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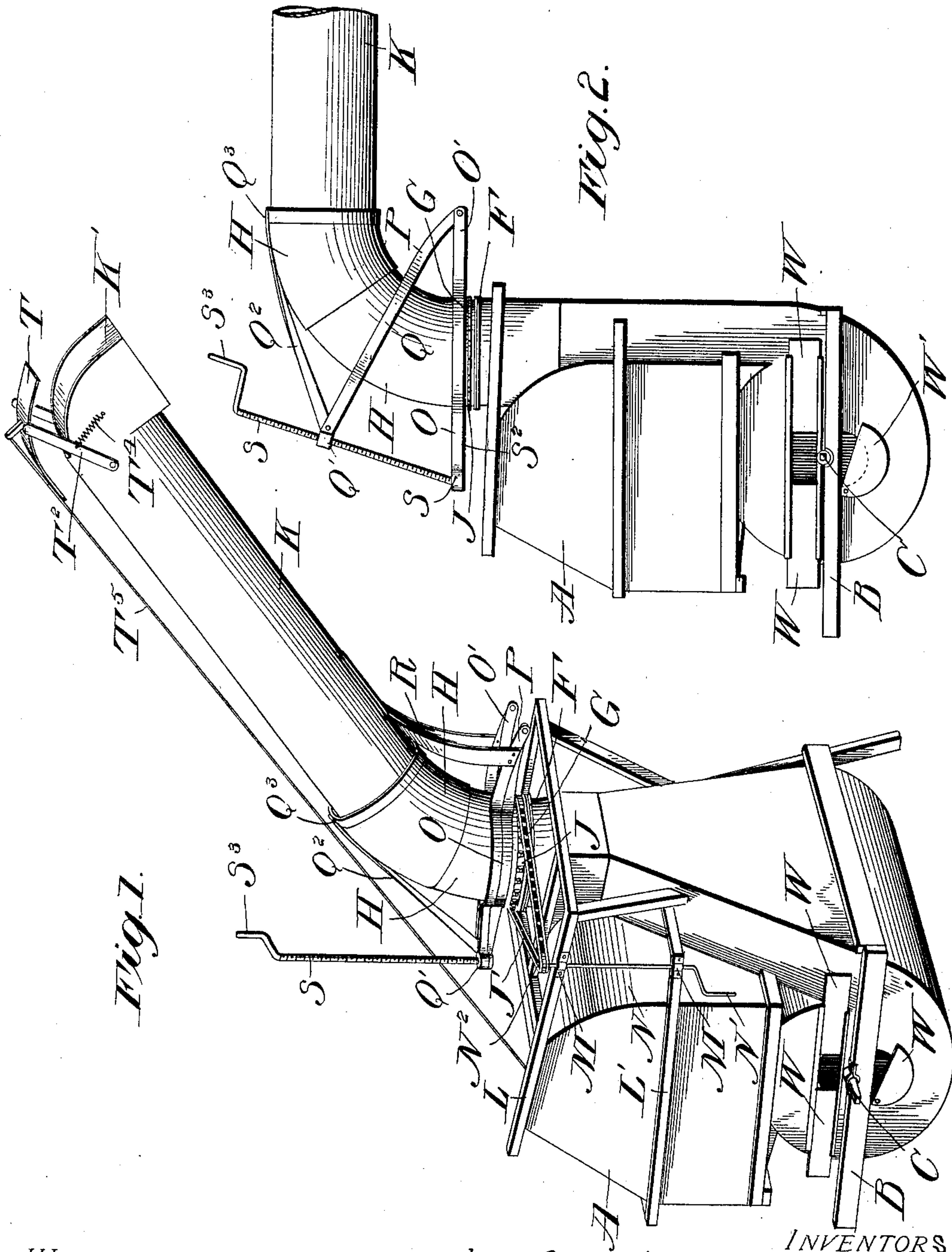
Patented Aug. 28, 1900.

A. H. OSTREM & O. O. HATLELI.
PNEUMATIC STRAW CONVEYER.

(No Model.)

(Application filed Apr. 24, 1900.)

2 Sheets—Sheet 1.



WITNESSES:

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ASSIGNORS OF ONE-THIRD TO HERMAN J. OSTREM, OF SAME PLACE.

PNEUMATIC STRAW-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 657,068, dated August 28, 1900.

Application filed April 24, 1900. Serial No. 14,157. (No model.)

To all whom it may concern:

Be it known that we, ANDREW H. OSTREM and OLE O. HATLELI, citizens of the United States, residing at Fosston, in the county of Polk and State of Minnesota, have invented certain new and useful Improvements in Pneumatic Straw-Conveyers; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in pneumatic straw elevators and conveyers, and particularly to conveyers having suitable fans and an adjustable and telescoping conveyer-trough which may be raised or lowered and rotated upon a suitable turn-table and having a spring-actuated deflecting-plate pivotally mounted near the end of the trough, whereby the straw may be deflected at an angle to the outlet end of the trough.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and arrangement of parts, as will be hereinafter more fully described, and specifically defined in the appended claims.

