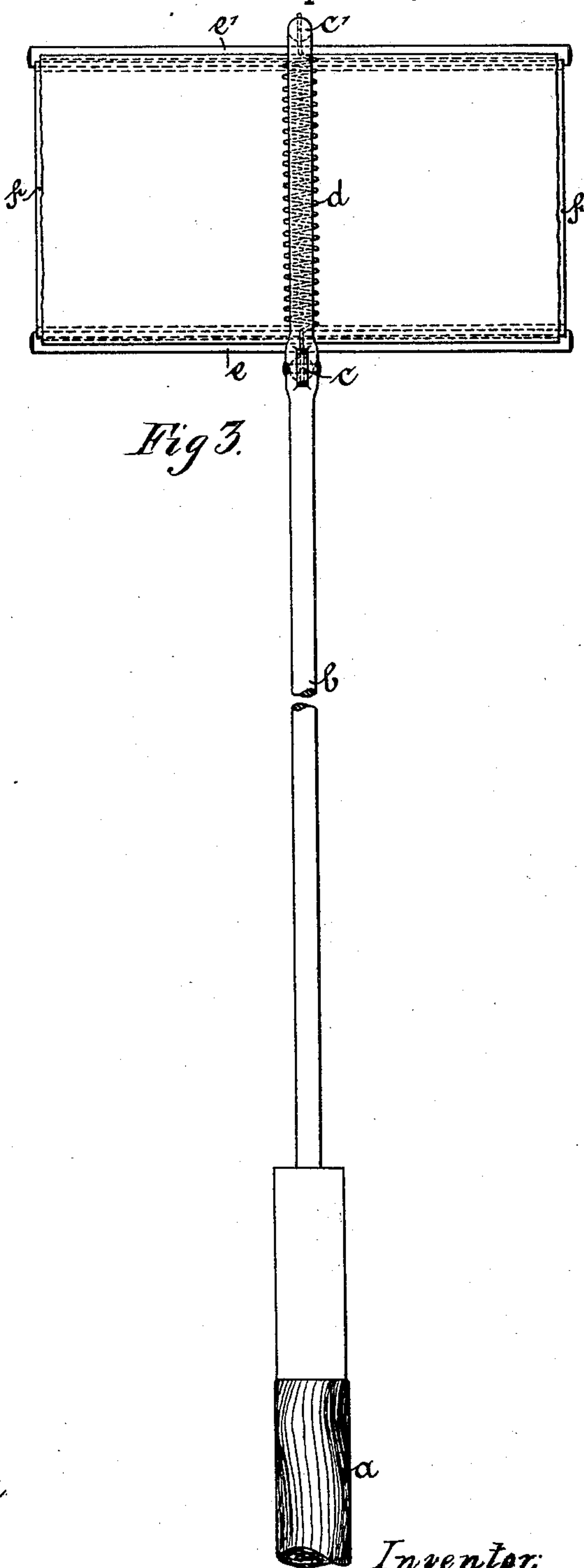
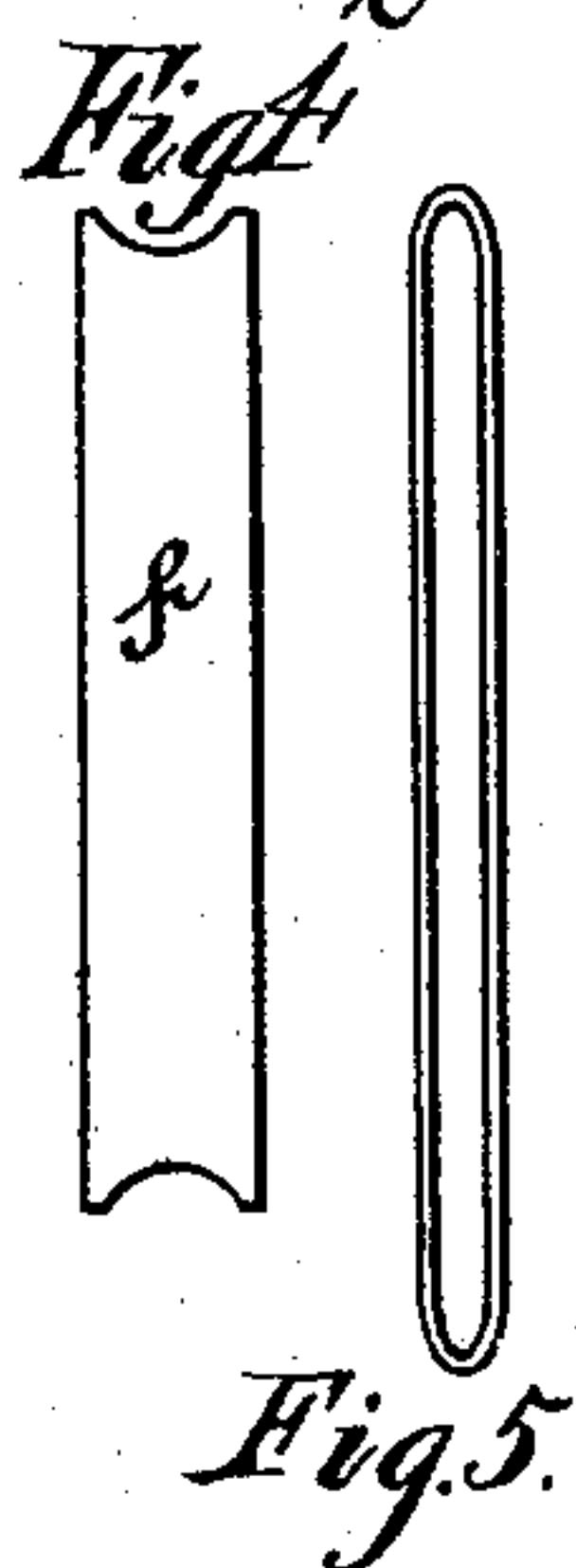
