

No. 692,230.

Patented Feb. 4, 1902.

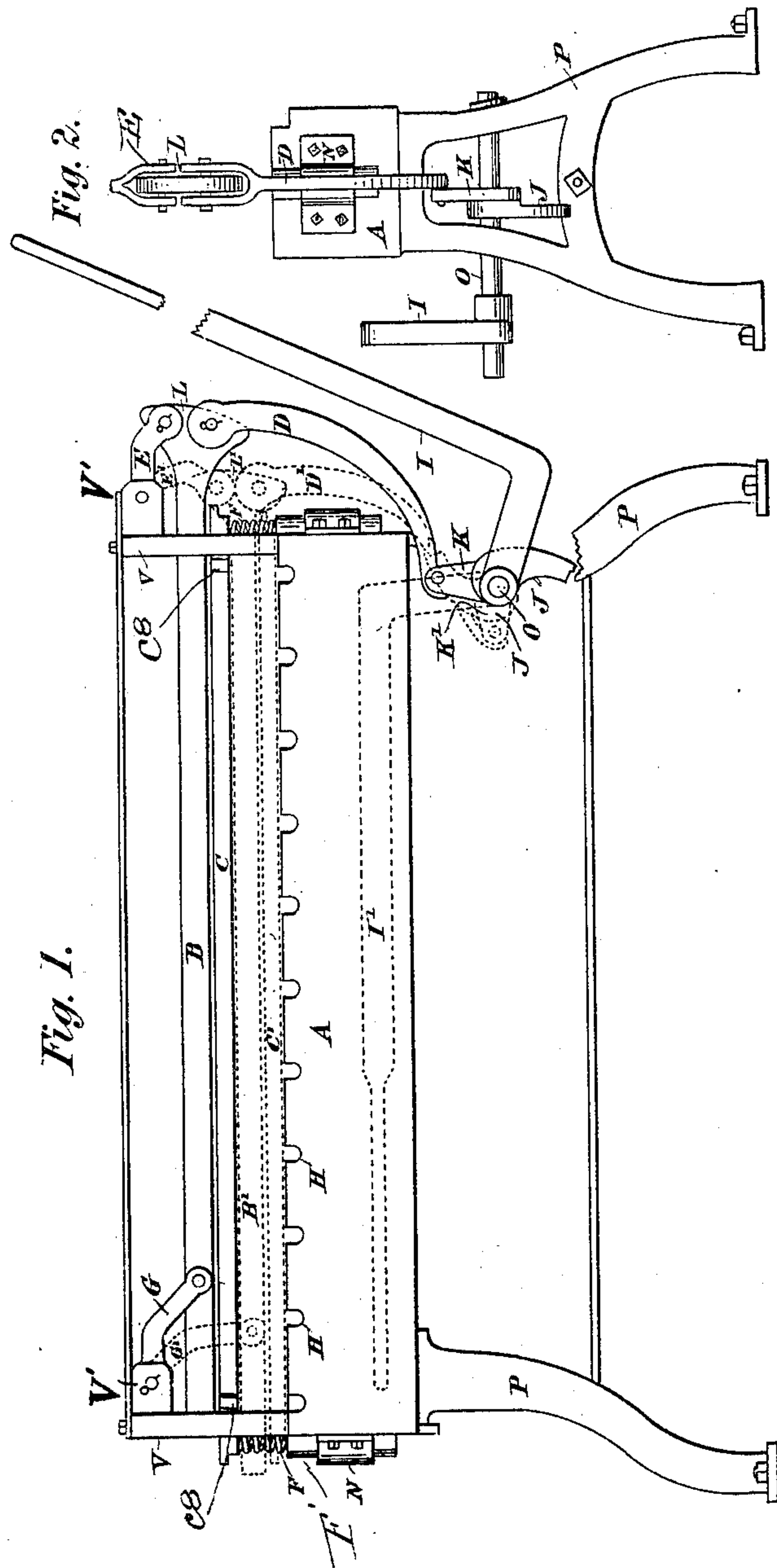
G. BINDER.

MACHINE FOR MAKING BRUSHES FOR STREET SWEEPING MACHINES.

