F. M. BECKFORD.
Carpet-Sweeper.

No. 162,520. Patented April 27, 1875.

Fig 1.

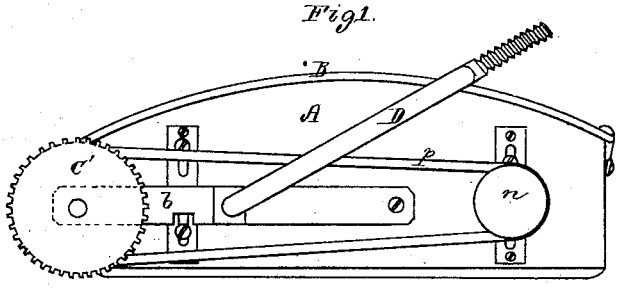


Fig 2.

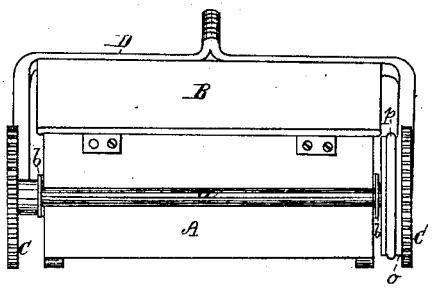


Fig 3.

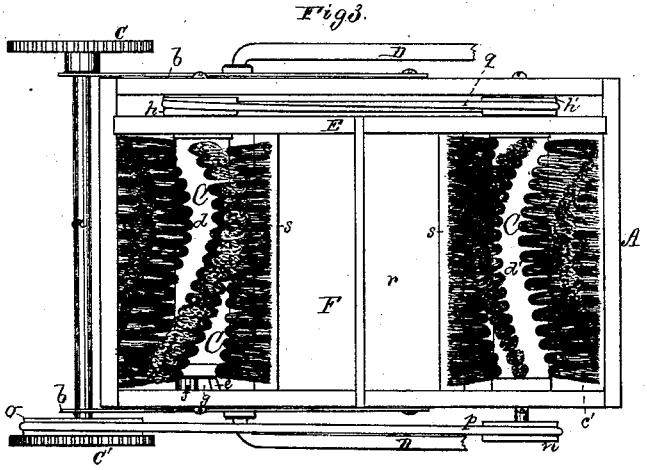


Fig 4.

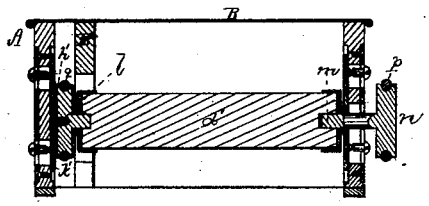


Fig 5.

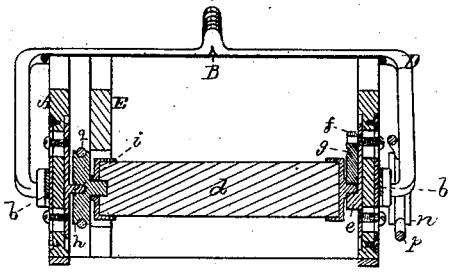
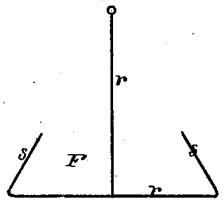


Fig 6.



Witnesses.
Geo Gray
F. G. Hale

Frank M Beckford.
by his attorney
F. P. Hale

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

FRANK M. BECKFORD, OF HAVERHILL, MASSACHUSETTS.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **162,520**, dated April 27, 1875; application filed March 20, 1875.

To all whom it may concern:

Be it known that I, FRANK M. BECKFORD, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Carpet-Sweepers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In said drawing, Figure 1 is a side elevation; Fig. 2, a front-end elevation; and Fig. 3, a top view, with the cover removed, of a sweeper constructed in accordance with my invention. Figs. 4 and 5 are sections taken through the brush-shafts. Fig. 6 is a transverse vertical section of the duplex dust-receptacle.

The object of my invention is to provide a sweeper which will remove the dust or dirt from carpets, whether of greater or less thickness, with equal facility, and which, at the same time, will better retain or prevent the escape of the dust from the body of the sweeper, while the latter is in operation, than devices of this character as ordinarily constructed; also, to provide a more ready means of removing the dust, when collected, from the sweeper; and my invention consists in the peculiar construction and arrangement of the parts, as hereinafter referred to and claimed.

