N. B. Pratt,

Carpet Sweeper.

No. 22,975. Patented Feb. 15, 1859.

Fig. 3.

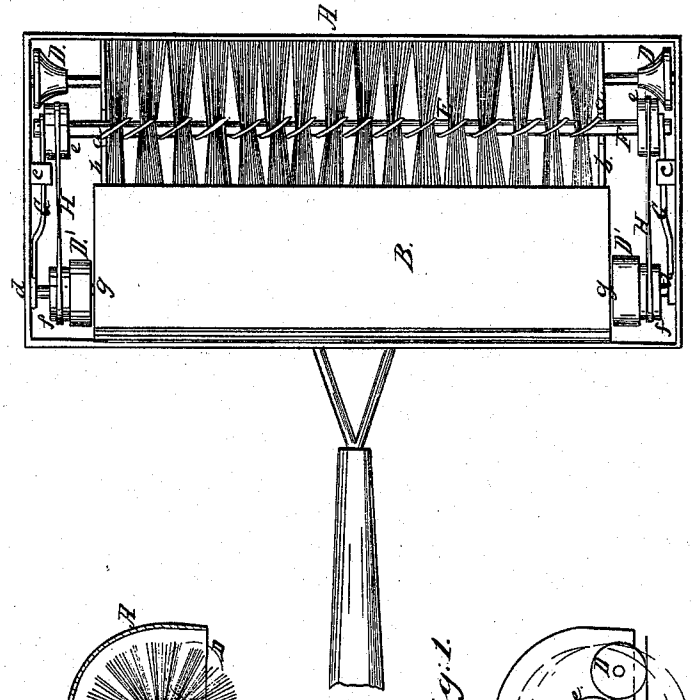


Fig. 2.

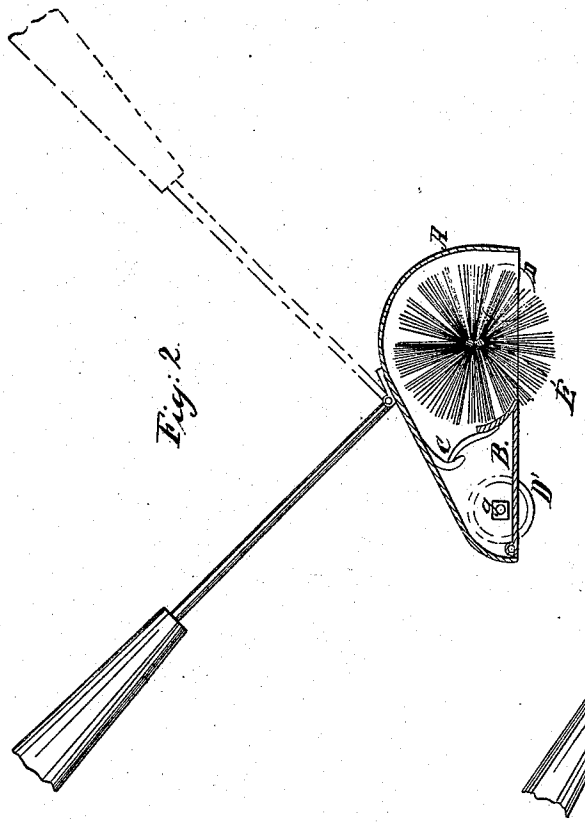
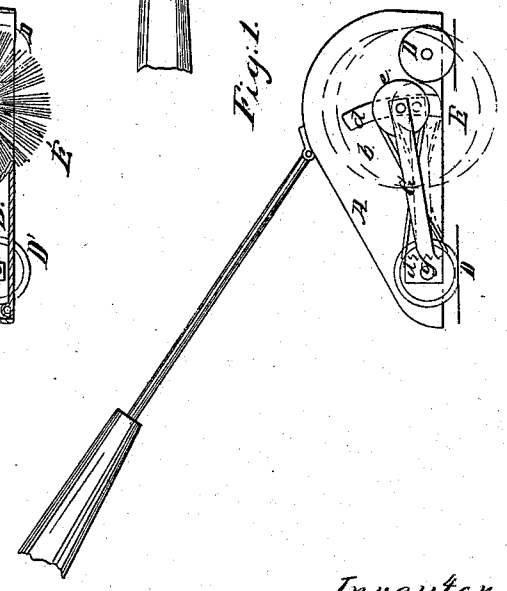


Fig. 1.