(Application filed Apr. 13, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

Wm B. Lifford
John Hoos

Gottlieb Binder Inventor

By Attorney R. M. Kelly

No. 692,230.

Patented Feb. 4, 1902.

G. BINDER.

MACHINE FOR MAKING BRUSHES FOR STREET SWEEPING MACHINES.

(Application filed Apr. 18, 1901.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

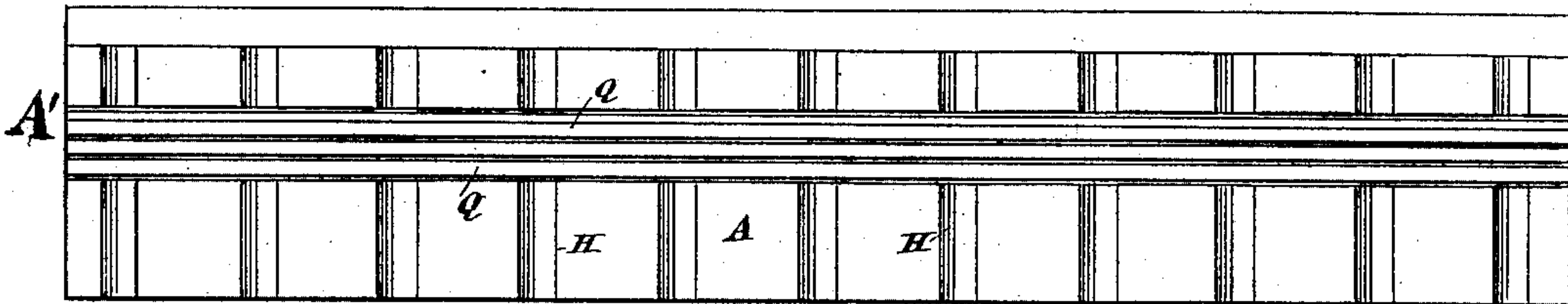


Fig. 4.

