

No. 653,363.

Patented July 10, 1900.

J. A. PARKER.
PNEUMATIC CONVEYER AND CLEANER.

(Application filed Feb. 6, 1900.)

(No Model.)

2 Sheets—Sheet 1.

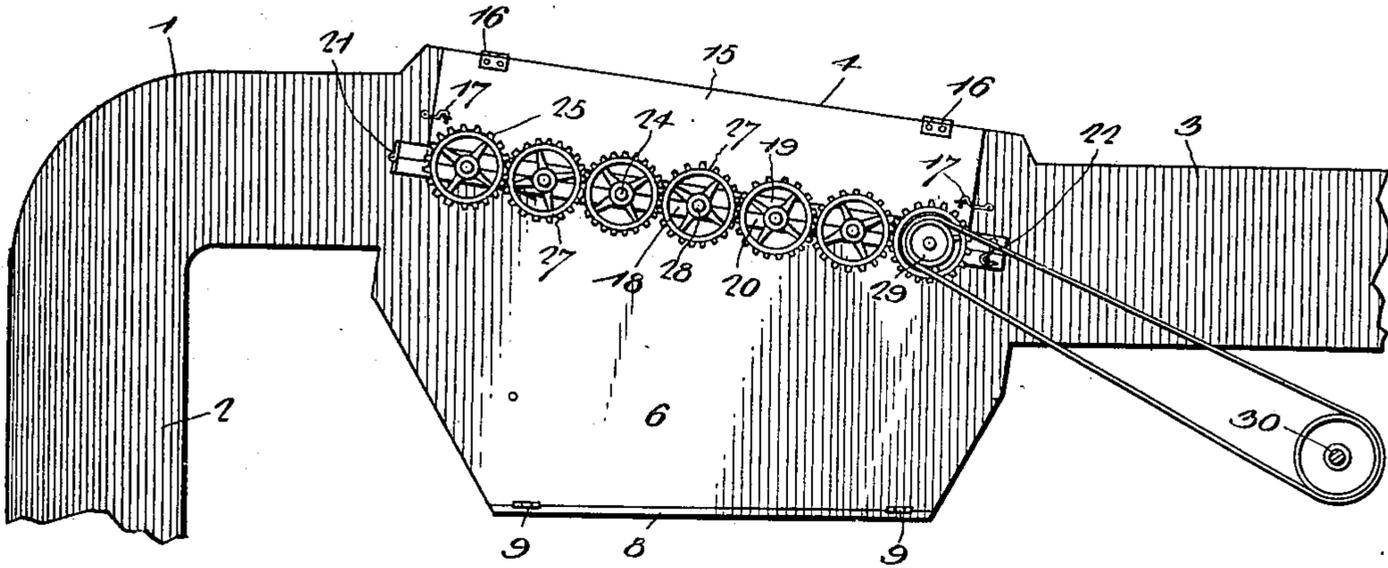


Fig. 1.

