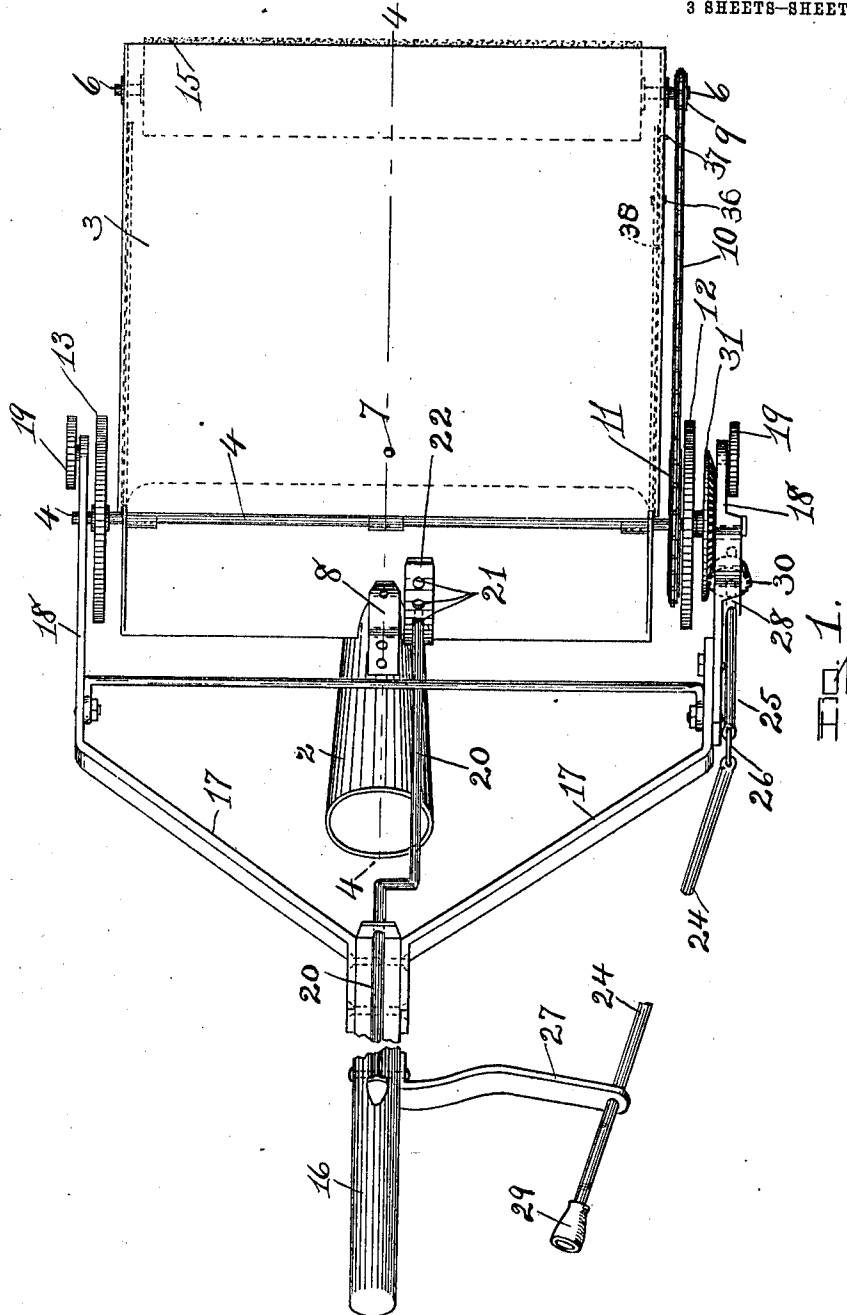


J. H. TOWNSEND.
CARPET SWEEPER.
APPLICATION FILED FEB. 12, 1910.

989,083.

Patented Apr. 11, 1911.