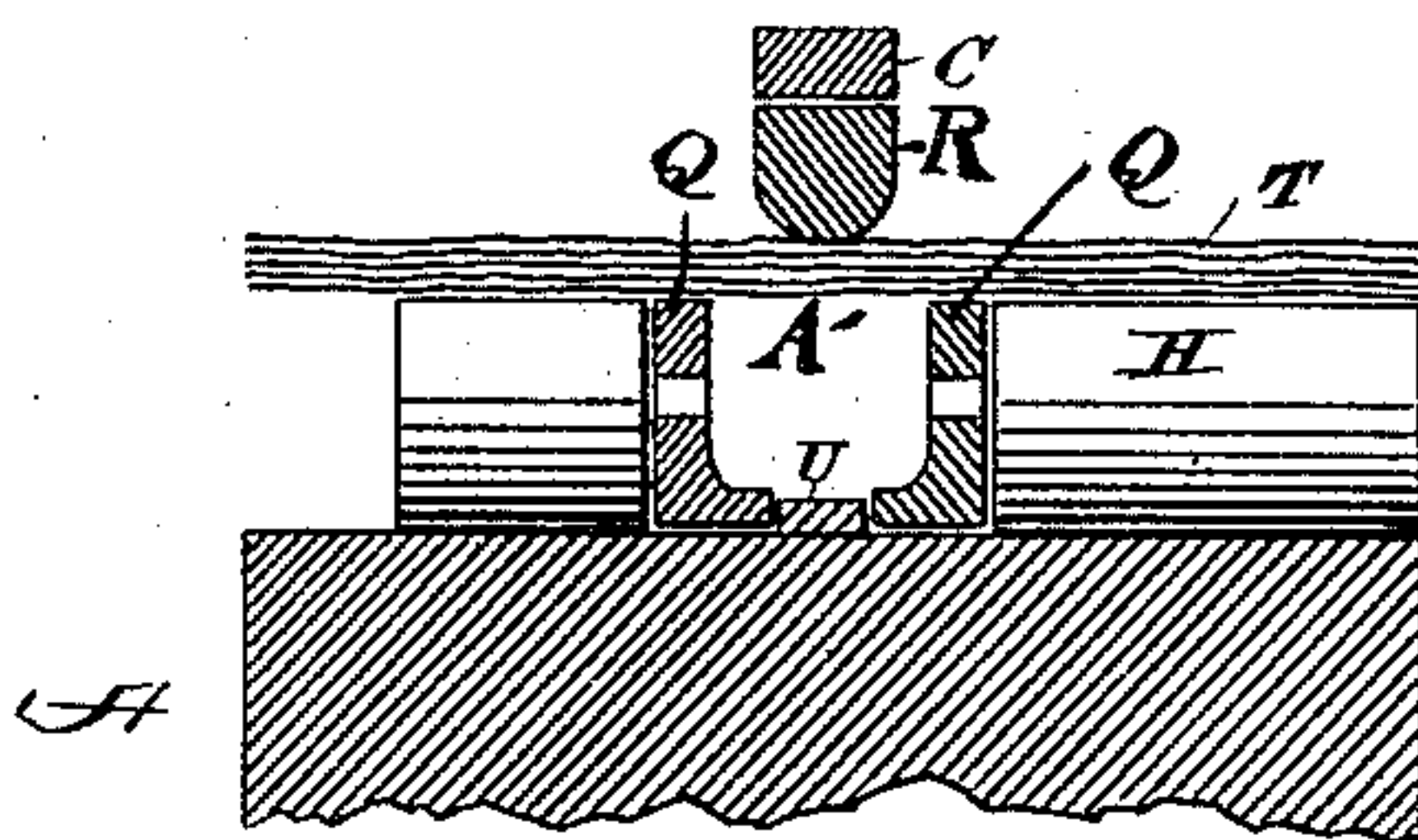


Fig. 5.

