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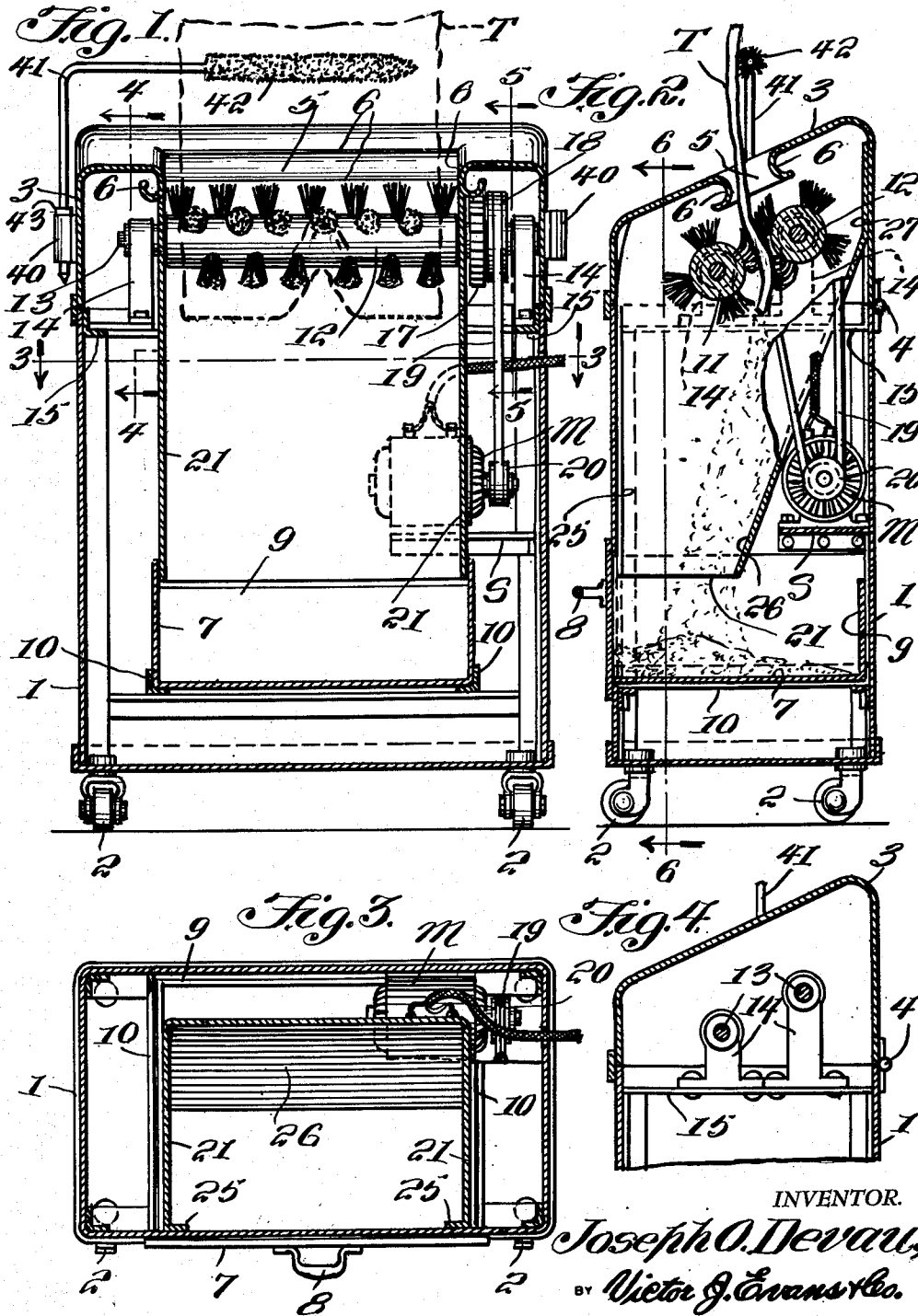
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2,632,902

