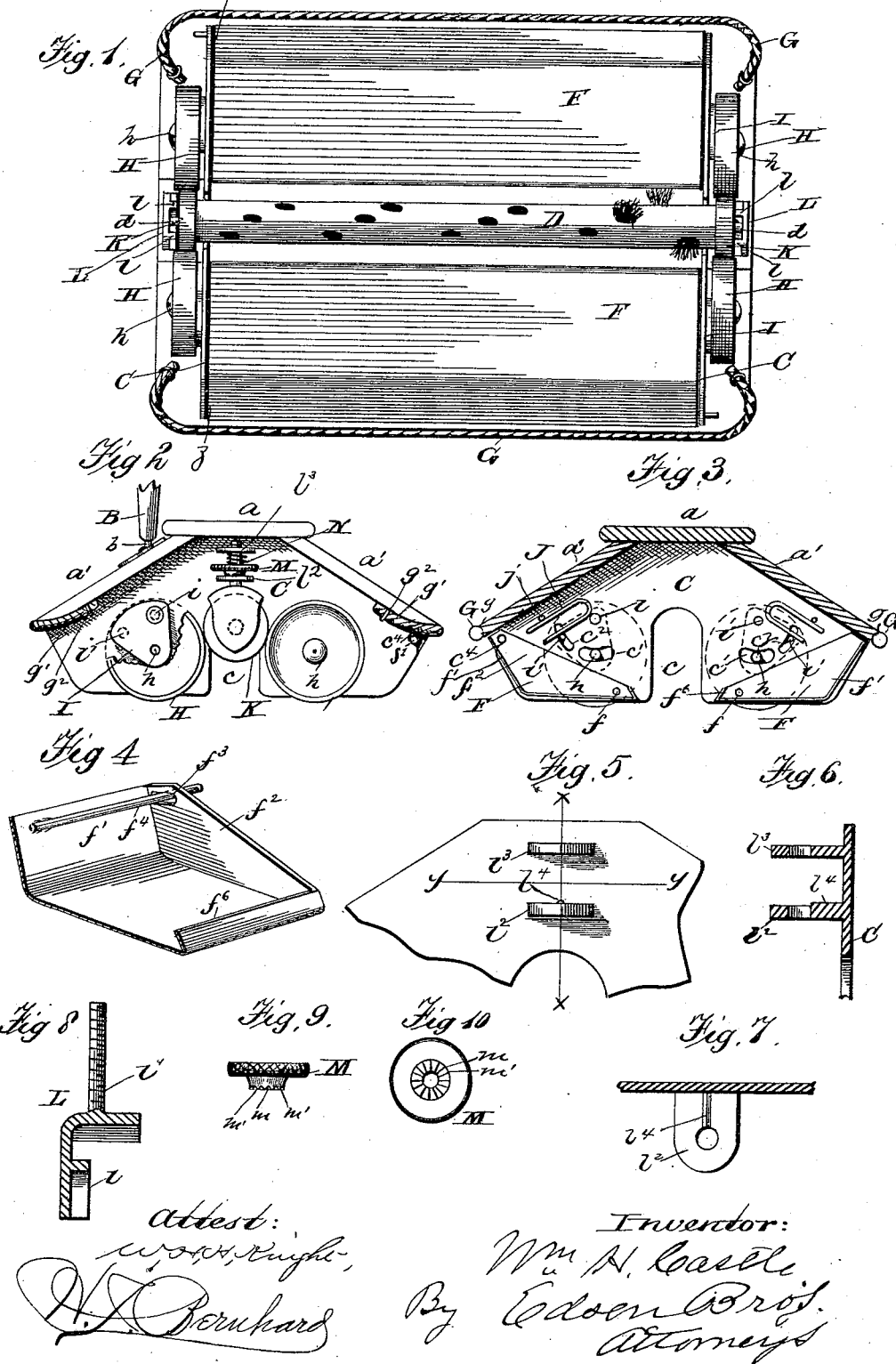


(No Model.)

W. H. CASTLE.
CARPET SWEEPER.

No. 346,641.3

Patented Aug. 3, 1886.



