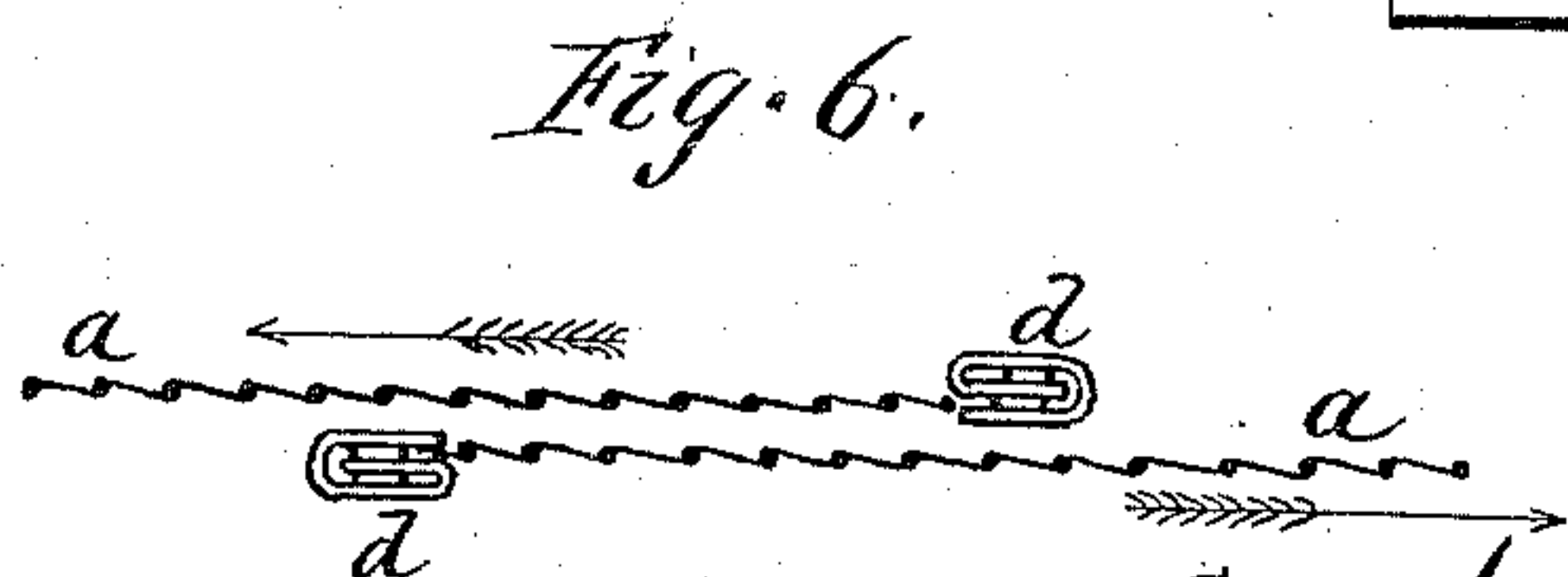
