J. H. Crane,

Carpet Sweeper.

No. 25,099. Patented Aug. 16, 1859.

Fig. 1.

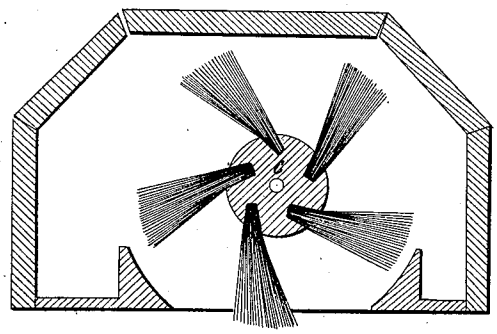


Fig. 2.

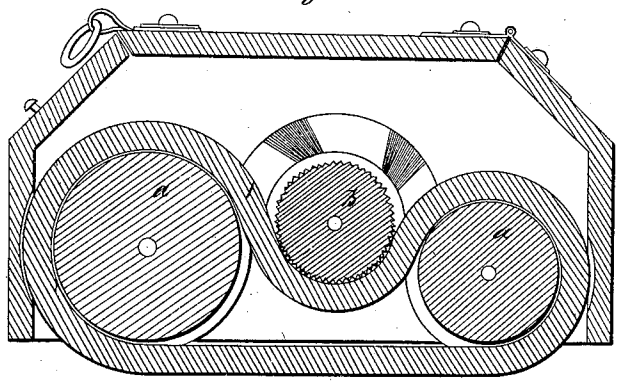
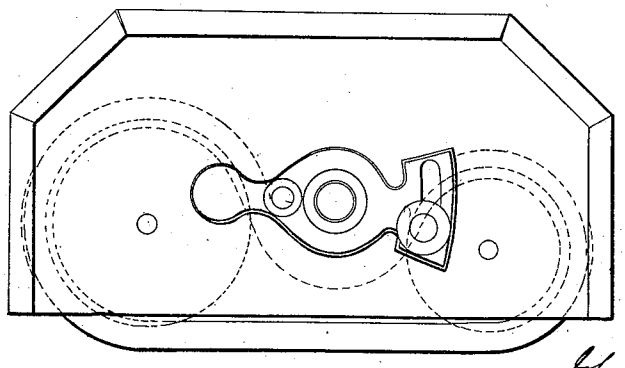


Fig. 3



Witnesses:
J. B. Crosby
W. B. Gleason

Inventor:
John H. Crane

UNITED STATES PATENT OFFICE.

J. H. CRANE, OF CHARLESTOWN, MASSACHUSETTS.

CARPET-SWEEPER.

Specification of Letters Patent No. 25,099, dated August 16, 1859.

To all whom it may concern:

Be it known that I, J. H. CRANE, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Carpet-Sweepers, so called; and I do hereby declare that the following, taken in connection with the drawings which accompany and form a part of this specification, is a description thereof so full and exact as to enable those skilled in the art to practice my invention.

In the drawings referred to, Figure 1 is a cross section through a carpet sweeper, showing the rotating brush used therein and the dust receptacles. Fig. 2 is a cross section through that part of a sweeper in which the mechanism which rotates the brush is located, and Fig. 3 is an end view of the sweeper.

In all the figures of the drawings similar letters refer to similar parts.

I am aware that an endless belt passing over a pulley on the brush shaft of a carpet sweeper and over a guide or pulley so arranged as to bring the said belt into contact with the carpet over which the sweeper is passed has been used in such a manner and so proportioned that the belt is driven from and by its contact with the carpet and not as is usually the case by the surface of the pulley through which the power is applied. This arrangement which I especially disclaim differs from the ordinary and better known arrangement of belt and pulley inasmuch as in the first case the belt drives the pulley and in the latter the pulley drives the belt. In the arrangement which I disclaim the belt touches the carpet theoretically at a point only and practically there is but a small surface in contact which renders the action of the belt uncertain in rotating the brush.

To obviate this difficulty is the object of my invention, the nature of which consists in the means substantially as herein described for extending to any desired extent the length and amount of surface of the belt in contact with the carpet.

The guides (*a*) are so connected to the body of the sweeper, on opposite sides of the pulley (*b*) fixed on the brush shaft (*c*), as to rotate freely on their axes. The belt which passes over the guides (*a*) and is in contact with the pulley (*b*), which is purposely serrated to prevent slip between it and the belt, projects beyond the peripheries of the guides. If this were otherwise the rotating guides would become driving pulleys, and the arrangement and action of the belt would not only be devoid of novelty but the traction of the belt, (which in my arrangement of it depends not only on its adhesion to the floor but also upon the nip or bite upon the belt produced between the guides and the floor), would depend solely upon the tightness of its strain over the driving pulleys. It is evident that the number of places where the belt is pinched between the floor and the guides may be increased by placing a number of rollers above the straight part of the belt, shown in the drawings and in contact with it. It is also evident that increase of the length of that portion of the belt which comes in contact with the floor will increase its power of traction by its increased adhesion.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States is:

The arrangement of belt, rotating guides, and driven pulley, operating in combination with carpet sweepers essentially as set forth.

JOHN H. CRANE.

Witnesses:
J. B. CROSBY,
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