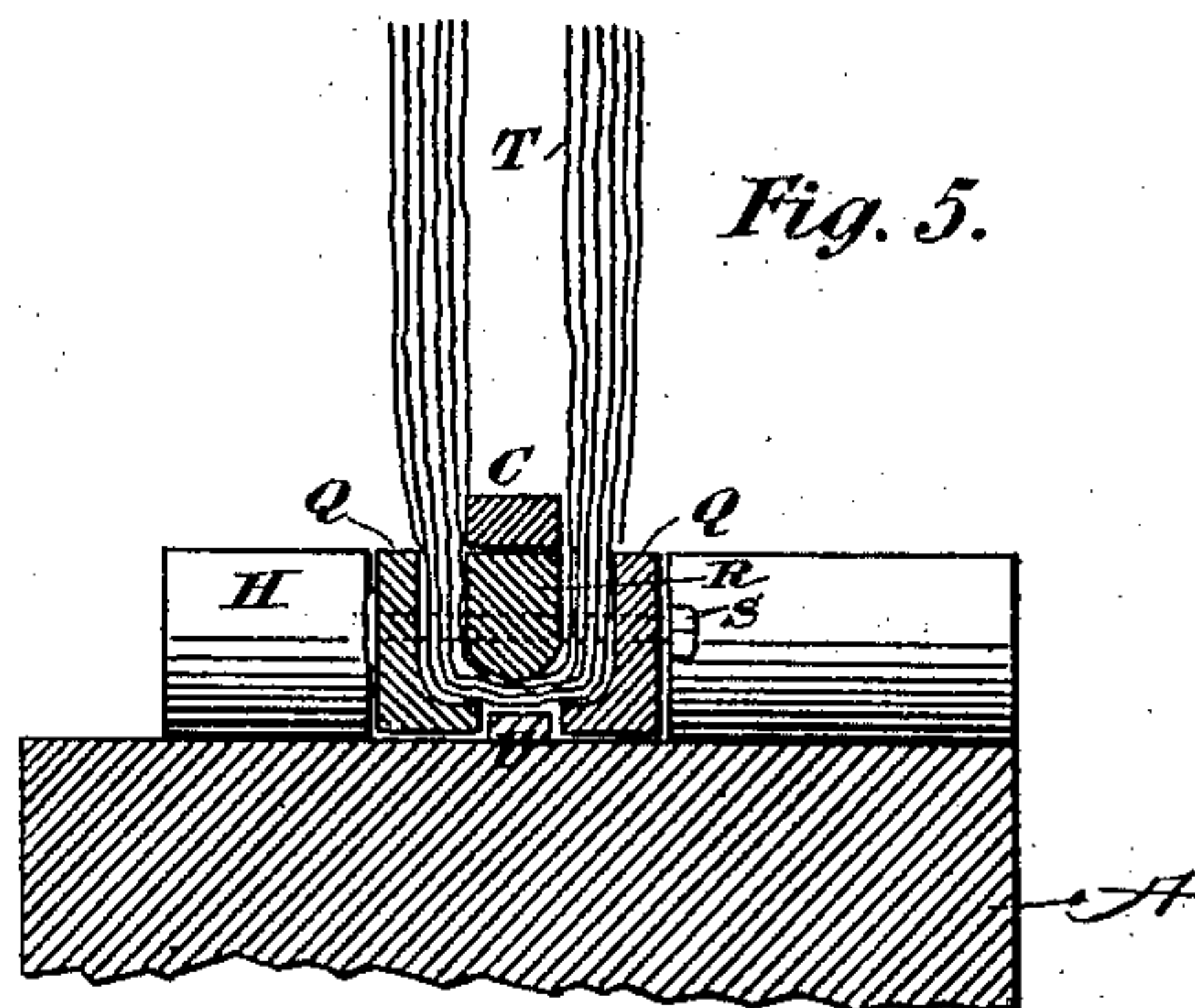
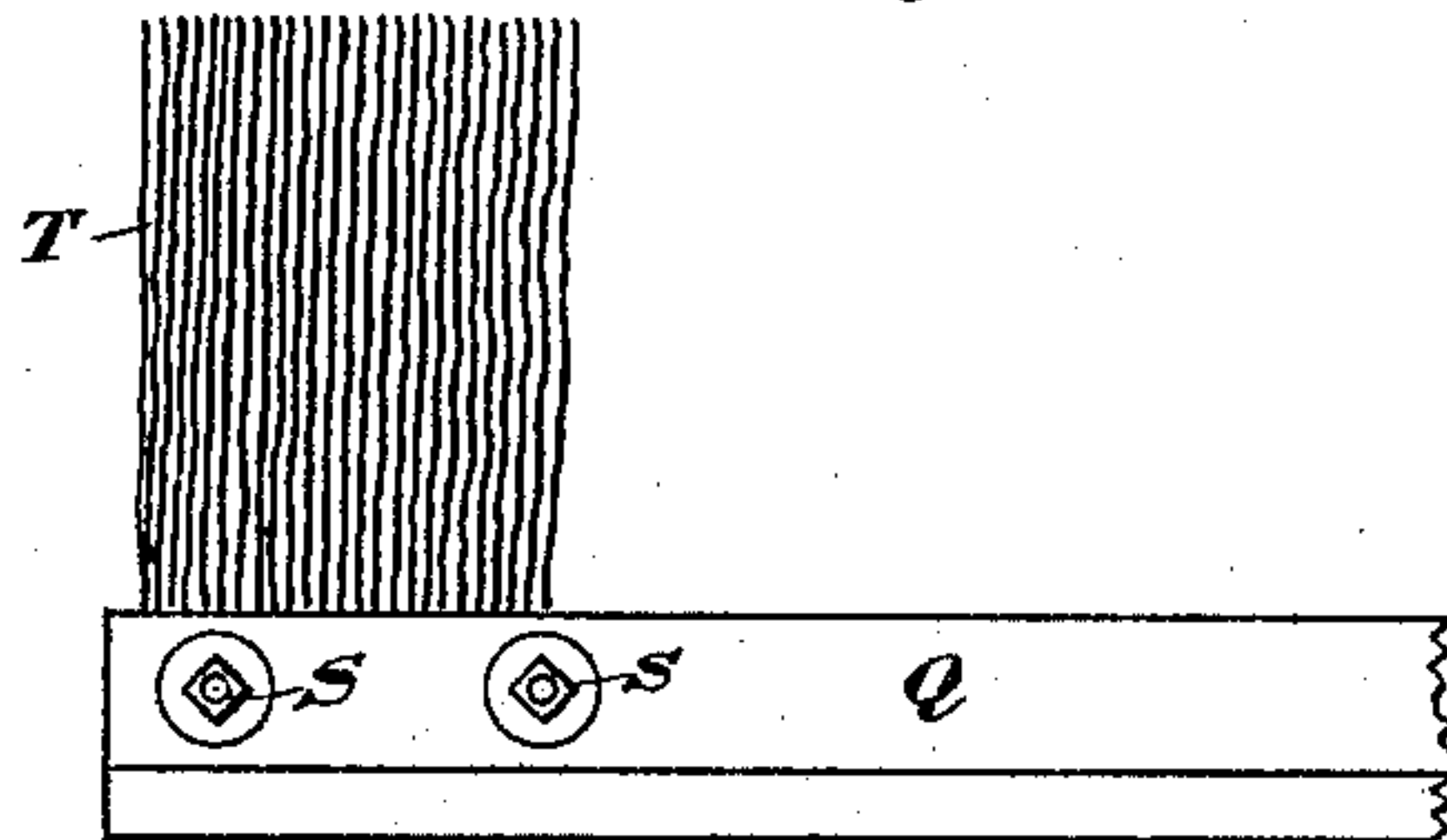


