

(No Model.)

M. R. BISSELL, Dec'd.

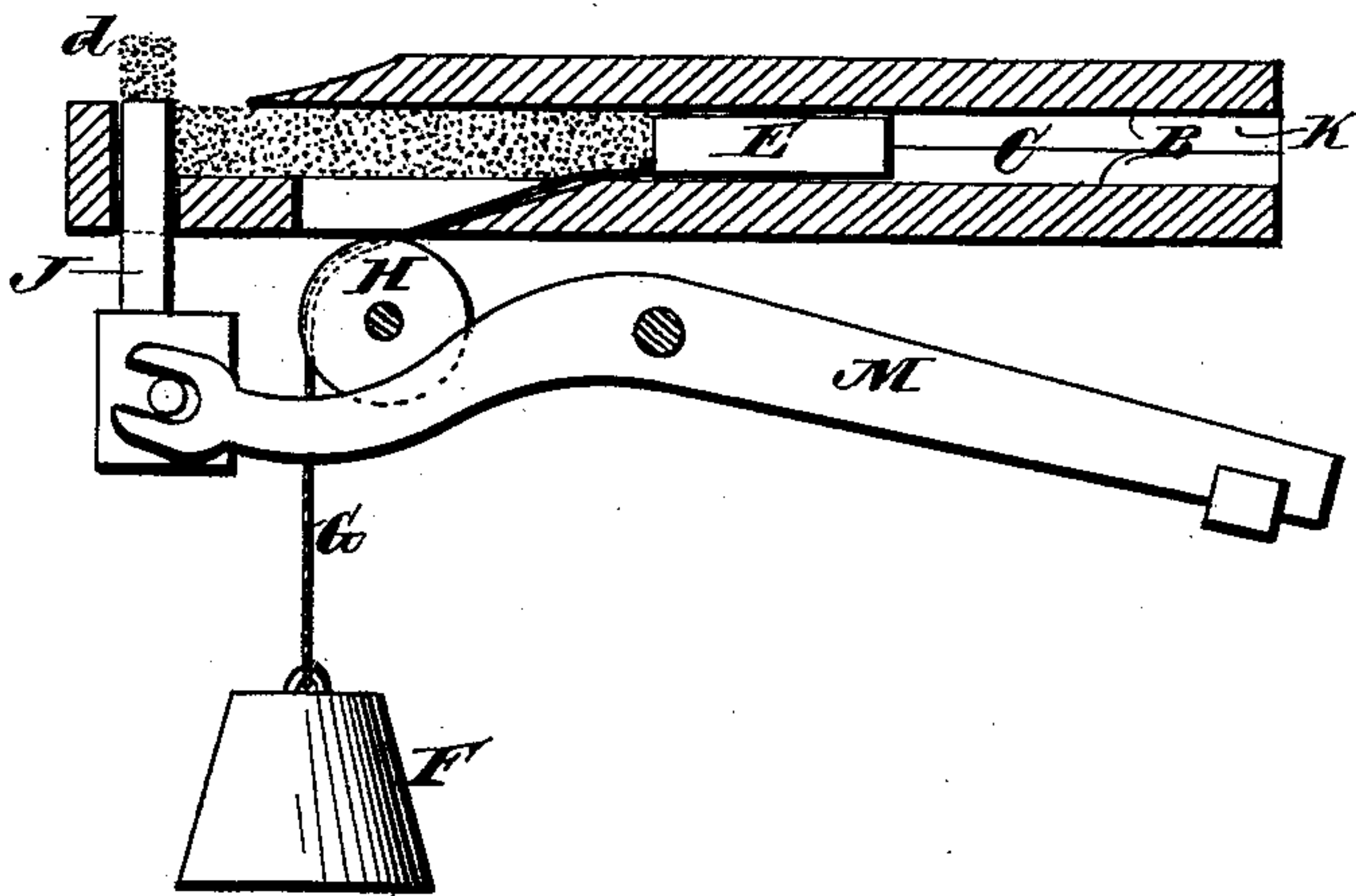
A. BISSELL, Executrix.

BRUSH MAKING MACHINE.

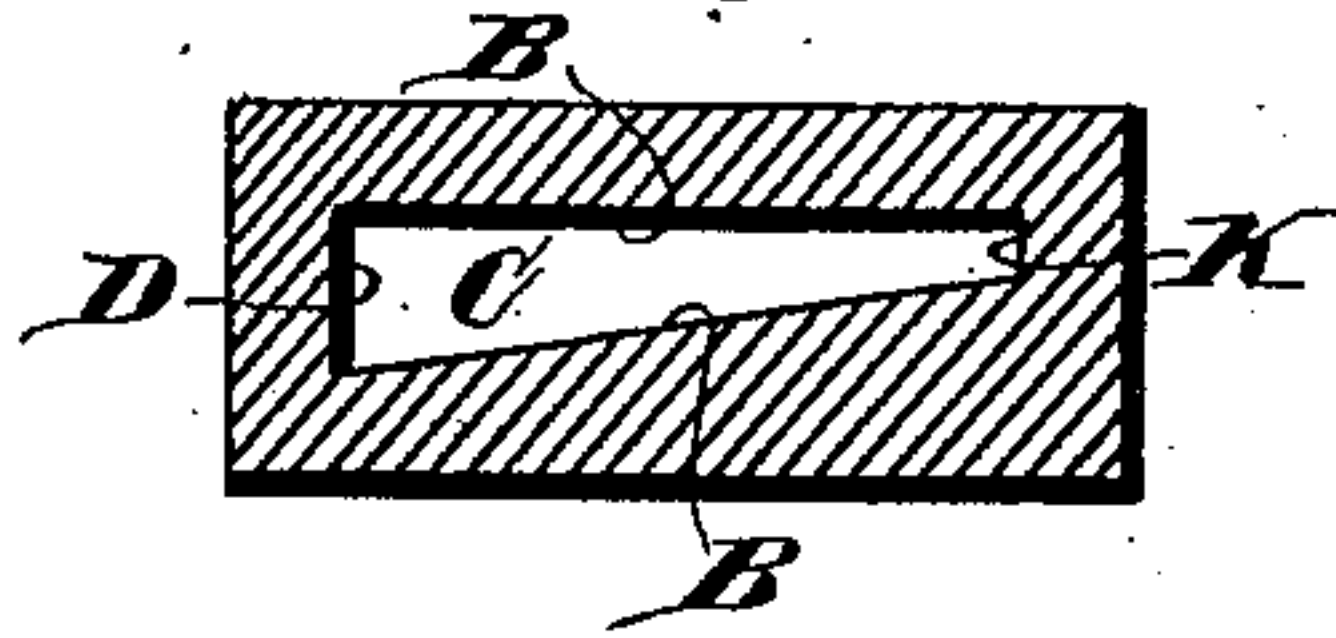
No. 435,268.

