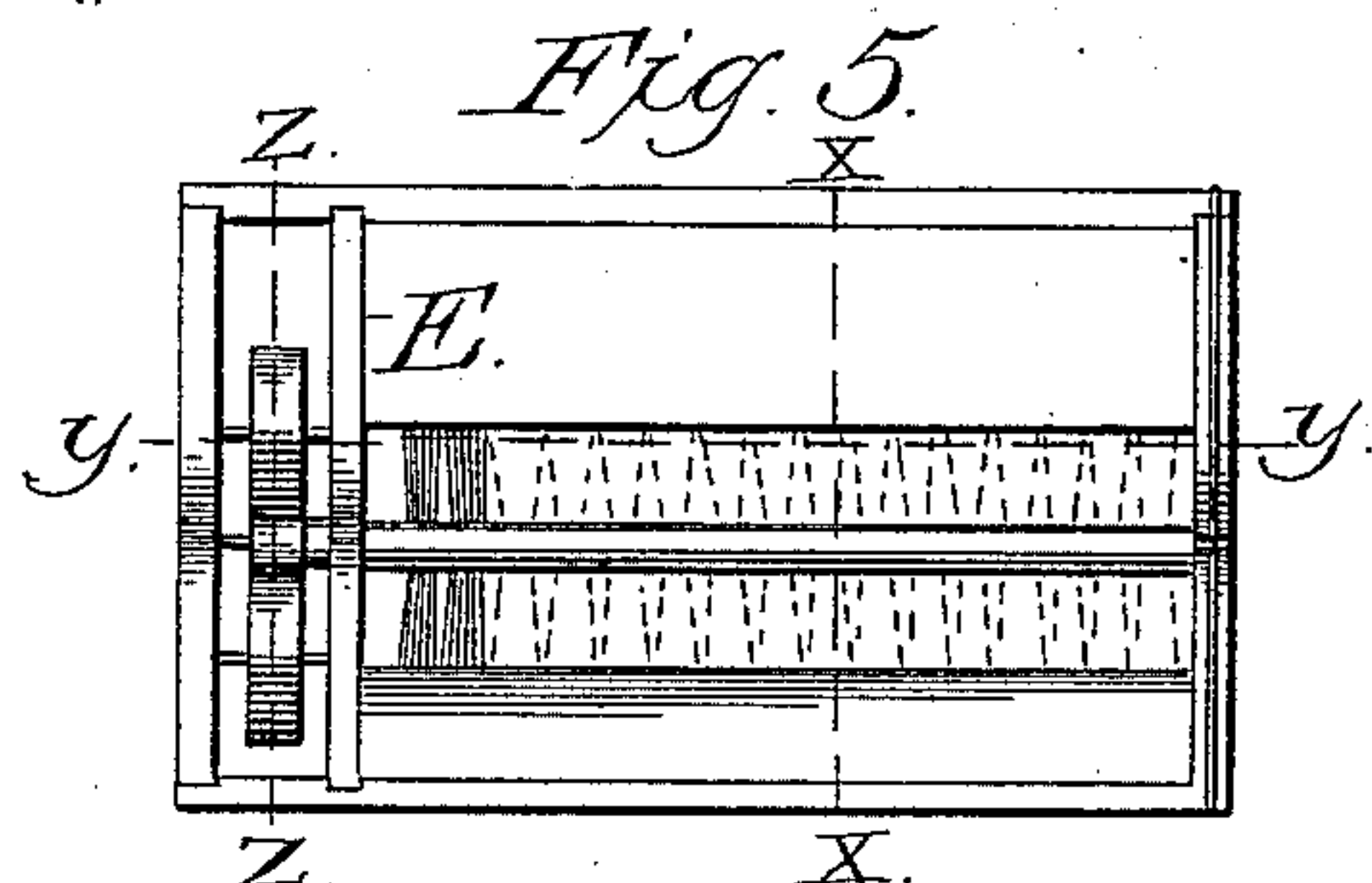
