

(No Model.)

J. RUCKSTINAT.
WINDOW CLEANER.

No. 570,231.

Patented Oct. 27, 1896.

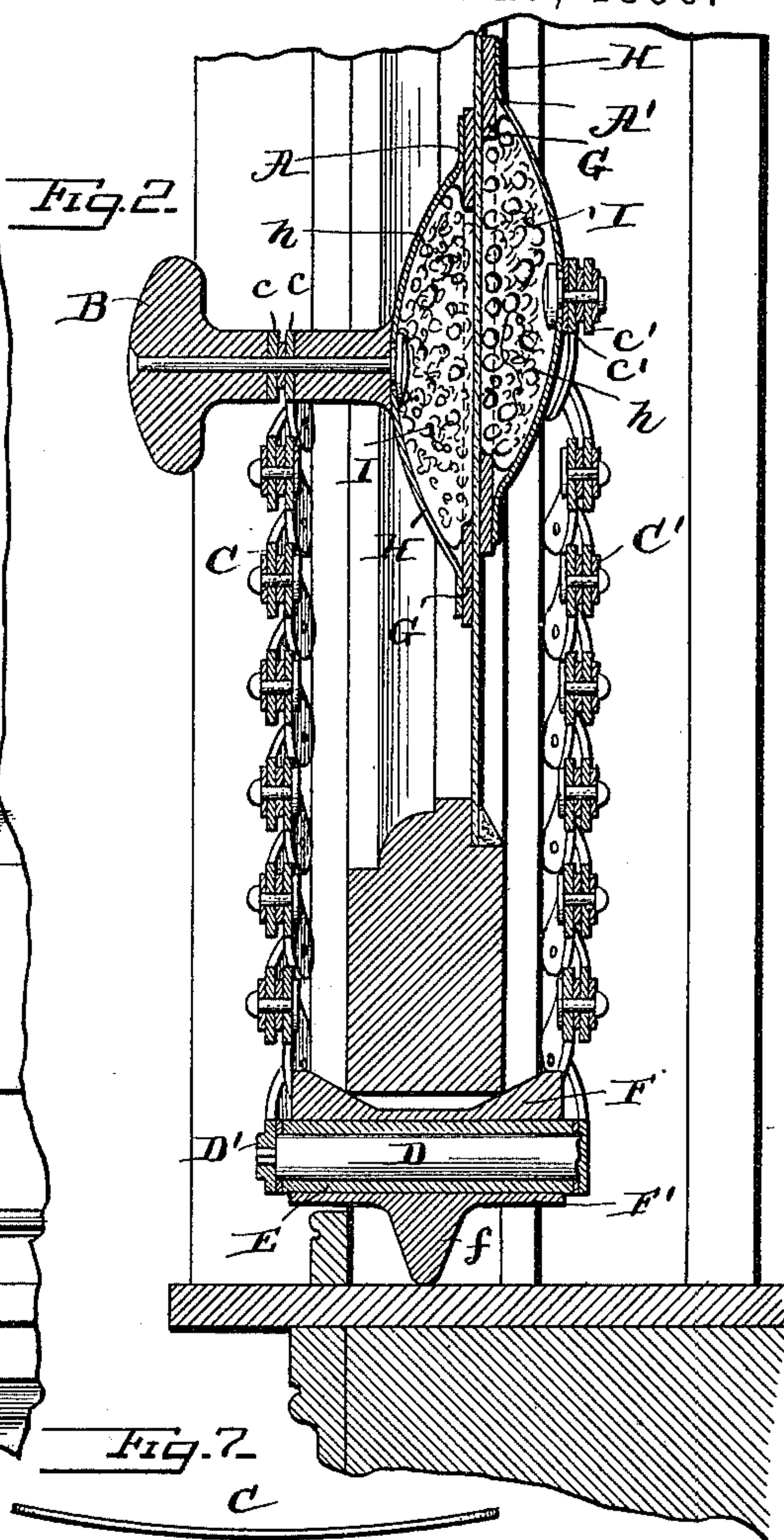
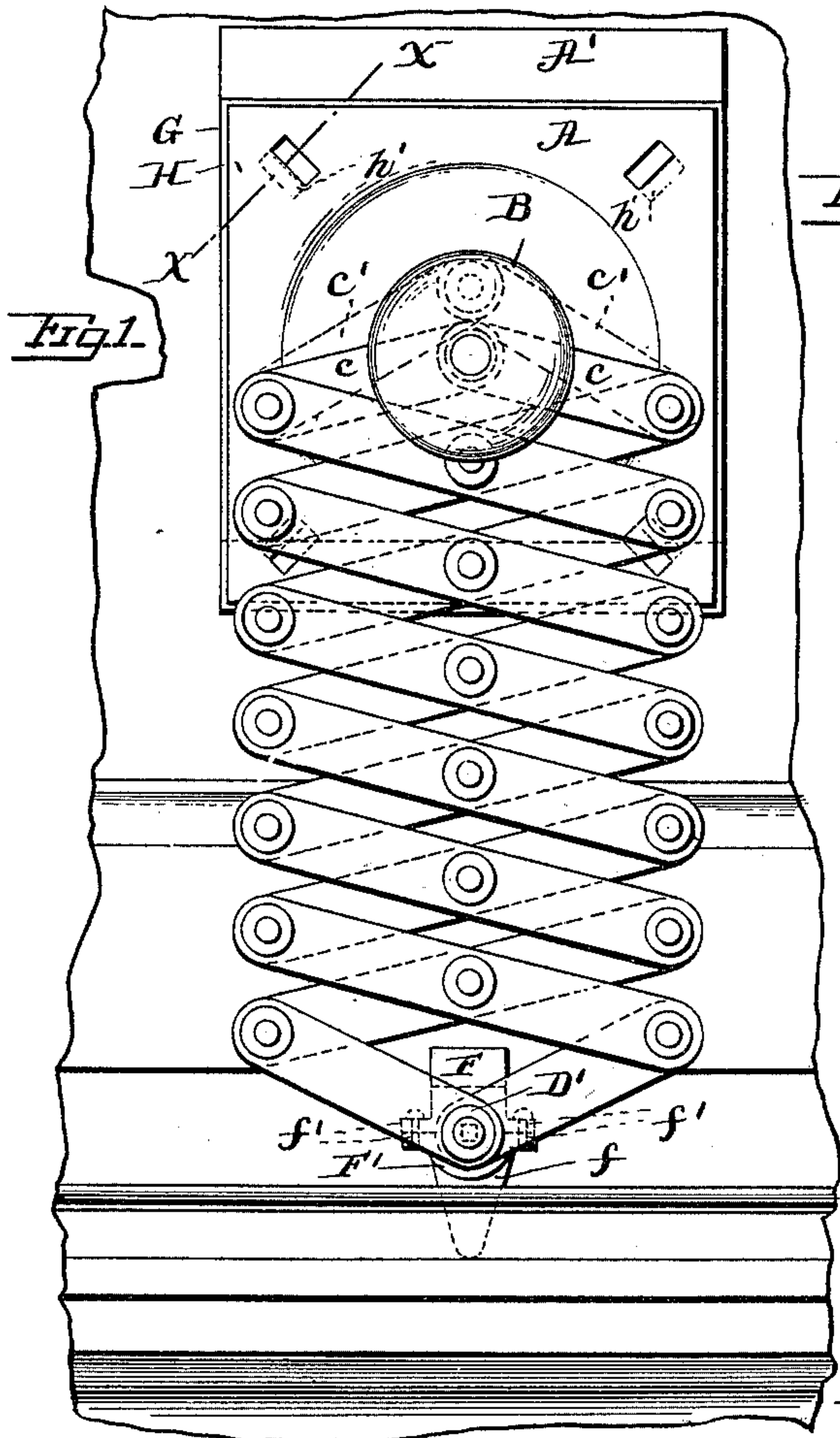
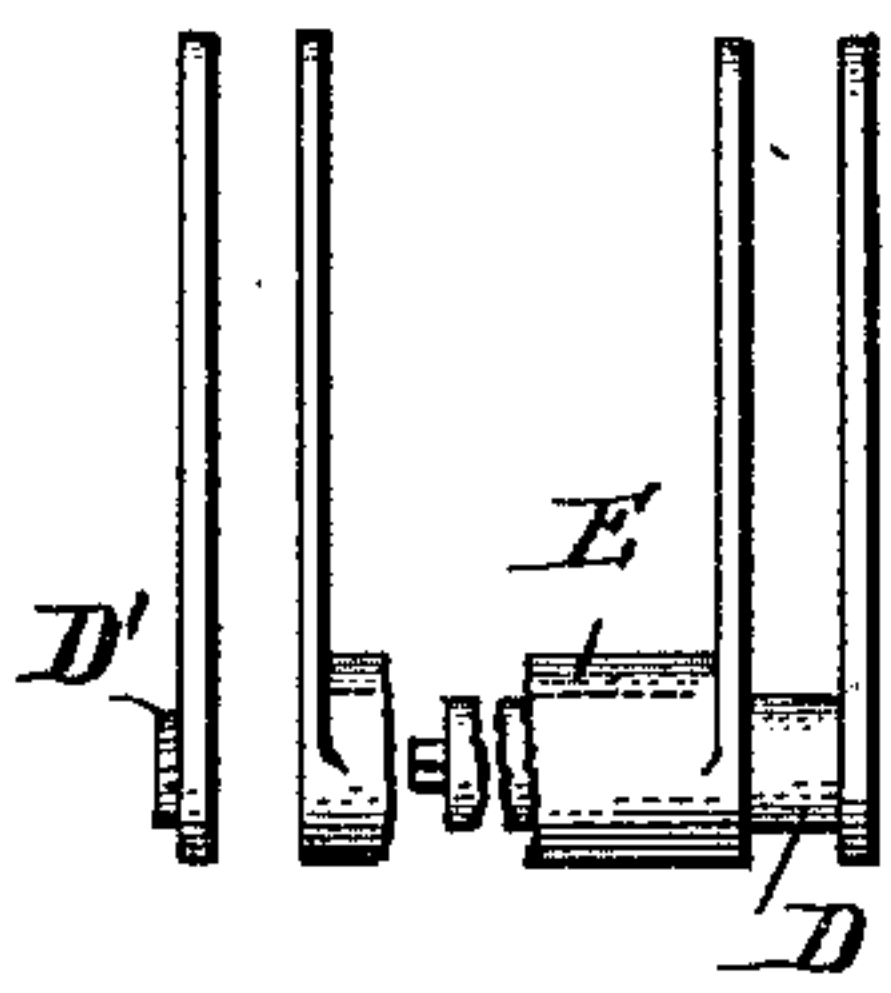