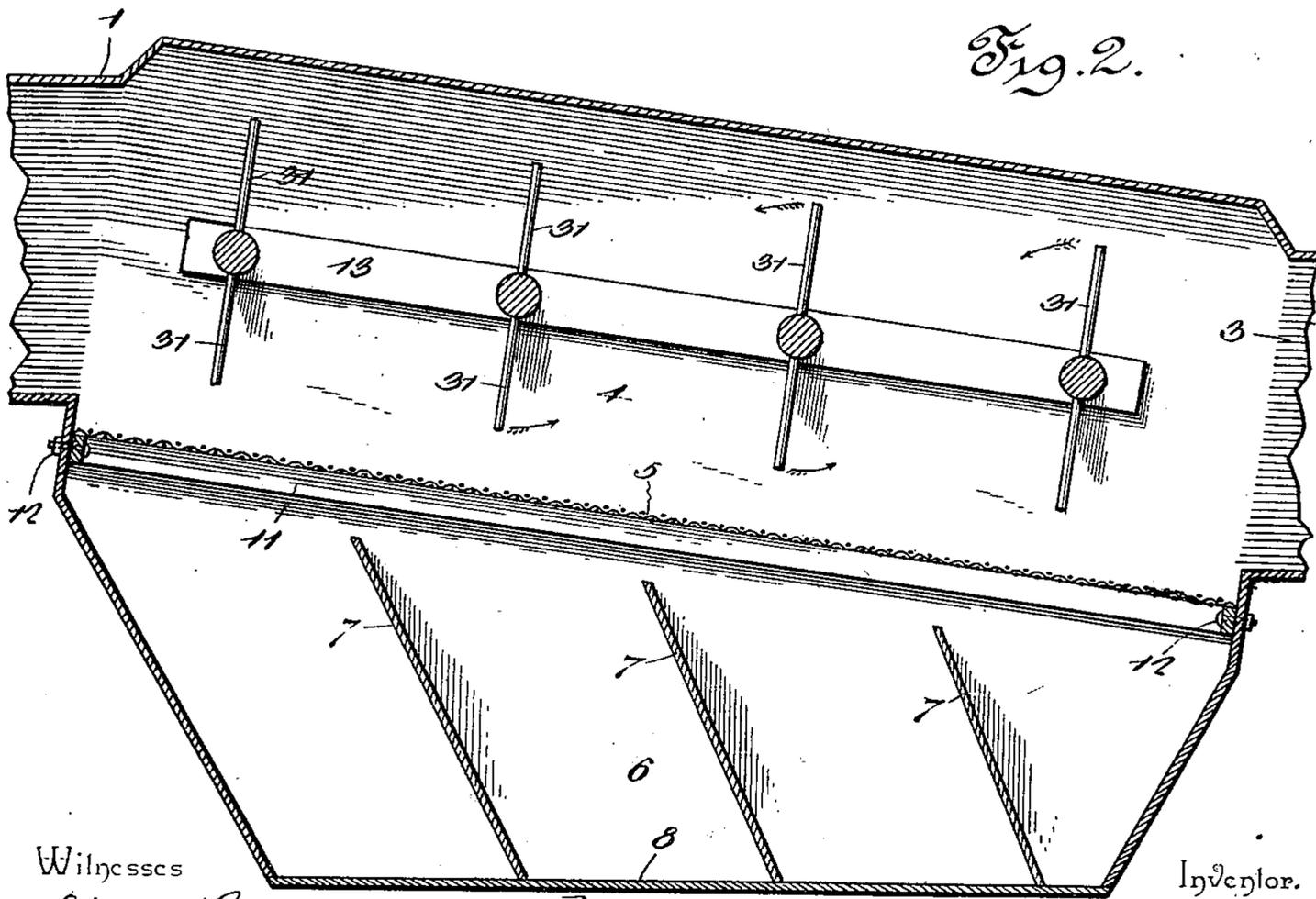


Fig. 2.

Witnesses
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(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

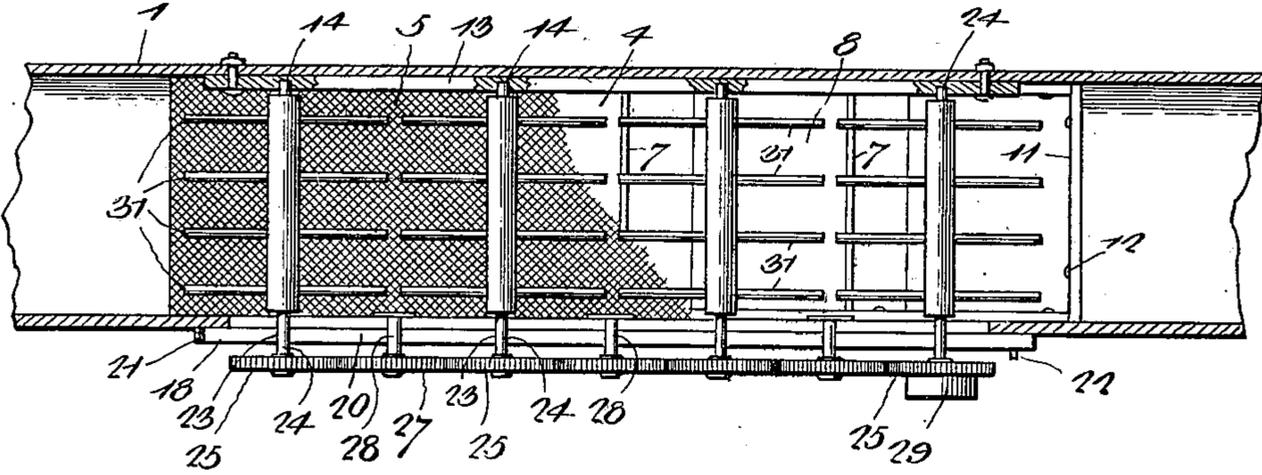


Fig. 5.

