No. 894,011. PATENTED JULY 21, 1908.

O. KAMPFE.

SWEEPER.

APPLICATION FILED FEB. 6, 1907.

Fig. 1.

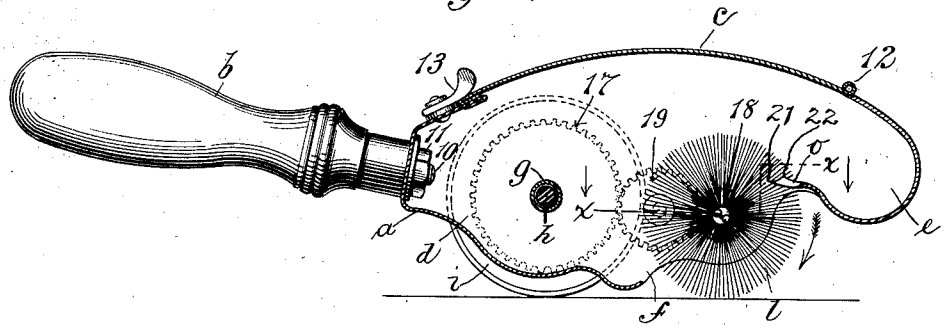


Fig. 2.

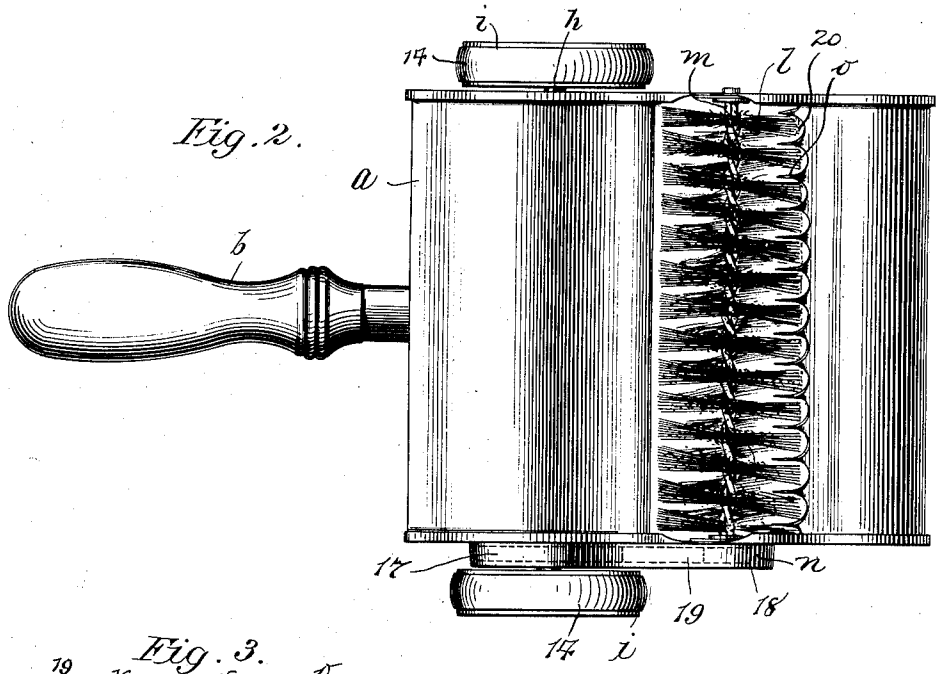


Fig. 3.

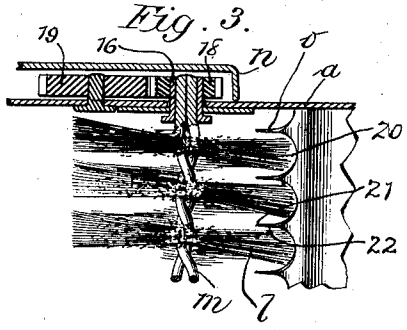
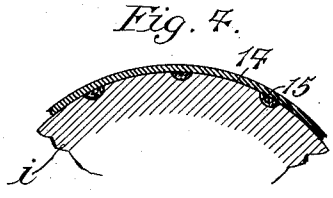


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SWEEPER.