Fig. 3.



Fig. 5.

Fig. 4.



Witnesses.

Jesse B. Heller,
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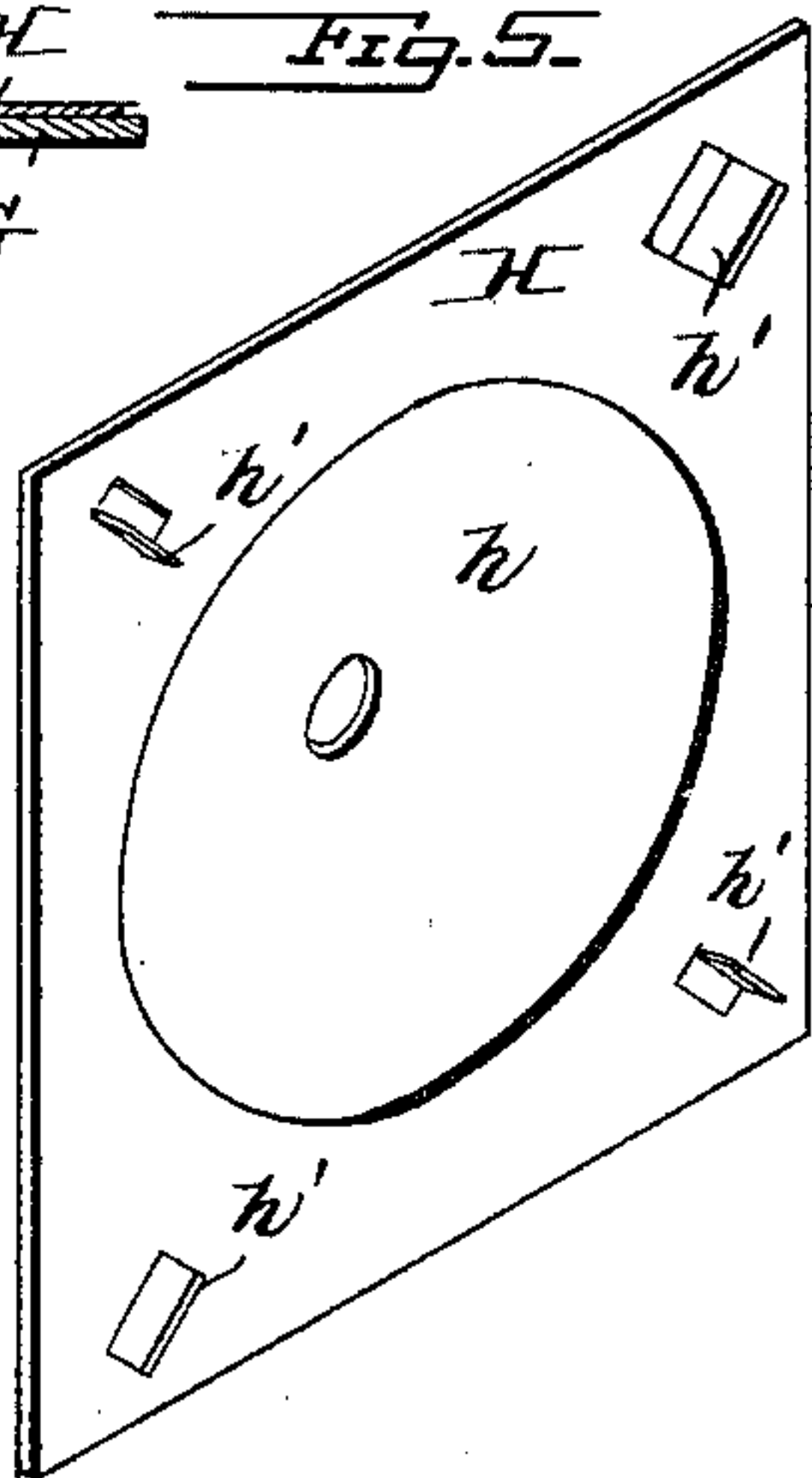


Fig. 6.