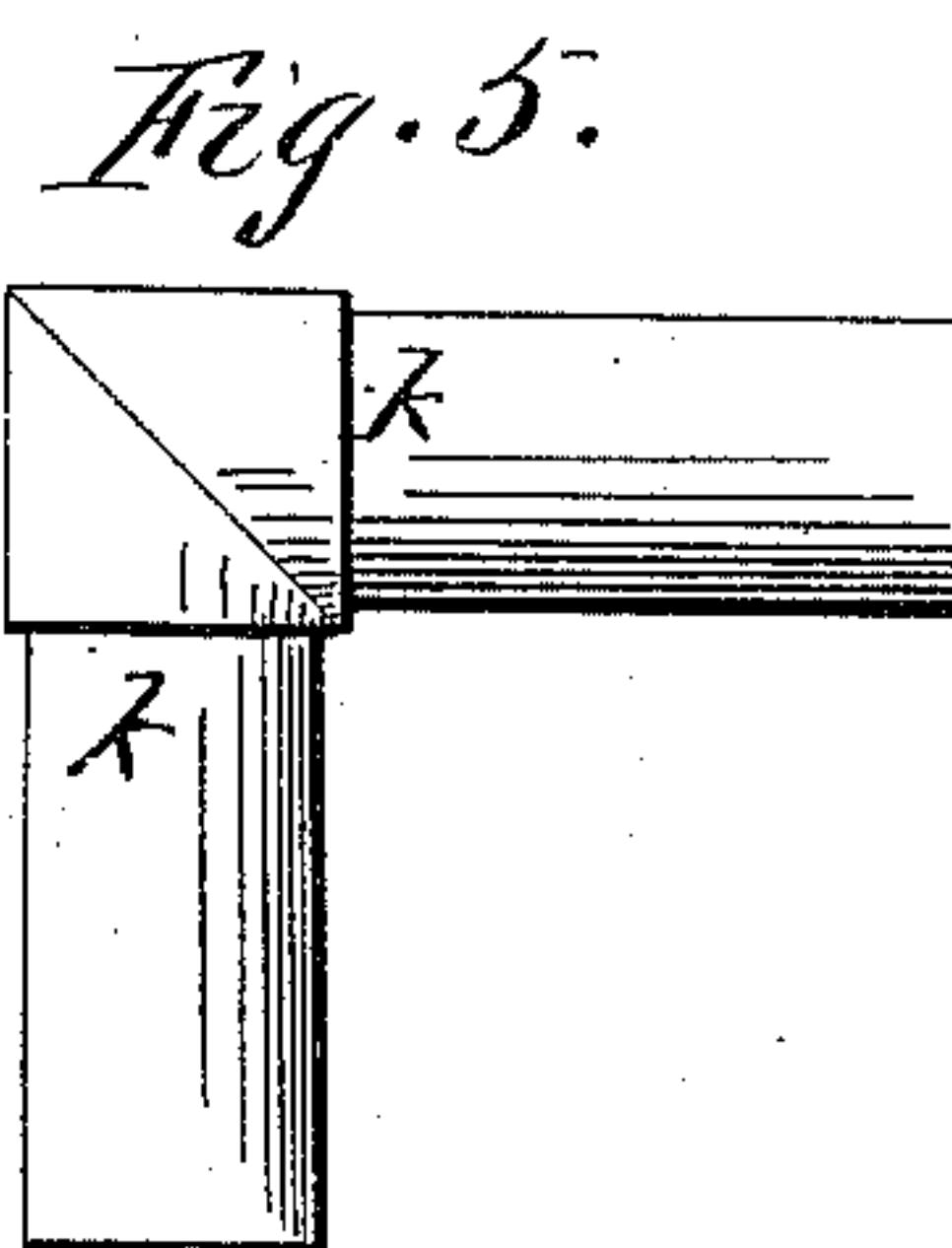
