(No Model.)

3 Sheets—Sheet 1.

J. O. CULVER.

WINDOW CLEANER.

No. 456,356. Patented July 21, 1891.

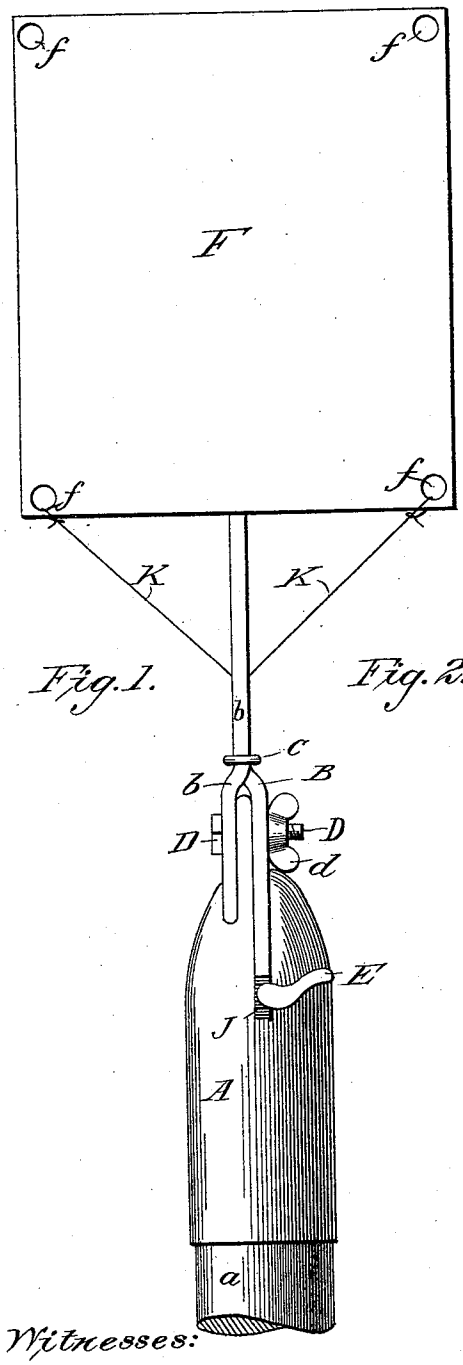


Fig. 1.

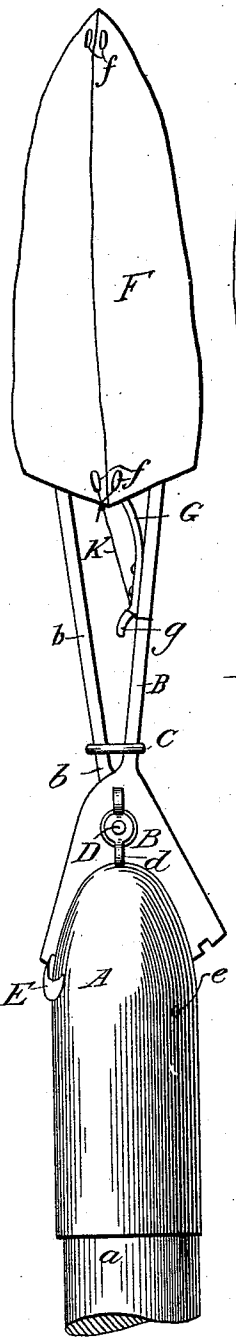


Fig. 2.