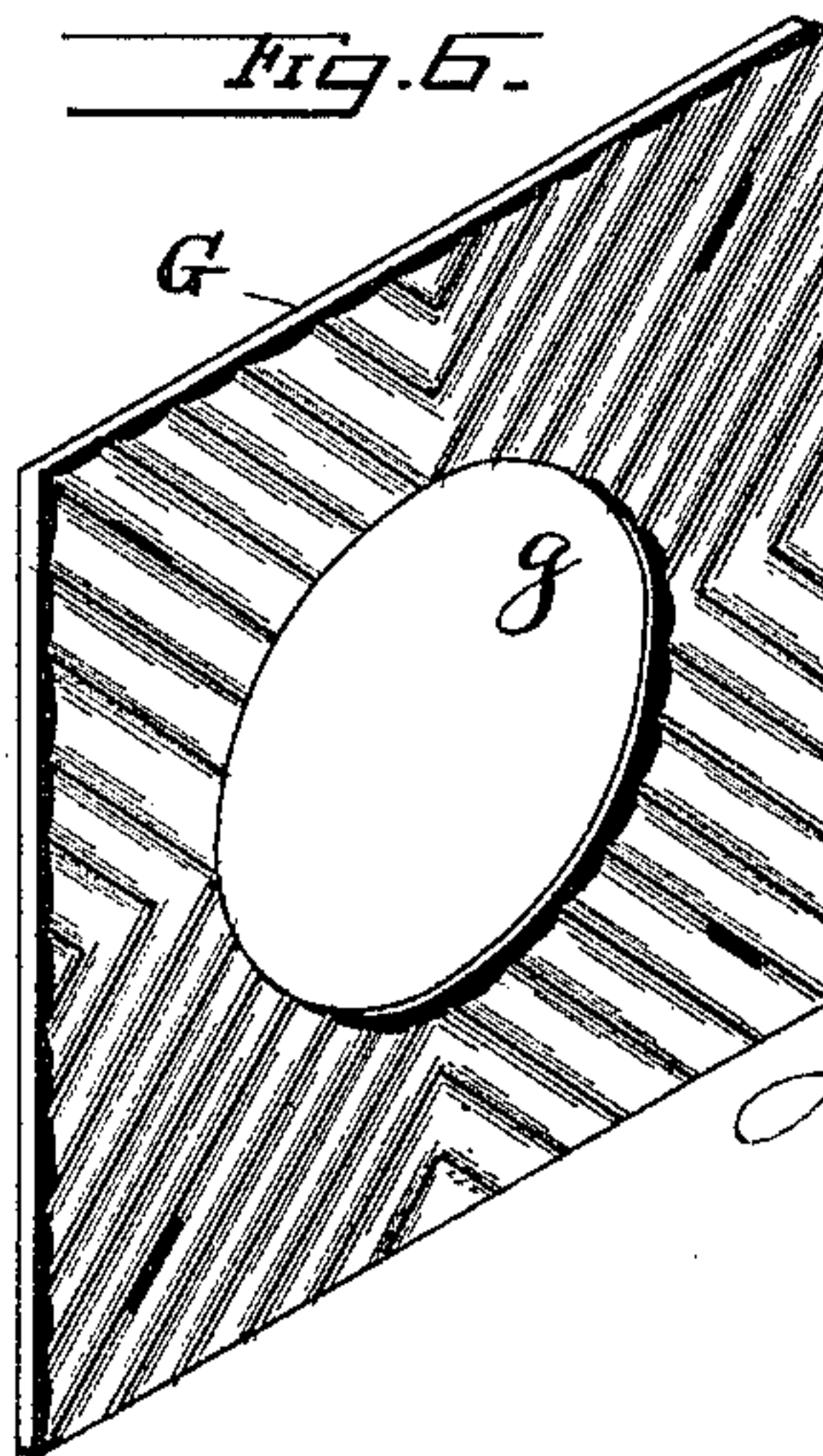
