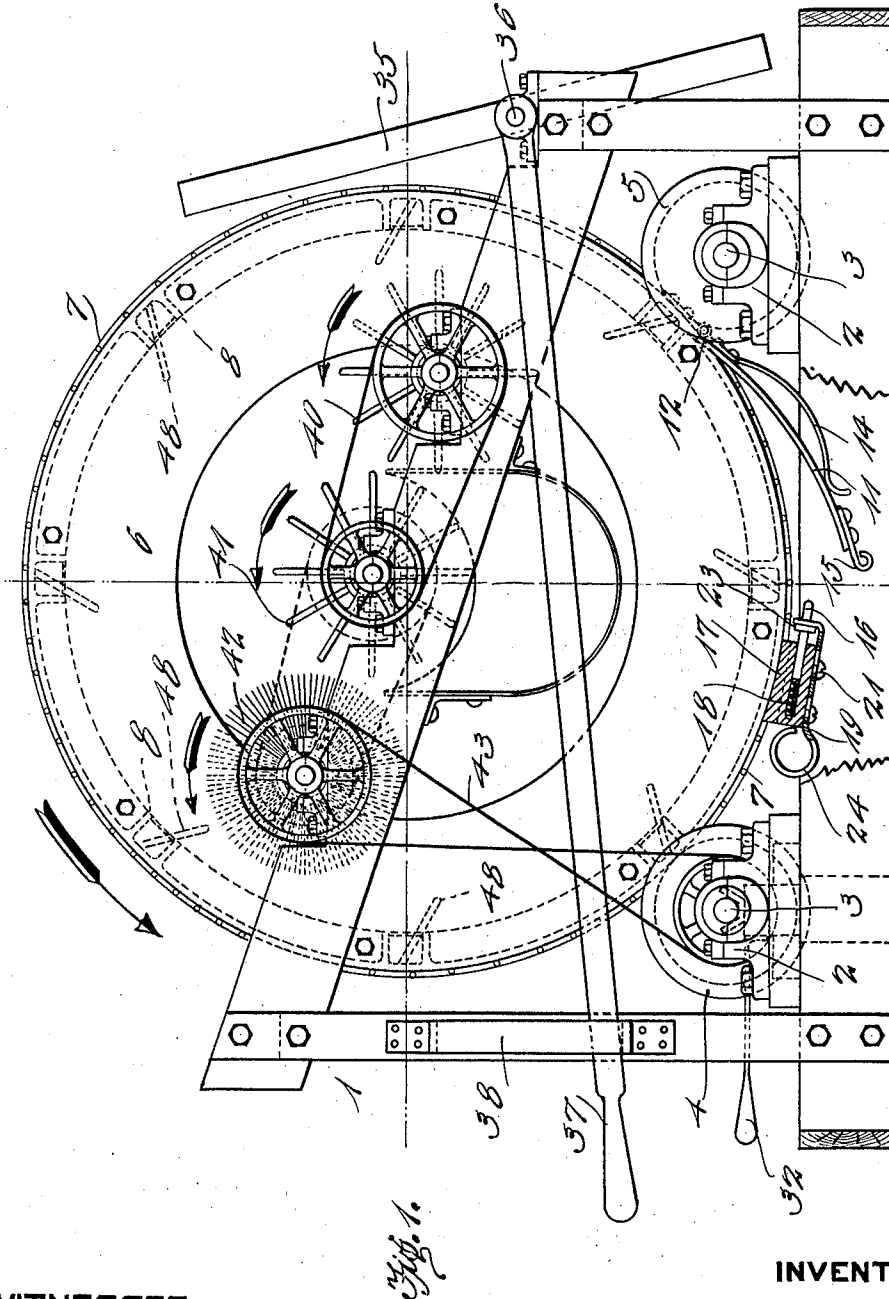


W. H. WILDRICK.
SACK CLEANER.
APPLICATION FILED OCT. 10, 1912.

1,058,507.

Patented Apr. 8, 1913.

3 SHEETS—SHEET 1.



WITNESSES.

