F. L. SATTLEY.

PNEUMATIC STACKER.

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997,936. Patented July 11, 1911.

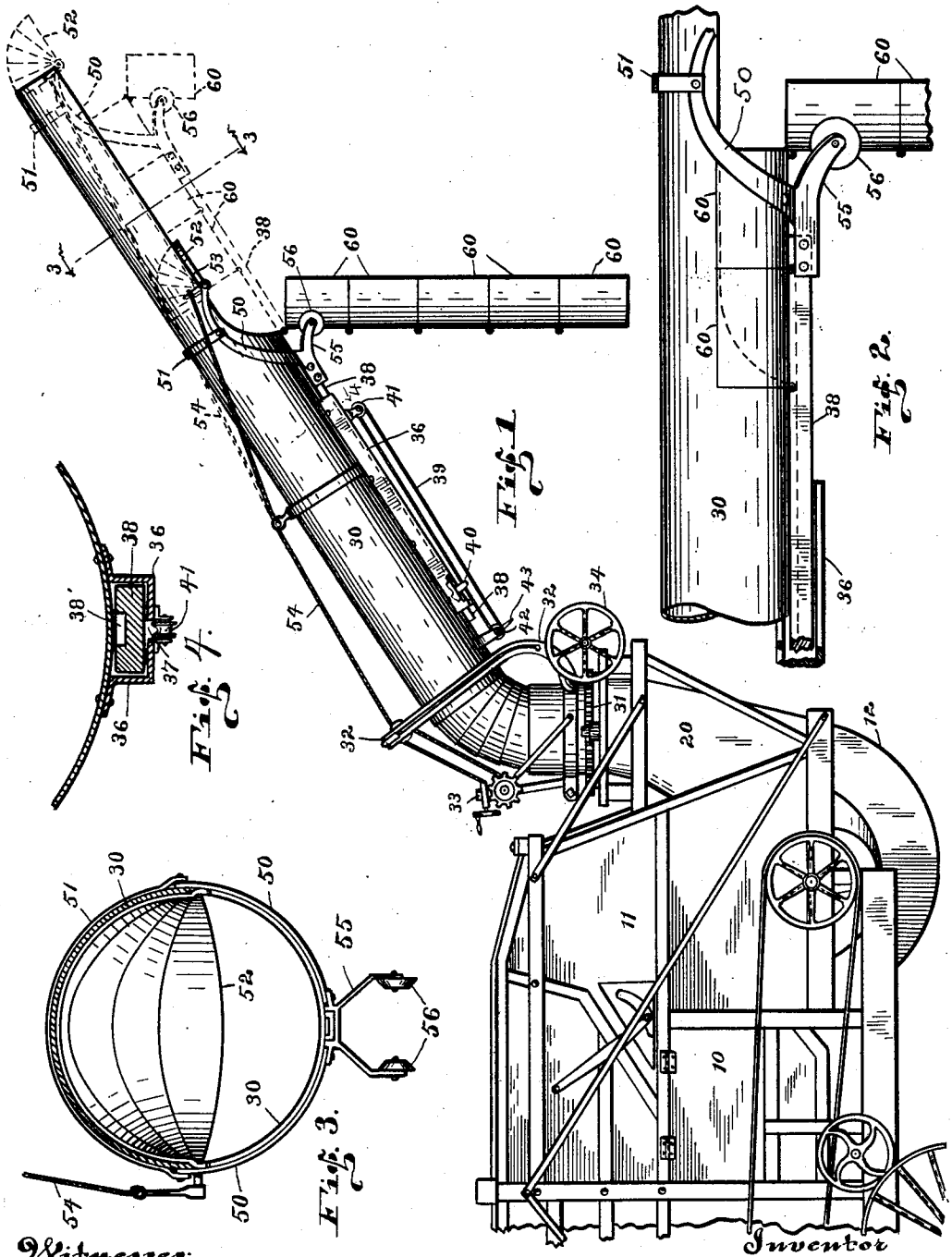

Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3.