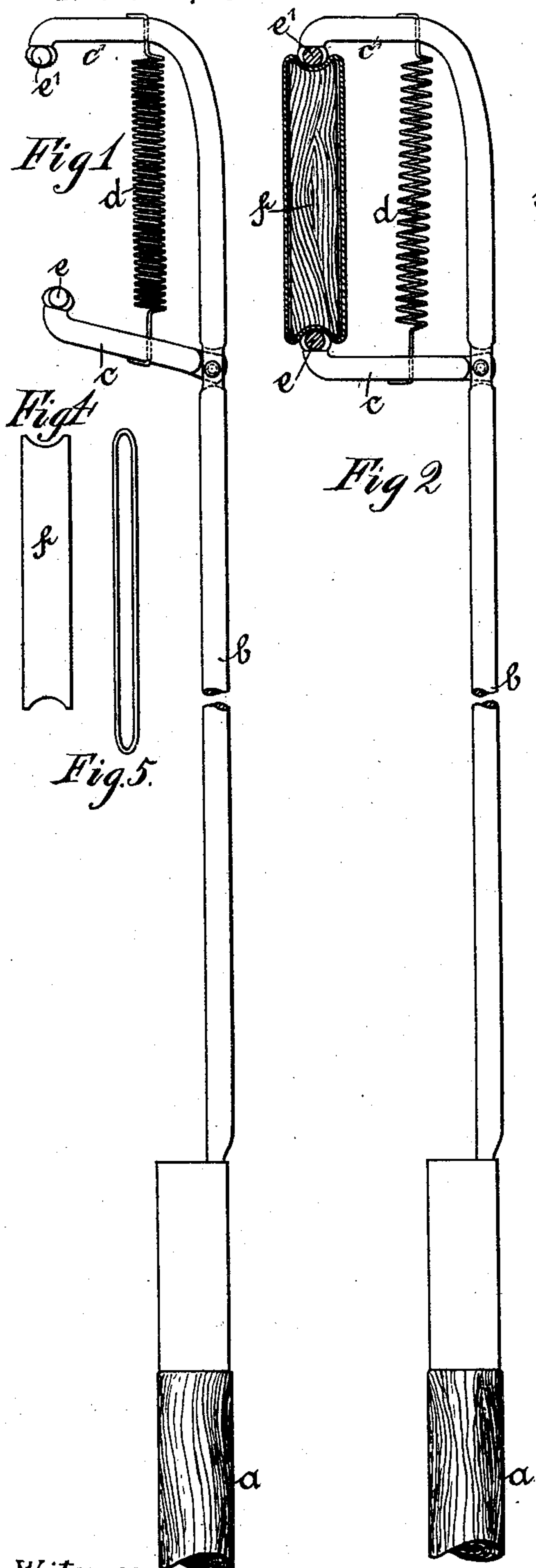