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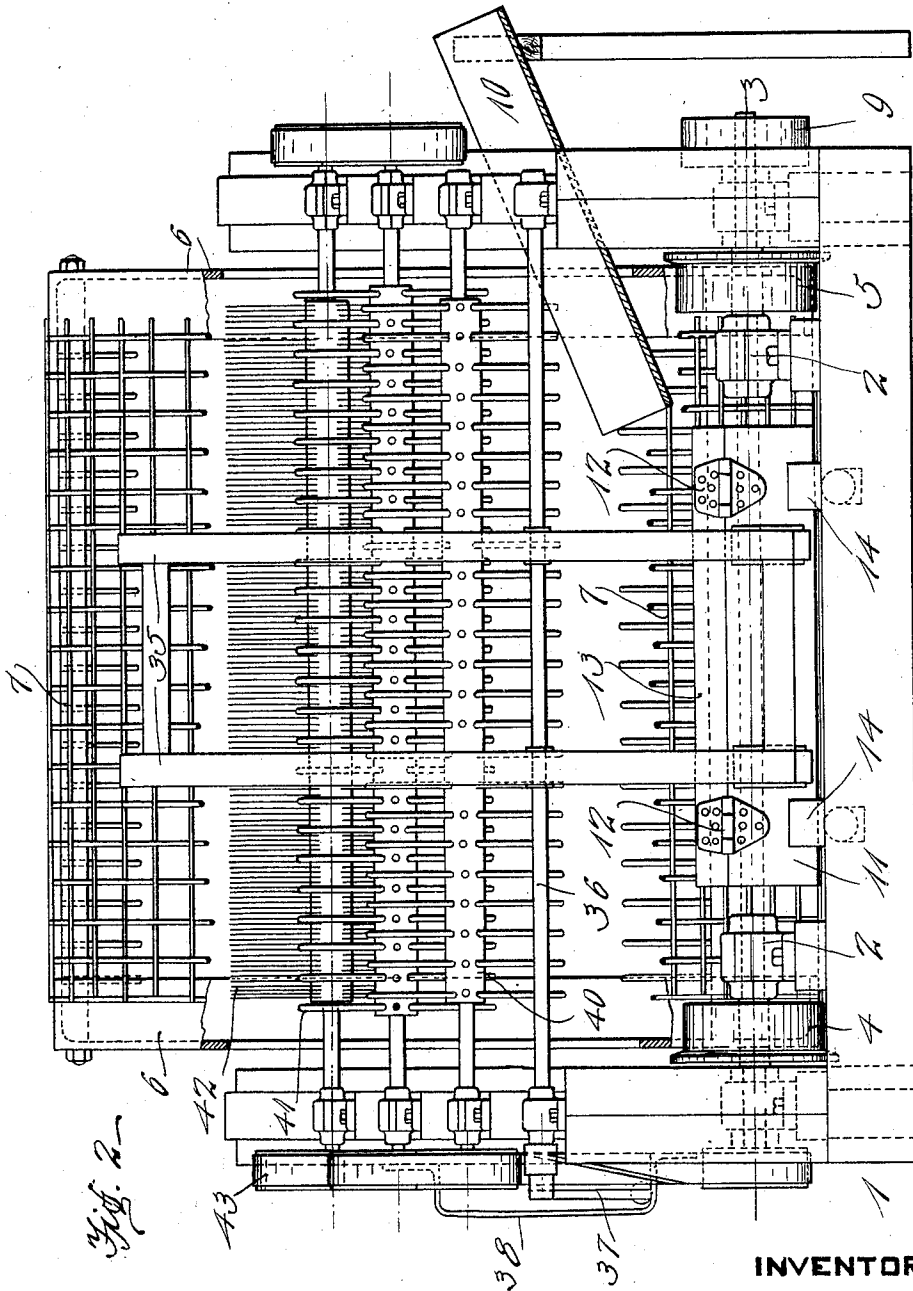


Fig. 2

WITNESSES.

