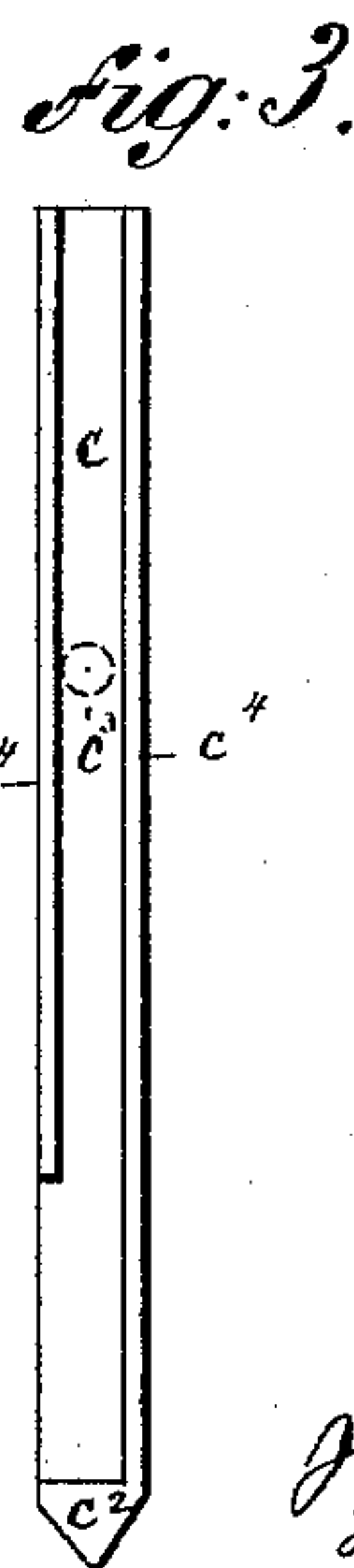
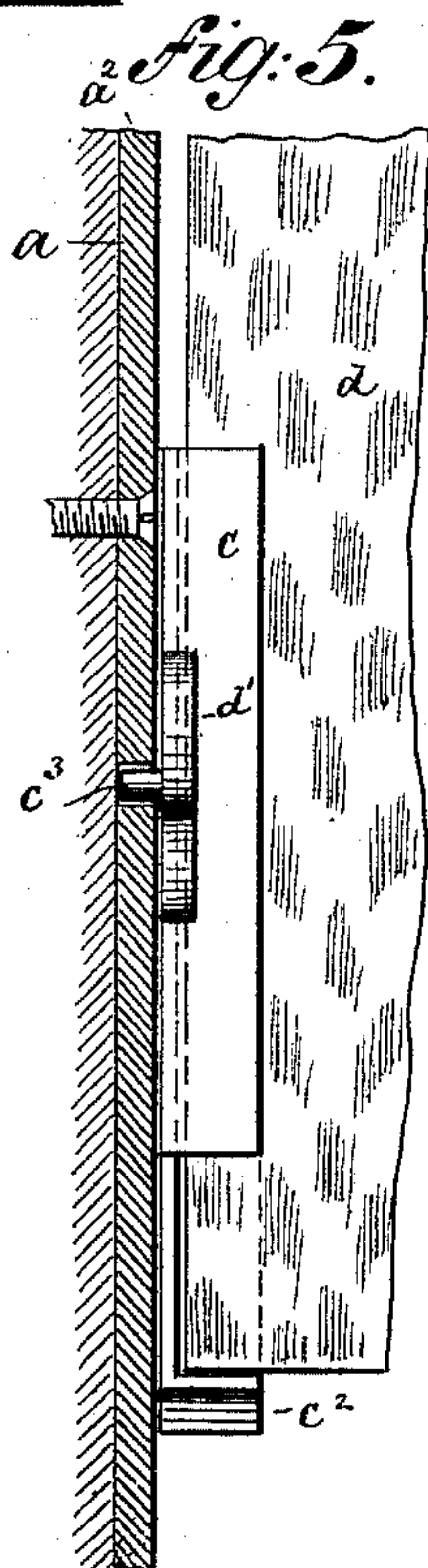