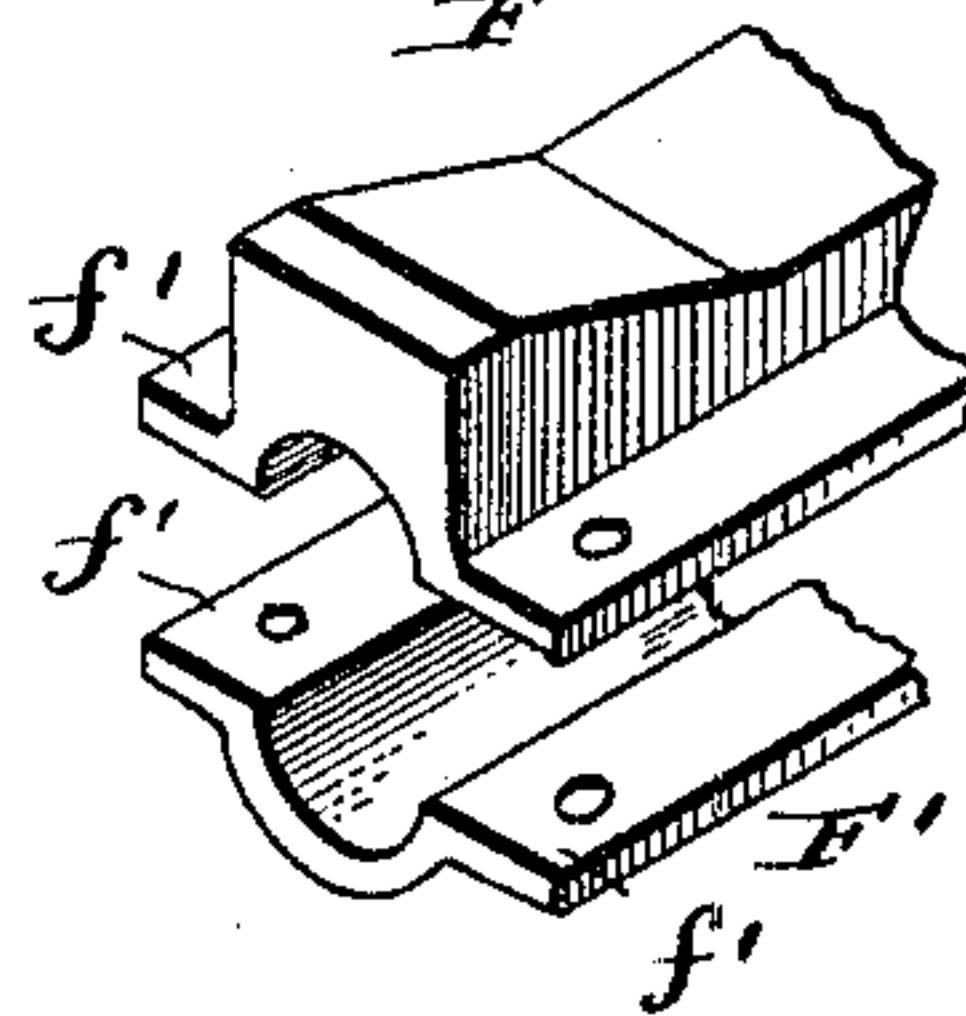