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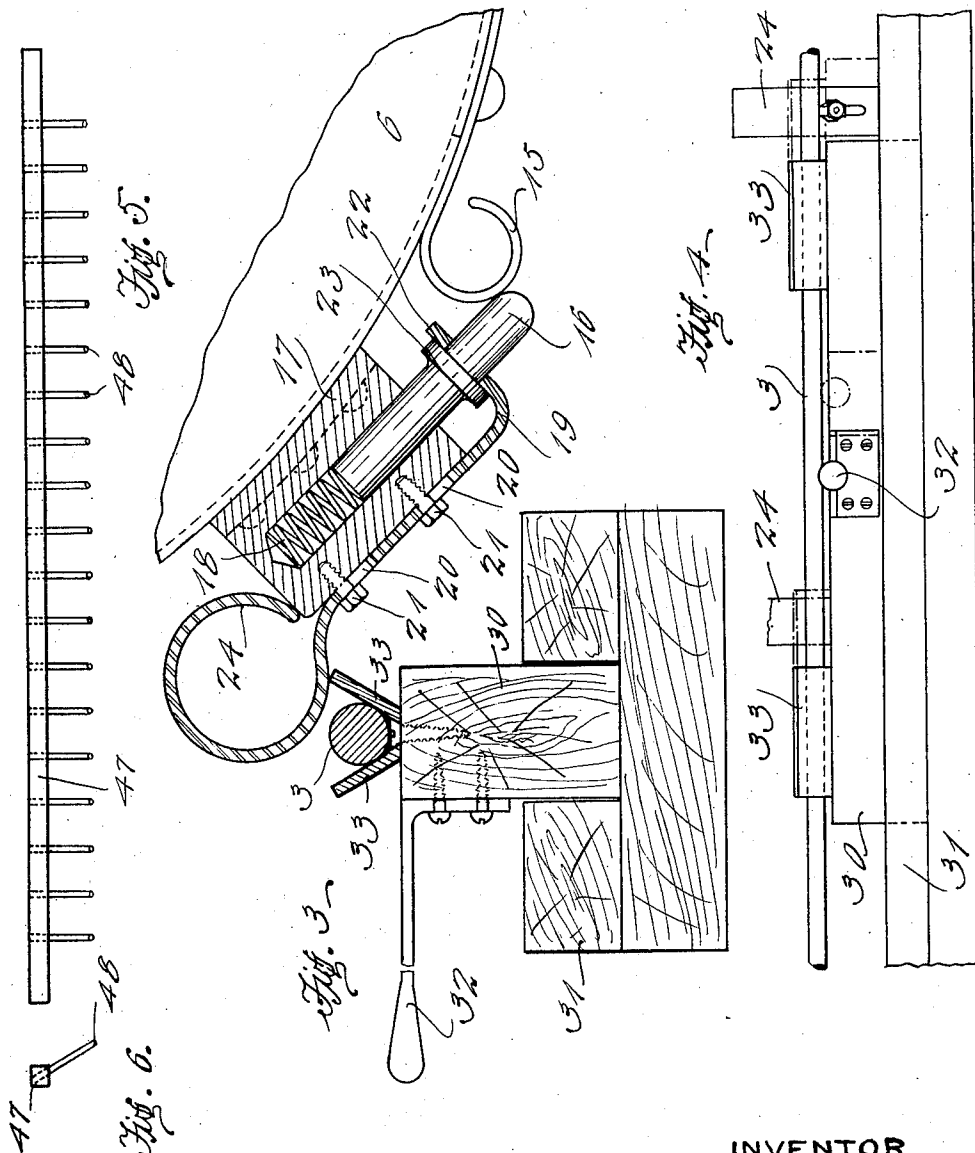
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WARREN H. WILDRICK, OF PHILLIPSBURG, NEW JERSEY.

SACK-CLEANER.

1,058,507.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed October 10, 1912. Serial No. 725,009.

To all whom it may concern:

Be it known that I, WARREN H. WILDRICK, a citizen of the United States, residing at Phillipsburg, in the county of Warren and State of New Jersey, have invented certain new and useful Improvements in Sack-Cleaners; and I 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.

This invention relates to the class of brushing and scrubbing, and more especially to the sub-class of carpet cleaning; and the specific object of the invention is to produce a machine which, while capable of cleaning carpets and the like, is more particularly intended for the cleaning of sacks or bags such as those which have contained cement, flour, or other dusty or pulverized products.

The object of the present invention is primarily to simplify such a machine and render its action to an extent automatic, to which end the invention consists in the provision of a feed chute for delivering the sacks or other articles to the interior of a rotary drum, and an exit door in one side of the same, with mechanism for opening and closing said door at intervals so that the dusted or cleaned sacks may be automatically dropped out of the drum at proper intervals. This and other objects are accomplished by constructing the machine as fully shown in the drawings wherein—

Figure 1 is an end elevation of the machine complete, partly in section and with the picker bars shown in dotted lines; and Fig. 2 is a rear elevation of certain parts of the machine with the drum broken away and the chute in section. Fig. 3 is an enlarged sectional detail of the door latching mechanism and the devices for tripping said latch, and Fig. 4 is a front elevation of the mechanism for shifting said tripping devices. Fig. 5 is a plan view and Fig. 6 an end elevation of one of said picker bars.

