J. K. SHARPE, JR.

PNEUMATIC STACKER.

APPLICATION FILED JULY 13, 1908.

971,933. Patented Oct. 4, 1910.

Fig. 1.

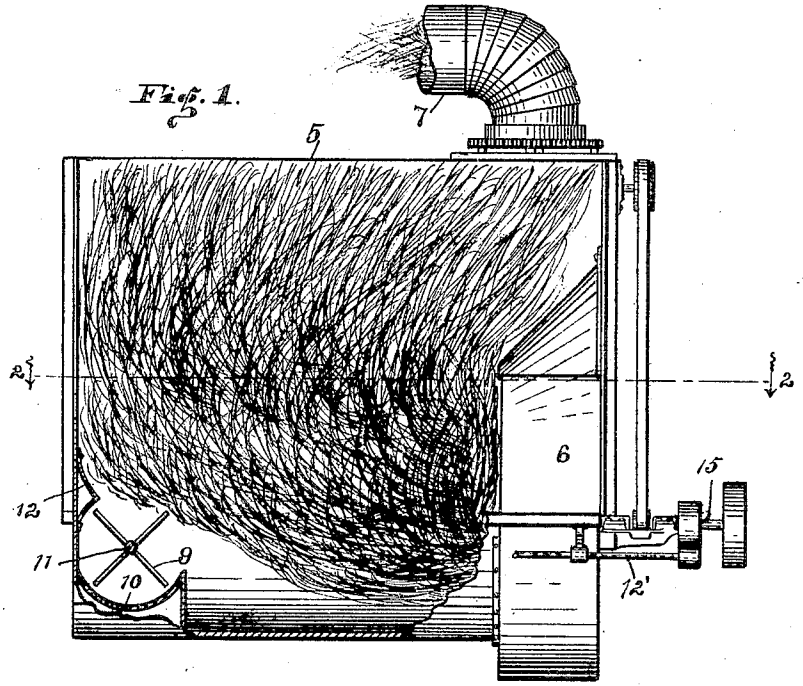


Fig. 2.

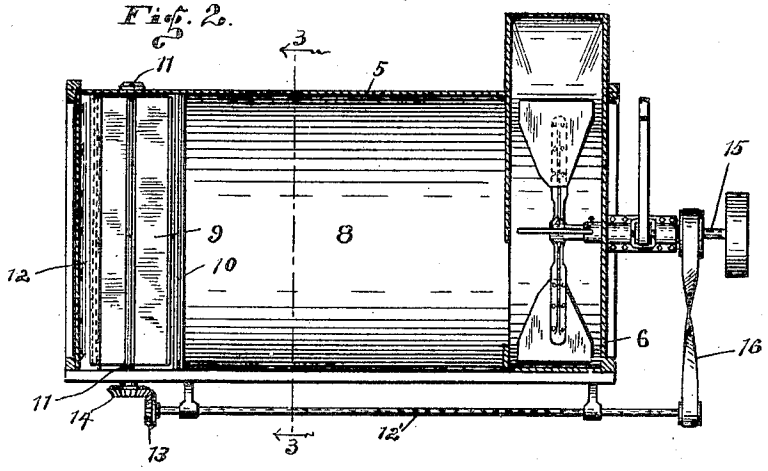
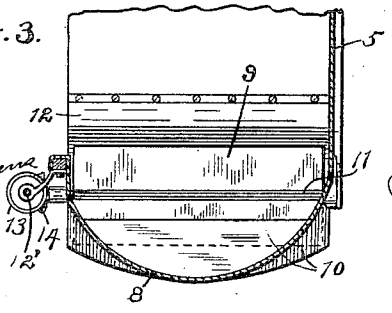


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH K. SHARPE, JR., OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE INDIANA MANUFACTURING COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF WEST VIRGINIA.

PNEUMATIC STACKER.

971,933. Specification of Letters Patent. Patented Oct. 4, 1910.

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To all whom it may concern:

Be it known that I, JOSEPH K. SHARPE, Jr., 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, and has particular reference to the material-receiving chamber thereof, in which I provide means for positively deflecting toward the discharge fan that portion of the material which falls into the chamber at the farthest side from said fan and away from the influence of its intake air currents, and by which means I am enabled to utilize an interiorly unobstructed horizontally-arranged chamber of simple construction and formation, obviating the necessity of employing mechanical conveyers across the width of the chamber, or inclining the bottom thereof where no conveyers are provided, each of which arrangements must be especially designed to meet the various conditions existing incident to the difference in form and dimensions of the many types of separators and the peculiar separating mechanisms embodied therein.

In the accompanying drawings, which are made a part hereof, Figure 1 is an elevation of a stacker embodying my invention, and indicates the manner in which the material is treated; Fig. 2, a horizontal sectional view on the dotted line 2—2 in Fig. 1; and Fig. 3, a vertical sectional view on the dotted line 3—3 in Fig. 2.

In said drawings the portions marked 5 represent the casing of the stacker, in one side of which is mounted a discharge-fan, 6, having the usual discharge chute, 7, connected therewith, which elements may be of any ordinary or desired construction, and provided with any suitable operating means, such for instance as indicated in the drawings.

As before indicated, the suction produced by the rotation of the discharge fan 6 is effective only within a limited area in the straw chamber, 8, and as such chambers are of considerable width, it is necessary, in order to insure efficient operation of the stacker, that all of the material issuing from the separator be positively directed into the zone of action of the discharge-fan, and to attain this result it is the common practice to provide a straw chamber inclined from that wall of the machine opposite the discharge fan downwardly to the inlet of said fan so that the material may by gravity move into the influence of said fan, or, in some instances, where the chamber has a horizontal bottom, to introduce a mechanical conveyer therein for carrying the material into the fan.

By my present invention I attain this result by means of a beater, 9, of any desirable construction, located in the opposite side of the straw chamber to that of the discharge fan, and which, as indicated in the drawing, is positioned transversely of the length of the chamber, being partially inclosed in an appropriate casing, as 10, above which I preferably provide a guide, 12, for directing the material onto the beater. Said beater 9 is mounted on shaft, 11, which may be driven in any desired manner, either from the shaft of the discharge fan or from a suitable source on the separator, a simple and preferred arrangement, however, being that disclosed in Fig. 2, which consists of the counter-shaft, 12′, having a gear, 13, which meshes with gear, 14, on the beater-shaft, 11, said counter-shaft being driven from the discharge-fan shaft, 15, by means of belt, 16.

As will be readily understood, when the machine is in operation, rotary motion is imparted to the beater by means of the arrangement shown and described, or as may be otherwise preferred, with the consequent result that material discharged from the separator into that side of the chamber falls directly onto said beater, and is impelled thereby (and by any air currents caused by its rotation) laterally across said chamber and toward the discharge fan and sufficiently near thereto to be acted upon by the air suction produced thereby, by which it is withdrawn into said fan and discharged through the stacker chute, as usual.

I claim as my invention:

1. A pneumatic stacker comprising a material-receiving chamber, a discharge-fan at one side thereof, a beater in the opposite side of said chamber, a guide for directing

material to said beater, and means for actuating said beater to impel material toward said discharge fan.

2. A pneumatic stacker comprising a material-receiving chamber, a discharge fan at one side thereof, a beater at the opposite side of said chamber, a casing partially inclosing said beater, a guide above said beater, and means for actuating said beater to impel material toward said discharge fan.

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

JOSEPH K. SHARPE, JR.

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