(No Model.)

A. LANGE.  
APPARATUS FOR CLEANING WINDOWS.

No. 411,154.

Patented Sept. 17, 1889.



Witnesses:  
John Ricker  
Geo. Barru.

Inventor:  
Arthur Lange  
by attorney:  
Brown & Griswold.

# UNITED STATES PATENT OFFICE.

ARTHUR LANGE, OF DRESDEN, SAXONY, GERMANY.

## APPARATUS FOR CLEANING WINDOWS.

SPECIFICATION forming part of Letters Patent No. 411,154, dated September 17, 1889.

Application filed April 26, 1889. Serial No. 308,730. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR LANGE, of the city of Dresden, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Apparatus for Cleaning Windows, of which the following is a specification, reference being had to the accompanying drawings.

The main feature of this invention consists in the provision, hereinafter described and claimed, for holding a board on which is a removable cleaning-cloth, and for at the same time holding the cloth on the board in such manner that it may be easily removed and replaced.

Figure 1 in the drawings is a side view of the holder without the board. Fig. 2 is a side view of the holder and the board in it. Fig. 3 is a back view corresponding with Fig. 2. Fig. 4 is an end view of the board. Fig. 5 is an edge view of the cleaning-cloth.

Similar letters of reference designate corresponding parts in all the figures.

*b* designates a stick or rod of proper length having a handle *a* at one end and the two arms *c c'* at the other end, which arms extend at approximate right angles to the direction of the length of the rod *b* and both upon the same side of said rod. I preferably make the rod *b* and the arms of metal, and I affix the arms *c c'* to it at a certain angle to its length.

In the example of my improvement shown but one of the arms *c c'* is movable, while the other is rigid. This arrangement is shown in the drawings, the arm *c* being hinged or pivoted to the rod *b* and the arm *c'* being rigidly connected thereto. Said arms are connected by a coiled spring *d*, so that cross-bars *e e'* at the end of the arms form a pair of

spring-actuated clamping-jaws to firmly hold the cleaning-board *f* interposed between the said cross-bars. In order to get a firm hold of the board I preferably form the cross-bars of circular or oval shape, and I form the upper and lower edges of the board *f* of the same shape, but the reverse way, so that if, for instance, the bars *e e'* are of circular shape the said sides of the board are formed with semi-circular grooves or flutes. This form enables the spring to hold the board *f* and any cover or cleaning-cloth drawn or laid over it firmly between the cross-bars *e e'*. If a simple piece of leather is used for cleaning purposes, it may be simply laid over the board, and the board and cloth together may hereinafter be inserted between the cross-bars *e e'*, with the grooved edges of the board toward the bars, and may easily be removed therefrom.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of a board for receiving a cloth of a holder, consisting of a rod and two jaws upon the rod for clamping between them the upper and lower edges of the board with the cloth upon it, one of said jaws being pivoted to said rod, and a spring for forcing said pivoted jaw toward the other jaw, both of said jaws extending at approximate right angles to the direction of the length of said rod and both upon the same side of said rod, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ARTHUR LANGE.

Witnesses:

GEORG WALTHER,  
PAUL DRUCKMÜLLER.