

(No Model.)

J. C. POTTER.
CLEANER TRUNK FOR COTTON OPENERS.

No. 581,471.

Patented Apr. 27, 1897.

Fig. 1.

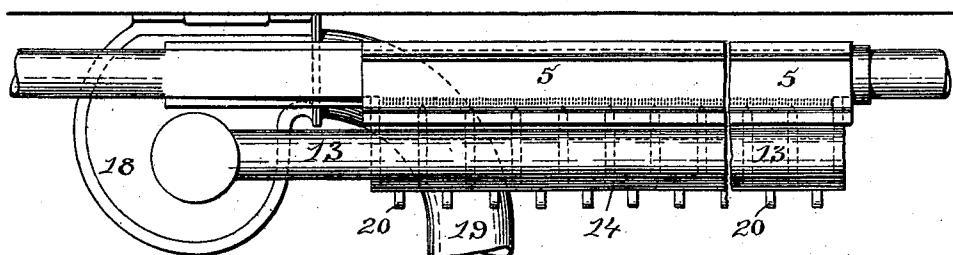


Fig. 2.

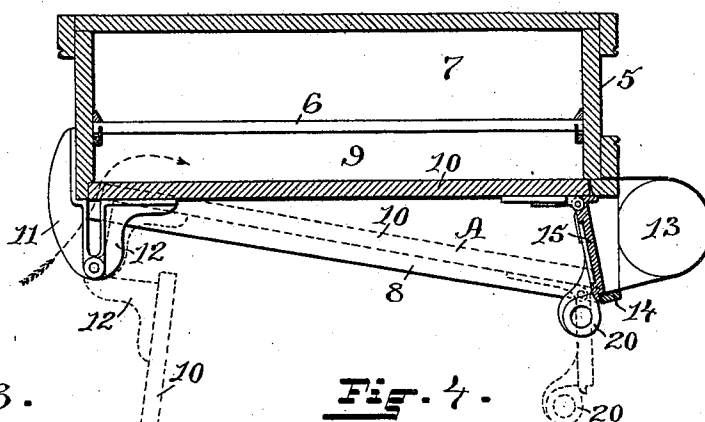


Fig. 3.

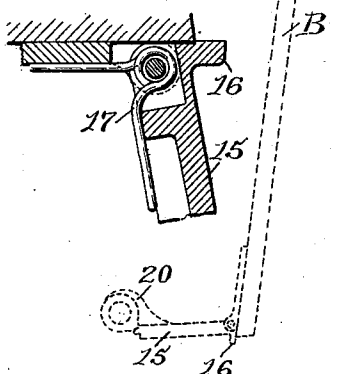
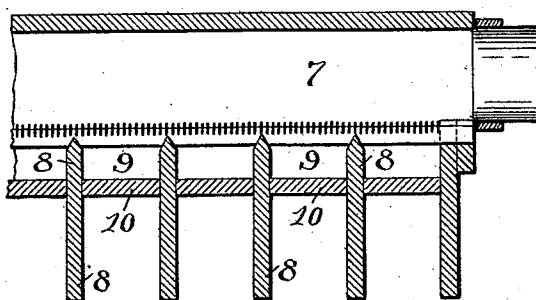


Fig. 4.



WITNESSES:

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JAMES C. POTTER, OF PAWTUCKET, RHODE ISLAND.

CLEANER-TRUNK FOR COTTON-OPENERS.

SPECIFICATION forming part of Letters Patent No. 581,471, dated April 27, 1897.

Application filed February 26, 1896. Serial No. 580,838. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. POTTER, of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Cleaner-Trunks for Cotton-Openers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the construction of the cleaner-trunk through which the cotton opened by the opener is blown for the purpose of removing as much as possible the impurities contained in the opened cotton.

As heretofore constructed the lower surface of the trunk was formed of a grating, usually a series of transverse slats, over which the cotton was blown. Below this grating a series of transverse partitions were placed, so as to form a series of pockets in which the sand, leaf, and other impurities that passed through the grating were collected. The bottoms of these pockets were formed by doors hinged at one side to a partition and secured when in place at the opposite side to the next partition. By opening these doors the dirt, sand, and dust were discharged into suitable receptacles.

The object of my invention is to facilitate the removal of the dirt, dust, sand, and other impurities and secure more ready access to the grating for cleaning.

The invention consists in the peculiar and novel construction and the combination of the parts, as will be more fully described hereinafter, and more particularly pointed out in the claims.

Figure 1 is a side view of my improved cleaner-trunk, showing both ends with the middle portion cut out, the interior grating and partitions being indicated in broken lines. Fig. 2 is a transverse sectional view of the trunk. Fig. 3 is an enlarged sectional view showing the connection of the latch-plate with the bottom plate. Fig. 4 is a longitudinal section of the trunk.

Similar numerals of reference indicate corresponding parts in all the figures.

In the drawings the cleaner-trunk 5 is divided transversely by the grating 6 into the

upper chamber 7, through which the cotton is blown, and the lower part subdivided by the transverse partitions 8 into a series of chambers 9, in which the dust, sand, and impurities are collected, the bottom plates or doors 10 of which, instead of being hinged to the partitions 8, are hinged at one end on the brackets 11 at a point considerably below the plates 10, each plate 10 being provided with the hinge-bracket 12. The partitions 8 are extended below the plates 10 at the hinged end of the plate 10, and a considerably greater distance below the plate 10, when in its normal or closed position, at the opposite or outlet end, where the exhaust-flue 13 is connected with the cleaner-trunk. At this end the partitions 8 are connected by the bar 14.