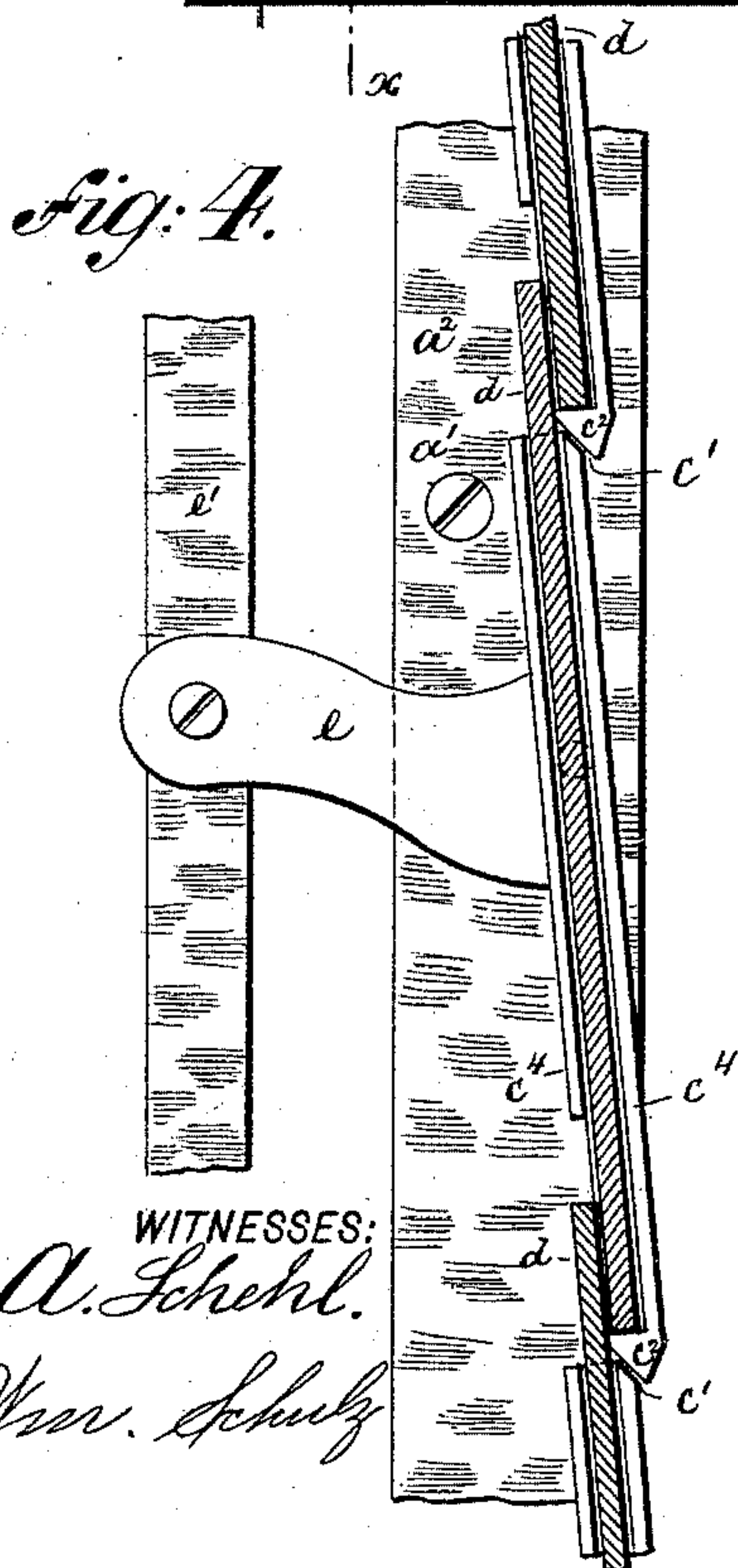
