(No Model.)

C. TANGENBERG.

CARPET SWEEPER.

No. 500,976. Patented July 4, 1893.

FIG. 1.

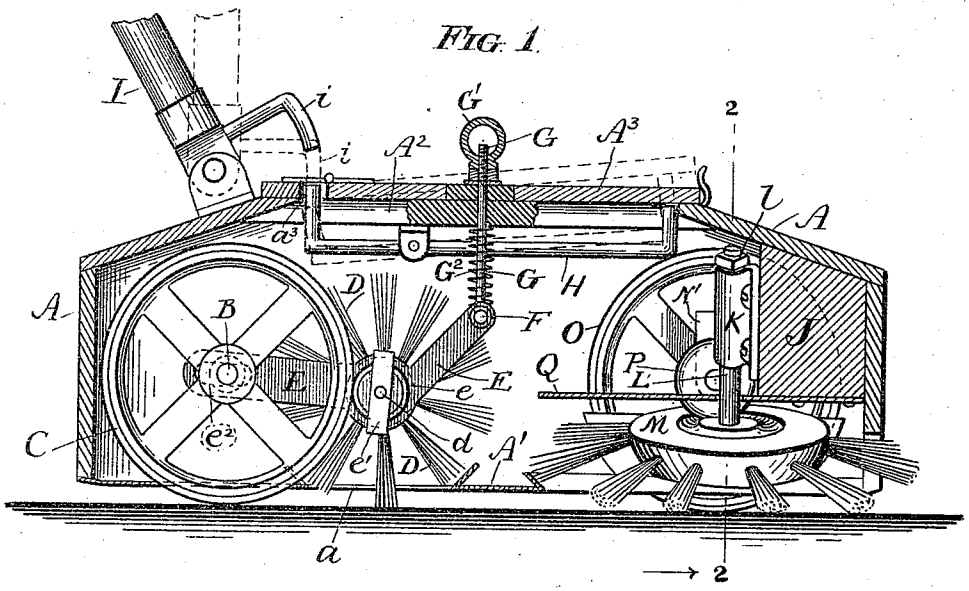
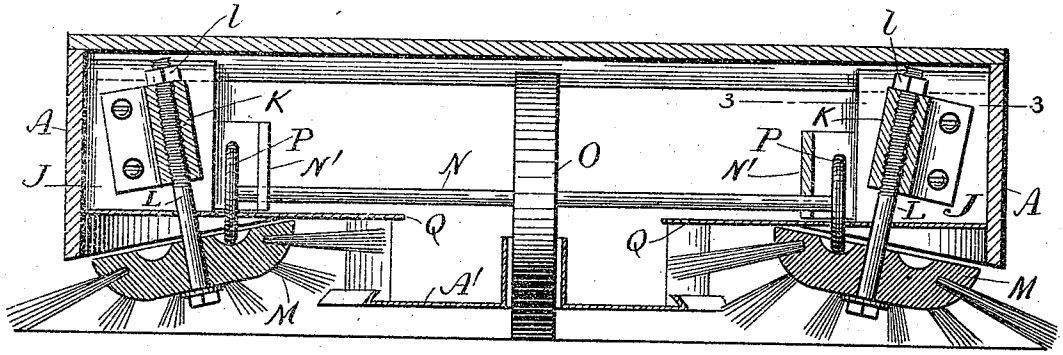


FIG. 2.



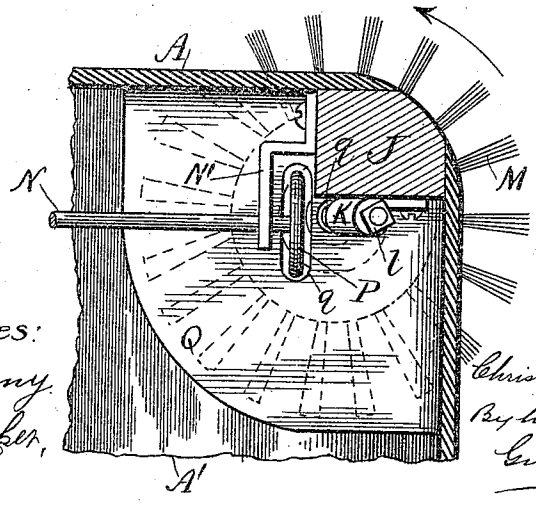


FIG. 3.