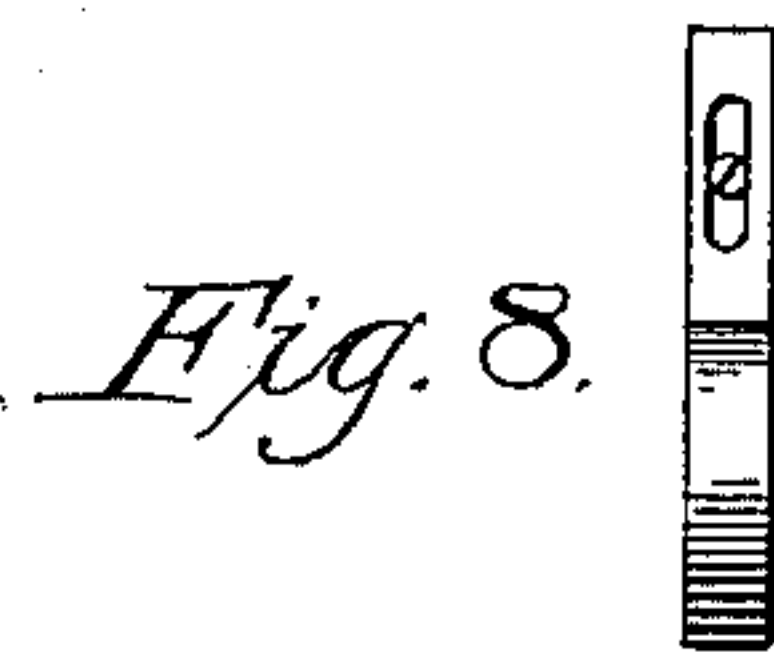