Fig. 7.



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WINDOW-CLEANER.

SPECIFICATION forming part of Letters Patent No. 570,231, dated October 27, 1896.

Application filed April 1, 1896. Serial No. 585,681. (No model.)

To all whom it may concern:

Be it known that I, JOHN RUCKSTINAT, a citizen of the United States, residing at East Providence, county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Window-Cleaners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to that class of window-cleaners which consist of a double pad or cleaner, one adapted to rest against the inside of the window-glass and the other against the outside thereof, and so connected together that by the operation of one pad against one side of the glass the other is moved simultaneously over corresponding areas of the opposite side of the glass.

The objects of my invention are to remedy certain defects in the class of window-cleaners now in use; to provide means for connecting the pads together; to provide means for holding the pads in close contact with the window-pane, which means shall not interfere with the capacity of the cleaners for moving over the entire surface of the glass; to provide a new construction of pad, and to provide a new means for supporting the cleaner when in use.

It consists of certain features of construction, which will be fully described hereinafter and particularly set out in the claims.

In the drawings, Figure 1 is a side elevation of the window-sash and of the cleaner in position for use; Fig. 2, a vertical section of the same. Fig. 3 is a sectional view, on the line *xx*, Fig. 1, of the two parts of the pad connected together. Fig. 4 is a detail view of the sleeve and the shaft with the respective bars. Figs. 5 and 6 are detailed perspective views of the cover and base, respectively, of the pad. Fig. 7 is a plan view of one of the levers or bars of the lazy-tongs. Fig. 8 is a detached perspective view of the corresponding ends of the upper and lower sections of the support.

A A' are the pads; B, a handle which is secured to pad A; C, lazy-tongs to which handle B is secured; C', lazy-tongs to which pad A' is secured. The lower ends of the two

sets of lazy-tongs are secured together, and the tongs are caused to fold and extend simultaneously by means of the construction shown in Fig. 4, wherein the shaft D (to which is secured one bar of the lower pair of bars of lazy-tongs C') is slipped through sleeve E, and to the opposite end of the shaft is riveted the head D', (to which is secured one bar of the lower pair of bars of lazy-tongs C.) To the sleeve E are secured the two remaining bars of the lower pairs of bars of lazy-tongs C and C'.

The supporting device is made in two sections F and F', which are adapted to fit upon and surround the sleeve E. The lower section may be provided with a leg *f*, and each section has longitudinal flanges *f'*, and bolts or other securing devices are adapted to pass through holes in said flanges and hold the two sections together.