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UNITED STATES PATENT OFFICE.

CHRISTIAAN TANGENBERG, OF CHICAGO, ILLINOIS.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 500,976, dated July 4, 1893.

Application filed January 31, 1893. Serial No. 460,363. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAAN TANGENBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical, longitudinal section of a carpet sweeper embodying the invention, the section being taken on the line 1—1, Fig. 3. Fig. 2 is a vertical transverse section thereof on the line 2—2, Fig. 3, and Fig. 3 is a horizontal section thereof on the line 3—3, Fig. 2.

The objects of the present invention will appear in the following description, and the features of novelty in which such invention resides are particularly pointed out in the claims hereinafter.

In the drawings A represents the casing, the sides of which support the axles B of the floor wheels C.

D represents the brush, which has contact with the floor through an opening *a* in the bottom A′ of the casing. This brush is supported by small axles *d* that are journaled in arms or levers E, one end of each of which levers is pivoted upon one of the axles B, while its other end is secured to a horizontal rod F. The central portion of this rod is pivotally connected to the lower end of an adjusting screw G, which passes through a perforation formed for it through a brace A^2 and receives at its upper end a thumb-nut G′, whereby it may be adjusted vertically. Between the brace A^2 and the rod F is interposed a coiled spring G^2, which surrounds the screw G and has a constant tendency to force the rod F downward. By this means the brush is held in contact with the floor with a yielding force, and its downward movement may be limited to any desired extent.

The cover A^3 is provided with an opening which enables it to be opened or closed without coming in contact with the thumb-nut G′. The top of the casing is provided with an opening a^3 in which fits one end of a lever H, which is fulcrumed to a bracket secured to the under side of the brace A^2, the other end of said lever being normally in contact with the under side of the cover.

The handle I is pivoted to the top of the case, and is provided with an arm *i*, which, when the handle is moved upon its pivot to the position indicated by the dotted lines, enters the perforation a^3 and comes in contact with one end of the lever H, thereby throwing the other end of the said lever upward and lifting the cover as indicated by the dotted lines. If the sweeper is then turned up side down, the cover A^3 will open by gravity and permit the sweepings to fall out through the opening in the top of the case.

The levers E are provided with round openings *e*, through which the stem or body of the brush D passes, the axles of said brush being journaled in the cross pieces *e′* that are slightly off-set and span these openings.

Perforations e^3 of the levers, through which the axles B pass, are elongated as indicated by the dotted lines in Fig. 1, in order to permit of a slight longitudinal movement of the levers.

In the forward part of the casing blocks J J are secured to the sides, and to each of these blocks is secured, by screws, or other suitable means, an internally screw-threaded sleeve or socket K, into which is screwed a bolt L, which receives at its upper end a lock nut *l*. This bolt projects some distance downward from the lower end of the sleeve, and upon its lower part is journaled a circular brush M. The bolt is placed at a slight inclination, in order to give the brush a corresponding inclination, as shown more clearly in Fig. 2. The bottom, the side and the end of the casing are cut away, and the parts are so located that the bristles of this substantially horizontal brush project a slight distance beyond the front and sides of the casing, as shown more clearly in Fig. 3.

N is a shaft journaled in brackets N′ that are secured to the blocks J, and O is a wheel secured to said shaft and projecting through an opening in the bottom of the casing so that it may have contact with the floor. At each end of this shaft is a wheel P having a rubber tire, which has frictional contact with one of the brushes M. As a result of this construction the wheel O is revolved by con-

tact with the floor and imparts motion to the shaft N and wheels P, and the latter, in turn, impart motion to the brushes M, in the direction indicated by arrow in Fig. 3. The object of these brushes is to enter corners and crevices that cannot be reached by brush D, and throw the dirt forward and inward so that it may be taken up when reached by brush D. So far as I am aware I am the first to use brushes such as M, located within the casing, forward of the main brush, and driven by a mechanism entirely independent of said main brush, said mechanism including a wheel that has contact with the floor.