The plate 15 is hinged to the outlet end of the plate 10 and is provided at its upper end with the stop 16. The wire spring 17, coiled around the pivot of the hinge, has one end bearing on the plate 10 and the other on the plate 15. The lower end of the plate 15 is supported on the bar 14 and closes the outlet to the exhaust-flue 13 when the plate 10 is in the closed position shown in solid lines in Fig. 2. The exhaust-flue 13 is connected with the exhaust-fan 18, which may be located in any desired position, and is provided with the discharge-tube 19, through which the dirt, sand, and impurities are conveyed to any place desired for the discharge of the impurities.

To enable others versed in the art to carry out my invention, I will now describe the operation more fully.

From time to time the dirt, dust, sand, and other impurities deposited in the chambers 9 have to be removed, and usually at longer intervals the grating has to be cleaned. To facilitate the removal of the impurities, I start the exhaust-fan 18. If a general system of exhaust is used in a mill, I connect the exhaust-flue 13 with the exhaust system. By means of the handles 20, connected with each of the plates 15, I push one of the plates 15 off from the bar 14 and drop the plate 10 into the position shown in broken lines in Fig. 2 and marked A. The stop 16 will rest on the bar 14 and support the plate 10 in this position. The respective chamber or chambers 9 are now in connection with the exhaust-flue 13 and the dirt, dust, and other impurities

are drawn by suction into and through the exhaust-flue 13. Such a suction would have a tendency to draw the loose cotton fiber in the upper chamber 7 onto or through the grating 6, over the particular chamber or chambers now connected with the exhaust-tube. To prevent this, air must be admitted to the chamber 9 and preferably at the end opposite the discharge end connected with the exhaust-flue. In the preferred form I accomplish this by the hinge 12. The pivotal point is below the plate 10, so that when the opposite end is lowered the plate 10 swings forward and the air enters each chamber, as is indicated by the arrow shown in broken lines in Fig. 2. When the grating requires sweeping, the plate 10 is lowered into the position shown in broken lines in Fig. 2, (marked B.)

I do not wish to confine myself to the exact detail construction herein shown and described, as modifications may be made without materially changing the results secured by the use of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a cleaner-trunk, the combination with the upper chamber 7, the grating 6 and the collecting-chambers 9, of the plates 10 pivotally connected at one end with one side of the trunk and supported by a latch at the other end, and the partitions 8 extending beyond the plates 10; whereby each plate may be lowered at one end and the impurities discharged at one side of the trunk from each chamber separately, as described.

2. In a cleaner-trunk, the combination with the upper chamber, the grating and the collecting-chambers, of partitions extending beyond the collecting-chambers, plates forming the bottoms of the chambers, hinges, supporting the ends of the bottom plates, the pivots of which are placed below the plates, and latches for supporting the plates in the raised or lowered position, whereby the bottom plates are raised and lowered transversely to the length of the trunk and the impurities are discharged on one side of the trunk from each collecting-chamber separately, as described.

3. In a cleaner-trunk, the combination with the upper chamber, the grating and the collecting-chambers, of the bottom plates of the collecting-chambers pivotally connected at

one end with one side of the trunk, a double latch supporting the opposite end of each of the plates in the raised position and in the lowered position A, and transverse partitions, extending from the grating downward below and between the bottom plates when lowered into the position A, whereby each collecting-chamber is independently connected with the exhaust on one side of the trunk and each chamber may be opened to give access for the cleaning of the grating, as described.

4. In a cleaner-trunk, the combination with the upper chamber, the grating and the collecting-chambers, of the bottom plates of the collecting-chambers pivotally supported at one end, latches, pivotally connected with the bottom plates, adapted to support the ends of the bottom plates and close the opening of the exhaust-flue, the partitions 8 and the bar 14; whereby each one of the collecting-chambers may be connected with and disconnected from the exhaust-flue, as described.

5. In a cleaner-trunk the combination with the upper chamber, the grating and the collecting-chambers, of the bottom plates 10 hinged to one side of the trunk at one end, latches for supporting the other end, an exhaust-flue extending along one side of the trunk, the downward-extended partitions and connections between the exhaust-flue and the collecting-chambers; whereby the dirt, dust and impurities may be removed from the collecting-chambers and access may be had for the cleaning of the grating, as described.

6. In a cleaner-trunk, the combination with the upper chamber 7, the grating 6 and the collecting-chambers 9, of the plates 10, the brackets 11 and 12 forming the hinges for the support of one end of the plates 10, the latches 15 hinged to the opposite ends of the plates 10 and each having the stop 16 at its upper and the handle 20 at its lower part, the partitions 8, the connecting-bars 14 and the exhaust-flue 13, whereby the dust and impurities may be removed from the collecting-chambers separately and the inlet to the exhaust-flue controlled, as described.

In witness whereof I have hereunto set my hand.

JAMES C. POTTER.

Witnesses:

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