

G. W. GOODIER.  
FLOOR DUSTER AND POLISHER.  
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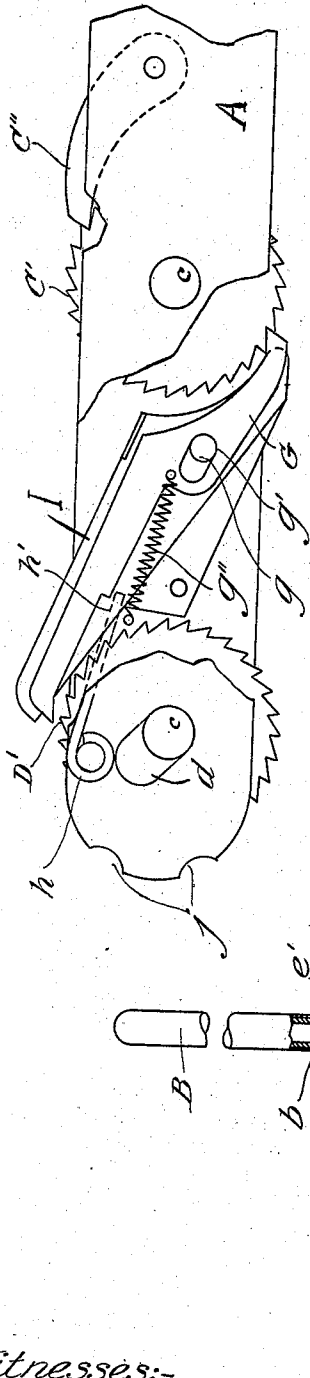


Fig. 3.

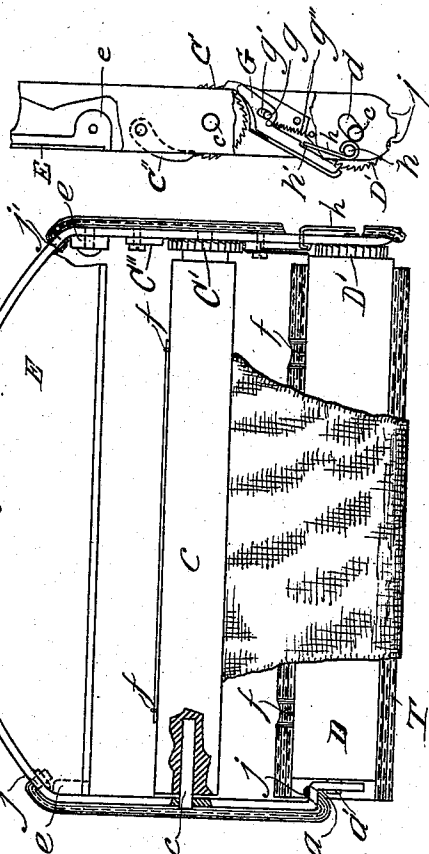


Fig. 2.

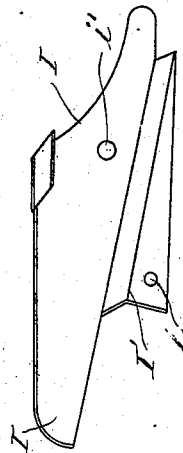


Fig. 4.

Witnesses:-  
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# UNITED STATES PATENT OFFICE.

GEORGE WILLIAM GOODIER, OF UTICA, NEW YORK, ASSIGNOR TO HYGIENIC FLOOR MACHINE COMPANY, OF UTICA, NEW YORK.

## FLOOR DUSTER AND POLISHER.

No. 899,727.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed December 26, 1906. Serial No. 349,418.

*To all whom it may concern:*

Be it known that I, GEORGE WILLIAM GOODIER, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Floor Dusters and Polishers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to an improved floor duster and polisher, and I declare that the following is a full, clear, concise and exact description thereof, sufficient to enable one skilled in the art to make and use the same, reference being had to the accompanying drawings in which like letters and numerals refer to like parts throughout.

The device here described and illustrated in the drawings is one comprising two rollers which support a cleaning cloth, which latter is wound from one to the other automatically on drawing the machine backward. Normally the cleaner is pushed before the operator over the floor to be cleaned, the lower or front roller resting on the floor and carrying the cloth which is periodically wound onto the upper roller. This winding is accomplished by means of a reciprocating double pawl, one end of which engages a ratchet-wheel on one roller and the other end engages a ratchet-wheel on the other roller. The front roller is mounted in a slotted bearing whereby its ratchet may be brought within the field of the reciprocating pawl.