TROUSER CUFF AND POCKET CLEANER

Filed May 20, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

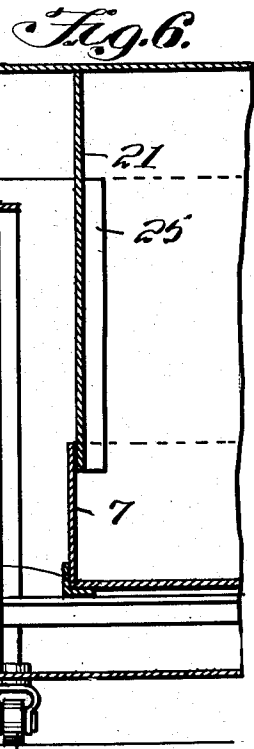
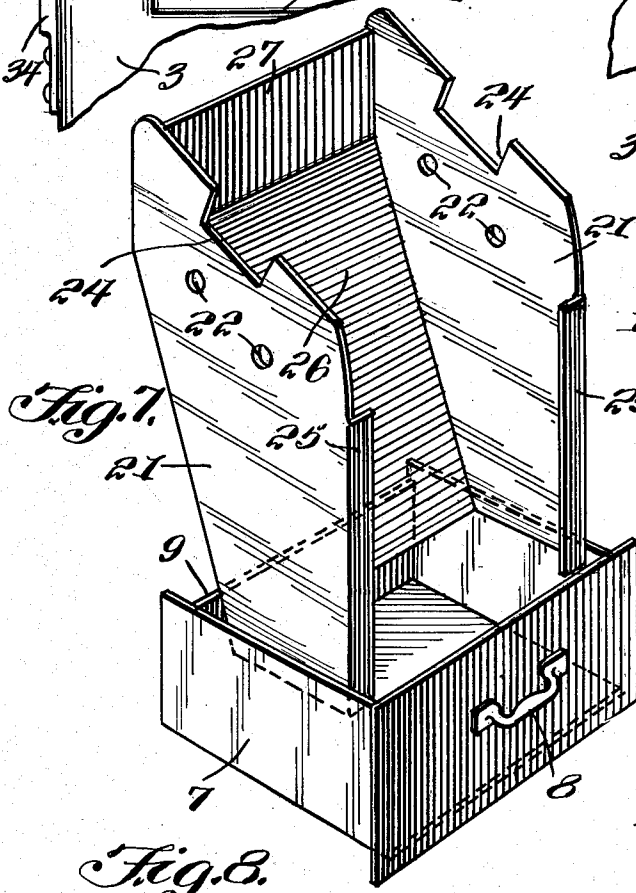
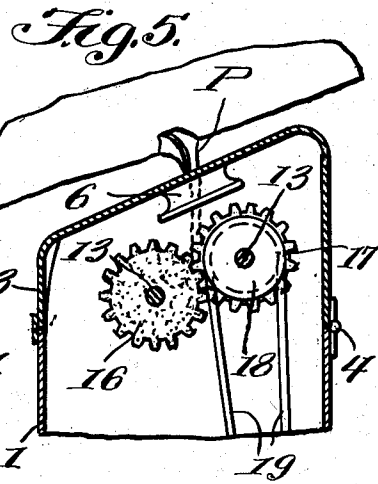
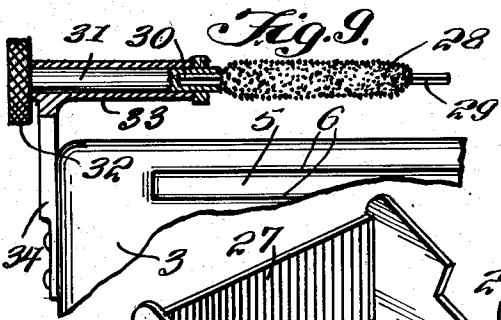
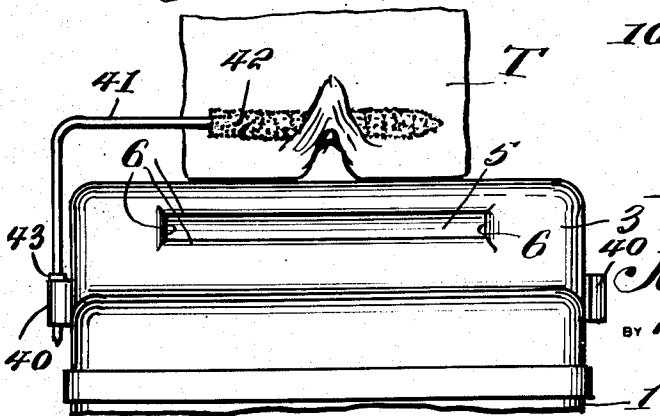


Fig. 8.