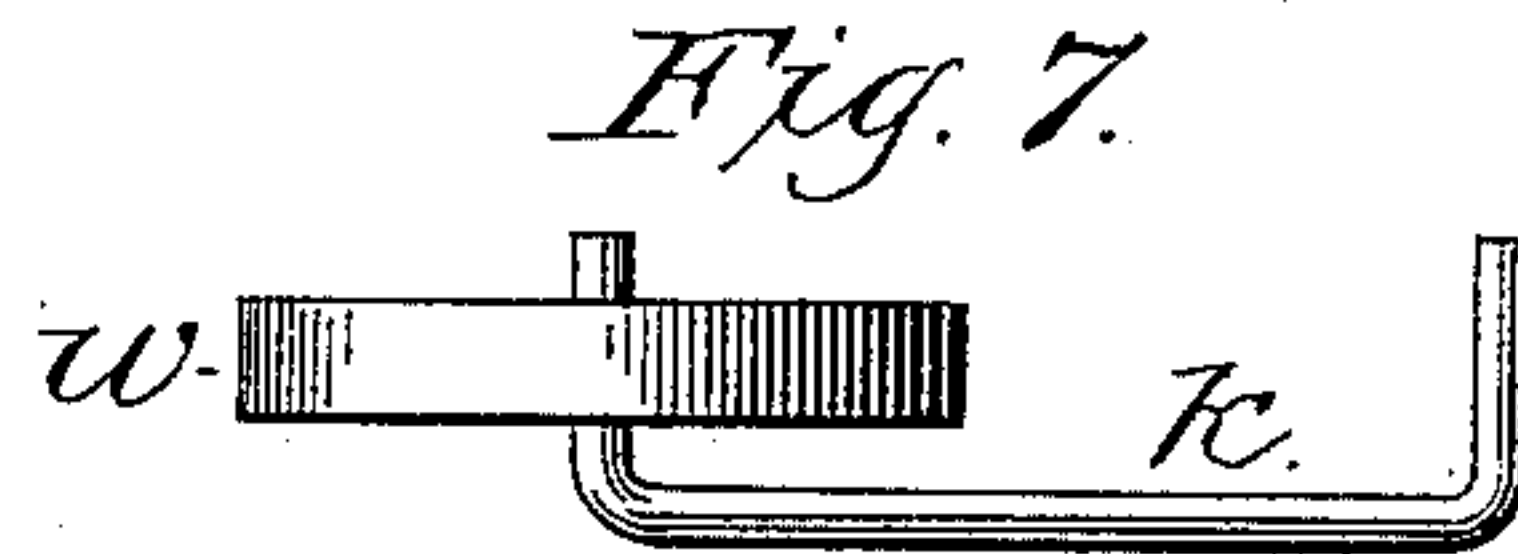