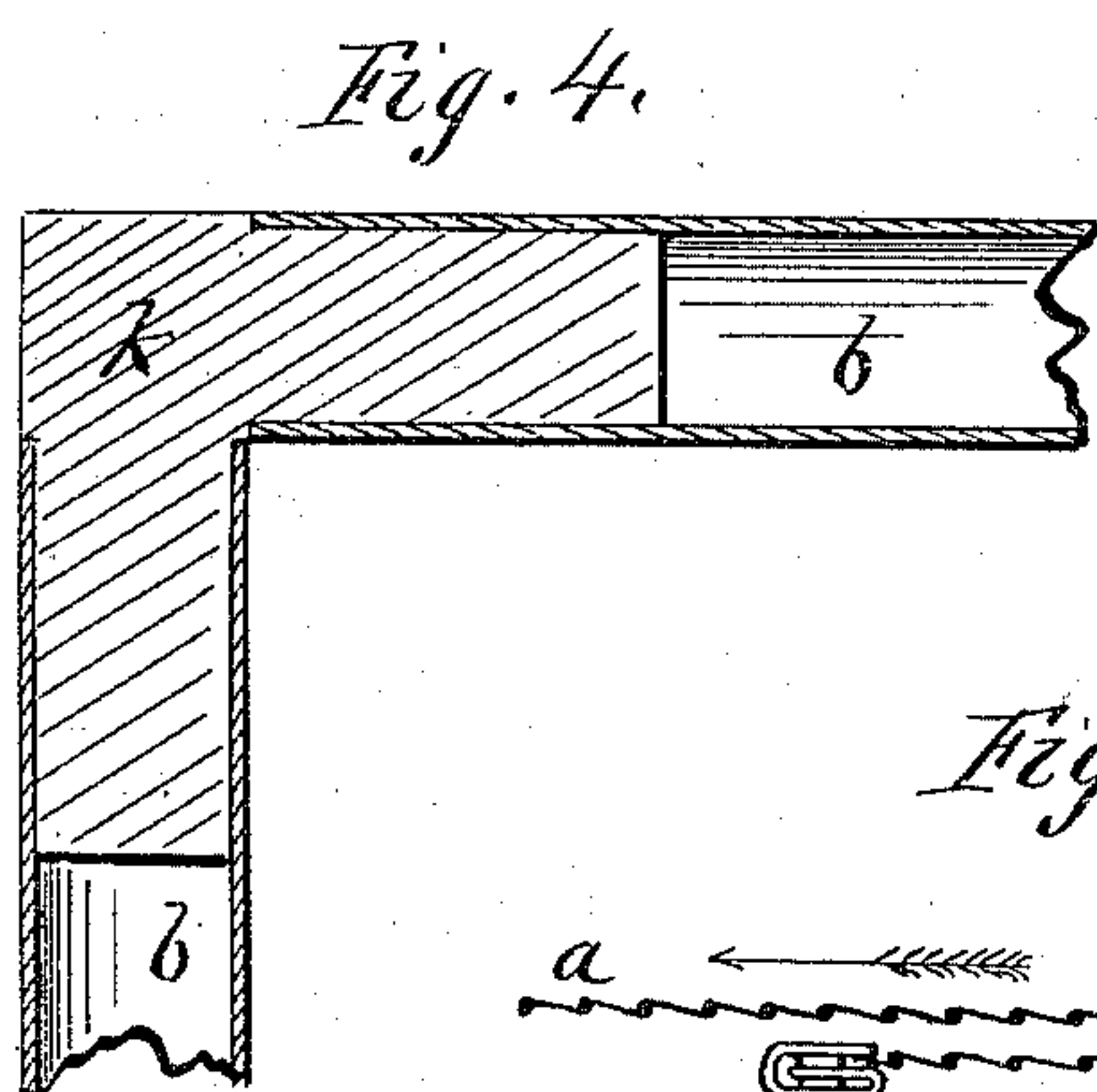
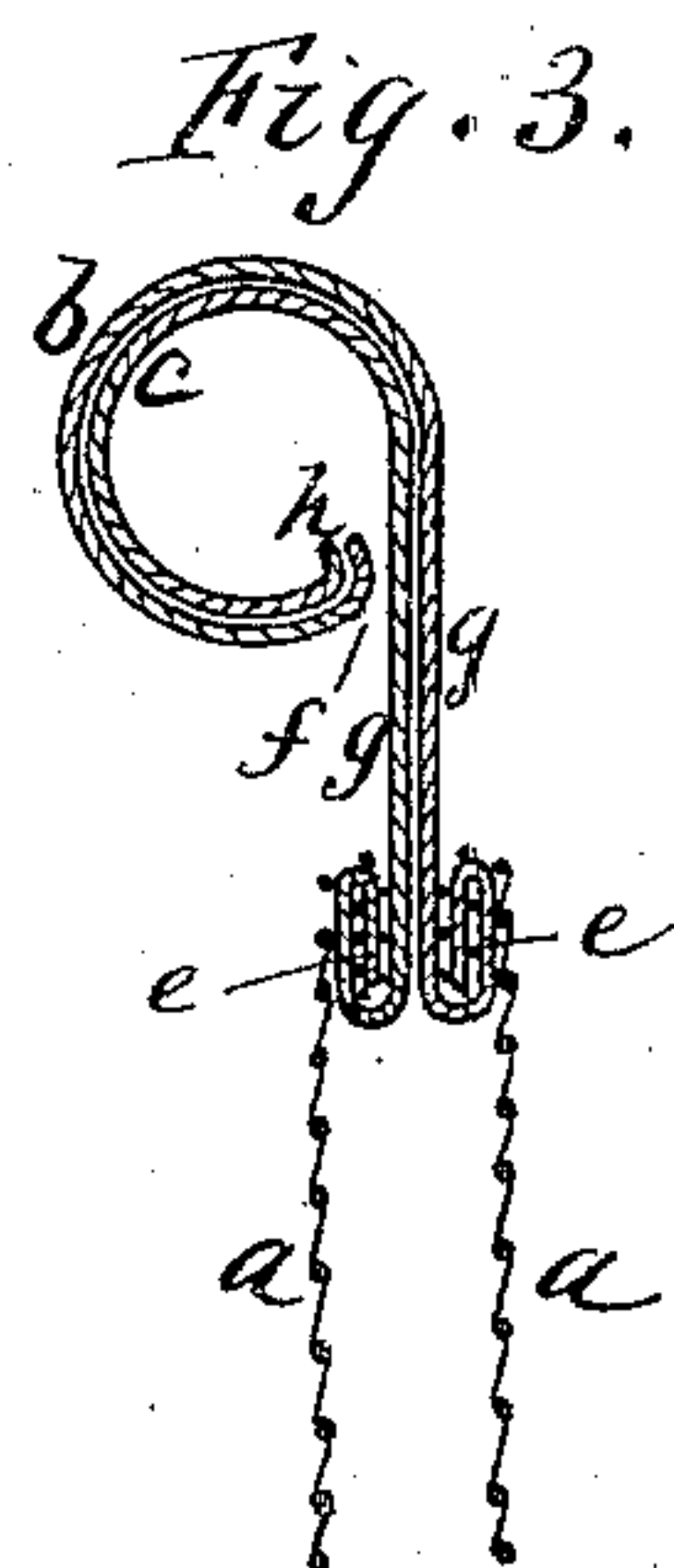