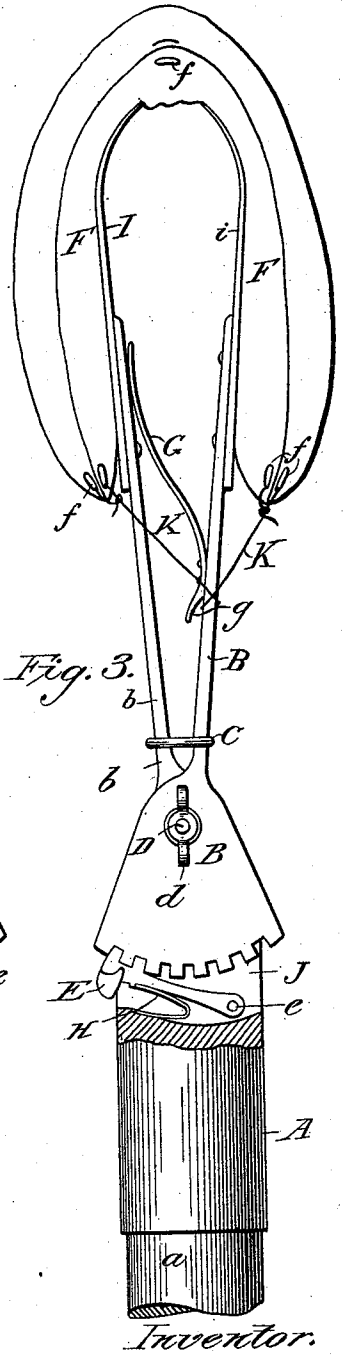


Fig. 3.

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Fig. 4.

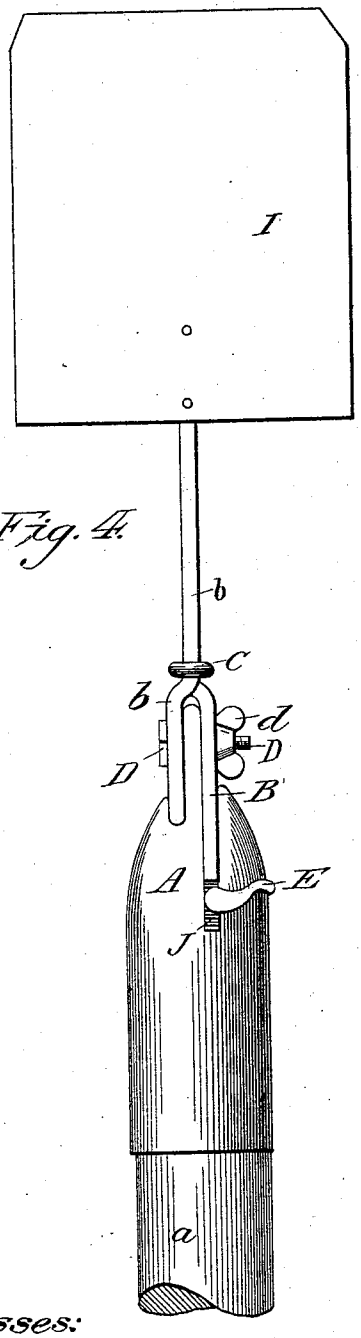
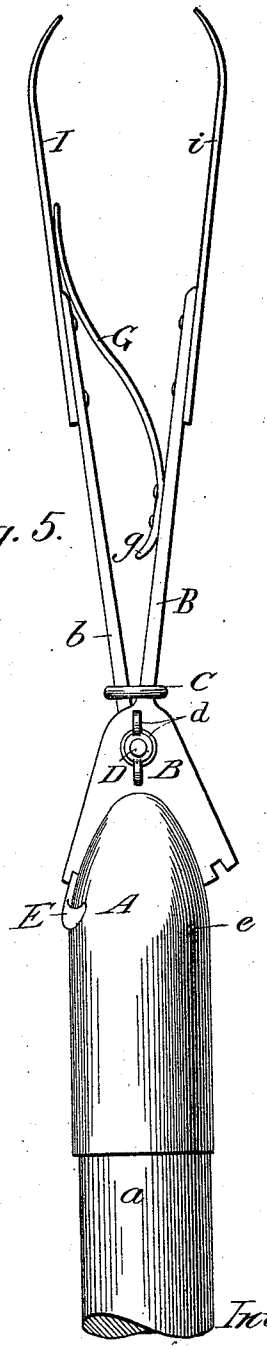


Fig. 5.