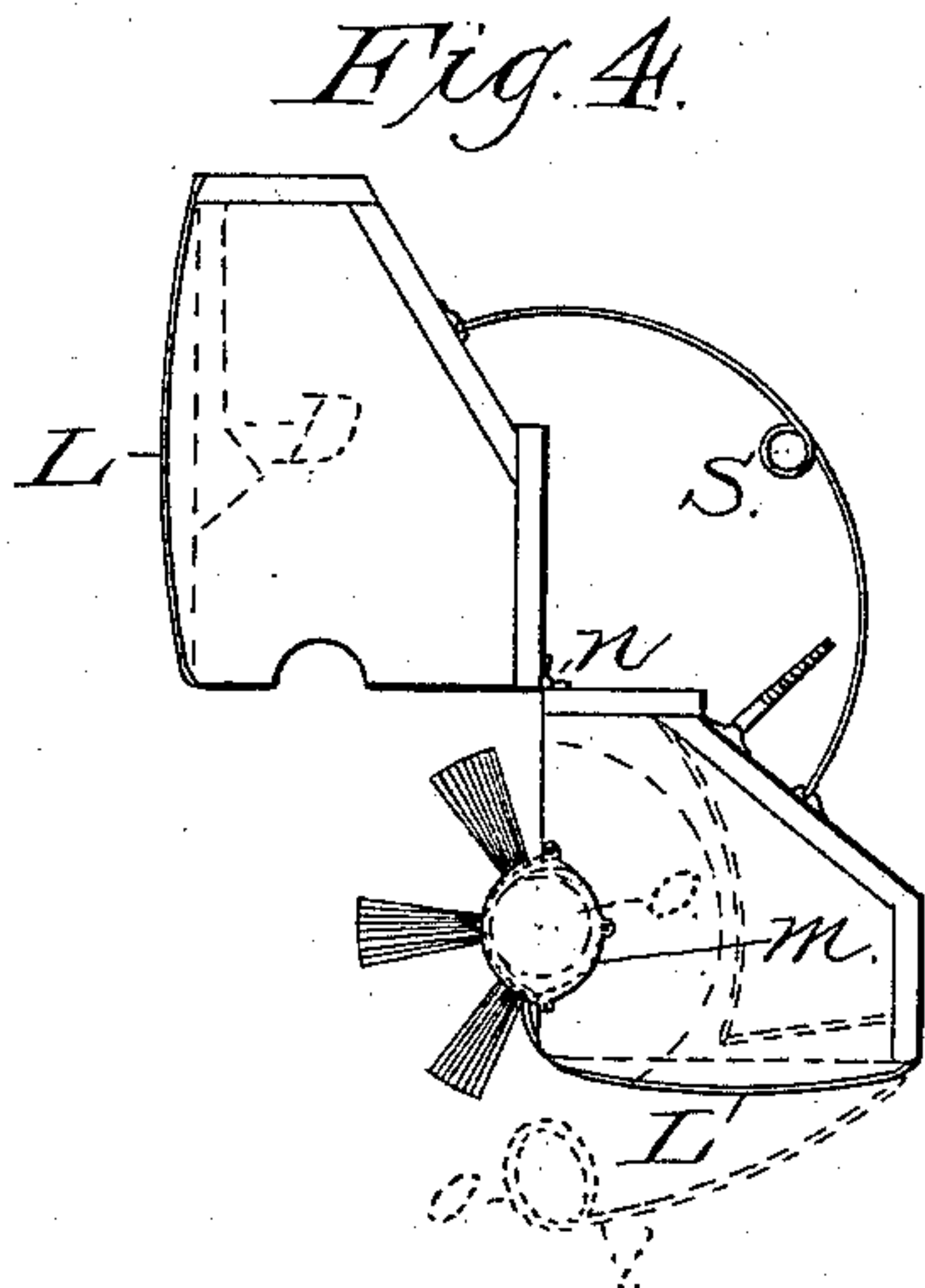
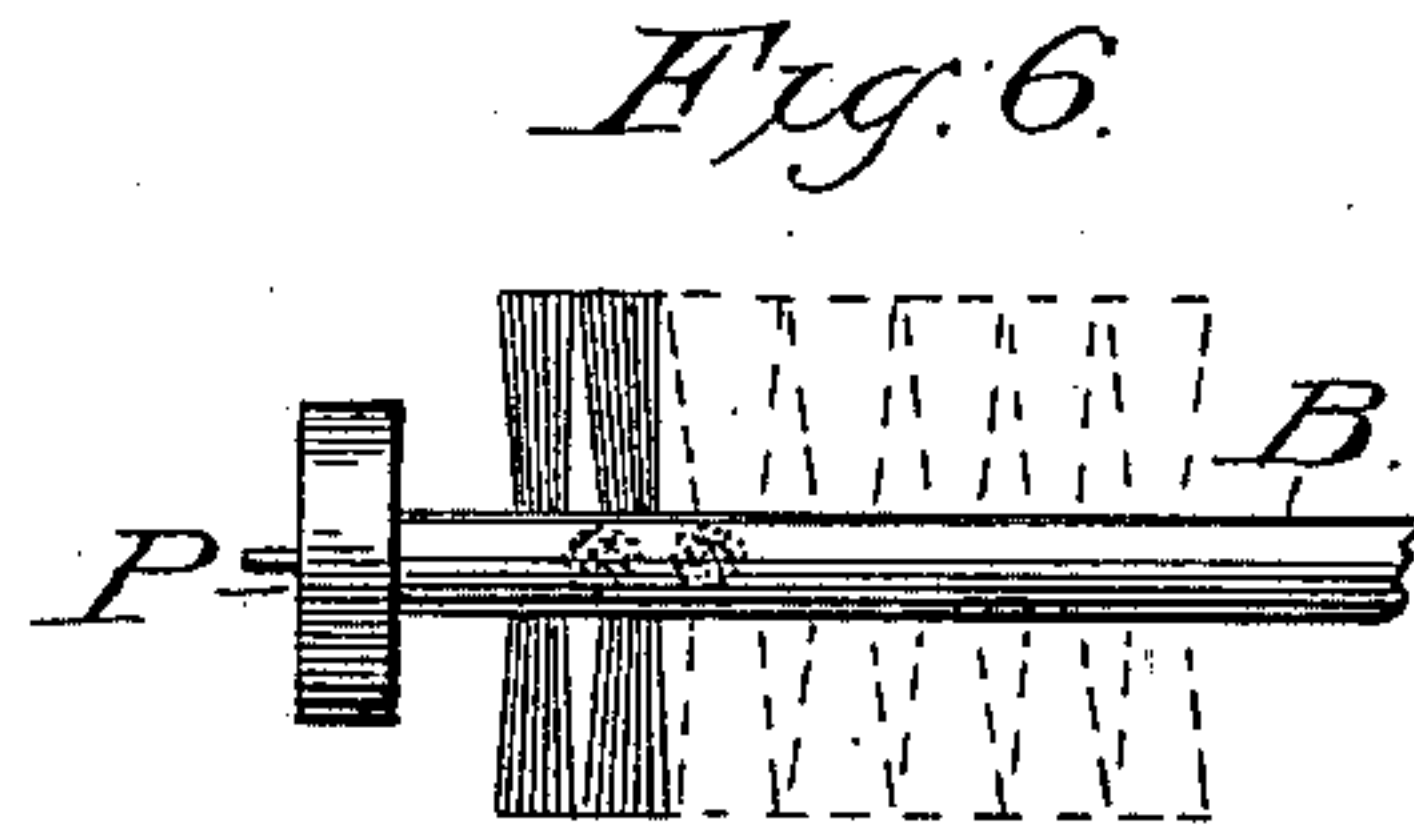