In order to prevent the brush D from throwing dirt onto the tops of the brushes M, I place over these brushes plates Q, or other suitable housings, which will inclose them, said housings being provided with the necessary openings, as shown, for example, at *q*, for permitting the passage of the bolts L and lower peripheries of the wheels P.

The brushes M may be removed by first removing the lock nuts *l*, and then removing the bolts L. This done, the shaft N and its accessories will fall, since they are held in place only by contact of the brushes M with the wheels P, the journals of said shaft being formed simply by cutting open notches in the lower edges of the brackets N'.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a carpet sweeper the combination with the main brush, of a pair of auxiliary brushes located forward of the main brush and so as to project beyond the sides of the casing, means independent of the main brush for revolving said auxiliary brushes whereby they throw the dirt inward and into the path of the main brush, and a casing inclosing the main brush and the auxiliary brushes, substantially as set forth.

2. In a carpet sweeper, the combination with the main brush, of a pair of auxiliary brushes having upright axes and located forward of the main brush, and so as to project beyond the sides of the casing, means independent of the main brush for revolving said auxiliary brushes, and a casing inclosing the main brush and the auxiliary brushes, substantially as set forth.

3. In a carpet sweeper, the combination with the main brush, of a pair of auxiliary brushes located forward of the main brush, and so as to project beyond the sides of the casing, said auxiliary brushes having axes that are slightly inclined from a vertical position, means independent of the main brush for revolving said auxiliary brushes, and a casing inclosing the main brush and the auxiliary brushes, substantially as set forth.

4. In a carpet sweeper the combination with the main brush and casing, of a pair of auxiliary brushes located forward of the main brush and projecting beyond the sides of the casing, means for revolving said auxiliary brushes, and housings covering them, and protecting them from dirt that is thrown forward by the main brush substantially as set forth.

5. In a carpet sweeper the combination with the casing, the main brush and means for driving it, of a pair of auxiliary brushes located forward of the main brush, a wheel projecting through the opening in the bottom of the casing and adapted to have contact with the floor, a shaft carried by said wheel, and wheels carried by said shaft and engaging the auxiliary brushes whereby they are revolved, independently of the main brush substantially as set forth.

6. In a carpet sweeper, the combination with the main brush, of a pair of auxiliary brushes located forward of the main brush, the bolts L upon which said auxiliary brushes are journaled, and the sleeves K in which said bolts are secured and by which said bolts are held against displacement, said sleeves being secured to the casing, substantially as set forth.

7. In a carpet sweeper the combination with the casing of the brackets N' having notches in their under sides, the shaft N journaled in the said notches, the wheels P secured to said shaft, the brushes M bearing against the under sides of the wheels, and the removable upright bolts L upon which said brushes are journaled, substantially as set forth.

8. In a carpet sweeper the combination with the casing having an opening at top and a cover adapted to close said opening, said cover having an opening a^3, of a lever fulcrumed within the casing, having one end opposite the opening a^3, and the other end in engagement with the under side of the cover, and the handle pivoted to the casing, and having an arm adapted to enter the opening a^3 and engage the lever, substantially as set forth.

9. In a carpet sweeper the combination with the casing and the floor wheels, of the levers E fulcrumed upon the axles of said wheels and having the openings *e* and brackets *e'*, the main brush projecting through the openings *e* and having axles *d* journaled in said brackets, the rod F to which the free ends of said levers are secured, the adjusting screw G connected at its lower end to said rod, the brace A^2 through which said screw passes, the thumb nut G' fitting upon said screw, and the spring G^2 surrounding the screw and exerting its pressure upward against the brace A^2 and downward against the rod F, substantially as set forth.

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