

S. A. DAVIS.
CARPET SWEEPER.
APPLICATION FILED MAY 27, 1909.

1,045,264.

Patented Nov. 26, 1912.

Fig. 1

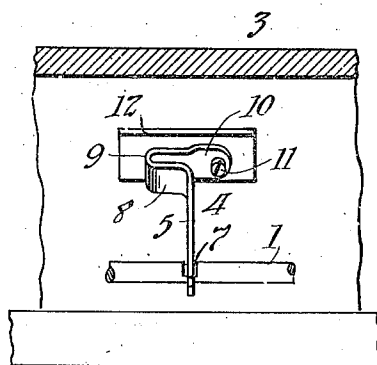
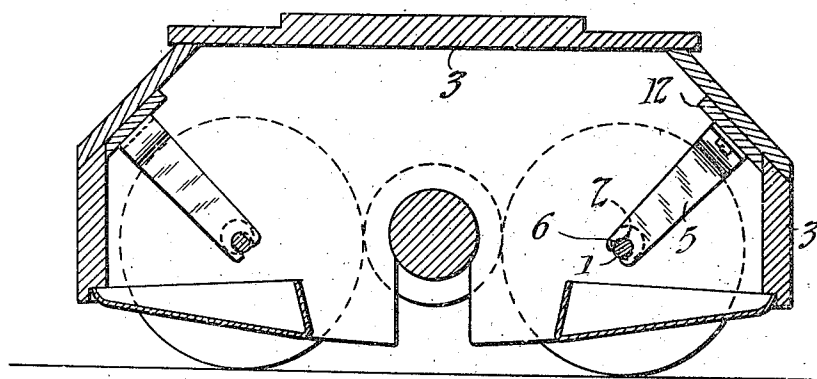


Fig. 2

Witnesses:
Grant Lewis
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Inventor:
Stephen A. Davis
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UNITED STATES PATENT OFFICE.

STEPHEN A. DAVIS, OF NEWARK, NEW JERSEY, ASSIGNOR TO NATIONAL SWEEPER COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CARPET-SWEEPER.

1,045,264.

Specification of Letters Patent.

Patented Nov. 26, 1912.

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To all whom it may concern:

Be it known that I, STEPHEN A. DAVIS, of No. 154 Roseville avenue, in the city of Newark, county of Essex, and State of New Jersey, a citizen of the United States, have made a certain new and useful Improvement in Carpet-Sweepers, of which the following is a specification.

My invention relates to carpet sweepers, and among its objects are the provision of a simplified device of this character which will be effectual in operation and simple in construction, and in which many of the objections which have heretofore existed in devices of this character are eliminated.

With these and related objects in view, my invention consists in the parts, combinations and improvements hereinafter set forth and claimed.

My present invention relates particularly to an improved arrangement of the wheel axles in their mounting with relation to the casing. Heretofore, a common practice has been to provide a spring axle for the wheels which is rigidly held at its center, the spring of the axle between the center and the ends thereof permitting the wheels to yield so that the brush may be brought into closer contact with the carpet. A construction of this sort, while effective if the very best quality of spring steel can be obtained and used for the axles, is unsatisfactory because it is not practical to obtain such material except at high cost, and even then the extent of yielding or "give" of the spring axles will vary considerably in the case of different axles. Greatly improved effects can be produced and at the same time cheaper material can be used for the axles when the axle is made from a rigid bar, which may be of very cheap material, and spring pressure is applied thereto by means of a separate spring, which may conveniently have the form of a leaf spring, and it is to the improvement of devices of this character that my invention is directed.

For a more complete understanding of my invention, reference is hereby made to the accompanying drawings forming a part of this specification, in which the same reference numerals are used throughout for the designation of the same parts, and wherein—

Figure 1 is a transverse cross-sectional

view of my improved carpet sweeper, and Fig. 2 is a cross-sectional view taken on a plane at right angles to that on which Fig. 1 is taken.

In a device constructed in accordance with my improvement, the axles 1 pass through enlarged openings 2 in the end of the casing 3. The wheels are rotatably mounted at the outer ends of the axles. Spring means is provided between the ends of the casing, preferably midway thereof, to normally hold the axles downwardly and inwardly against the tire on the brush shaft, but which will yield when pressure is applied as by pressing the sweeper down upon the carpet by means of its handle. The form of spring means which I have illustrated, and which I prefer to use for this purpose, comprises a spring 4 having a straight portion 5 which has a slot 6 at its end to receive the axle, the axle being notched at 7 so as to present a square section at the point where it enters the slot 6 in the spring, thereby preventing the rotation thereof, and the spring 4 being given a sidewise bend 8 adjacent to the straight portion 5, being then bent reversely as shown at 9 to form a portion 10 extending substantially at right angles to the straight section 5. The provision of a U-shaped bend in the spring formed in the manner above described affords great resiliency in the direction in which pressure is applied in the use of the sweeper. The spring may be attached to the interior of the casing by any convenient means such as a screw 11 which may conveniently pass through the section 10 of the spring 4 and which is preferably passed through a metal reinforce 12 on the interior of the casing. It is apparent, of course, that springs of other forms may be used for this purpose, but I prefer to use the form shown, as it is cheap and easily constructed and very efficient in its operation.

Having now described my invention, I claim:

1. In a carpet sweeper, a casing having apertures in its ends, a pair of substantially rigid axles passing through the apertures and extending beyond the ends of the casing, wheels on the axles at their ends and springs connecting the axles and the casing and provided with slots for the reception of the axles, the axles being so formed as to present

a square section where they enter the said slots to prevent rotation thereof, substantially as set forth.

2. In a carpet sweeper, the combination
5 with the casing having apertures for the passing of the axles, of a pair of substantially rigid axles passing through said apertures, and having wheels rotatably mounted thereon at their ends, springs for connecting
10 the said axles to the sweeper casing and extending upwardly and outwardly from the respective axles, the said springs comprising straight sections extending substantially at right angles to the axles and sections of U
15 shape at the ends of the straight sections and means for connecting one of the legs of the U shaped portion of each spring to the casing, substantially as set forth.

3. In a carpet sweeper, the combination
20 with the casing having apertures for the passage of the axles, of a pair of substan-

tially rigid axles passing through said apertures, and having wheels rotatably mounted thereon at their ends, springs for connecting the said axles to the sweeper casing and extending upwardly and outwardly from their
25 respective axles, the said springs comprising straight sections extending substantially at right angles to the axles and sections of U-shape at the ends of the straight sections,
30 the springs being provided at their ends with slots for the reception of the axles and the axles being so formed as to present squared sections where they enter the said slots to prevent rotation thereof, substan-
35 tially as set forth.

This specification signed and witnessed this 22nd day of May 1909.

STEPHEN A. DAVIS.

Witnesses:

WILLIAM H. LEWIS,
ARTHUR B. CHASE.