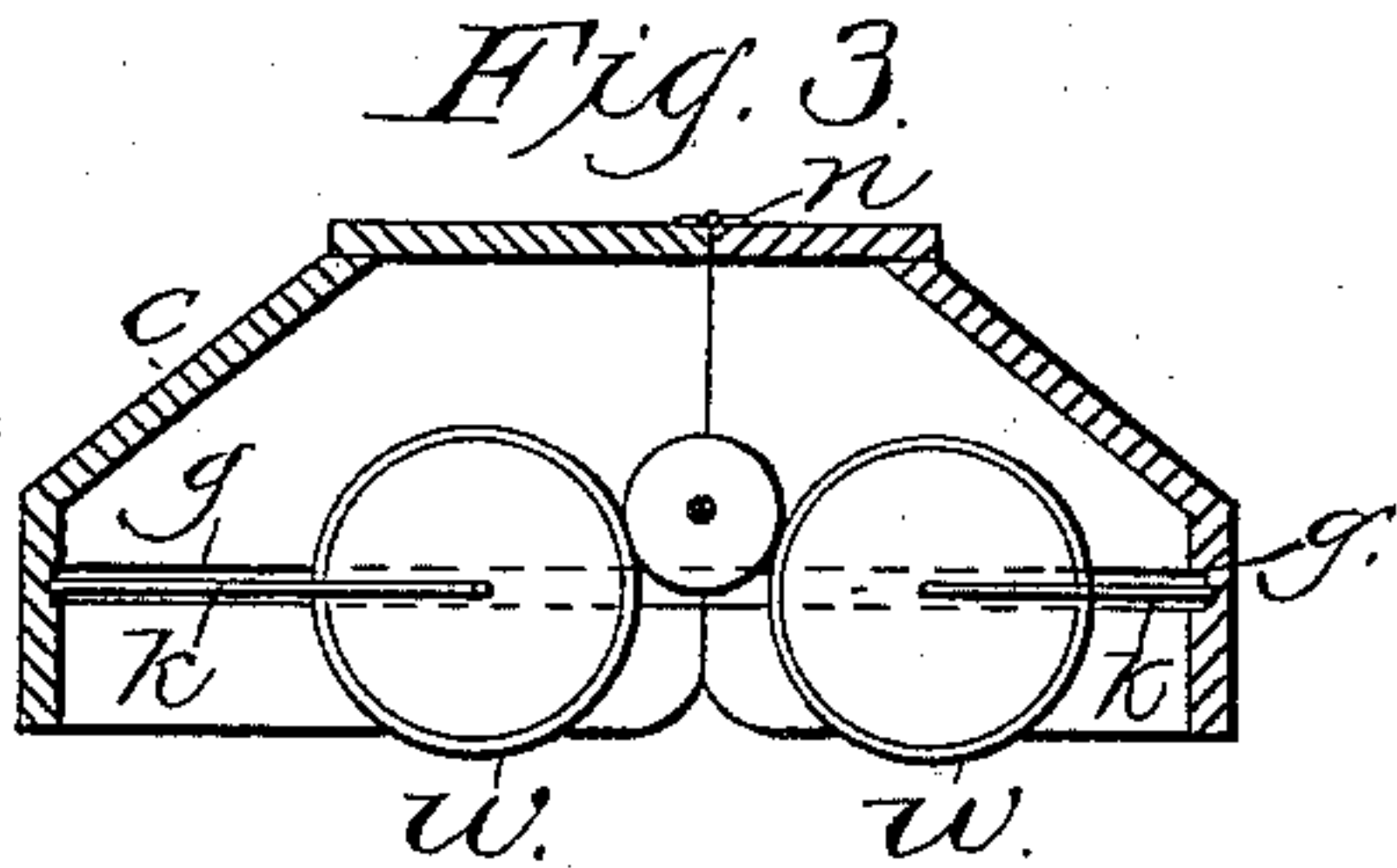
