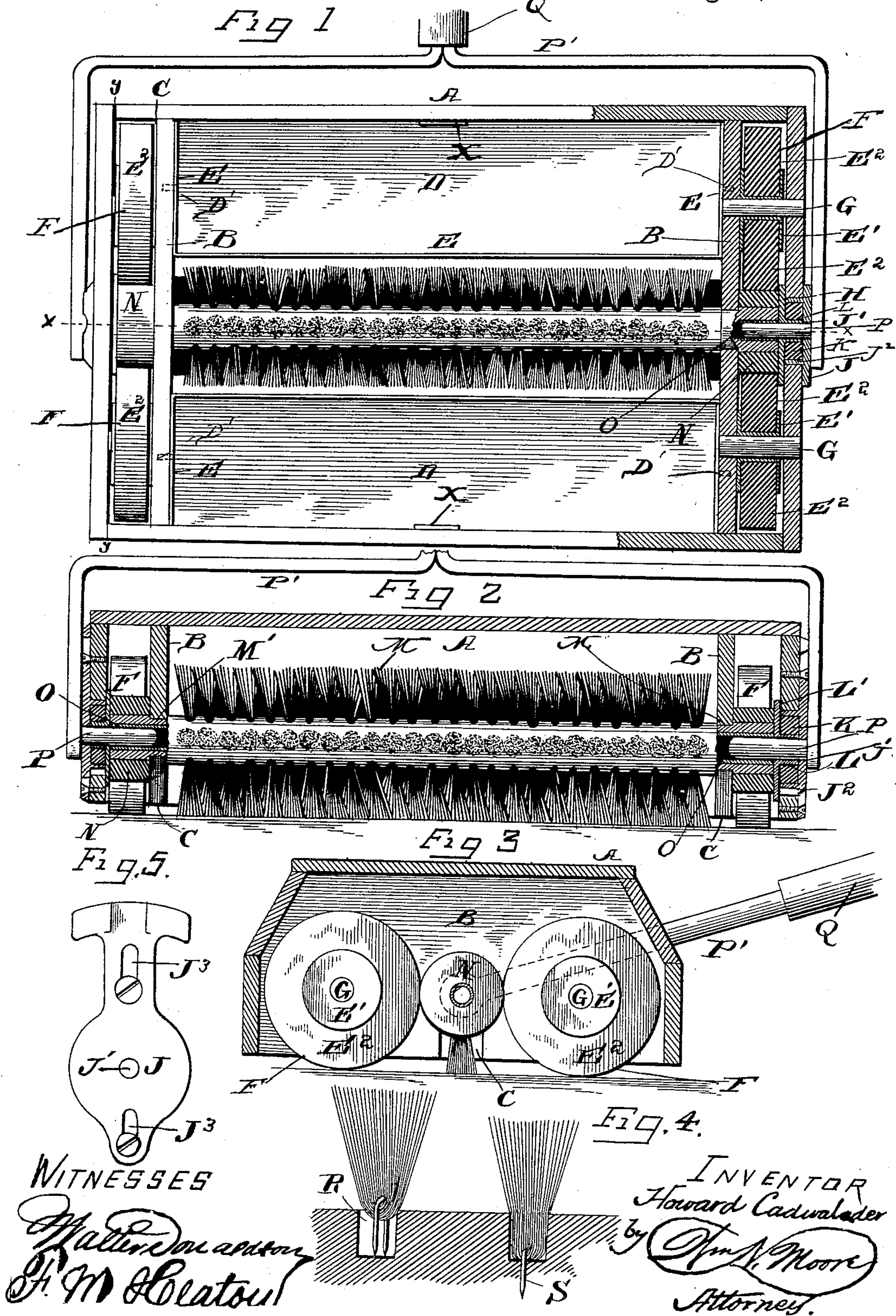


(Model.)

H. CADWALADER.
CARPET SWEEPER.

No. 480,451.

Patented Aug. 9, 1892.



UNITED STATES PATENT OFFICE.

HOWARD CADWALADER, OF RICHMOND, INDIANA.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 480,451, dated August 9, 1892.

Application filed April 2, 1891. Serial No. 387,344. (Model.)

To all whom it may concern:

Be it known that I, HOWARD CADWALADER, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Carpet-Sweepers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in carpet-sweepers; and one of the objects is the production of a carpet-sweeper which will be free from noise, which will remove all the dust or dirt from the carpet or floor, and which will not fatigue the user.

Another object of my invention is the production of a carpet-sweeper which will permit the brush to press firmly or lightly upon the floor, as the case requires, which can be easily taken apart for the purpose of repair, and which will be light in weight.

Another object of my invention is the provision of a carpet-sweeper which will be of strong and durable construction and inexpensive of production.

To attain the desired object the invention consists of a carpet-sweeper constructed substantially as herein illustrated, described, and specifically defined and distinguished by the claims.

In order that the construction, operation, and advantages of my improved sweeper may be readily understood and appreciated, I would invite attention to the accompanying drawings, in which—

Figure 1 is a plan view with the top of the casing removed to illustrate the arrangement of the inclosed parts. Fig. 2 represents a section on the line $x x$ of Fig. 1. Fig. 3 represents a section on the line $y y$ of Fig. 1. Fig. 4 represents a detail view of the brush to show the manner of securing the bristles in the brush. Fig. 5 represents a detail view of one of the adjusting-plates.