Witnesses.

by Burke & Lee

H. H. Young

Inventor.

N. B. Pratt.

UNITED STATES PATENT OFFICE.

N. B. PRATT, OF DEEP RIVER, CONNECTICUT.

CARPET-SWEEPER.

Specification of Letters Patent No. 22,975, dated February 15, 1859.

To all whom it may concern:

Be it known that I, N. B. PRATT, of Deep River, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Carpet-Sweepers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is an end view of the carpet sweeper, the end plate being removed. Fig. 2, is a transverse section of the same. Fig. 3, is an inverted plan of the same.

Similar letters of reference, in each of the several figures, indicate corresponding parts.

The nature of my invention consists in the arrangement of the rotating brush on adjustable swinging lever bearings in combination with an elastic driving belt, whereby the brush can be adjusted so as to compensate for any considerable wear and is held down to its work with a greater or less spring pressure and yet is capable of rising and falling automatically so as to adapt itself to any undulations of the surface over which it moves, as hereinafter specified.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A, is the case which incloses the working mechanism of the carpet sweeper.

B, is the dust pan hinged as usual to the bottom of the case, and held in place, while sweeping is being performed, by means of a catch C, said catch allowing it to be readily detached and inverted when it is desired to empty the dust.

D, D′, are rollers on which the sweeper travels. The periphery of the rollers D, D′, are covered with rubber so as to act with greater friction upon the floor or carpet and thus rotate the brush more effectually.

E, is the brush, it rotates on an axle F, which is suspended in oblong slots *a*, *a*, of the partitions *b*, *b*, of the case A, by means of swinging lever bearings G, G, as shown. The bearings G, G, are arranged to play up and down in stop guides *c*, *c*, and are connected loosely by one of their ends to stationary notched plates *d*, *d*, as shown. The connection between the bearings and the plates is such that while no pivots or axes are provided, the bearings have no chance to change their position unless shifted by hand. hand.

H, H, are elastic crossed belts encircling pulleys *e*, *e*, of the brush and pulleys *f*, *f*, of the propelling and driving roller shafts *g*, *g*, as shown.

It will be seen that the bearings of the brush stand diagonally to the belt and consequently the bearings act with a leverage and cause the brush to act with a downward thrust which, with the tension of the elastic belt, causes the brush to bear with considerable force upon the floor or carpet and consequently, in its revolution, to sweep the same perfectly. The force, however, exerted upon the brush is not so great as to interfere with its rising and accommodating itself to any undulations of the surface over which it moves.

By having the bearings connected with the plates *d*, *d*, by unconnected V shaped joints facilities are afforded for adjusting the brush as occasion may require by reason of wear, for by shifting the bearings to either of the notches of the plates above the one it now occupies, the brush will have a chance to descend to a greater extent, as the central portion of the bearings will come in contact with the front edge of the guides instead of the rear edge and consequently will have a greater movement allowed them before they rest. Thus adjusting the bearings will decrease the downward thrust of the bearings, but will increase the longitudinal thrust and thus cause the belts to be drawn to a greater or proper tension in case they have become slack. In this case the brush will act upon the carpet or floor more by its own gravity than by the thrust of the lever and the tension of the belt, and therefore its effect upon the carpet will be comparatively light. Thus it will be seen the brush can be adapted for light and heavy sweeping.

As a modification of my invention, the belt might be made of leather and the bearings be made elastic themselves so as to act with a leverage and spring pressure, as described. By making the bearings with a series of coils intermediate between their ends or by applying flat springs to their upper edges, they may be caused to act with a spring pressure.

In the drawing, Fig. 2, the red lines show the proper position of the handle I, by which the sweeper is moved over the carpet, but if necessity require, the handle may be adjusted as shown in black.

The red lines in Fig. 1, show the brush in full action as when moving over a plain surface and the black lines the position of the brush as when moving over raised or irregular portions of the carpet or floor.

What I claim as my invention and desire to secure by Letters Patent, is—

The arrangement of the rotating brush on adjustable swinging lever bearings G, in combination with an elastic driving belt H, substantially as and for the purposes set forth.

N. B. PRATT.

Witnesses:
G. YORKE ATLEE,
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