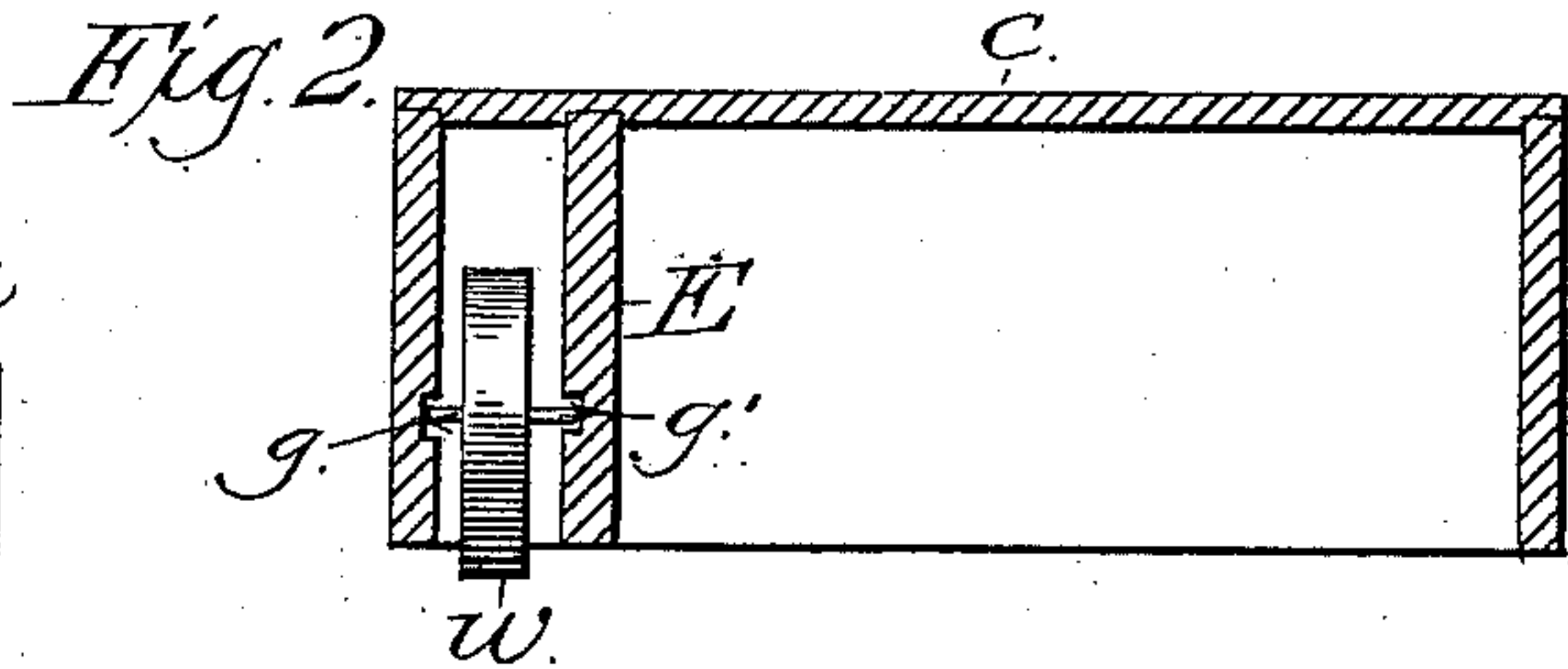