Fig. 6.



Witnesses

Mo B. Lifford
John Hoos

Gottlieb Binder Inventor

By Attorney R. H. Kelly

UNITED STATES PATENT OFFICE.

GOTTLIEB BINDER, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF
TO CHARLES H. YOST, JR., OF LOUISVILLE, KENTUCKY.

MACHINE FOR MAKING BRUSHES FOR STREET-SWEEPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 692,230, dated February 4, 1902.

Application filed April 13, 1901. Serial No. 55,609. (No model.)

To all whom it may concern:

Be it known that I, GOTTLIEB BINDER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Machines for Making Brushes for Street-Sweeping Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to machines for making brushes for pick-up street-sweeping machines.

In the drawings, Figure 1 is a side elevation of a brush-making machine with my improvement. Fig. 2 is a front end elevation of same with parts removed. Fig. 3 is a top plan view of the bed of same. Fig. 4 is a vertical transverse section of the bed through one of the transverse grooves therein, showing the cane-straw in position to be pressed into place, the wooden braces of the broom, and the pressure-bar. Fig. 5 is a similar sectional view showing the cane-straw pressed into position for clamping, the inner and outer bracing-strips, and the pressure-bar C. Fig. 6 is a side elevation of a portion of a broom complete.

The objects of my invention are to apply direct pressure to the cane-straw forming the brush, so that it will not be rolled and scattered in pressing it into place, and to furnish a suitable bed or support for the brush while being pressed into form.

A represents the bed of my brush-making machine, formed of a rectangular beam of wood or other suitable material.

P P represent its legs.

A' represents a longitudinal rectangular groove extending the length of the bed to receive the brush-braces and cane-straw.

Q Q represent strips of wood, half-U shaped on their inner sides, adapted to fit in opposite sides of the longitudinal groove A'.

R is a longitudinal piece of wood, beveled at its lower corners, adapted to be pressed

down on the cane-straw into the groove A and serve as inner brace for the brush.

T represents the cane-straw forming the brush.

H H represent transverse grooves formed at suitable intervals in the bed A, of the same depth as the groove A', adapted to allow the passing of bolts through the broom.

U is a narrow metal strip extending along the middle of the groove A' and fastened to its bottom.

I is a lever keyed on a spindle O, journaled in the legs P, on which spindle is keyed between the legs P an eccentric having a lower stop-arm J and an upper arm K, pinned to the lower end of an arm D, which is pinned at its upper end by forked arms to the broadened end L of a metal bar B, which extends longitudinally over the middle of the bed A between vertical standards V V, erected at each end of the bed A and on each side of groove A'. Between these standards at their tops are pieces V', projecting toward the front or lever end of the frame. To these projections are pinned at the front standards an arm E, which is pinned at its outer end by forked arms to the broadened end L of the bar B, and at the rear standards an arm G, pinned at its outer end by forked arms to the sides of the bar B.

