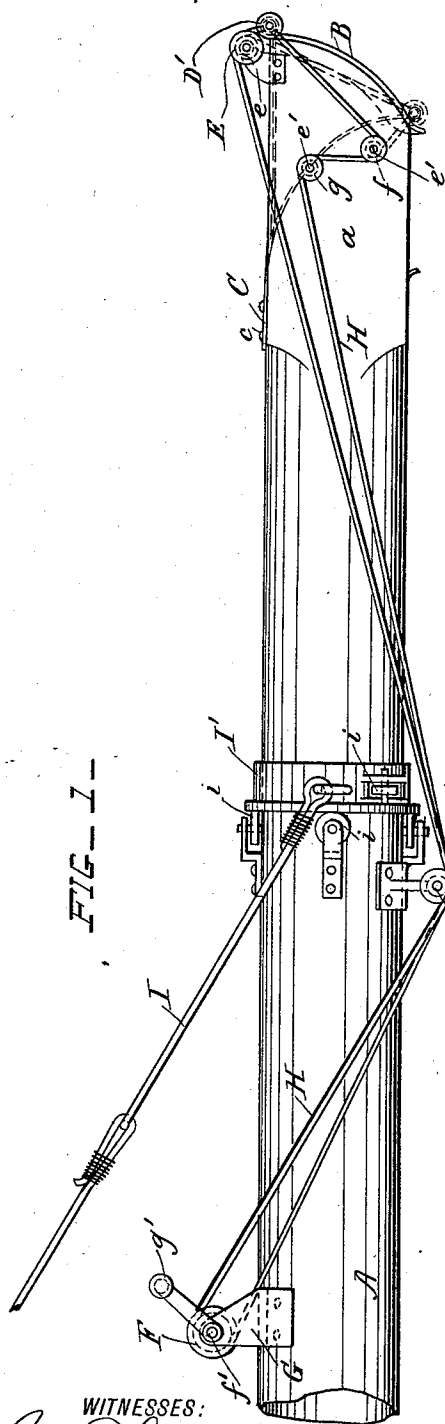
(No Model.)

F. F. LANDIS.

DISCHARGE PIPE FOR PNEUMATIC STRAW ELEVATORS.

No. 512,556.

Patented Jan. 9, 1894.



UNITED STATES PATENT OFFICE.

FRANK F. LANDIS, OF WAYNESBOROUGH, PENNSYLVANIA.

DISCHARGE-PIPE FOR PNEUMATIC STRAW-ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 512,556, dated January 9, 1894.

Application filed July 22, 1893. Serial No. 481,176. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. LANDIS, 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 Discharge-Pipes for Pneumatic Straw-Elevators; 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 the discharge pipes of pneumatic straw elevators and stackers used in connection with thrashing machines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed whereby the direction of the straw is controlled at the outlet of the discharge pipe.

In the drawings: Figure 1 is a side view of the outlet pipe constructed according to this invention; and Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal section through the end of the discharge pipe, drawn to a larger scale.

A is the discharge pipe of a pneumatic straw elevator and stacker. This pipe is preferably circular in cross-section and has a rectangular end *a* which is open at the end and bottom. The side portions of the end *a* have curved guide plates B secured to their ends.

C is a thin flexible plate, preferably of sheet iron. One end of this plate is secured to the top portion of the discharge pipe by the bolts or rivets *c*. A plate D is secured to the other end of the plate C and is provided with projecting pins *d* at its ends, upon which grooved rollers D' are journaled. The grooved rollers D' engage with the edges of the curved guide plates B.

E are guide sheaves journaled in brackets *e* secured to the top of the end portion *a*, and *f* and *g* are guide sheaves journaled on pins *e'* projecting from the sides of the end portion *a*.

F is a barrel mounted on a shaft *f'* which is journaled in the bracket G secured to the

pipe A. The shaft *f'* is provided with a handle *g'* for revolving the barrel.

H are cords, or their equivalents such as chains, wire ropes or bands. These cords are secured to the ends of the pins *e'* and pass around the guide sheaves and barrel as shown in the drawings. The guide sheaves can be variously located for convenience in operating the device.

J are guide sheaves carried by brackets secured to the under side of the pipe A. These guide sheaves J are used to deflect the cords when it is desired to have the sides of the pipe clear for the attachment of the lifting rope I. The lifting rope I is attached to a collar I' journaled on the pipe A when the said pipe is revoluble, and *i* are rollers for permitting the pipe to be turned in the collar without friction. When the barrel is turned to cause the cords to depress the outer end of the plate C, the plate is bent in the form of a curve, as shown in Fig. 3, being constrained by the form of the guide plate, and prevented from bending at its other end where it is secured to the discharge pipe. When the discharge pipe is horizontal, the plate C may be raised as shown by the dotted lines in Fig. 3, to discharge the straw horizontally out of the end of the pipe, or the plate C may be lowered to discharge the straw vertically downward onto the stack. The plate C is not broken by being repeatedly bent back and forth as the bending is distributed over its entire length.

What I claim is—

1. The combination, with the discharge pipe having a rectangular end, of the curved guides on the sides of the said end, the flexible plate secured at one end to the top of the pipe and provided with rollers at its free end engaging the said guides, and means for moving the said rollers along the guides, substantially as set forth.

2. The combination, with the discharge pipe having a rectangular end, of the curved guides on the sides of the said end, the flexible plate secured at one end to the top of the pipe, and provided with rollers at its free end engaging the said guides, a barrel journaled

in a bracket secured to the pipe and provided with means for revolving it, the cords connected to the said plate and passing around the said barrel, and guide sheaves for the
5 said cords to pass over, substantially as set forth.

3. The combination, with the end of a discharge pipe, of a flexible deflector plate secured at one end to the pipe, guides constrain-

ing the said plate to bend in a gradual curve, 10 and means for bending the plate, substantially as set forth.

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

FRANK F. LANDIS.

Witnesses:

HERBERT W. T. JENNER,
ALF. N. RUSSELL.