3 SHEETS-SHEET 1.



WITNESSES

J. Dronbach
E. Bakeman.

INVENTOR

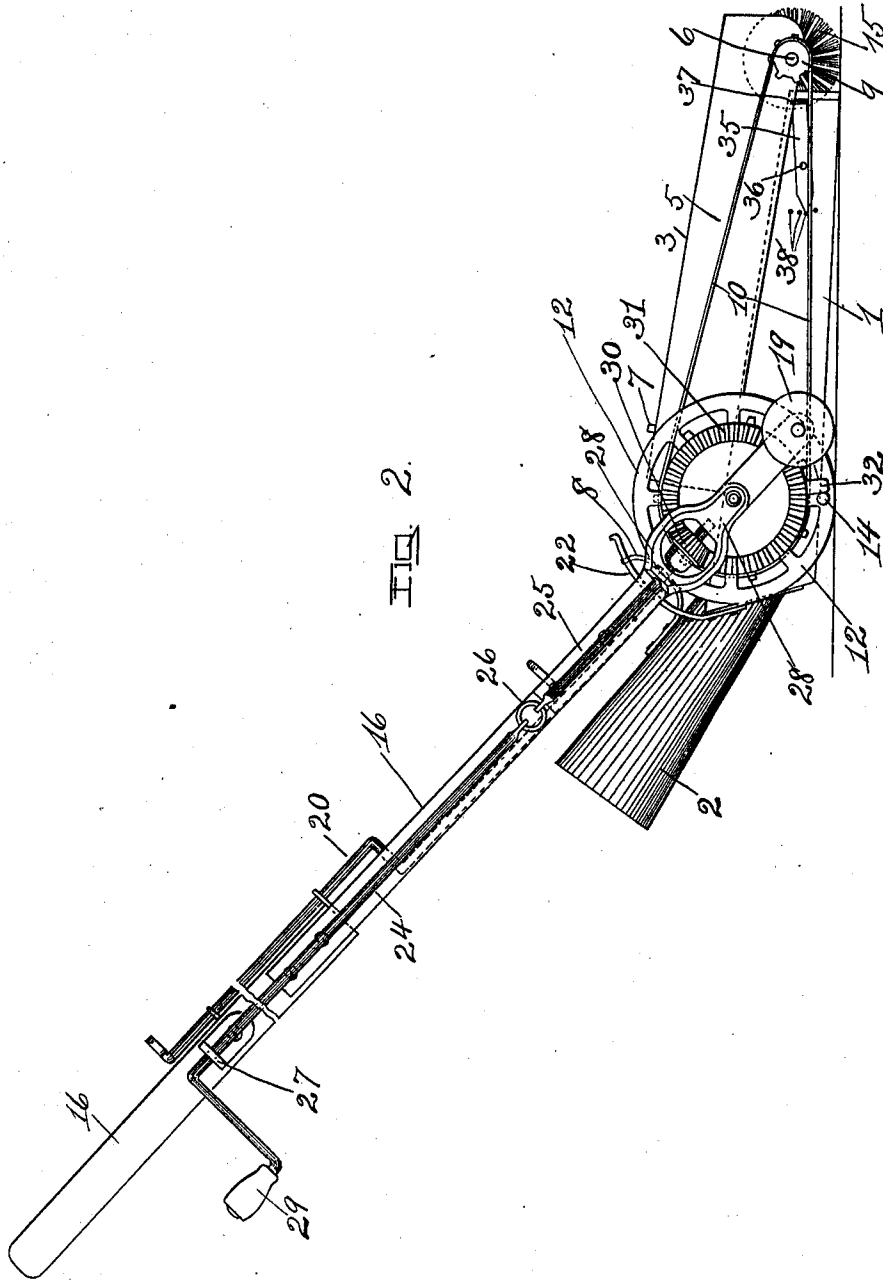
James H. Townsend
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INVENTOR