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(No Model.) 3 Sheets—Sheet 3.

J. O. CULVER.

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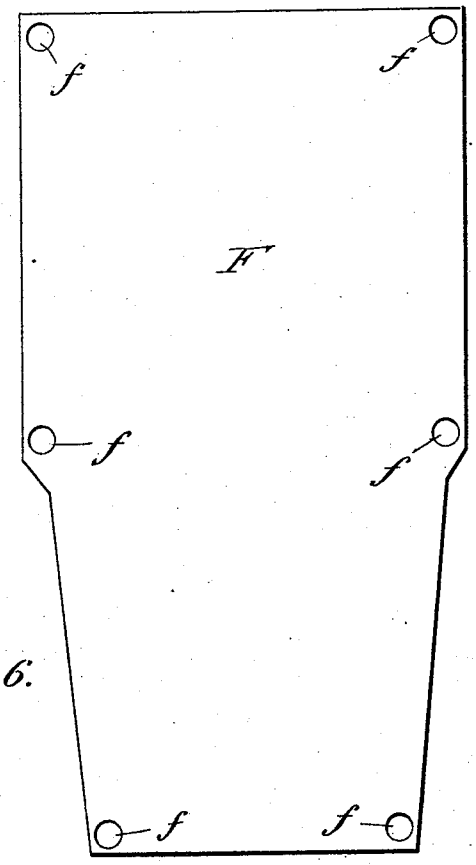


Fig. 6.

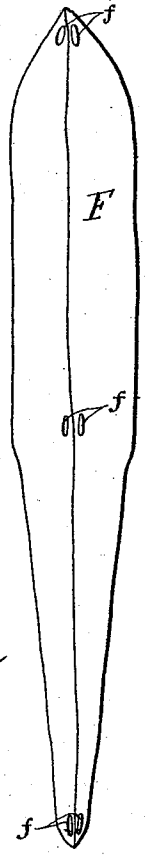


Fig. 7.

Fig. 8.

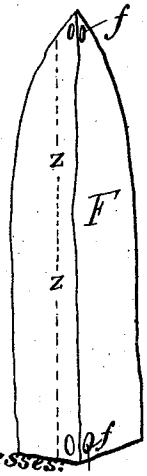
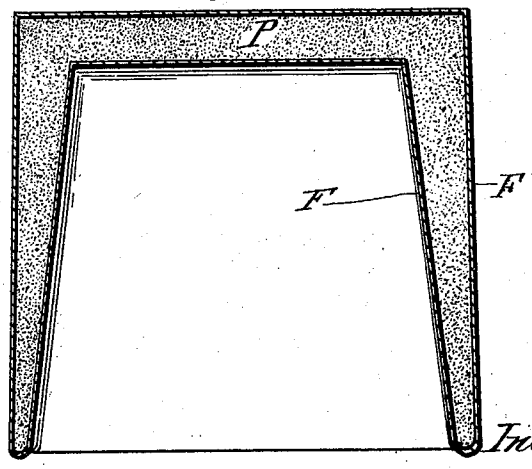


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN OSCAR CULVER, OF CALISTOGA, CALIFORNIA.

WINDOW-CLEANER.

SPECIFICATION forming part of Letters Patent No. 456,356, dated July 21, 1891.

Application filed March 26, 1889. Serial No. 304,913. (No model.)

To all whom it may concern:

Be it known that I, JOHN OSCAR CULVER, a citizen of the United States, residing at Calistoga, in the county of Napa and State of California, have invented a new and useful Improvement in Window-Cleaners, of which the following is a specification.