Witnesses:

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PNEUMATIC STACKER.

997,936. Specification of Letters Patent. Patented July 11, 1911.

Original application filed April 23, 1910, Serial No. 557,144. Divided and this application filed October 13, 1910. Serial No. 586,826.

To all whom it may concern:

Be it known that I, FREDERICK L. SATTLEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Pneumatic Stackers, of which the following is a specification.

My invention relates to improvements in pneumatic stackers, such for example as is shown in my application Serial No. 557,144 of which this is a division, and particularly to the chute therefor, which I am enabled to so adjust as to discharge and deflect material from various points in its length, as may be desired, in a simple and expeditious manner, as will be hereinafter more fully explained.

In the accompanying drawings, which form a part hereof, Figure 1 is a side elevation of a separator with a pneumatic stacker embodying my improvements attached thereto; Fig. 2 a side elevation of a portion of the stacker chute; and Figs. 3 and 4 sectional views of the chute as seen from the dotted lines 3—3 and 4—4, respectively in Fig. 1.

In said drawings the portion marked 10 indicates an ordinary separator to which a pneumatic stacker straw chamber is attachable in any suitable manner. Leading from the fan 12, mounted in said chamber, is the usual duct, 20, with which my improved chute, 30, communicates. Said chute 30 is non-telescopic, and is vertically and horizontally adjustable, as usual, being mounted on a suitable turntable, as 31, and supported by a yoke, 32, and otherwise, and adjusted by a windlass, 33, and wormed shaft operated by hand-wheel, 34, in an ordinary and well known manner. The outer under portion of said chute 30 is cut away a considerable portion of its length (Fig. 1), and at its lower side I provide a guideway preferably composed of angle-bars, 36, (Fig. 4) having a space, 37, therebetween. In said guideway I place a slidable bar, 38, having a groove, 38′, therein, which bar is movable by an endless chain or cable, 39, attached to a lug, 40, on said bar, and which chain or rope passes about sprockets or sheaves, as 41, attached to the guideway, and 42, secured to the chute, and is operable by means of a crank, 43, associated with sheave 42. To the outer end of said bar 38 a pair of arms, 50, are secured, which lie on the outer side of the chute and are preferably connected by a band, 51, to insure their stability, and in the ends of said arms I mount a hood or deflector, 52, which travels along the inside of the chute, being indicated by full and dotted lines in Fig. 1 in its normal position, and which may be adjusted by means of an arm, 53, to which is attached a cord, 54, running to within convenient reach of an operator. Also connected to said bar 38 I secure a second pair of arms, 55, having rollers, 56, mounted in the ends thereof.

To the end of the lower portion of chute 30 I hinge a plurality of hinged semi-cylindrical adjustable filler sections or closures, 60, which are normally dependent from said chute, as indicated in Fig. 1. By the employment of the sectional fillers just described I am enabled to readily adjust the stacker chute to discharge the material at different distances from the separator so that the same may be distributed over a considerable area and in such manner as to insure a compact stack, and which I accomplish in the following manner: As stated, the sections 60 (Fig. 1), and also the hood or deflector, are shown in normal position, and, when so arranged, material discharging through the chute will instantly be deflected downwardly upon striking the hood, which lies inside the chute. When it is desired to make the discharge slightly farther out, crank 43 is turned in the proper direction to cause chain 39 to move bar 38 outwardly, during which outward movement the hood or deflector 52, mounted on arms 50, is also carried the same distance, and also, as will be readily understood upon reference to Fig. 1, as said bar 38 travels outwardly the arms 55 thereon carrying the rollers 56, against which the upper semi-