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UNITED STATES PATENT OFFICE

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TROUSER CUFF AND POCKET CLEANER

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3 Claims. (Cl. 15-40)

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My present invention relates to the general class of motor-driven brushing appliances for wearing apparel, and more specifically to an improved trouser-cuff and pocket cleaner of the portable, rotary brush type, that is especially designed for commercial use in cleaning dust, lint, and accumulated dirt from the folds of trouser-cuffs, pockets of garments, used cloths, and other portions of apparel that are usually inaccessible in dry-cleaning operations. In use, the cuff-ends of trouser-legs, or the pocket of a garment, are suspended by hand within the dust-tight cleaner, the accumulated debris is thoroughly and quickly removed by the brushes from the folds of the cuffs, or from other garment materials, and the materials from the brushes are conveyed by gravity through a conveyor-chute and deposited within a removable and dust-tight receptacle, or collection-drawer located within the cleaner or appliance.

The appliance includes a minimum number of parts that may be manufactured with facility and low cost of production, and the parts may be assembled with convenience to assure a garment cleaner of this type that is durable, simple in construction and operation, and efficient in the performance of its functions.

The invention consists in certain novel features of construction and combinations and arrangements of parts as will hereinafter be described, and more particularly set forth in the appended claims.

In the accompanying drawings I have illustrated a complete example of a physical embodiment of my invention in which the parts are combined and arranged in accord with one mode I have devised for the practical application of the principles of the invention. It will however be understood that changes and alterations are contemplated and may be made in these exemplifying drawings and mechanical structures within the scope of my claims without departing from the principles of the invention.

Figure 1 is a vertical sectional view of the cleaner; and Figure 2 is a sectional view at right angles thereto.

Figure 3 is a horizontal sectional view at line 3-3 of Fig. 1; and Figure 4 is a sectional view at line 4-4 of Fig. 1.

Figure 5 is a vertical sectional view at line 5-5 of Fig. 1.

Figure 6 is a vertical sectional view at line 6-6 of Fig. 2.

Figure 7 is a perspective view showing the relation of the chute to the drawer.

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Figure 8 is a detail view at the top of the cabinet showing the auxiliary brush and its use; and

5 Figure 9 is an enlarged detail view partly in section disclosing the construction of a modified form of auxiliary brush.

In the preferred form of the invention shown in the drawings I utilize a portable cabinet 1 of suitable metal and generally rectangular in shape, which is provided with caster wheels 2 beneath its bottom, and the open-top cabinet is equipped with a hinged cover 3 having an inclined top wall or front face, the hinge 4 being located at the back wall of the cabinet.

15 For cleaning purposes the cuff ends of the trouser legs as T in Figs. 2 and 8, or the pocket P of a garment in Fig. 5, are inserted by hand through an opening 5 formed within an elongated slot of the cover, and the outcurved flanges 6 about the entrance opening or slot provide a smooth-surface interiorly flanged entrance nozzle for feeding and guiding the cuffs to the cleaning brushes.

25 The front wall of the cabinet is fashioned with a lower opening to accommodate a removable drawer 7 having an exterior handle 8, and the back wall or inner wall 9 is cut-away so that the height of the back wall 9 is less than the height of the side walls or the front wall, as indicated in Fig. 7. The drawer is designed to receive and collect the debris from the brushes, and it is slidable on a pair of elevated rails 10, 10 supported on the inner faces of the walls of the cabinet. The cabinet provides a dust-tight enclosure, and the drawer is neatly fitted within the cabinet to prevent escape of dust; and of course the drawer is removed to permit disposal of accumulated or collected dust, dirt, or lint, and then returned or replaced within the cabinet for further use.