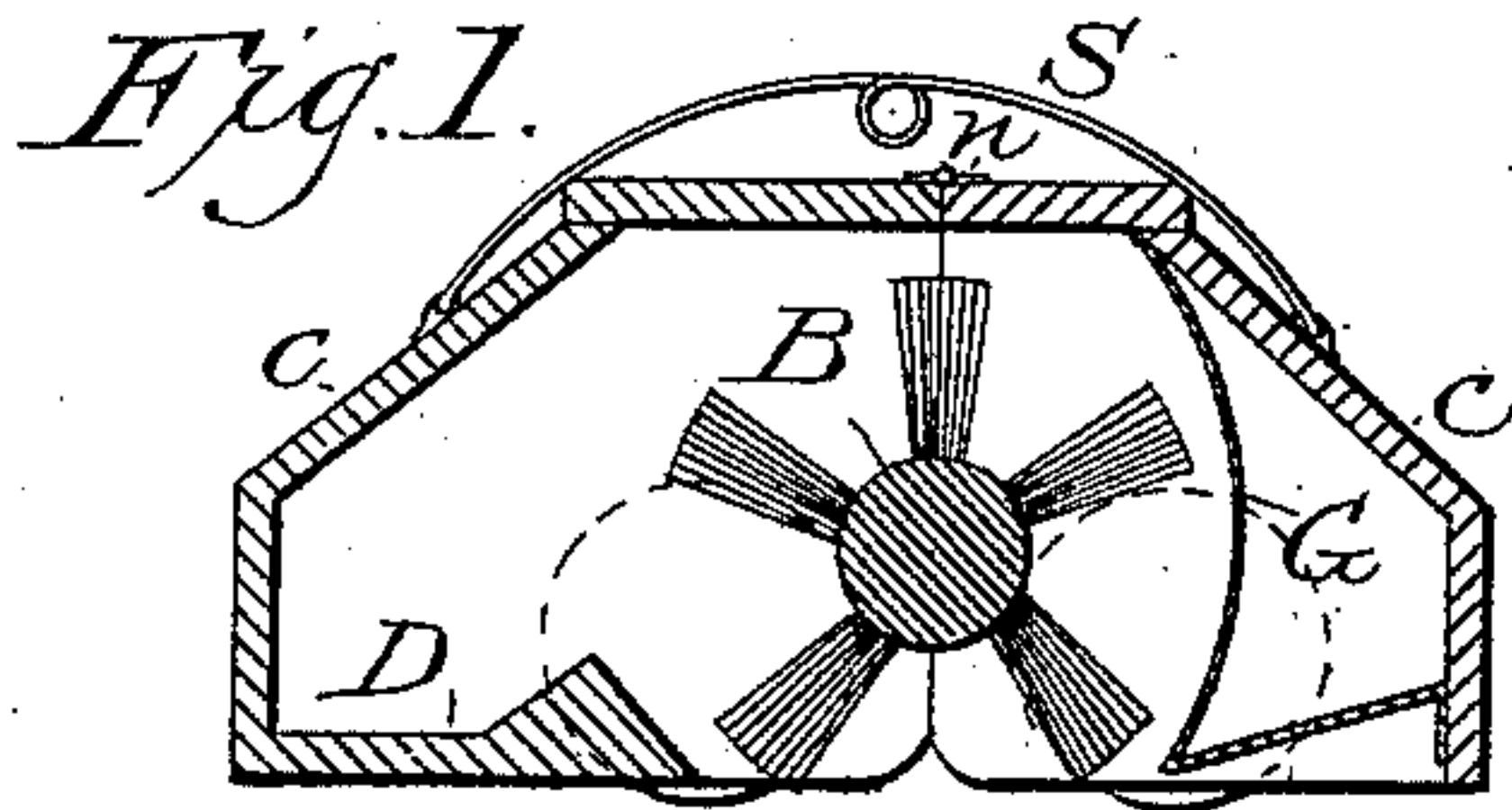