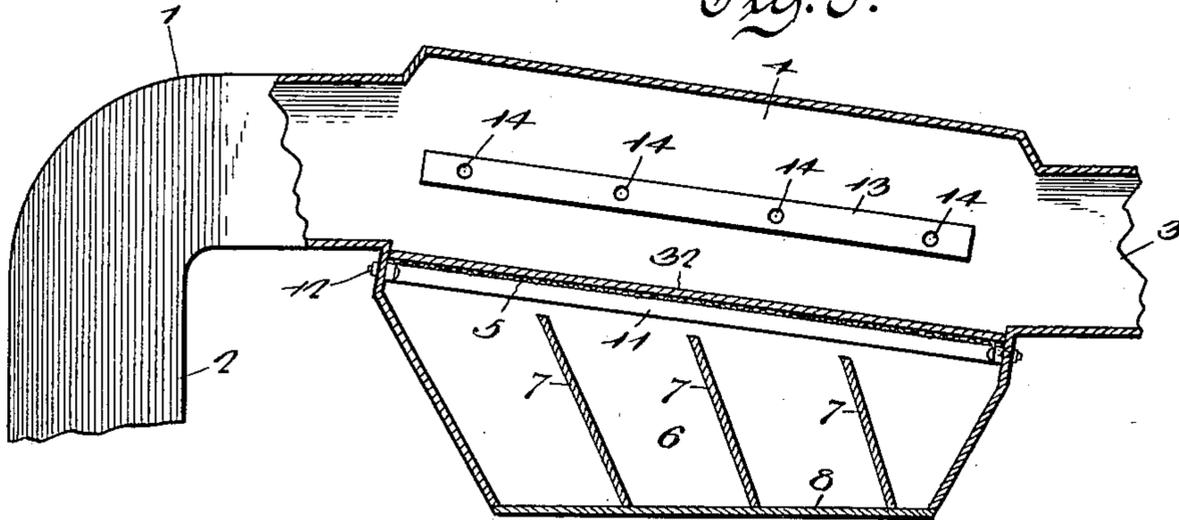
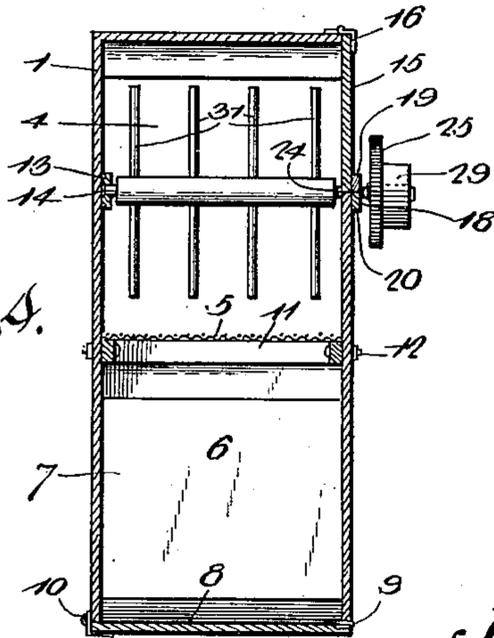


Fig. 4.



Witnesses

J. Frank Culverwell. By *his* Attorneys,
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UNITED STATES PATENT OFFICE.

JOSEPH A. PARKER, OF DRIPPING SPRINGS, TEXAS, ASSIGNOR OF ONE-HALF TO PEDERNALES LEINNEWEBER, OF SAME PLACE.

PNEUMATIC CONVEYER AND CLEANER.

SPECIFICATION forming part of Letters Patent No. 653,363, dated July 10, 1900.

Application filed February 6, 1900. Serial No. 4,270. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. PARKER, a citizen of the United States, residing at Dripping Springs, in the county of Hays and State of Texas, have invented a new and useful Pneumatic Conveyer and Cleaner, of which the following is a specification.

My invention is a pneumatic cotton conveyer and cleaner designed for carrying seed-cotton from a wagon or the like to a gin-house or warehouse or other receptacle or place of storage and for cleaning the cotton while the same is being so conveyed.

My invention consists in the peculiar construction and combination of devices hereinafter fully set forth and pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of a pneumatic cotton conveyer and cleaner embodying my invention. Fig. 2 is a vertical longitudinal sectional view of the same, showing the relative arrangement of the beaters, the screen, and the dust-receptacle. Fig. 3 is a horizontal longitudinal sectional view of the same. Fig. 4 is a vertical transverse sectional view of the same. Fig. 5 is partly an elevation and partly a vertical sectional view of my improved conveyer-flue, showing the beaters removed therefrom and a closing-board in place on the screen above the dust-receptacle.

The conveyer-flue 1, as here shown, has the vertical intake-arm 2, adapted to receive cotton from a wagon or the like, and a main trunk 3, which communicates with the intake-arm and extends to a gin-house, warehouse, or other point of discharge, to which it is desired to convey the cotton.