UNITED STATES PATENT OFFICE.

WILLIAM H. CASTLE, OF GENEVA, OHIO.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 346,641, dated August 3, 1886.

Application filed September 18, 1884. Serial No. 143,322. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CASTLE, a citizen of the United States, residing at Geneva, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to carpet-sweepers; and it consists, essentially, in certain new and useful devices for adjusting the brush-roll up and down in its guides, for increasing the force with which the rollers bear against the brush-roll, and for protecting furniture from being damaged by the sweeper when struck by the latter, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a bottom plan view of a carpet-sweeper provided with my improvements. Fig. 2 is an end view of the sweeper with one of the wheels broken away to show details of construction. Fig. 3 is a sectional view on the line $z z$ of Fig. 1, showing the inside of one of the end castings. Fig. 4 is a detail perspective view of a portion of one of the dust-pans. Fig. 5 is a detached detail view of a portion of one of the end castings. Fig. 6 is a sectional view taken on the line $x x$ of Fig. 5. Fig. 7 is a sectional view taken on the line $y y$ of Fig. 5. Fig. 8 is a detached sectional view through one of the brush-guiding ears. Figs. 9 and 10 represent views of the roller-adjusting thumb-screw.

Referring to the drawings, in which like letters of reference indicate like parts in all the figures, A designates the sweeper having the usual form of cover—i. e., flat central portions a , and inclined portions a' , one of which is provided with a slot through which the shank b of the handle B passes. The cover is secured, in the usual manner, to vertical ends C C, preferably of iron, each cast in a single piece, and provided with a central cut-away portion, c , through which the ends of the brush-roll D pass, and curved slots c' , formed in the ends at each side of said cut-away portion, for a purpose hereinafter described.

F designates dust-pans, which are pivoted at the points f to the ends C. The inclined sides f' extend upward to the portions a' of

the cover. One of the ends f^2 of each of the pans is provided near its upper edge with a slot, f^3 , through which passes one end of a piece of spring-wire, f^4 , secured at its inner end to the side f' of the pan, the outer end engaging, when the pan is closed upward, with detents c^4 , formed at one edge of each of the ends C, near the top thereof. The dust-pans F are provided at their edges adjacent to the brush-roll with upturned flanges f^5 , whereby dust is held within the pan and prevented from falling therefrom when the pans are tilted.

G G designate pieces of cord secured by glue or otherwise within grooves g , formed in the outer edges of each of the inclined portions a' of the cover. The ends g' of the cords pass under the overhanging ends of the cover, and are secured thereto by small staples g^2 , or otherwise. I preferably employ braided window-cord, although other kinds of cord may be employed with perhaps equal advantage, to prevent furniture from being marred or scratched by the sweeper when being used.

The sweeper is mounted upon four wheels or rollers, H, placed near each of its corners upon the end castings, C. The rollers are pivoted, as by screws h , to the lower ends of plates I, which are in turn pivoted at their upper inner corners, as by pivotal pins i , to the end castings, C.

i designates pins projecting inwardly from the outer corner of each of the plates I, and are engaged by one arm of U-shaped springs J, the opposite arm of the springs being bent outward and riveted in apertures formed for their reception in the end castings.

j designates studs against which the springs bear, and by which they are held in position.

I attach importance to the U-shaped form of the springs J. It will be seen from the above description that the rollers H are forced toward each other by the springs J, and that said rollers bear with considerable pressure against rollers K, secured to the opposite ends of the brush-roll D. The rollers K may be made entirely of rubber or leather, or wood covered with leather, rubber, or of any other preferred material. The centers of the rollers K are placed considerably above the plane of the centers of the rollers H, so that said brush-

rollers K and the brush-roll to which they are attached are wholly upheld or supported by the rollers H. (See Fig. 2.)