In the drawings the numeral 1 designates a suitable framework whose details of construction need not be described. In bearings 2 thereon are mounted shafts 3 and 4 extending across the machine and carrying flanged wheels 5 upon and between which rests a drum of some considerable size so that it may rotate on a horizontal axis. This drum has annular heads 6 and a foraminous periphery 7, as of coarse-mesh

wire cloth, ribs 8 connecting the heads 6 at suitable points inside the periphery to sustain the wire cloth in its cylindrical condition. Fast on one of said shafts is a pulley 9 which may be connected with a source of power so that, when the shaft and its wheels 5 are rotated, the drum is rotated in the direction of the arrow in Fig. 1. The sacks or other materials to be cleansed are fed into the interior of the drum through one of its annular heads 6 by means of a feed chute 10 best seen in Fig. 2, and it is my intention that they shall be fed over this chute rather slowly, as perhaps singly or in twos or threes. At one point within the periphery 7 of the drum a door 11 is hinged at 12 to a cross strip 13 and held counterbalanced by a spring 14. The free edge of this door is at the rear in the direction of rotation and carries a keeper 15 which is normally engaged when the door is closed by a bolt 16 slidably mounted in a guide block 17 fast on the outer face of the drum, and projected normally outward within its guide by means of a spring 18 as best seen in Fig. 3. This bolt or latch 16 is disengaged from the keeper 15 by means of a retractor consisting of a latch 19 having slots 20 in its body moving over headed pins 21 seated in the guide block 17, its front end 22 being forked or perforated so as to embrace the body of the bolt beyond a collar 23 formed rigidly thereon, and its rear end 24 having an enlarged head as shown. From Fig. 2 it will be seen that there are by preference two such keepers 15 on the door, and consequently there must be two retractors and two bolts, although it would not be departing from the principle of my invention to make the door so large that it would need three bolts or so small that it would need but one.

For retracting the latches 19 so as to draw the bolts 16 inward to disengage the keepers 15 and permit the door to fall open, I provide the mechanism best seen in Fig. 4. This consists of a rod 30 slidable in suitable guides 31 carried by the frame and having a handle 32 at the front of the machine within convenient reach of the operator, and this rod carries cams 33 (of which there are as many as there are latches 19) so disposed that when the rod is moved in one direction the cams will engage the heads 24 of the latches 19, but when the rod is moved in the other direction these cams will be

thrown out of the path of said heads and the latter will remain in the position shown in Fig. 3. It follows that the rod and its cams may be set so that the door remains closed throughout the revolution and the successive revolutions of the drum, or the rod may be set so that its cams engage the heads 24 of the retractors at each revolution of the drum, whereupon the bolts 16 are drawn upward or inward into their guide blocks 17 against their springs 18, and their tips free the keepers 15 on the door and the latter falls open as best seen in Fig. 1.

For closing the door after it has been opened I provide long fingers 35 rising rigidly from a rock shaft 36 journaled in bearings across the rear of the frame, and this shaft is capable of being set by means of a lever 37 extending to the front within reach of the operator and moving in a suitable guide 38. When this lever stands at the lower end of the guide as seen in Fig. 1, the fingers 35 stand close to the rear side of the drum and as this side rises the open door is pressed closed in a manner which will be clear; but when the lever is raised within its guide and the rock shaft 36 is turned, the fingers 35 will be thrown outward away from the rear side of the drum so that the door need not necessarily be closed by the tension of its spring 14, and in that case, when the drum makes another revolution the door will fall open.

The cleaning mechanism proper is disposed within the interior of the drum. By preference it comprises two rotary beaters 40 and 41 and a rotary brush 42, the shaft of the latter being driven by a suitable connection such as the pulleys and belt 43 between it and the power shaft as shown, and the shafts of the two beaters being by preference driven from the shaft of the brush, although these specific details are not essential. I dispose one beater across the interior of the drum near its rear side, the other a little higher and preferably at about the axial center of the drum, and the brush forward of the central beater and near the front side of the drum—all about as shown in Fig. 1—and I rotate them in the direction indicated by the arrows so that they will assist the drum in carrying the sacks or other materials around within the periphery thereof, rather than retarding such action. In Figs. 5 and 6 is shown a picker bar consisting of a preferably square rod 47 having fingers 48 projecting obliquely from it, and one such bar is disposed within each rib 8 across the periphery of the drum as indicated in dotted lines in Fig. 1, the inclination of the fingers being such that as they pass beneath the feed chute 10 they will pick up the sacks or other materials and carry them around the ascending