An inspection of Figs. 1 and 2 will show that the pad A' is slightly above the pad A. The upper pair of bars *c' c'* of lazy-tongs C', the ends of which are pivoted to the pad A', are somewhat longer than the corresponding pair of bars *cc* of lazy-tongs C; that is, somewhat longer than half the length of the bars or levers lying intermediate between the upper and lower pairs of bars. When, therefore, the tongs are brought into a completely folded position, the bars *c' c'* will not lie in a direct line with each, but will form an obtuse angle with each other, thus facilitating the extension of the tongs by preventing the binding which would occur if the bars *cc* were in a direct line with each other.

An important feature of my invention consists in the curved shape of the bars or levers forming the lazy-tongs. All the bars of each set of tongs are curved in the same direction, presenting their convex sides to the window-pane and acting as springs to maintain the pads in close contact with the glass. I am thus enabled to dispense with any auxiliary devices for this purpose, which not only occupy considerable space outside the window, but, as ordinarily constructed, limit the up-and-down range of movement of the pads and prevent the tongs from being completely folded or extended in the process of cleaning.

The pads A and A' consist of the cover G,

(shown in Fig. 6,) the plate II, (shown in Fig. 5,) having a cup-shaped portion *h*, and a sponge, rag, or other cleaning material I, held in place between the plate and cover. The surface of the cover G which is adapted to lie next to the window-pane is corrugated, as shown, so as to prevent smearing the glass when it comes in contact with it, and preferably formed of a yielding material, as, for instance, rubber. It is provided with a circular orifice *g*. The plate II is, as stated, provided with a cup-shaped central portion *h*, the circumference of which overlaps the circumference of orifice *g*, and near the four corners of the plate the metal is stamped out, so as to form lugs *h'*, which are passed through slots in the cover G and bent down upon the opposite side, thus holding the plate and cover together. The sponge is held in place between the cover and plate by the ends thereof lying in the annular pocket formed by the solid part of the plate and the cup-shaped central portion of the cover.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a window-cleaner, the combination with the pads, of two sets of lazy-tongs to the upper ends of which are secured the pads, a shaft, a sleeve upon said shaft, one bar of the lower pair of bars of each set of lazy-tongs being fixedly connected with said shaft, the other bar of the lower pair of bars of each set of lazy-tongs being fixedly connected with said sleeve, said sleeve and shaft being adapted to turn upon each other, and a support for said shaft and sleeve made in two sections adapted to surround said shaft and sleeve and be secured together, substantially as described.

2. In a window-cleaner, the combination with the pads of two sets of lazy-tongs to the upper ends of which are secured the pads, a shaft, a sleeve upon said shaft, one bar of the lower pair of bars of each set of lazy-tongs being fixedly connected with said shaft, the other bar of the lower pair of bars of each set of lazy-tongs being fixedly connected with

said sleeve, said sleeve and shaft being adapted to turn upon each other, and a support for said shaft and sleeve made in two sections and adapted to fit upon and surround said sleeve, the lower section having a downwardly-projecting leg, each section having flanges adapted to abut against the flanges of the other section, said flanges being secured together, substantially as described.

3. In a window-cleaner, the combination with the pads, of two sets of lazy-tongs to the upper ends of which are secured the pads, a connection between the lower ends of said two sets of lazy-tongs, and a support for said connection made in two sections adapted to surround said connection and be secured together, substantially as described.

4. In a window-cleaner, the combination with the pads of two sets of lazy-tongs to the upper ends of which are secured the pads, and a connection between the lower ends of said two sets of lazy-tongs, the bars or levers whereof are curved.

5. In a window-cleaner, the combination with the pads of two sets of lazy-tongs to the upper ends of which are secured the pads, and a connection between the lower ends of said two sets of lazy-tongs, the bars or levers of each set of lazy-tongs being curved and presenting to the other set their concave surfaces, substantially as described.

6. In a window-cleaner, the combination with the pads, of two sets of lazy-tongs, to the upper ends of which are connected the pads, and a connection between the lower ends of said two sets of lazy-tongs, the two upper bars of one or both sets of lazy-tongs having a common pivotal connection and being together of greater length than the length of the intermediate bars or levers of the corresponding set of lazy-tongs, substantially as described.

In testimony of which invention I have hereunto set my hand.

JOHN RUCKSTINAT.

Witnesses:

ANDREW ZANE,

CAROL H. DESHONG.