(Model.)

G. W. GATES.  
CARPET SWEEPER.

No. 285,745.

Patented Sept. 25, 1883.



Witnesses;  
Fred W. Stevens.  
Arthur C. Simison.

Inventor;  
George W. Gates  
By Edward Jaggard  
his attorney



# UNITED STATES PATENT OFFICE.

GEORGE W. GATES, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF TWO-THIRDS  
TO AMASA B. WATSON AND JOSEPH A. MCKEE, BOTH OF SAME PLACE.

## CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 285,745, dated September 25, 1883.

Application filed December 15, 1882. (Model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. GATES, of the city of Grand Rapids, county of Kent, and State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers, of which the following is a specification.

My invention relates to improvements in carpet-sweepers having the brush-roller operated by friction driving-wheels; and the objects of my invention are, first, to produce the friction by a spring not directly connected with the wheels or brush-roller; second, to construct a case so that it can easily be opened for discharging the dust and cleaning the brush-roller; third, to simplify the construction of a carpet-sweeper, and to render all parts of the machine accessible to the user without taking the machine apart. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a sweeper constructed in accordance with my invention on the line *xx* of Fig. 5. Fig. 2 is a longitudinal vertical sectional view of the sweeper-case with the wheel in elevation on the line *yy* of Fig. 5. Fig. 3 is a vertical sectional view of a sweeper on the line *zz* of Fig. 5, showing the arrangement of the driving-wheels, brush-roller, and grooves which support the driving-wheels. Fig. 4 is an end view of the sweeper-case opened. Fig. 5 is a view of the carpet-sweeper as it appears turned bottom upward. Fig. 6 is a view of a part of the brush-roller, showing the friction-pulley and end bearing. Fig. 7 is a view of one of the drive-wheels, having inserted in it the shank, which is held and moves in grooves provided for that purpose. Fig. 8 is a view of the metallic slotted bearing which is used in connection with the brush-roller.

Similar letters refer to similar parts throughout the several figures.

In the drawings, *cc* represent the sweeper-case, which is made in two parts, hinged together at the top, as shown at *n* in Fig. 1.

*B* is the brush-roller, journaled to that part of the case which does not contain the dust-pan.

*D* is the dust-pan, which may be made of

wood or any suitable material, and is attached to the side of the sweeper-case not bearing the brush-roller.

*G* is a dust-guide, made preferably of sheet metal, and its office is to convey and guide the dust into the pan when the brush-roller is revolved away from it, and when the roller is revolved toward the pan the dust is deposited directly in it without passing over the guide. The brush-roller *B* may be provided with the pulley *P*.

*W W* are the driving-wheels, and each wheel may be provided with a removable shank, constructed in the form shown by *K* in Fig. 7. These shanks slide in grooves in the end of the sweeper-case, and their free ends slide in corresponding grooves in the partition *E*, as shown by the dotted lines *g g* in Fig. 3 and by the lines *g* and *g'* in Fig. 2. They hold the wheels in the position shown in Fig. 3, and their form may be varied, if desired.

*S* is a spring which I have shown passing over the sweeper-case, and so constructed as to hold the case in the position shown in Fig. 1 when the sweeper is in use, and to hold the case open, as shown in Fig. 4, when the sweeper is opened for cleaning or for removing the dust.

*E* is a partition provided with the groove *g'*, before referred to, similar to the groove *g*, formed in the end wall of the sweeper-case. If desired, the position of the shank may be reversed, so that it will be in the groove *g'*, and its free ends be supported by and slide in the groove *g*. The position of the wheel and shank in the grooves is shown in Fig. 2.

*L L* are the shoes, which rest on the carpet, and which are at that end of the case opposite the driving-wheels. One of these shoes may be so constructed as to form a bearing for one end of the brush-roller in the form shown by *O* in Fig. 4. The other end of the roller rests in the slotted bearing shown in Figs. 3 and 8. The shoes *L L* may be of wire, bent into such form as to be readily clasped upon the sweeper-case, as shown in the drawings, and the brush-roller may be removed by bending that shoe which serves as a bearing outward and away



from the case, as shown by the dotted line *l* in Fig. 4. Then, when the force is removed, the shoe will spring back into position.

*m* is a plate designed merely to cover the bearing of the brush-roller, and it may be made of any desirable form and size, being attached to the ends of the sweeper-case on the outside.

By means of the hinged case and spring *S*, I am able to preserve a continuous pressure upon the brush-roller by the drive-wheels, and also to increase the pressure and lower the brush-roller at the same time by simply pressing downward on the handle of the sweeper.

The form and construction of the spring and hinges may be varied, as desired.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. In a carpet-sweeper, the case *C C*, hinged at the top and made in two sections, in combination with the spring *S*, and so constructed as to open and shut, substantially as and for the purpose described.

2. The combination of the following parts, viz: the case *C C*, made in two parts, having grooves *g g'*; the driving-wheels *W W*, supports *K*, and brush-roller.

GEORGE W. GATES.

Witnesses:

EDWARD TAGGART,  
ARTHUR C. DENISON.