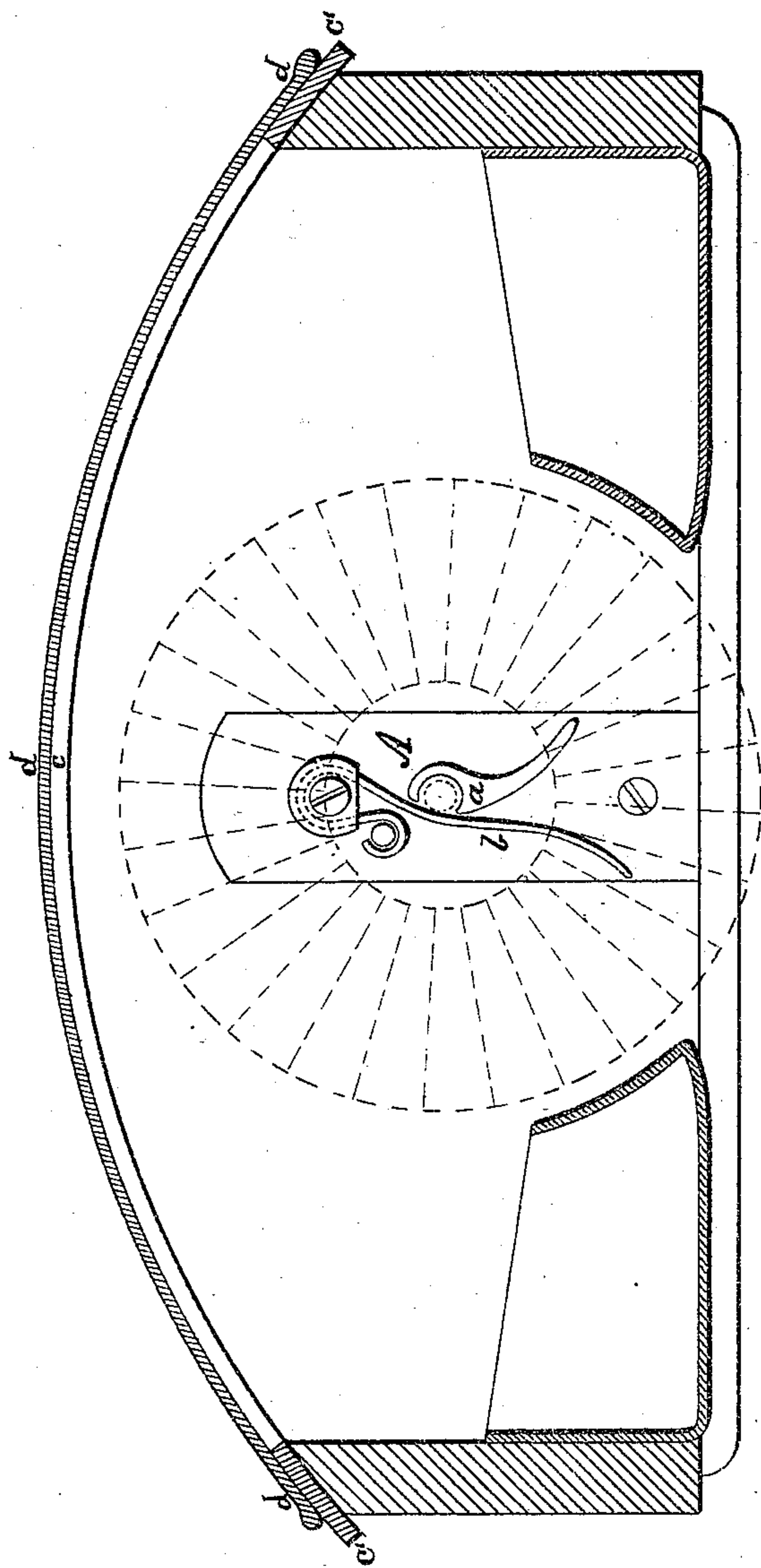


H. A. PALMER & A. H. SPENCER.

Carpet-Sweepers.

No. 146,016.

Patented Dec. 30, 1873.



Witnesses,

J. E. Knox
Henry W. Holland

Inventors,

Hartwell Palmer
Albert H. Spencer
by J. E. Maynard
their atty.

UNITED STATES PATENT OFFICE.

HARTWELL A. PALMER, OF HINGHAM, AND ALBERT H. SPENCER, OF BOSTON, ASSIGNORS TO JOHN J. HALEY, OF NEWTON, AND HENRY C. MORSE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **146,016**, dated December 30, 1873; application filed October 23, 1873.

To all whom it may concern:

Be it known that we, HARTWELL A. PALMER, of Hingham, and ALBERT H. SPENCER, of Boston, Massachusetts, have invented certain Improvements in Carpet-Sweepers, of which the following is a specification:

Our invention relates to certain methods of supporting the brush of a carpet-sweeper, and of readily removing the same when desired, and also to the use of an elastic fender to prevent injury to furniture, &c. The first part of our invention consists in the use of an open bearing, in connection with a spring, which serves to hold the end of the spindle securely in its bearing, and yet allows the brush to be readily removed and replaced.

The drawing shows a cross-section through a carpet-sweeper embodying our inventions, the brush and its spindle being indicated by dotted lines.

A is a metal plate secured to one of the end boards of the sweeper, and having cast upon it the projection *a*, formed as shown in the drawings, its upper part being an open bearing for the spindle projecting from one end of the brush-shaft, and its lower part serving, in connection with the lower part of the spring *b*, to facilitate the inserting of the brush-spindle in this open bearing. The spring *b* is secured to the plate A, and serves to close the open bearing in such a way as to prevent the spindle of the brush-shaft from accidentally getting out of the bearing, and yet allows it to be readily removed and replaced. To remove the brush, insert the hand through the bottom of the sweeper between the two dust-pans, seize the brush and press its spindle against the spring until it leaves the open bearing and permits that end of the brush to drop below and free from the bearing, when the other end can be drawn out of the socket in which it revolves. To replace the brush, first insert the spindle in its socket at the end opposite the spring, and then press the spindle at the other end upward against the spring *b*, and between that spring and the projection *a*, until it is pressed into the open bearing. The spindle on the other end of the brush and its bearing is not

shown in the drawing, because it is made in any usual way; or it may be arranged in the manner already described.

It is evident that various methods of accomplishing the ready removal of the brush may be employed, and we have arranged sweepers in several different ways, each embodying some modified form of spring bearing, by means of which one or both of the ends of the brush-spindle could be readily removed when desired; but as the same principle is involved in them all, and the method we have described is simple and cheap, we have not thought it necessary to explain them in detail.

The second part of our invention consists in the use of a strip of rubber or packing projecting from the top edge of the sweeper-case, and lying between the case and its cover, serving as a fender to keep the sweeper from injuring articles of furniture with which it comes in contact, thereby removing a very common and serious objection, and also to make a tighter joint when the cover is closed, this preventing the escape of dust, and reducing somewhat the noise of the machine when in use. The most convenient method of securing the packing to the case is by tacking or cementing a strip along its top edges, as shown in the drawing, or by binding the projecting edge of the cover with a suitable strip of rubber.

In the drawing, *c* denotes the strip over the top of one of the end boards, and *c' c'* the strips over the top of the side boards. *d* is a cover.

What we claim as our invention is—

1. The combination of a carpet-sweeper brush with its bearing and a spring, substantially as described.

2. The combination of a strip of rubber packing, or other similar material, with the case and cover of a carpet-sweeper, as and for the double purpose specified.

HARTWELL A. PALMER.
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Witnesses:

HENRY W. HOLLAND,
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