Our invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form part of this application, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a perspective view of our pneumatic straw-elevator. Fig. 2 is a view showing the telescoping conveyer lowered to its lowest limit. Fig. 3 is an elevation of the conveyer, parts being shown in section, the swinging door being shown in position opposite to that shown in Fig. 3 to better illustrate the construction within. Fig. 4 is a sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a detail in section showing the turn-table and interiorly-grooved flange turning thereon; and Fig. 6 is a perspective view of the adjustable swinging board, a portion being broken away.

Reference now being had to the details of the drawings by letter, A designates the casing of the conveyer, on the horizontal pieces B of which frame is mounted in suitable boxing the shaft C, which shaft carries two fans D, mounted near the ends of the casing, and each fan is suitably housed to prevent the straw or chaff coming in contact with the blades of the fan.

E is a swinging board which has eyes E² fastened thereto, which are journaled on the shaft C, (shown in Fig. 3,) and at each end of said board is a flange E', which may be held by any suitable means, as by screws, to the inner walls of the partitions A', Fig. 4. By adjusting said board in any one of the various positions indicated by dotted lines in Fig. 3 and securing the flanges fast to said partitions the apparatus may be adapted to draw in straw and chaff from different directions.

Mounted on a turn-table F, which is composed of a flanged plate forming a part of the upper tapering portion of the casing, is a flanged union G and adapted to rotate on the flange of said table F. A ring F', secured to the flange of the union by means of a screw F², serves to hold the union to the flanged portion of the casing. The upper end of said union is preferably curved, and a telescoping elbow made up of sections H is mounted upon the curved portion of the union at its lower end, and its upper end is connected to the conveyer K. Mounted adjacent to the rotary union, which is mounted upon the said flanged table, is a sprocket-wheel J, about which a sprocket-chain J' passes, and secured to the side strips L and L' of the casing are the journals M, in which the vertically-disposed crank-shaft N is mounted. Said crank-shaft N has a turning-handle N' at its lower end and at its upper end has a sprocket-wheel N², about which the endless sprocket-chain J' passes. Securely held about said union, which rotates upon the flanged table F, is a band O, having arms O', which are pivoted at their outer ends to the arms P, which are connected at their inner ends to a loosely-mounted band Q, passed about the telescoping elbow of the conveyer and suitably braced by means of the braces R, which connect said

arms P with the conveyer K, as shown in the drawings. Said band Q is made of a strap bent upon itself near its middle portion, at which latter place a threaded eye Q' is formed, and a suitable brace Q² passes from a location adjacent to said eye to the conveyer K and is fastened, as at Q³, thereto. A threaded crank-shaft S has its lower end swiveled, as at S', in an aperture at the end of the arm S², forming a part of the band O, said threaded crank-shaft passing through the threaded eye Q' and provided at its upper end with a handle S³, whereby as the latter is turned in one direction or another the telescoping elbow will be extended or closed. By means of the crank-shaft N, which has sprocket-chain connection with the wheel on the union G, said conveyer may be rotated.

The outer end of the conveyer K has an open end K', over which a deflecting-plate T is adapted to be held. Said plate T is pivoted near its middle portion to the arms T², which are pivoted on diametrically-opposite portions of the conveyer K, as shown, and a spring T⁴, having one end fastened to the conveyer near its outlet end and its other end connected to an arm T², serves to normally hold said plate over the apertured end of the conveyer. Connected to a lug on the plate T is a rope T⁵, whereby said plate may be held at different angles to the outlet end of the conveyer for the purpose of deflecting the straw or chaff coming through the conveyer as may be desired. If said plate is thrown back to its farthest limit, the straw and chaff will be blown straight ahead, and if said plate is held at an angle to the length of the conveyer the straw and chaff may be delivered in a downwardly-disposed direction.

In order to allow access to be had to the interior of the casing of our improved pneumatic straw-conveyer, the sides of the casing may be made removable, if desired, and in order to regulate the amount of air which it is desired to be fed to the fans slides W, one on each side of the casing, are provided, which may be moved longitudinally to regulate the amount of air which passes to the chambers in which the fans rotate, and directly underneath the shaft on which the fans are mounted is a pivoted door W' for the same purpose.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. A pneumatic straw-elevator, comprising in combination with the casing, the fans mounted to rotate therein, a swinging board mounted between said fans, a telescoping and rotary elbow and mechanism for rotating same, as set forth.

2. In a pneumatic conveyer, the combination with the casing, the operating-shaft journaled in the end walls of said casing and fans rotating with said shaft, a swinging board carrying a hinge, which is journaled on said shaft, and a flange at the end of said board, which is designed to be adjustably held in different locations to the inner wall of said casing, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ANDREW H. OSTREM.
OLE O. HATLELI.

Witnesses:

ALBERT KAISER,
LEWIS LOHN.