Patented Aug. 26, 1890.

*Fig. 1.*



*Fig. 2.*



*Witnesses,*  
*Phet Corbett,*  
*Dennis Sumbly.*

*Inventor:*  
*Anna Bissell, Executrix,*  
*of Melville R. Bissell, Deceased.*  
*By Edward Taggart,*  
*Atty.*

# UNITED STATES PATENT OFFICE.

ANNA BISSELL, OF GRAND RAPIDS, MICHIGAN, EXECUTRIX OF MELVILLE R. BISSELL, DECEASED, ASSIGNOR TO THE BISSELL CARPET SWEEPER COMPANY, OF SAME PLACE.

## BRUSH-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 435,268, dated August 26, 1890.

Application filed February 15, 1890. Serial No. 340,623. (No model.)

*To all whom it may concern:*

Be it known that MELVILLE R. BISSELL, late of the city of Grand Rapids, county of Kent, and State of Michigan, has invented certain new and useful Improvements in Brush-Making Machines, of which the following is a specification.

This invention relates to an improvement in the fiber channel or hopper of the machine for making brushes invented by Alexander Frazier and embodied in his patent, No. 330,688, dated November 17, 1885; and the object of the present invention is to provide novel means whereby bristles having comparatively large butts, like hog-bristles, are uniformly fed and packed, so that a correct tuft can be moved in a compact form from the fiber-channel. To accomplish this object the invention involves the features of construction, the combination or arrangement of parts, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view through the fiber-channel, and Fig. 2 is a transverse sectional view of the same.

Similar letters refer to similar parts throughout both the views.

The fiber-channel is shown by C, bounded by the walls D, B, and K. The rear end of the channel is preferably left open in order to afford opportunity for filling the channel with bristles. The channel is triangular or nearly triangular in cross-section, as shown in Fig. 2. The side D receives the larger end of the bristle and the side K receives the smaller end, and the fiber will be equally compact the entire length of the channel. The follower E is the same form in cross-section as the channel, so that the follower fills the channel and presses evenly upon the fiber. The follower E is connected to a weight by a cord which presses the fiber toward the end of the channel occupied by the slide J. The slide J is operated at right angles to the channel and adapted to lift from the channel a tuft of fiber to the position shown by *d*, and then to be returned when the follower pushes forward the body of fiber to fill the

space left vacant by the retraction of the slide J.

In the example of the invention illustrated in the drawings the lever M, operated by suitable mechanism, a cord G, pulley H, and weight F are used and other parts corresponding with the mechanism particularly shown and described in said Frazier patent, the invention being limited to the improved fiber-channel and follower herein described.

In the manufacture of brushes the bristles are received by the brush-manufacturer with their butts placed one way and their points the other, and it is necessary to place the bristles in the channel so that their butts will all be in one direction and the points in another direction. These bristles being fed by means of a follower, it is evident that the butts will fill a larger space than the points, so that as they are fed the pressure will be upon one side of the channel or upon the butt-ends of the bristles. This renders it impossible to pack the bristles so that a tuft can be taken out in a compact form from the channel. In addition to this the pressure of the block or follower has a tendency to drive the butts forward so as to displace the bristles in the channel, and thereby render it impossible to take the tuft in the right place or in the place to make a good setting of bristles. In actual practice the butt forms the principal portion, and in fact almost the entire sweeping portion, of the brush in a brush-roll.

In making carpet-sweeper brushes and brushes of like character a comparatively short bristle is used, and, as above stated, the points have little to do with the sweeping portion of the brush when completed. Now, by making the bristle-channel triangular in cross-section, in order to correspond as nearly as possible to the size of the ends of the bristles, it becomes impossible for the bristles to pack at one side of the channel and to be loose at the other. It also becomes impossible for the bristles as they pack up at the butt ends to slip by each other, thereby presenting the bristles in position to form an imperfect tuft, as is the case where the channel is rectangular in cross-section.

Having thus described the invention, what



I claim to have been invented by said MELVILLE R. BISSELL, and what I desire to secure by Letters Patent, is—

5 In a machine for making brushes, the combination of a fiber-channel substantially triangular in cross-section, a follower adapted to fit the channel and to move longitudinally in said channel, and suitable mechanism for

pressing the follower upon the fiber within the channel, substantially as and for the purpose described. 10

ANNA BISSELL,  
*Executrix of the Estate of Melville R. Bissell.*

In presence of—

EDWARD TAGGART,  
HUGH E. WILSON.