The two oppositely rotating brushes 11 and 12, which are mounted in the cabinet and located within the hinged cover parallel with the entry opening or slot 5 and just beneath the slot, are designed and set to have a beating action as they brush the cuffs which dangle through the slot and are held in suspension by the hands of the operator. Each of the brushes is equipped with a shaft as 13, and the shafts are journaled in bearings 14 mounted upon a frame 15 attached to the walls of the cabinet, and the bearings or brackets project upwardly into the interior of the cover to support the brushes, sufficient clearance being provided for opening and closing the hinged top or cover of the cabinet.

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The two shafts are provided with intermeshing spur gears 16 and 17, preferably of fiber, and the shaft 13 of brush 12 is provided with a driven pulley 18 over which a belt 19 passes from a drive pulley 20 on the shaft of a motor M; and this electric motor is supported on a suitable stand as S mounted in the cabinet above the drawer, and provided with a cable C and suitable electrical controls, receiving power from an electrical connection to a source of energy.

Between the upper brushes and the lower collection drawer a gravity conveyor for the dust from the brushes is interposed, which forms a chute having side walls 21 with holes 22 near its upper edges to accommodate the shafts 13 and the top inclined edges of the side walls are notched as at 24 to fit around the opposite ends of the nozzle, spout, or neck 5-6 of the cover.

The chute has an open top and open front, and the latter is bounded by a pair of laterally spaced upright flanges as 25 that are preferably welded to the inner face of the front wall of the cabinet, with the lower open end of the chute depending slightly into the open drawer, but terminating just above the top edge of the back wall 9 of the drawer, to permit insertion and removal of the drawer.

The back wall 26 of the chute declines from the short vertical wall 27 to form a deflector plate beneath the brushes to deflect and guide the debris from the brushes to the drawer, and to clear the motor assembly, with its driving mechanism exterior of the chute.

In Figs. 1 and 8 the cover 3 is provided on the opposite ends thereof with tubular supports 40 and these supports are adapted to selectively receive the lower end of the L-shaped handle 41. The opposite end of the handle is provided with a plurality of bristles forming the long slender auxiliary brush 42. The brush 42 is provided for use in cleaning the inside folds of the cuffs that are closely tacked or stitched to the legs of the trousers. As indicated in Fig. 8 the cuff is held, exteriorly of the cabinet, with the slender brush 42 inserted within the fold of the cuff and the cuff is passed to and fro along the fixed brush to remove otherwise inaccessible dust, dirt or lint. The handle 41 at the end receivable in the supports 40 is provided with a stop collar 43 which limits the entrance of this end into the supports 40. As shown the handle 41 can be positioned at either end of the cover 3.

In Fig. 9 a modified form of auxiliary brush 28 is shown and the shaft 29 of the brush 28 is inserted in a socket 30 of shaft 31 having a hand knob 32 for turning the brush, and the shaft 31 is

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journalled in a bearing sleeve 33 integral with a bearing bracket 34 that is rigidly mounted upon the cover 3 of the cabinet and movable therewith.

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

1. In a motor-driven garment-cleaner the combination with a cabinet having a cover hinged to the top thereof, said cover being provided with an interiorly flanged entrance nozzle, a pair of rotary brushes and shafts therefor journalled in the cabinet within the cover adjacent the interiorly flanged entrance nozzle, a chute having an open top and an open front with the open front being bounded by laterally spaced upright flanges which are secured to the inner surface of the cabinet so that the chute extends around the sides of the brushes, a removable collection drawer having a rear wall of less height than the side and rear walls thereof positioned in the lower end of the cabinet so that the chute terminates within the drawer just above the top edge of the rear wall of the drawer to permit insertion and removal of the drawer, the side walls of the chute having openings therein for said shafts, and notches in the upper edges of the side walls to fit around the interiorly flanged entrance nozzle.

2. In a motor-driven garment-cleaner as in claim 1 wherein said chute is provided with a forwardly and downwardly inclined deflector plate which is formed by a portion of the rear wall of the chute and which extends beneath the brushes.

3. In a motor-driven garment-cleaner as in claim 1 wherein a motor is mounted in said cabinet exteriorly of said chute and said motor has driving connection with said shafts for the rotation of said brushes.

JOSEPH O. DEVAU.

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