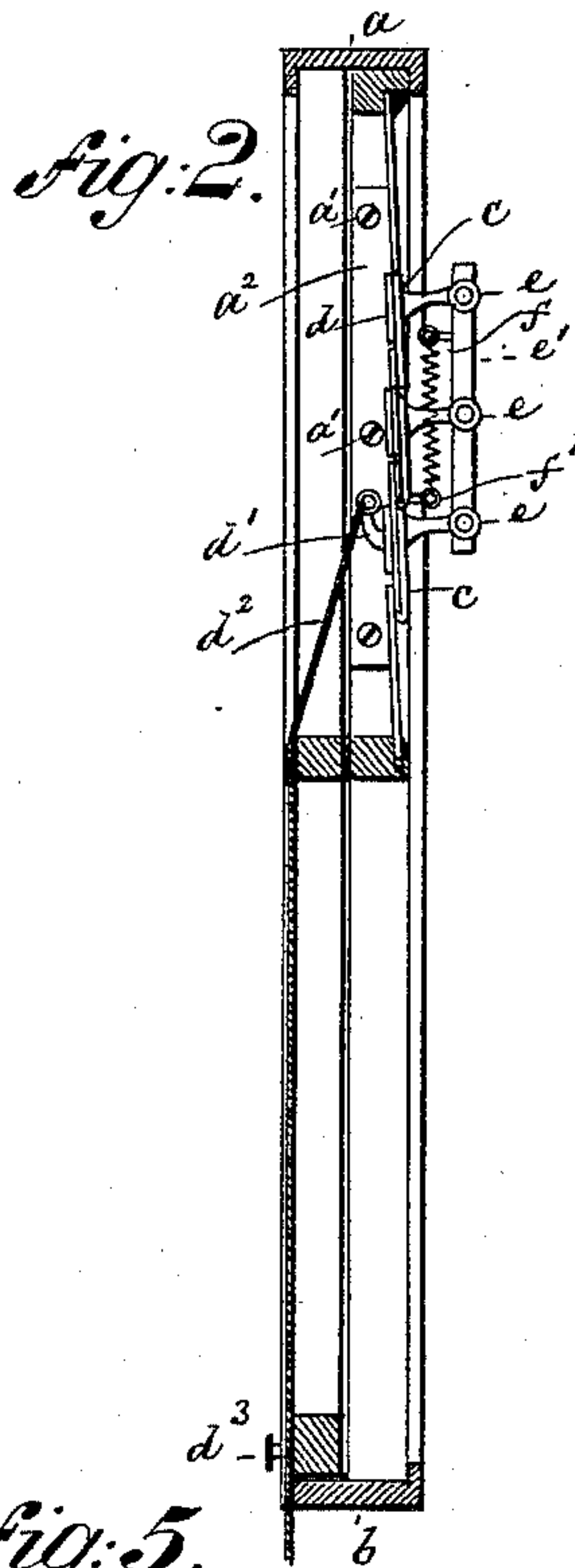
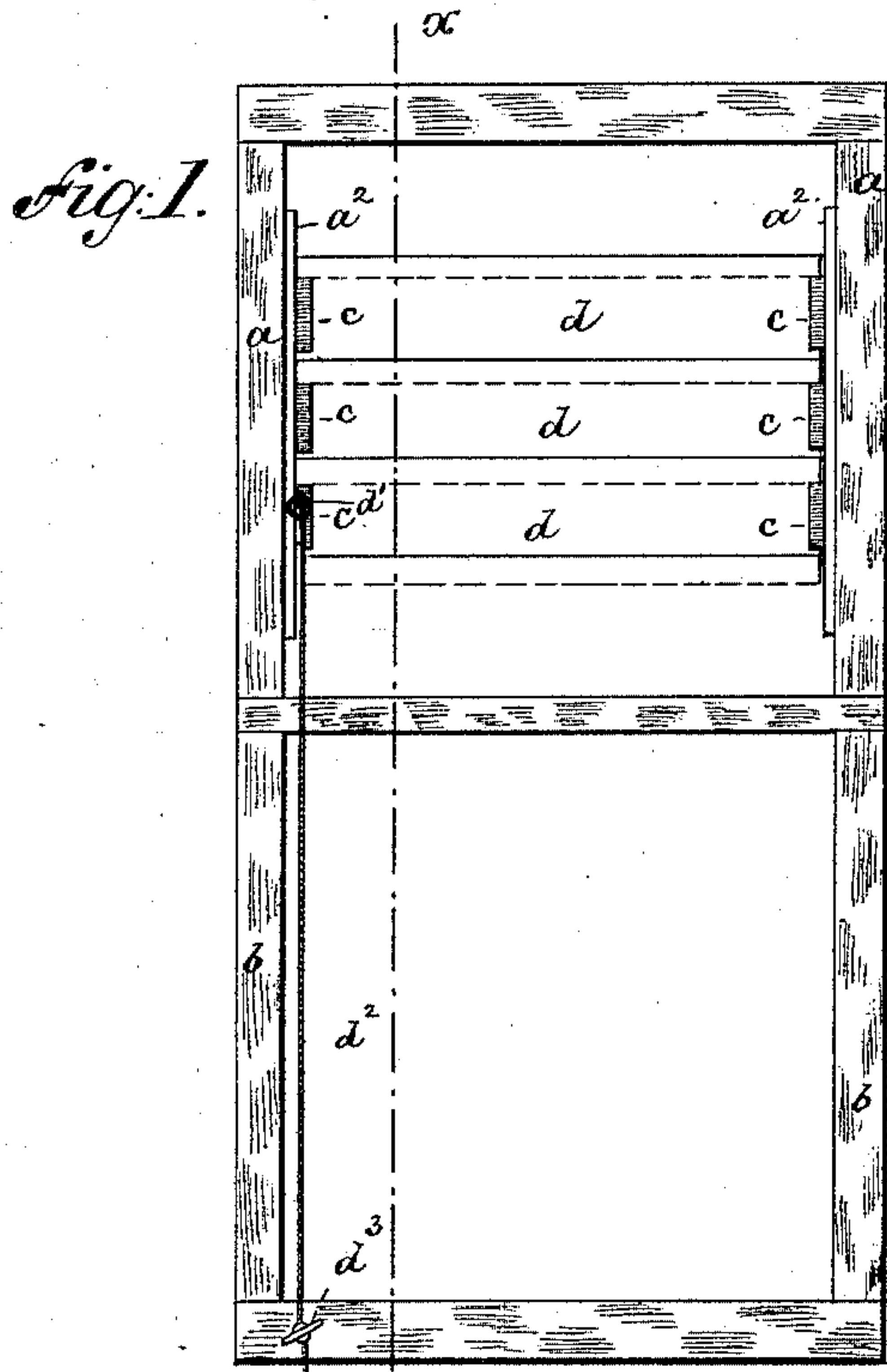