In the drawings Figure 1 is a plan view of the device, one of the rollers being shown in section and other parts being broken away; Fig. 2 is a side view of a portion of the frame which is partly broken away to show the reciprocating pawl and other parts, the front roller being in the position taken when the device is withdrawn and the pawl in the position when it has just effected the turning of the upper roller; Fig. 3 is a like view showing the front or lower roller and the pawl in normal position when the device is being pushed by the operator, and Fig. 4 is a detail view of a guard for the reciprocating pawl.

Referring to the figures in detail, A represents a frame, B a handle mounted therein, C the upper or carrying roller and D the lower or cleaning roller. The rollers are mounted in the frame which has extended side pieces or bars for the support of the rollers.

E shows a cover mounted on the upper

part of the frame having lugs *e* whereby it is secured to the frame giving it form and rigidity. The handle B is attached to the frame A by means of a bolt *b* and nut *e'*.

The rollers may be of wood and are mounted in the frame by pins, such as *c*. The tip of the right arm of the frame as the operator pushes the device is bent inwardly, as shown at *a*. This roller is covered with felt which extends at the righthand end beyond the end of the wooden part of the roller, which latter is shorter than the upper roller. The construction is, therefore, such that a soft and yielding corner is presented so that the frame cannot mar the furniture or wood-work as the device is pushed along. Each roller is provided with pins *f* on which the cleaning cloth is hooked. The cloth M is first hooked on the front or cleaning roller and wound thereon, the opposite end then being secured to the pins in the upper or carrying roller. As the machine is operated in passing the cloth from one roller to the other the front roller turns to the right, as shown in Figs. 2 and 3, and the upper roller to the left. On the corresponding end of each roller is mounted a ratchet-wheel, shown as D' and C'. On the frame adjacent the ratchet C' is pivoted a pawl C'' which engages the ratchet-wheel C' to prevent its turning to the right. As the machine is pushed over the floor, the cloth on the front roller being in contact with the floor, the tendency is to turn roller D toward the left, but this is prevented by the engagement of the pawl C'' with the ratchet C'.

When it is desired to turn the cloth to present a clean surface to the floor, the device is withdrawn or pulled back while still resting on the floor. The bearing or pin of the roller D is supported at each end of the roller in a slotted bearing *d*. When the device is being pushed the pin is in the position shown in Fig. 3, but when it is withdrawn the pin is in the position shown in Fig. 2.

Between the rollers and on the pin *g* is mounted the double pawl G, in a slotted bearing *g'*. A spring *g''* mounted on the frame is connected with the pawl G and normally holds it in the position shown in Fig. 3 with the end adjacent ratchet C' bearing thereon. When, however, the machine is pulled back and the roller D is forced into the position shown in Fig. 2, the ratchet-wheel on such roller is brought into the position where it engages the tooth on the adjacent end of the

pawl G whereupon the withdrawal of the device turns the roller D to the right which pushes the pawl G into the position shown in Fig. 2, and at the same time turning roller C to the left by contact of the pawl with the ratchet on that roller. This operation turns both rollers a distance depending on the length of the slot  $g'$ . The operation can be repeated to turn the rollers farther, as may be desired.

While roller D is larger than roller C and more cloth would naturally be paid off roller D than roller C will take up, the condition is immediately corrected, either by pulling the machine back two or three times which turns roller C two or three notches of the ratchet and then pushing the machine forward which takes up the slack cloth, or the machine need not be so drawn back as its forward movement at once takes up the cloth. On the frame is a latch  $h$  pivoted at  $h'$ , its inner end passing through the frame as shown in dotted lines in Fig. 1 and being bent against the inner face of the frame. This latch may be swung upward and then the inner end of it bears against the double pawl G and lifts each end out of contact with its respective ratchet. The rollers can then be freely turned to wind or unwind the cloth.

I show a guard I fixedly mounted on the frame by a screw in hole  $i$  and also supported at  $i'$  on pin  $g$  which supports the double pawl. It is formed with an offset  $I'$  whereby is provided a space for the double pawl, the portion marked I lying between the double pawl and the rollers.