side of the drum. Obviously the rearmost beater 40 will here act on the sacks as its rearmost fingers are moving upward in the same direction as the fingers of the picker bars which pass it. The beater-fingers take the sacks from the fingers of the picker bar, and toss them over onto the central beater which runs faster than the rearmost beater and therefore cannot become clogged, and this in turn takes the sacks and tosses them over onto the brush which runs still faster and therefore cannot become clogged but will brush the sacks clean before dropping them onto the descending side of the drum in a manner which will be clear. Finally the beaten and cleansed sacks pass to and tumble about within the bottom of the drum, and when the door is opened from time to time in the manner above described they drop out in a cleansed condition and may be permitted to fall in a pile on the floor or into a suitable receptacle whence they can be removed at leisure.

Obviously the materials and sizes of parts are not essential to the successful operation of this machine, nor the exact details of construction further than as set forth in the following claims.

I claim:—

1. The herein described sack cleaner comprising a rotating drum mounted on a substantially horizontal axis and having a foraminous periphery provided at one point with a door opening, a door hinged in said opening and having a keeper on its free edge, a spring-projected bolt on the drum normally engaging said keeper, retracting mechanism for said bolt, and means for throwing said mechanism into position to be struck by the bolt or out of said position.

2. The herein described sack cleaner comprising a rotating drum mounted on a substantially horizontal axis and having a foraminous periphery and annular heads at its extremities, means for feeding the sacks into the drum, said periphery being provided at one point with a door opening, a door hinged in said opening at the forward side of the same in the direction of rotation of the drum, and having a keeper on its free edge, a spring-projected bolt on the drum normally engaging said keeper, retracting mechanism for controlling the position of said bolt, means for setting the retractor at will, and means for closing the door.

3. The herein described sack cleaner comprising a rotating drum mounted on a substantially horizontal axis, means for feeding the sacks therinto, its periphery being provided at one point with a door opening a door hinged in said opening at the forward side of the same in the direction of rotation of the drum and having a keeper at its free edge, a spring-projected bolt on the drum normally engaging said keeper, re-

tracting mechanism for said bolt, the same consisting of a sliding latch whose front end engages the bolt and whose rear end has a head, a rod movably mounted on the framework which supports said drum, and a cam on the rod adapted to be thrown into the path of said head.

4. The herein described sack cleaner comprising a rotating drum mounted on a substantially horizontal axis and its periphery provided at one point with a door opening, a door hinged in said opening, a spring latch therefor, a rod movably mounted on the framework which supports said drum, a cam on the rod adapted to be thrown into the path of said latch.

5. The combination with a rotating drum having a door hinged in its periphery; of a guide block carried by the latter, a bolt slidable in the guide and having a collar, a spring normally projecting the bolt to engage the free edge of said door, a retractor consisting of a latch slidably mounted on said guide block and having its front end engaging said collar and a head at its rear end, and a cam against which said head is adapted to strike as the drum rotates.

6. The combination with a rotating drum having a door hinged in its periphery; of a guide block carried by the latter, a bolt slidable in the guide and having a collar, a spring normally projecting the bolt to engage the free edge of said door, a retractor

consisting of a latch slidably mounted on said guide block and having its front end engaging said collar and a head at its rear end, a rod movably mounted on the framework which supports said drum, and a cam on the rod adapted to be thrown into the path of said head.

7. The herein described sack cleaner comprising a rotary drum mounted on a substantially horizontal axis, means for admitting the sacks thereto and removing them therefrom, ribs across the interior of the periphery of the drum, a picker bar carried by each rib and consisting of a rod having fingers projecting from the bar and obliquely forward within the interior of the drum in its direction of rotation, a rotary beater disposed along the axis of the drum, another beater disposed near the ascending side thereof but lower than the first beater, a rotary brush disposed near the descending side of the drum but higher than the first mentioned beater, the fingers of said picker bars passing by both beaters and the brush, and means for driving said beaters and brush.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WARREN H. WILDRICK.

Witnesses:

OLIVER VAN BILLIARD,
BESSIE A. BUSH.