Referring by letter to the drawings, in which similar letters denote corresponding parts in the several views, A designates the

casing or housing of my improved sweeper of the desired size and preferably of the shape shown.

Within the casing and near the ends thereof are secured the walls or partitions B, which form the end compartments in said casing, and these walls are formed with kerfs or recesses C. Mounted in said walls on each side of said kerfs or recesses are pans D, provided on the inner faces and ends with the guard-strips E. These pans by reason of being pivoted, as shown at D', can be tilted to allow the dirt to fall out. These strips are clearly shown in Fig. 1.

The supporting-rollers F are mounted on studs G and consist of the metallic flanged hub E' and the rubber or elastic body E². From this construction it will be seen that the supporting-wheels are constructed almost entirely of elastic material and insure a light, easy, and noiseless support, and also can be pressed firmly or lightly on the floor, and thereby accordingly press the brush.

In the end walls of the casing and in line with the kerfs or recesses I provide openings H, and to the outside of the casing I secure the plates J, having the bearings J', the interior annular flange J², arranged within the openings H, and the vertical slots J³, which receive the fastening-screws and by means of which the plates may be adjusted vertically. Within the annular chambers formed by the interior annular flanges J², I arrange the elastic bearings or cushions K, provided with a central aperture to receive the hubs L of the disks or plates L'. The brush-shaft M is formed near its ends with grooves M', which fit in the recesses or kerfs C, and it is provided at the ends with rubber rims or tires forming elastic rollers N, which bear against the supporting-rollers, and the ends of the brush-shaft are provided with metallic bushings O to receive the studs P of the bail P', to which the handle Q is connected. The studs of the bail pass through the bearings of the plates J, the hubs L, and into the bearings O of the brush, as will be readily understood from the drawings.

From this construction it will be seen that the bearings for the brush are yielding, which allows the brush to accommodate itself according to the surface to be cleaned, and the

bearings of the plate are also adjustable, which permits the brush to have still further means of adjustment for accommodating it to the desired purposes.

5 The manner of securing the bristles in the brush is an essential feature of my invention and consists in forming the brush-shaft with openings R, in which the central portion of the bristles is secured by means of staples S,
10 which are driven into the openings and confine the central portion of the bristles within the opening, as clearly shown. By this construction the bristles are securely fastened in the brush-shaft and the ends thereof flare, so
15 as to present a large surface.

From the foregoing description, taken in connection with the drawings, the manner of using my sweeper will be readily understood, and, briefly stated, is as follows: The supporting-rollers and brush rest upon the floor, and
20 by passing the sweeper over the floor the brush is revolved, the bristles thereof removing the dirt and depositing it within the casing, and to remove the dirt it is merely necessary to turn either of the pivoted pans,
25 which allows the dirt to be discharged, and these pans are prevented from turning inward by means of the abutments or stops X, which are secured to the casing. It will be seen that
30 the sweeper is supported upon elastic rollers, and consequently will move over the floor or surface noiselessly and lightly. It will also be seen that by reason of the elastic or yielding bearings the brush is permitted to be
35 pressed lightly or firmly upon the floor or surface, as circumstances may require. It will also be seen that the sweeper comprises very few parts, and is thereby rendered very simple, durable, and inexpensive, is light in
40 weight, and can thereby be used without fatiguing the user, is compact and occupies a small amount of space, permits the wear on the brush to be taken up, and is thoroughly efficient in operation, thus possessing all the
45 features of merit desired in a device of this character.

I reserve the right to make minor changes in the construction and arrangement of parts

without departing from the spirit or sacrificing any of the advantages of my invention. 50

I claim as my invention—

1. In a carpet-sweeper, the combination of the casing, the adjustable plates secured to the end of the casing, the elastic bearings carried by said plates, the brush arranged in the
55 casing, and the handle bearing in the said elastic bearings and the ends of the brush.

2. In a carpet-sweeper, the combination of a casing having a partition in each end, supporting-rollers mounted in the ends of the
60 casing and having flanged metal hubs and elastic bodies, a brush-shaft mounted in the casing and having elastic rollers engaging the supporting-rollers, plates adjustably secured to the casing and having flanged cups, elastic
65 bearings in said cups, plates having hubs in said bearings, and a bail having studs passing through the bearings into the ends of the brush-shaft.

3. In a carpet-sweeper, the combination of
70 the casing, the adjustable plates secured to the ends of the casing, the elastic bearings carried by said plates, the brush arranged in the casing and carrying elastic rollers, the elastic supporting-rollers engaging said rollers, and
75 the handle bearing in the ends of the brush and the elastic bearings of the plates, substantially as described.

4. In a carpet-sweeper, the combination of a casing, yielding or elastic supporting-roll-
80 ers having flanged metal hubs mounted in the casing, a brush having elastic or yielding rollers engaging the supporting-rollers, adjustable plates connected to the ends of the casing and having flanges forming bearing-
85 boxes, elastic or yielding bearings arranged in said boxes, plates having hubs fitting into said yielding bearings, a bail having studs bearing in the brush and the adjustable bear-
90 ings, and a handle.

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

HOWARD CADWALADER.

Witnesses:

JOSEPH E. MOORE,

HENRY H. DILLE.