No. 894,011. Specification of Letters Patent. Patented July 21, 1908.

Application filed February 6, 1907. Serial No. 355,970.

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented an Improvement in Sweepers, of which the following is a specification.

My present invention relates to a sweeper and particularly to a hand sweeper adapted to brush up and collect crumbs, cigar and cigarette ashes and other similar refuse articles from tables, floors or any other places.

In carrying out my invention, I preferably employ a one-compartment casing, a main receptacle at one end and an auxiliary receptacle at the opposite end, a brush revolubly mounted in the sides of the casing intermediate of the said receptacles and so placed as to pass into and partially through an opening extending entirely across the bottom of the casing, and means for revolving said brush in the use of the sweeper. I also prefer to provide the edge of the opening in the bottom of the casing adjacent to the auxiliary compartment with a series of teeth between which the bristles of the brush, which are preferably arranged spirally,—pass and contact, thereby removing particles which may have collected upon the bristles of the brush, or threads entwined with said bristles, and depositing the same in the said auxiliary receptacle, as will be hereinafter more particularly described.

In the drawing, Figure 1 is a sectional elevation of my improved sweeper. Fig. 2 is an inverted plan of the same. Fig. 3 is a partial longitudinal section on line *x*, *x*, Fig. 1, showing the brush, bearings in which the same is mounted and the teeth formed on the edge of the opening in the bottom of the casing adjacent to the auxiliary receptacle, and Fig. 4 is a partial sectional elevation of one of the roller wheels.

Referring particularly to the drawing, *a* designates the casing which I preferably make of sheet metal. One end of the casing is provided with the handle *b* secured thereto by the reduced end 10 of the handle passing through the end of the casing and secured thereto by means of the nut 11 on the screw threaded reduced end or in any other desired manner.

The casing *a* is provided with a cover *c* preferably hinged thereto as indicated at 12 and provided with a latch 13 by which the same may be maintained in its closed position. At one end of the casing *a*,—preferably that to which the handle *b* is attached,—I provide a main receptacle *d* and at the opposite end of the casing *a*, an auxiliary receptacle *e* and intermediate of the said receptacles *d*, *e*, the bottom member of the casing *a* is provided with an opening *f* preferably rectangular in outline and extending from one side of the casing to the other.

g represents a sleeve passing transversely through the casing *a* in the main receptacle *d* and secured in any desired manner to the inner surfaces of the sides of the casing. The shaft *h* passes through and has its bearing in the said sleeve *g* and on the extremities of the shaft *h* and exteriorly of the casing, rollers *i* are secured. These rollers *i* are preferably made of wood and provided with rubber tires 14, the peripheries of the rollers *i* being notched or scored as indicated at 15 so as to provide a purchase for the cement by which the tires 14 are secured, the rubber tires producing a more or less yielding effect in the use of the sweeper.

l is a brush, the bristles of which are preferably mounted spirally in the brush axle *m*, whose extremities are journaled in suitable bearings 16 secured to the sides of the casing *a* in such a position that the brush *l* extends into and partially through the opening *f* in the bottom of the casing.

17 represents a gear wheel secured on the shaft *h* exteriorly of the side of the casing.

18 is a gear wheel secured to the brush axle *m*, also exteriorly of the casing, and 19 is an intermediate gear wheel suitably mounted on the side of the casing in such a position as to mesh with both the aforesaid gear wheels, and the arrangement of these gear wheels is such, as will be apparent, that by operating the sweeper upon the rollers *i*, the brush *l* will be turned in the same direction that the rollers *i* revolve through the gear wheels which are so employed as to cause the brush *l* to turn at a considerably greater speed than the rollers *i*, and the gear wheels 17, 18, and 19, as shown, may be inclosed in a suitable gear case *n* secured to the side of the casing *a* and intermediate of the same and one of the rollers *i*.