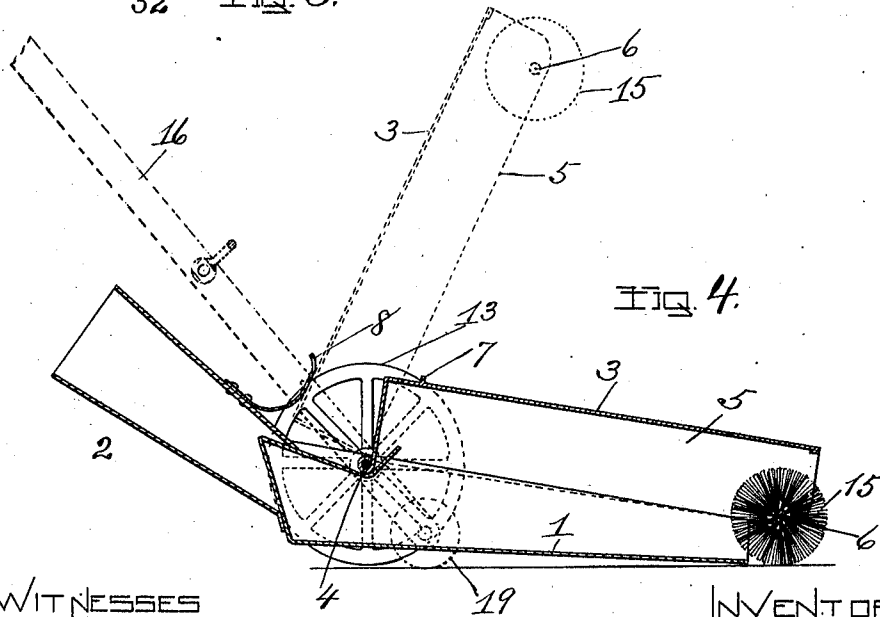
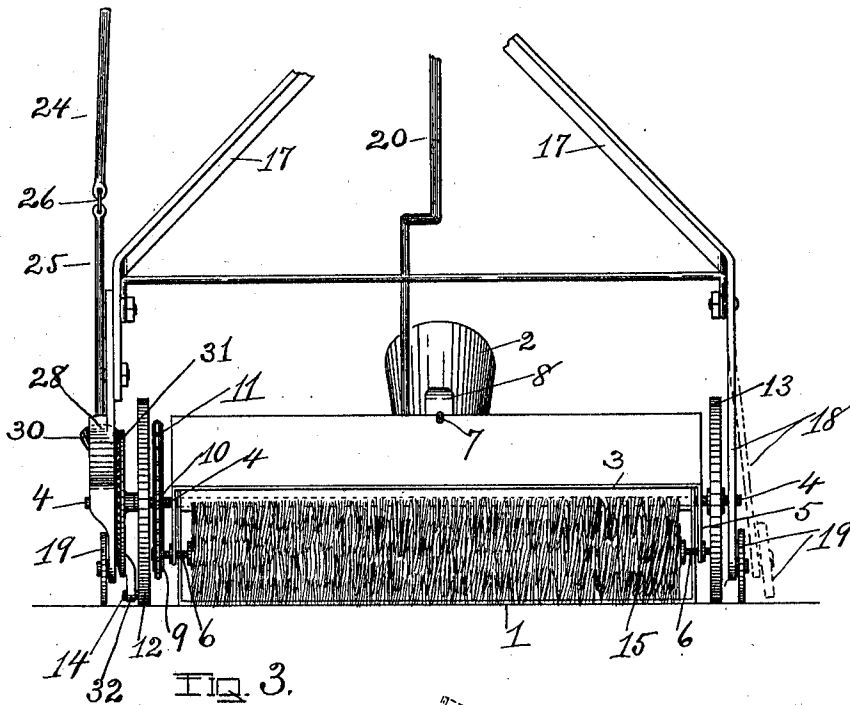
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3 SHEETS—SHEET 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES H. TOWNSEND, OF GLOVERSVILLE, NEW YORK.

CARPET-SWEEPER.

989,083.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed February 12, 1910. Serial No. 543,429.

To all whom it may concern:

Be it known that I, JAMES H. TOWNSEND, a citizen of the United States, residing at Gloversville, county of Fulton, and State of New York, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a top plan view of my improved carpet-sweeper with the handle and parts mounted thereon broken away for convenience of illustration. Fig. 2 is a view in side elevation of the same. Fig. 3 is a view in front elevation of the same. Fig. 4 is a vertical longitudinal section of the same taken on the broken line 4—4 in Fig. 1, with the long handle removed, its relative position in use being indicated by dotted lines.

Certain of the objects of the invention are to facilitate sweeping in close proximity to the base-board or furniture in a room; to provide a readily portable, hand-operated device having a receptacle for sweepings which can be used either with a hand-operated rotatory brush forming a part of the device, or with a separate brush or broom; and to provide a portable sweeping device having a rotatory brush with means for supporting and operating the same by hand, either at a point near the floor by a person stooping, or at a higher point convenient to a person in a more erect position.

Other objects will appear in connection with the following description.

In carrying out the invention, I provide a dust-pan or receptacle for sweepings with a handle attached directly thereto, and also with a longer handle removably attached thereto; a brush rotatively mounted and movable into and out of a position to co-operate with said dust-pan; means mounted upon said dust-pan for rotating said brush by hand; and hand-operated means mounted on said removable handle through which the brush-rotating mechanism mounted on the dust-pan can be operated.

Referring to the drawings wherein the in-

vention is shown in preferred form, 1, represents a sweepings-receptacle or dust-pan having fixed at the back thereof a handle, 2, which may be of any known form, and whereby the pan may be lifted and held in any desired position.

The dust-pan is covered by a hood or lid, 3, pivotally mounted upon the cross-shaft, 4, carried by the dust-pan, the side-walls, 5, of the hood forming bearing-supports for the opposite ends of a rotatory brush-shaft 6. A cylindrical brush, 15, is fixed upon the brush-shaft, 6, to rotate therewith.