In the embodiment of my invention I provide the trunk of the conveyer-flue with an inclined section, as at 4, which dips or inclines downwardly in the direction of the air-current through the flue. The bottom of the inclined section 4 is formed by a screen 5, of any suitable foraminous material, and from the said section depends a dust box or receptacle 6, which is preferably divided into a series of compartments by the inclined partitions 7. The bottom of the dust box or receptacle is formed by a board 8, which is hinged at one side, as at 9, and is provided

with a hasp and staple or any other suitable means for securing it when closed, as at 10. The screen 5 is supported in an inclined position, preferably parallel with the top of the inclined section of the flue, and the rectangular frame 11, on which the screen is stretched and to which it is secured, is bolted in place, as at 12, and said screen-frame forms a ledge below the inclined section of the conveyer-flue for a purpose presently described.

One of the vertical sides of the inclined section 4 is permanently closed, and within the same is disposed an inclined beam or bar 13, arranged substantially midway between the upper and lower sides of said inclined section and parallel therewith, and in the said beam or bar are formed a series of bearings, as at 14, for the beater-shafts. The opposite side of the inclined section of the conveyer-flue is provided with a door 15, adapted to be opened to permit access to the interior of said inclined section of the flue, and said door is preferably hinged at its upper side, as at 16, and is provided with hooks or other suitable devices, as at 17, by means of which it may be fastened when closed. A bearing-bar 18 is disposed on the outer side of the conveyer-flue and comprises an upper section 19 and a lower section 20. The said bar is in the same plane with the bearing-bar 13 and has its lower section permanently fastened to the exterior of the conveyer-flue, the upper section of the bar being hinged to the lower section thereof at one end, as at 21, whereby said upper section is adapted to be lifted from said lower section, and when closed thereon, as shown in Fig. 1, said upper section of the bar is secured to the lower section thereof at its free end by a hook or other suitable device 22. Bearings 23 are formed in the proximate meeting sides of said upper and lower sections, and in said bearings and in the bearings 14 are journaled a series of revoluble beater-shafts 24, as shown.

Each of the beater-shafts is provided at one end with a spur-wheel 25, and intermediate between said spur-wheels are idle spur-wheels 27, which mesh therewith, as shown in Figs. 1 and 3, whereby all of the beater-shafts are adapted to rotate in the same direction. The said idle spur-wheels 27 are mounted upon

short shafts or spindles 28, which are secured between the proximate sides of the upper and lower hinged sections of the bearing-bar 18, as shown. One of the beater-shafts is provided with a driving-pulley 29, which is adapted to receive power from a suitable counter-shaft, such as is indicated at 30, in the usual manner by an endless belt and pulley. Each beater-shaft is provided with a series of radial beating-arms 31, which project from opposite sides thereof and are of suitable length, and when the conveyer-flue is in operation and the seed-cotton is being conveyed there-through by an air-blast created by a suction-fan of usual construction and arrangement (not herein shown) the seed-cotton in its passage through the downwardly-inclined section of the conveyer-flue is mechanically beaten by the revoluble beaters, which serve to dash the seed-cotton downward upon the screen and to dislodge the dirt and other impurities therefrom, the same passing through the screen into the dust-receptacle, while the cotton is carried over the screen and continued in its transit through the flue by the combined action of the air-current and the revoluble beaters, as will be readily understood. The suction of the air-current through the flue tends to create a partial vacuum in the dust-receptacle, which, together with the series of partitions therein, greatly facilitates the dropping of the dust particles and other impurities through the screen and into the dust-receptacle. Moreover, the inclination of the section 4, in which the screen is located, imparts to the air-current a tendency to rise in its passage over the screen, and hence to diminish the strength of said current over said screen, which facilitates the operation of the beaters upon the cotton and permits the dust and other impurities dislodged from the cotton to fall, as will be readily understood. The dust may be discharged from the dust-

receptacle from time to time by opening the bottom door 8 thereof.

When it is not desired to employ the revoluble beaters in connection with the conveyer-flue, they may be readily removed by opening the upper section of the bearing-bar 20 from the lower section thereof and opening the door 15 a sufficient distance to enable the inner ends of the beater-shafts to be unshipped from their bearings, when by canting said shafts so as to depress the outer ends thereof the door may be opened wider and the shafts moved therewith and in this manner removed. When the said revoluble beaters are thus disused and removed from the conveyer-flue, I employ a board 32, as shown in Fig. 5, which is placed on the screen and is supported upon the ledges formed by the screen-frame 11.

Having described the invention, I claim—

A pneumatic cotton-conveyer comprising a flue having a straight downwardly-inclined section, a dust-receptacle on the lower side thereof and communicating therewith, a screen in the lower side of said flue above said dust-receptacle, bearings in one side of the said section, a door in the opposite side thereof, a divided bar on the outer side of the flue and door, and having bearings formed in its contacting sides and centering with the free side of the door, and a series of revoluble beaters having their shafts adapted to be journaled in said bearings and removable therefrom at will as the door is opened, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH A. PARKER.

Witnesses:

JOHN A. BARGE,
RAMON CARREON.