As shown in the drawing, I prefer to provide the edge of the opening *f* adjacent to the auxiliary receptacle *e* with a series of teeth *o*, providing as will be understood, the intermediate recesses 20, through which the bristles of the brush *l* pass and contact with the

teeth with every revolution thereof, and it will be noted, as shown in the drawing, that I prefer to make the projecting upper edge of each tooth *o* with a concave surface providing at the extremities thereof the points 21, 22, which insure the intercepting of any threads or strings that the brush may collect and the removal of such articles therefrom.

In the use of the hereinbefore described sweeper, as will be apparent, the greater portion of the dust, ashes, or other materials to be taken up, are thrown by the brush into the main receptacle *d*, but occasionally articles such as string for instance, adhere to or become entangled with the bristles of the brush and are not thrown off into the main receptacle *d*, but pass around on the brush until the bristles contact and engage the teeth *o* which remove any such articles and deposit the same in the auxiliary receptacle *e*.

I claim as my invention:

1. A sweeper comprising a casing with a central portion of greatest depth, a handle secured to one side of the casing, a brush revolubly mounted near the other side of the casing, an intermediate axle, rollers on the ends of the same bearing upon the traveled surface, whereby the casing of the sweeper can be turned or rocked on the rollers by the operator engaging the handle so as to bring the sweeper with greater or less force upon the surface being swept, a main receptacle in the casing between the shaft of the rollers and the brush and a smaller receptacle at the end of the casing on the opposite side of the brush.

2. A sweeper comprising a casing with a central portion of greatest depth, a handle secured to one side of the casing, a brush revolubly mounted near the other side of the casing, an intermediate axle, rollers on the ends of the same bearing upon the traveled surface, whereby the casing of the sweeper can be turned or rocked on the rollers by the operator engaging the handle so as to bring the sweeper with greater or less force upon the surface being swept, a main receptacle in the casing between the shaft of the rollers and the brush, a smaller receptacle at the end of the casing on the opposite side of the brush and a cover in the top of the casing forming the major portion of the top, whereby the contents of the receptacles are delivered therefrom upon the over-turning of the casing.

3. A sweeper comprising a casing with a central portion of greatest depth, a handle secured to one side of the casing, a brush revolubly mounted near the other side of the casing, an intermediate axle, rollers on the ends of the same bearing upon the traveled surface, whereby the casing of the sweeper can be turned or rocked on the rollers by the operator engaging the handle so as to bring the sweeper with greater or less force upon the surface being swept, a main receptacle in the casing between the shaft of the rollers and the brush, a smaller receptacle at the end of the casing on the opposite side of the brush and a series of teeth formed as prolongations of the casing along the edge of the smaller receptacle and extending into the brush, said teeth each having a projecting upper edge and concave surfaces extending within the periphery of the brush for the purposes specified.

4. A sweeper comprising a casing of suitable material having a top, sides and a lower or bottom portion having a central part nearest the surface swept and having an adjacent main receptacle provided therein, the front portion of the casing being shallow and raised above the level of the surface being swept and having a receptacle provided therein, a brush mounted in the sides of the casing between these receptacles, an axle mounted in the sides of the casing, and rollers on the ends of the same upon which the sweeper may be tilted and upon which the sweeper is moved along, a handle secured to the casing at the opposite side of the rollers to that occupied by the brush, by which the sweeper is moved and means operatively connected to the axle and brush for revolving the brush with the movement of the sweeper.

5. A sweeper comprising a casing of suitable material having a top, sides and a lower or bottom portion having a receptacle provided in the front portion of the casing and raised above the level of the surface being swept, a brush mounted in the sides of the casing, an axle and rollers on the ends of the same and upon which the sweeper is moved along, a handle secured to the casing at the opposite side of the rollers to that occupied by the brush, means operatively connecting the axle and brush for revolving the brush with the movement of the sweeper, and a series of teeth connected to the casing at the edge of the brush adjacent to the said receptacle, with the points of the teeth passing in beyond the periphery of the brush.

Signed by me this 28th day of January, 1907.

OTTO KAMPFE.

Witnesses:
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BERTHA M. ALLEN.