The hood and the brush carried thereby can be swung vertically so as to occupy either the position shown by solid lines or that indicated by dotted lines in Fig. 4.

The hood is adapted to be supported in raised position as indicated by dotted lines in Fig. 4, by the engagement of a pin, 7, carried by the hood with a spring-plate, 8, having an aperture adapted to receive said pin. The spring-plate, 8, can be pushed by hand out of engagement with the pin, 7, permitting the rotatory brush to be swung down into position to coöperate with the dust-pan.

Fixed upon one end of the brush-supporting shaft, 6, is a sprocket, 9, connected by chain, 10, with a sprocket, 11, fixed upon the shaft, 4, which shaft is rotatively mounted upon the dust-pan and has fixed upon its opposite ends a pair of wheels, 12 and 13, which may be used as supporting wheels for the pan, and when so used serve as the means for automatically rotating the brush.

The device thus far described can be used in the manner of an ordinary carpet-sweeper by a person stooping to grasp the handle, 2, whereby the device can be pushed along the floor; or the handle can be grasped in a similar manner and the dust-pan supported with its front edge resting upon the floor, and the wheels, 12 and 13, slightly raised from the floor, as shown in Fig. 4, in which position the rotation of the brush can be accomplished by turning the wheel, 12, by means of the crank-handle, 14, thereon.

Said device can also be used as an ordinary dust-pan by swinging the hood and brush upward to the position indicated by dotted lines in Fig. 4, in which case the sweepings can be brushed into the dust-pan by an ordinary broom or brush-broom.

To adapt the device to be operated by a person in a substantially erect position, I have provided a removable handle attach-

ment, 16, terminating at its lower end in a yoke, 17, having near the ends of its side-arms, 18, apertures adapted to receive the opposite ends of the cross-shaft, 4, said side-arms being sufficiently resilient to enable them to be sprung over the ends of said shaft, 4, and to freely receive between them the wheels, 12 and 13. The arms, 18, of the handle yoke project somewhat beyond the bearing-apertures which receive the ends of the shaft, 4, and have rotatively mounted thereon, respectively, wheels, 19, whose peripheries project a somewhat greater distance from the axis of the shaft, 4, than the peripheries of the wheels 12 and 13, respectively. By sufficiently raising the removable handle, 16, the wheels, 19, can be brought into engagement with the floor, causing the wheels, 12 and 13, to be slightly raised from the floor, as indicated in Fig. 4, while, by lowering the handle to or below the position shown in Fig. 2, said wheels, 19, can be raised from the floor a sufficient distance to permit the wheels, 12 and 13, to rest upon the floor.

The removable handle, 16, can be temporarily locked to the dust-pan, whereby they are supported as a substantially rigid element, by means of a slide-bolt, 20, slidably mounted upon the shaft of the handle, 16, with its lower end adapted to enter a selected one of a plurality of apertures, 21, formed in a plate, 22, fixed upon the body of the dust-pan. When the bolt, 20, is inserted in one of the apertures, 21, the dust-pan can be moved from place to place by means of the handle, 16, while maintaining the relative angular position of said pan and handle. By supporting the handle, 16, in such a position that the wheels, 19, clear the floor, the device can, by means of the handle, 16, be made to travel along the floor upon the wheels, 12 and 13, causing the brush, 15, to be rotated and the device to be operated in the manner of an ordinary carpet-sweeper, while the operator maintains an erect attitude; or, if desired, the hood, 3, may be swung up to the position indicated by dotted lines in Fig. 4, and the dust-pan held in engagement with the floor by means of the handle, 16, which is grasped by one hand of the user, while sweepings are deposited therein by means of an ordinary brush or broom wielded by the other hand of the user of the device. I prefer, however, to provide the removable handle with hand-operated means for rotating the shaft, 4, and the brush-shaft which is connected therewith. For this purpose I mount upon the handle, 16, a rotatory shaft comprising an upper member, 24, and a lower member, 25, flexibly connected together at, 26, and rotatively mounted in bearings, 27 and 28. The upper end of the shaft, 24, has fixed thereon a crank-handle, 29, and the lower

end of the shaft, 25, has fixed thereon a beveled pinion, 30, adapted to engage a beveled gear, 31, rotatively mounted on the arm, 18, of the handle-yoke adjacent to the wheel, 12, which is provided with the crank-handle, 14. The beveled gear, 31, is so mounted concentrically with the bearing-aperture which receives the neighboring end of the shaft, 4; and said gear-wheel carries a lug, 32, adapted to engage said crank-handle, 14, to cause the wheel, 12, to rotate in unison with the beveled gear 31. When the device is used in this manner, the handle, 16, is swung upward at such an angle that the wheels, 19, engage the floor, so as to lift the wheels, 12 and 13, from the floor. The device can thus be moved along the floor upon the wheels, 19, while the brush is rotated as rapidly as desired by hand-operation of the crank 29.