cylindrical section 60 rests, push each of said sections upwardly on its hinge, so that when the rollers have reached the outer end of a section the latter has filled up the open portion of the chute to the extent of its length, as indicated in Fig. 2, and the closed portion of the chute becomes accordingly increased, the remaining sections depending from the first section in like manner as it depends from the chute by its hinged connection therewith; and as said bar meets the hinge connecting said sections each hinge becomes seated in groove 38′ thereof and is thus prevented from lateral displacement during the operation of closing or opening the chute. In this manner the cut-away portion of the chute can be filled step by step as the bar 38 is caused to move outwardly, placing one section after another in position, while at the same time the same relation between the outer end of each section and the deflector is constantly maintained, and when all the sections have been filled in the chute is substantially a closed tube through its entire length, or to whatever extent said sections have been brought to closing position. It will be understood also that said sections may be readily returned to dependent or normal position by reversing the direction of movement of bar 38, and the cut-away portion of the chute thus enlarged as desired.

I claim as my invention:

1. The combination, with a pneumatic stacker, of a vertically and horizontally adjustable chute communicating with said fan and having a portion of its under side cut away, sectional fillers connected to said chute, and means for raising and guiding each of said fillers into position to close said chute.

2. The combination, with a pneumatic stacker, of an adjustable chute having its lower side open, adjustable closures dependent from said chute and pivoted to each other, and means for positioning each of said closures to cover or uncover a portion of said open-sided chute.

3. The combination, with a pneumatic stacker, of an adjustable chute having its lower side open, a closure pivoted to said chute, and means for swinging said closure on its pivot to close or open said chute.

4. The combination, with a pneumatic stacker, of an adjustable chute having its lower side open, a plurality of closures pivoted to each other and dependent from said chute, and means for swinging each of said closures into position to close a portion of said chute.

5. The combination, with a pneumatic stacker, of a chute having a portion of its under side cut away, sectional means depending from said chute for closing and opening the cut-away portion thereof, longitudinally-movable means mounted on said chute and contacting with said closing and opening means, and means for advancing and retracting said longitudinally-movable means to swing said sectional means into closing and opening position in relation to said cut-away portion of said chute.

6. The combination, with a pneumatic stacker, of a chute having its under side open, longitudinally movable means mounted on said chute, a hood in said chute and connected to said movable means, sectional means for opening and closing said chute and dependent therefrom and arranged to be contacted by said longitudinally movable means, and means for actuating said movable means to project and retract said hood and to position said sectional means in opening and closing position.

7. The combination, with a pneumatic stacker, of a chute having its under side open, a plurality of closures hinged to each other and supported from said chute and each adapted to cover and uncover a part of the open portion of said chute, and means for actuating said closures to opening and closing position.

8. The combination, with a pneumatic stacker, of a chute, a bar movably mounted thereon embodying two pairs of arms, a hood mounted on a pair of said arms, closures depending from said chute and adapted to be contacted by the other pair of said arms, and means for actuating said bar to advance and retract said hood and to raise and lower said closures.

9. The combination, with a pneumatic stacker chute, of sectional fillers dependent therefrom, a guide-way mounted on said chute, a bar movably mounted in said guide-way, arms on said bar, a deflector adjustably mounted on a pair of said arms, rollers mounted on another pair of said arms to contact with said fillers, and means for moving said bar longitudinally in said guide-way.

10. The combination, with a pneumatic stacker chute, of fillers hinged thereto and to each other, a guide-way mounted on said chute, a bar movably mounted in said guide-way, arms mounted on said bar for raising and lowering said fillers, and means for operating said bar.

11. The combination, with a pneumatic stacker chute, of fillers hinged thereto and to each other, a guide-way mounted on said chute, a bar movably mounted in said guide-way and having means therein for receiving and guiding the hinges connecting said fillers, arms connected to said bar for raising and lowering said fillers and means for operating said bar.

12. The combination, with a pneumatic stacker chute, of fillers hinged thereto and to each other, a bar movably mounted on

said chute, deflector-supporting arms communicating with said bar, a deflector mounted on said arms, filler-contacting arms communicating with said bar, and means for operating said bar to simultaneously advance or retract said deflector and raise or lower said fillers.

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

FREDERICK L. SATTLEY.

Witnesses:
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