My invention relates to improvements in machines and the application of materials for cleaning windows, mirrors, bath-tubs, and other surfaces; and the objects of my improvements are, first, to provide an improved bag of fibrous or porous material which will securely hold polishing-powder and to be used by wetting the bag and contents and rubbing the wet bag of polishing-powder on the glass or surface to be polished, which causes the powder mixed with the water to exude through the texture of the bag and overspread the surface to be cleaned and polished in just the quantity needed without dropping water or wasting powder; second, to provide an adjustable holder and handle for said bag, so arranged that the surface of the bag can be held and used parallel with the plane of the handle or adjusted to any angle desired, thus saving time and labor; third, to afford facilities for readily attaching a sponge to the holder for the purpose of washing dirt from the window or other surface and afterward attaching a dry cloth for the final polishing. I attain these objects by mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improvement. Fig. 2 is a side elevation of the same with the small end of the bag pushed inside of the larger end. Fig. 3 is a side elevation with the bag extended to its full length and folded over to cover the outside of each jaw of the holder. Fig. 4 is a front elevation of the holder without the bag. Fig. 5 is a side elevation of the holder. Fig. 6 is a front elevation of the bag at full length. Fig. 7 is a side elevation of the same. Fig. 8 is a side elevation of the large part of the bag, the small end being inside. Fig. 9 is a sectional view of the same on the line Z Z in Fig. 8.

Similar letters refer to similar parts throughout the several views.

The handle *a*, which may be any length desired, is inserted in socket A, to which are attached, by means of bolt D, the arms B *b* of the jaws I *i*. The improved bag F, containing polishing-powder P, Fig. 9, has a pocket into which the jaws I *i* are placed when the bag in its short form is in use. This pocket when pulled out is an extension to and becomes a part of the bag containing the polishing-powder, and can be attached to the jaws I *i* by means of the eyelets *f* and strings K, as shown in Fig. 3. The spring G, attached to the arm B, Fig. 5, presses the jaws I *i* against the inside of the bag F, holding it in position. The ring C is pushed along arms B *b* toward the jaws I *i* when it is necessary to hold firmly a sponge or cloth in the jaws I *i*. The catch E in slot J of the socket A, held by rivet *e*, engages with the teeth on the end of arm B, and is held in position by the spring H, Fig. 3, and, disengaging catch E, permits the movement of arm B and the adjustment of jaws I *i*, so that the bag F or the sponge or dry cloth may be used to the best advantage. The improved bag F, Fig. 6, is made of canton-flannel, or of stouter cloth or other fibrous porous material, of the size suitable to perform the work required. The smaller end can be readily thrust into the larger part, thus forming a pocket surrounded by powder on all sides and affording a receptacle for the jaws I *i*. The bag F, when necessary, can be fastened by strings K passing from eyelets *f* to hook *g*.

The entire device is used by wetting the bag F and inclosed polishing-powder P and taking hold of the handle *a* and rubbing the wet bag F on the glass or other surface to be cleaned or polished. The powder P immediately mixes with the water or other liquid and oozes from the bag F and overspreads the glass or surface being cleaned or polished in just the quantity needed, and the bag F in passing to and fro cleans the surface. Before the powder becomes entirely dry on the surface the bag F is removed from the jaws I *i*, and a dry cloth is clamped in the jaws I *i* by means of the ring C and tucked in between the jaws I *i* on all sides to hold it, and is then used to rub the powdered surface until it is clean and bright.

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

1. In a window-cleaner, the combination of the handle *a*, the socket A, the catch E, the

arms B *b*, the bolt D, the nut *d*, the jaws I *i*, the bag F, with eyelets *f*, the strings K, the ring C, the spring G, and hook *g*, substantially as shown and described.

2. In a window-cleaner, the adjustable holder having in combination the handle-socket A, formed with the slot J and furnished with the catch E and spring H, the arms B *b*, having the toothed arc in said slot, jaws I *i*, spring G, hook *g*, the pivot-bolt D, nut *d*, and the slide-ring C, substantially as set forth.

3. In a window-cleaner, a detachable closed porous bag containing polishing-powder and having one end portion for nearly one-half the length of the bag smaller than the larger other end portion and capable of being turned in the form of a pocket within the latter, and said bag having eyelets near the junction of said smaller and larger portions, substantially as set forth.

JOHN OSCAR CULVER.

Witnesses:
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WM. L. CULVER.