(No Model.)

J. GROSS & H. BECK.
VENTILATOR.

No. 483,650.

Patented Oct. 4, 1892.



WITNESSES:

A. Schehl.
Wm. Schulz

INVENTORS

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per
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UNITED STATES PATENT OFFICE.

JOHN GROSS AND HERMAN BECK, OF NEW YORK, N. Y. ASSIGNORS OF
ONE-THIRD TO JOSEPH WEISS, OF SAME PLACE.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 483,650, dated October 4, 1892.

Application filed March 10, 1892. Serial No. 424,464. (No model.)

To all whom it may concern:

Be it known that we, JOHN GROSS and HERMAN BECK, of New York city, New York, have invented an Improved Ventilator, of which the following is a specification.

This invention relates to a ventilator of the class in which narrow overlapping panes of glass are pivotally secured within a frame, so as to admit or exclude air by being opened or closed.

It consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of our improved ventilator; Fig. 2, a longitudinal section on line $x x$, Fig. 1; Fig. 3, an end view of a pocket, showing it empty; Fig. 4 is a detail end view of the pockets with the glass in section; Fig. 5, a front view of a pocket.

The letter a represents the upper sash-frame, and b the lower sash-frame, of a window. To the inner edge of the frame a there are secured by screws a' a pair of flat metal bars a^2 . To these bars are pivoted the glass-containing pockets c . These pockets have a beveled upper edge c' and a lower beveled head c^2 , Fig. 4, which parts come into contact with each other when the ventilator is closed. Thus a tight joint is produced and at the same time the glass panes d , confined within the pockets c , are prevented from coming into violent contact with each other. The pivots c^3 , on which the pockets turn, are formed at the center of each pocket and between its flanges c^4 , Fig. 3. Thus the pivots are not only entirely invisible, but they are so placed that

each pocket turns truly on its center. The lowermost pocket c is provided with a lug d' , that projects into the room, but not beyond the frame a , so as not to interfere with the raising of the lower sash b . To this lug d' is secured one end of a string d^2 , the other end of which is secured to a button d^3 , attached to sash b . Each pocket c is provided with a lug e , projecting outwardly. These lugs are pivotally attached to a connecting-bar e' . To this bar is connected one end of a spring f , the other end of which is secured to a hook f' , projecting outwardly from frame a . Thus the spring is placed side by side with bar e' . It will be seen that by placing the lugs e , connecting-bar e' , and spring f on the outside of the window these parts will not interfere with the opening and closing of sash b .

In use as the sash b is raised or opened the string d^2 will be relaxed and the ventilator will be closed by its spring f ; but when the sash b is lowered or closed the string d^2 will at once open the ventilator against the action of its spring. Thus the ventilator is made to open or close automatically with the closing and opening of the lower sash.

What we claim is—

The combination of sash a with pivoted pockets c , inclosed glass panes d , and with the inwardly-projecting lug d' on pocket c , a button d^3 on sash b , and a connecting-string d^2 , substantially as specified.

JOHN GROSS.
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Witnesses:

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