Under the metal bar B between the standards V V is placed a metal bar C, the ends of which rest on the top of coil-springs F, having their lower ends inserted in boxes F', by which they are held upright and into which they sink when the bar C is depressed. Said boxes are secured to the ends of the frame by the straps N, which are bolted to the ends of the bed A. To prevent longitudinal movement of the bar C, its ends adjacent to the inner edges of the standards V V may be provided with suitable stops C^s to engage said edges.

The operation of my improved machine may be described as follows: When the lever I is thrown back, as shown in Fig. 1, the pieces Q are placed in the long socket or groove A', as shown in Figs. 3, 4, and 5. They are held apart at their bottoms by the metal strip U. The cane-straw T is spread across the bed, as

shown in Fig. 4. The inner wooden brace-piece R is placed on the cane-straw, extending over the middle of the groove A from end to end. The lever is then thrown forward to the position shown by the dotted lines marked I' in Fig. 1. By that movement the bar B is pressed down on the bar C, which in turn presses the brace-piece R and the cane-straw into the position shown in Fig. 5, and the other parts of the mechanism are thrown into the positions indicated by dotted lines in Fig. 1. Through transverse grooves H in the top of the bed A bolts S are then passed through the side braces Q, the cane-straw, and the center brace R and fastened by screw-nuts, and the broom-head is complete.

The special features of my invention are the bed A, with its grooves, legs, and standards, as described, and placing the bar C on springs under the pressure-bar B, so that bar C will have only a straight up-and-down motion. Without this interposition of the bar C the motion of the bar B in exerting its pressure, which is longitudinal as well as downward, would roll the cane-straw when brought down on brace R and displace it. The interposition of the bar C, which can only have a straight downward motion, prevents that.

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

1. In a machine for making brushes for street-sweeping machines, the combination with a bed having a groove to receive the broom-bristles, of a bar adapted to be forced into said groove, springs acting on said bar in one direction, and means for pressing said bar in opposition to said springs, substantially as described.

2. In a machine for making brooms for street-sweeping machines, the combination with a longitudinal bar, supported at each end by coiled springs, of a lever, I, eccentric arms, K, J, an arm D, a longitudinal metal bar B, supported over the spring-supported bar C, by arms G, and E, between standards V, at either end of the bed A, all constructed and arranged substantially as described and for the purposes specified.

3. In a machine for making brooms for street-sweeping machines, a bed A, having on its top through its middle from end to end a rectangular groove A', of depth suitable to receive the side braces of a street-sweeping

broom, transverse grooves H, of equal depth with the longitudinal groove A, a metal strip U, down the middle of the longitudinal groove, legs P, and parallel standards V, V, erected at each end of the bed on each side of the longitudinal groove, substantially as described and for the purposes specified.

4. In a machine for making brooms for street-sweeping machines, the combination with a suitable supporting means, a spring-supported bar adapted to force the bristles into the broom-head, of a means acting on said bar in opposition to the springs thereof, comprehending a lever, a second bar above the first-mentioned bar having pivoted supports for its ends, and connections between said lever and second bar for transmitting motion of the former to the latter.

5. In a machine for making brooms for street-sweeping machines, the combination with a bed having a longitudinal groove to receive the bristles and side braces of the broom-head, and a spring-supported bar adapted to force said bristles into said groove and between said side braces, of a lever, a second bar above the first-mentioned bar having pivoted supports for its ends, and connections between said lever and second bar for transmitting motion from the former to the latter.

6. A machine for making brooms for street-sweeping machines, comprising a bed having a longitudinal groove adapted to receive the side braces of the broom-head and transverse grooves intersecting said longitudinal groove, a strip in the bottom of the longitudinal groove, standards rising from the ends of the bed on each side of said longitudinal groove, a spring-supported bar above said longitudinal groove, guided by said standards in its vertical movements and having no longitudinal movement, a second bar above the first-mentioned bar, pivoted levers supporting the ends of the second bar, an actuating-lever, an eccentric actuated thereby, and a lever connecting said eccentric with an end of said second lever.

In testimony whereof I affix my signature in presence of two witnesses.

GOTTLIEB BINDER.

Witnesses:

THOS. H. LOCKE,
CHAS. H. YOST, Jr.