I have spoken of the fact that the forward end of the righthand arm of the frame is bent inwardly to provide a construction by which the woodwork is prevented from marring. I also provide a cord or other fending means for protecting the furniture from the edges of the frame. The end of the lefthand arm of the frame is cut out or notched as indicated at  $j$ , and holes  $j'$  are provided at a suitable point back of the side portions of the frame so that a cord may be passed through and supported in the cut-outs  $j$  and secured in the openings  $j'$ , as clearly indicated in the figures. On the righthand member of the frame the cut-outs  $j$  are provided just rearwardly of the mounting of the front roller on the frame.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a device of the character described, a frame provided with a handle and having forwardly extending side bars, rollers pivotally mounted between the said bars, a ratchet-wheel on each of said rollers and on corresponding ends thereof, one of said rollers being supported at each end in a slot in each side bar, a double pawl mounted with a slotted bearing on the side bar adjacent to the ratchets, the tooth at one end of said

pawl being in contact with the ratchet of the innermost roller, the slotted bearing of said former roller having a direction to bring the ratchet on the said roller into contact with the adjacent end of the double pawl whereby the turning of the said roller operates the pawl and turns the other roller, and a detent pawl in engagement with the ratchet on the latter roller, substantially as described.

2. In a device of the character described, a frame with a handle mounted thereon, the frame being formed with oppositely disposed projecting side bars, one of said side bars having an inner offset at its forward end, rollers pivotally mounted in the said bars, the outermost roller being shortened corresponding to the degree of the said offset and being provided with a soft covering extending beyond said end of the roller to the line of the end of the other roller, the said side bars being notched, and a fending means being supported in such notches of the frame, substantially as described.

3. In a device of the character described, a frame with a handle mounted thereon, the frame being formed with oppositely disposed projecting side bars, one of said side bars having an inner offset at its forward end, rollers pivotally mounted in the said bars, the outermost roller being shortened corresponding to the degree of the said offset and being provided with a soft covering extending beyond said end of the roller to the line of the end of the other roller, the said side bars being also notched, and a fending means being supported in such notches of the frame, the said frame being provided with a cover member mounted thereon, substantially as described.

4. In a floor cleaning device, the combination of a frame, a handle and rollers mounted in the frame, the said rollers having means for the engagement of a member whereby the rotation of one roller is operative to turn the other, the said rollers being adapted to support a cleaning member and wind the same from one to the other, one of said rollers being mounted in slotted bearings, a member adapted to transmit motion from one roller to the other and mounted in a bearing slotted in a line at an angle to the line of the slots of the roller bearing, one end of said member being normally in contact with the other roller whereby the first mentioned roller when brought to one end of its bearing slots is brought into contact with the said member and its rotation becomes operative to turn the latter roller, substantially as described.

5. In a device of the character described, a frame, rollers mounted thereon, a cloth cleaning member wound on the rollers, and a handle, having in combination therewith a double pawl mounted on the frame in a slotted bearing, one end of the pawl being normally in contact with a ratchet-wheel pro-

vided on one of the rollers, the other roller being also provided with a ratchet-wheel and being mounted in a slotted bearing having such direction that the said roller may be brought into and out of contact with the adjacent end of the pawl whereby in the former position the turning of said roller is operative through the medium of the pawl to turn the other roller, and means limiting the turning of the latter roller, substantially as described.

6. In a device of the character described, a frame, rollers mounted thereon, a cloth cleaning member wound on the rollers, and a handle, having in combination therewith a double pawl mounted on the frame in a slotted bearing, one end of the pawl being normally in contact with a ratchet-wheel provided on one of the rollers, the other roller being also provided with a ratchet-wheel and being mounted in a slotted bearing having such direction that the said roller may be brought into and out of contact with the adjacent end of the pawl whereby in the former position the turning of said roller is operative through the medium of the pawl to turn the other roller, means limiting the turning of the latter roller, and means to disengage the pawl from contact with each ratchet, substantially as described.

7. In a device of the character described, a

frame with rollers mounted therein and a double pawl mounted between the rollers, the said rollers being provided with ratchets to be engaged by the pawl, the said pawl and one of said rollers being mounted in bearings slotted on converging lines whereby said roller may be brought into operative contact with the adjacent end of the pawl and the pawl be thus operative by turning of the said roller to actuate the other roller, substantially as described.

8. In a device of the character described, having a handle, a frame and rollers mounted therein, one in slotted bearings, and a cleaning means on the rollers, the combination of means operative by said roller, in a given position thereof, to engage and turn the other roller to pass the cloth from one roller to the other by friction contact of the first-named roller with the surface to be cleaned, and a locking member to prevent, by coöperation of the cleaning means, the turning of the rollers in opposite direction, substantially as shown.

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

GEORGE WILLIAM GOODIER.

Witnesses:

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