In the drawing, A denotes the box or body of the sweeper, the same consisting of a wooden case, open at bottom, and provided at its top with a hinged cover, B. C C′ are two driving-wheels, having their peripheries serrated or roughened, such wheels being affixed to an axle, *a*, arranged in front of the case A. This axle extends through two levers, *b b*, disposed on opposite sides of the case, and pivoted at their rear ends to the same, as shown in Fig. 1, such arrangement enabling the wheels to freely move in vertical directions independently of the case, and thus accommodate themselves to the thickness of the carpet, whereby the bottom of the box or case is permitted to rest directly on the surface of the carpet, whether the latter be of a greater or less thickness, and thereby prevent any lateral escape of the dust, as often occurs where the wheels are located in fixed positions with respect to the lower surface of the box. D is a metallic yoke, its upper end being affixed to a handle in the ordinary manner, its lower ends being formed with inward projections, which pivot in sockets made in the levers *b*, as shown in Figs. 1 and 2. This sweeper is provided with two brushes, *c c′*, which are disposed in opposite ends of the box, and in as close proximity thereto as may be, and at the same time allow the brushes to freely rotate. Each of the brushes has its journals supported in adjustable bearings, which permits the brushes to be lowered, as they may become worn, and thus enable them to be maintained in their due relation to the bottom of the box. *d* represents the front brush-shaft, the same having one of its ends supported in an open slotted bearing, *e*, a spring, *f*, and a key or wedge, *g*, serving to retain the same in place, and at the same time allow it (such end of the shaft) to be readily inserted in its bearing or removed therefrom, as occasion may require. The other end of the shaft is formed with a square socket, to receive a stud projecting axially from a pulley, *h*, which is supported and rotates upon a stud, *i*, extending laterally from the inner side of the box. The rear brush-shaft *d′* has each of its ends formed with a square socket, one of which receives a stud projecting from the pulley *h′*, which is supported and revolves upon a stud, *l*, projecting from an adjustable plate, *k′*, affixed to the inner side of the box A. The other end of the shaft receives a square stud, *m*, extending axially from a pulley, *n*, disposed on the outside of the box, as shown in Figs. 1, 3, 4, and 5. By withdrawing the stud *m* from its socket, the brush may be readily removed from the sweeper. E is a removable partition, extending longitudinally of the box, and forming one of the walls of the brush-chamber, such partition serving to protect the pulleys *h* and *h′* and their actuating-band from dust or other foreign matters collected by the brushes. Affixed to the inner side of the wheel C′ is a pulley, *o*, around which and the pulley *n* (affixed to the shaft of the rear brush)

an endless band, *p*, extends, and serves to put such brush in rotation. *q* is another endless band, which is crossed and extends around the pulleys *h* and *h'*, and thereby transmits motion from the rear to the front brush.

By this arrangement the brushes are caused to rotate in opposite directions, and when the sweeper is impelled forward both the brushes rotate inward or toward each other, so that while the front brush acts upon the carpet in one direction, the rear one acts thereon in a reverse direction, and when the sweeper is moved backward the two brushes act on the carpet in the same manner, only in a reverse direction, the two counter actions in either case serving most effectually to gather up and remove the dust, &c., from the carpet, and deposit the same in the dust-receptacle.

F is a duplex dust-receptacle, the same being disposed transversely of the box, and midway between the brushes. This receptacle consists of a rectangular divisional plate, *r*, whose edges slide in vertical grooves, one of which is formed in the inner side of the box A, and the other in the partition E. Extending from the bottom of the plate *r*, and on a plane with the bottom of the box, are two plates, *s s*, whose outer ends extend upward and inward, such bent portions being arranged in close proximity to the periphery of the peripheries of the brushes, as shown in Fig. 3. The plate *r* has its top portion bent around a wire or rod, whose ends project beyond the ends of the plate, and rest in bearings formed in the top of the box and the partition E, such serving to preserve the receptacle in due relation to the bottom of the brushes, and enabling the receptacle to be either readily applied to or removed from the box.

Having described my invention, what I claim is—

1. The combination, with the box A, of the driving-wheels C C', their axle *a*, and the pendulous arms or levers *b b*, the whole being arranged substantially as and for the purpose set forth.

2. In a carpet-sweeper, the combination, with the case A, of the two brushes *c c'*, arranged as described, and provided with actuating mechanism, substantially as set forth.

3. In a carpet-sweeper, substantially as specified, the combination, with the case A and the brushes *c c'*, of the removable duplex dust-receptacle, constructed and arranged substantially as shown and described.

4. The improved carpet-sweeper, consisting of the box A, self-adjusting driving-wheels *c c'*, provided with actuating mechanism, as described, and the duplex dust-receptacle, the whole being combined and arranged substantially as set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

FRANK M. BECKFORD.

Witnesses:

F. P. HALE,

F. C. HALE.