Whether the brush be operated by means of the crank-handle, 29, or of the crank-handle, 14, the brush can be rotated more or less rapidly without regard to the rapidity or direction of movement of the dust-pan. The device can thus be moved toward and from the base-board or a piece of furniture; or rapidly rotated for as long a time as may be desired in close proximity to such object while the dust-pan is held stationary. It is thus possible to sweep very closely to such objects without danger of injurious engagement of the sweeping-device with such objects, as frequently happens in the use of ordinary carpet-sweepers in which the rotation of the brush is induced only by a progressive movement of the apparatus as a whole.

The bearing-supports for the brush-shaft being oscillatory about the axis of the shaft, 4, the chain and sprocket connections between the shaft, 4, and the brush-shaft, 6, are not interfered with in raising and lowering the hood 3.

The height of the brush in use can be regulated by means of a lever, 35, fulcrumed at, 36, upon the side of the dust-pan, having one end offset at, 37, to underlie and support the side-wall, 5, of the hood, and its other end offset as indicated by dotted lines in Fig. 1 adapted to be sprung into one of a series of apertures, 38, in the side-wall of the pan, as shown in Fig. 2.

What I claim as new and desire to secure by Letters Patent is—

1. In a portable carpet-sweeper, and in combination, a dust-pan; a handle for lifting the same; a shaft rotatively mounted upon said dust-pan; means for manually rotating said shaft; a rotatory brush; operating connections between said brush and said shaft; a hood for said pan pivotally mounted thereon concentrically with said shaft; and bearing-supports for said brush carried by said hood.

2. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a brush rotatively mounted and operatively connected with one of said wheels; a crank-handle on said wheel; a handle removably connected with said pan; and hand-operated mechanism mounted upon said handle having a member engageable with the crank-handle on said wheel for rotating the latter.

3. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a rotatory brush operatively connected with one of said wheels; a handle pivotally mounted upon said pan concentrically with said wheels; hand-operated mechanism mounted on said handle for producing rotation of said wheel; a pair of wheels mounted upon said handle to project beyond the periphery of the wheels upon which said pan is mounted, and adapted to be brought into engagement with the floor by a swinging movement of said handle.

4. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a rotatory brush operatively connected with one of said wheels; a handle pivotally mounted upon said pan concentrically with said wheels; hand-operated mechanism mounted on said handle for inducing rotation of said wheel; a pair of wheels mounted upon said handle to project beyond the periphery of the wheels upon which said pan is mounted, and adapted to be brought into engagement with the floor by a swinging movement of said handle; and means for temporarily locking together said handle and dust-pan in selected relative rotative positions.

5. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a rotatory brush operatively connected with one of said wheels; a handle pivotally mounted upon said pan

concentrically with said wheels; hand-operated mechanism mounted on said handle for producing rotation of said wheel; a pair of wheels mounted upon said handle to project beyond the periphery of the wheels upon which said pan is mounted, and adapted to be brought into engagement with the floor by a swinging movement of said handle; and a slide-bolt carried by said handle adapted to temporarily lock together said handle and pan in a selected relative rotative position thereof.

6. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a rotatory brush operatively connected with one of said wheels; a handle mounted upon said pan; floor-engaging means carried by said handle whereby said wheel can be raised from the floor; a flexible shaft rotatively mounted on said handle; an operating crank on the upper end of said shaft; a beveled pinion on the lower end of said shaft; a beveled gear engageable with said pinion rotatively mounted on said handle concentrically with said wheel; and interengaging means on said beveled gear and wheels.

7. In a sweeper, and in combination, a dust-pan; a pair of wheels upon which said pan is mounted; a rotatory brush operatively connected with one of said wheels; a handle mounted upon said pan; floor-engaging means carried by said handle whereby said wheel can be raised from the floor; and hand-operated mechanism mounted on said handle for producing rotation of said wheel when so raised from the floor.

In testimony whereof, I have hereunto set my hand this 8th day of February, 1910.

JAMES H. TOWNSEND.

Witnesses:

ALICE M. SUTLIFF,
EZRA A. SUTLIFF.