I have shown the brush-roll D as but partially supplied with brushes. Each end of the brush-roll D is provided with a projecting pin or stud, *d*, which is adapted to move freely up and down and between the flanges *l*, formed upon the inside of the casting L. The flanges of each casting L are joined at their upper ends, the lower ends thereof being spaced apart, (see Fig. 1,) to permit the brush-roll to be inserted and withdrawn from the sweeper. Said flanges also prevent lateral movement of the brush-roll, and limit its upward movement. The wheels H wholly support the brush-roll and revolve the same by frictional contact.

I adjust the brush-roll to the proper height by the following means—to wit: *l'* designates screw-threaded pins or studs projecting upward from the tops of the castings L and passing through perforations formed in ears or lugs *l''*, cast with or otherwise secured to the ends C.

l' designates a V-shaped rib formed upon the upper surfaces of each of the lower ears or lugs, *l''*, and extends from the aperture in said lug to the outer surface of the end casting. (See Fig. 6.)

M designates a thumb-nut provided upon its lower surface with a series of radial ribs, *m*, and grooves *m'*. A thumb-nut, M, is placed upon each of the screw-threaded pins *l'* between the lugs *l''*, its ribbed and grooved lower surface being kept in engagement with the rib *l'* of the lug *l''* by a spiral-spring, N, interposed between the top of the thumb-nut and the upper lug, *l''*, and surrounding the pin *l'*. When it is desired to adjust the brush-roll up or down, turn the thumb-nut M, whereby the ribs *m* upon the said nut will slide over the rib upon the lug *l''*, said nut being held stationary at any desired point by the engagement with the rib *l'* by one of the different grooves *m'* in the nut.

From the foregoing it will be observed that a firm and secure locking device is provided having simplicity of form, durability, and facility of operation.

It will be seen that the spring-rod *f*⁴, attached to the dust-pan, and having its end projecting through the slot *f*³, will have more rigidity and firmness, and therefore not be so liable to displacement as in those cases where the rods extend over the upper edge of the pans. I regard this point as one of great importance, inasmuch as much trouble and annoyance result from the breakage of the dust-pan lock, which I wholly avoid.

By providing the sweeper with side guards, G, I lessen, if not wholly overcome, all danger of marring or injuring furniture when operating the sweeper.

Without confining myself to the exact details of construction shown and described, what I claim as new is—

1. In a carpet-sweeper, the end castings provided with cut-away portions for the passage of the brush-roll, curved slots for the pivoted wheels, and lugs provided with apertures and ribs for the reception of the brush-roll-adjusting devices, in combination with the brush-roll and pivoted supporting-wheels, substantially as described.

2. In a carpet-sweeper, and in combination with the end casting thereof, the adjustable brush-casting provided upon its inner face with guide-flanges, a thumb screw having corrugated lower surface, and a spiral spring, substantially as shown and described.

3. In a carpet-sweeper, the end casting, C, provided with cut-away portions *c*, curved slots *c'*, and lugs *l'*, *l''*, one of said lugs having a rib, *l'*, in combination with the guide-casting L, having flanges *l*, and screw-threaded pin *l'*, thumb-nut M, having corrugated lower surface, spiral spring N, and the brush-roll and carrying-wheels, substantially as described.

4. In a carpet-sweeper, and in combination with the brush-roll and brush-roll-guiding brackets, the adjusting thumb-nut M, provided upon its lower surface with alternate ribs *m* and grooves *m'*, and spring N, substantially as described.

5. In a carpet-sweeper, the dust-pans F, provided at one end with slots *f*³ and spring-rod *f*⁴, in combination with the end castings, C, and detents *c'*, formed therein, substantially as described.

6. A carpet-sweeper consisting of the following elements, to wit: the sweeper-case-supporting wheels H, pivoted to triangular journal-plates I, said plates I eccentrically pivoted to the end castings of the case, brush-roll D, supported and operated by the wheels H, guide-castings L, having screw-threaded pin *l'*, end castings, C, having lugs *l''*, one of said lugs having rib *l'*, thumb-nut M, having corrugated lower surface, spiral spring N, and pans F, having slots *f*³, substantially as and for the purpose set forth.

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

WILLIAM H. CASTLE.

Witnesses:

A. B. CARPENTER,
F. R. SMITH.