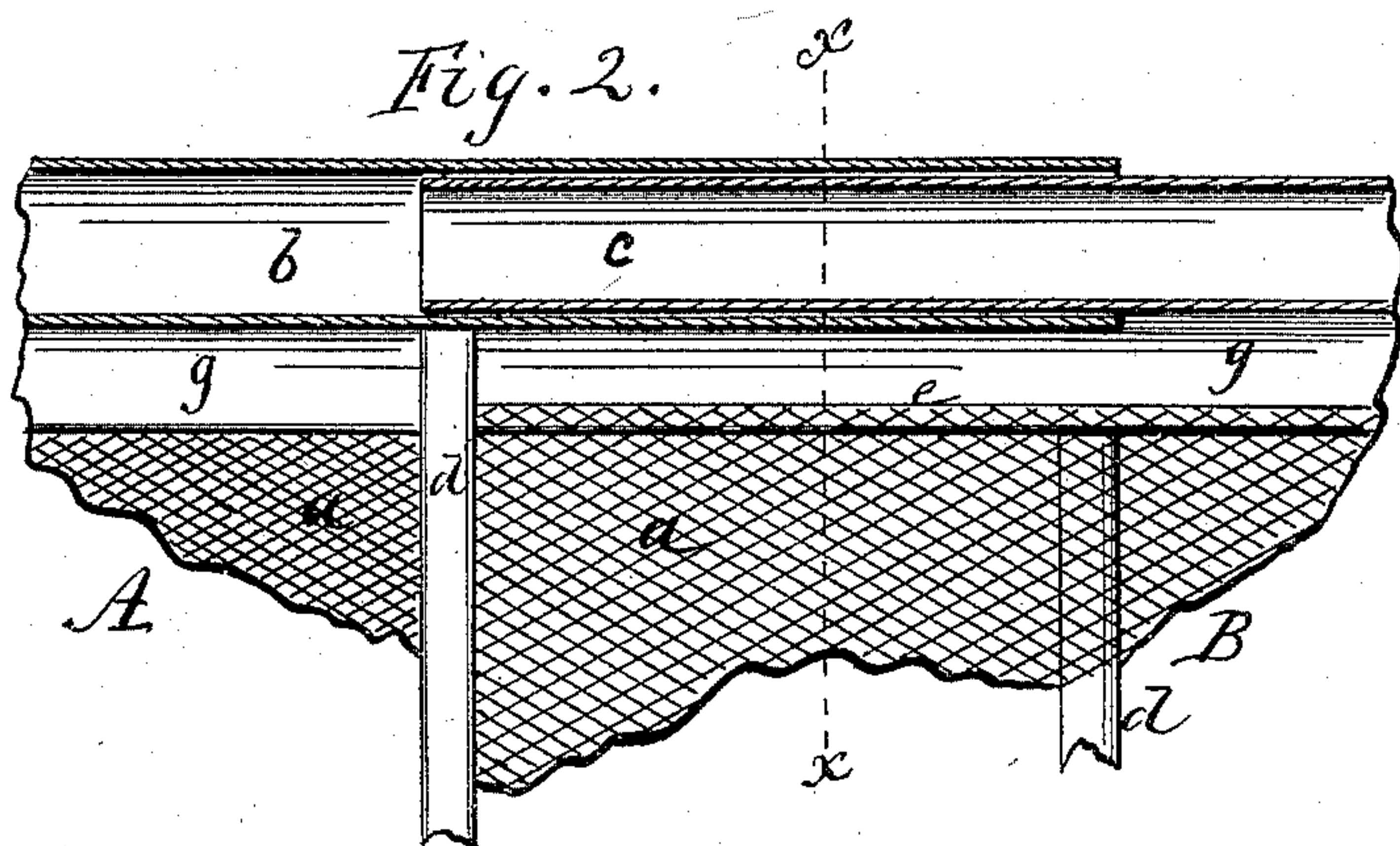
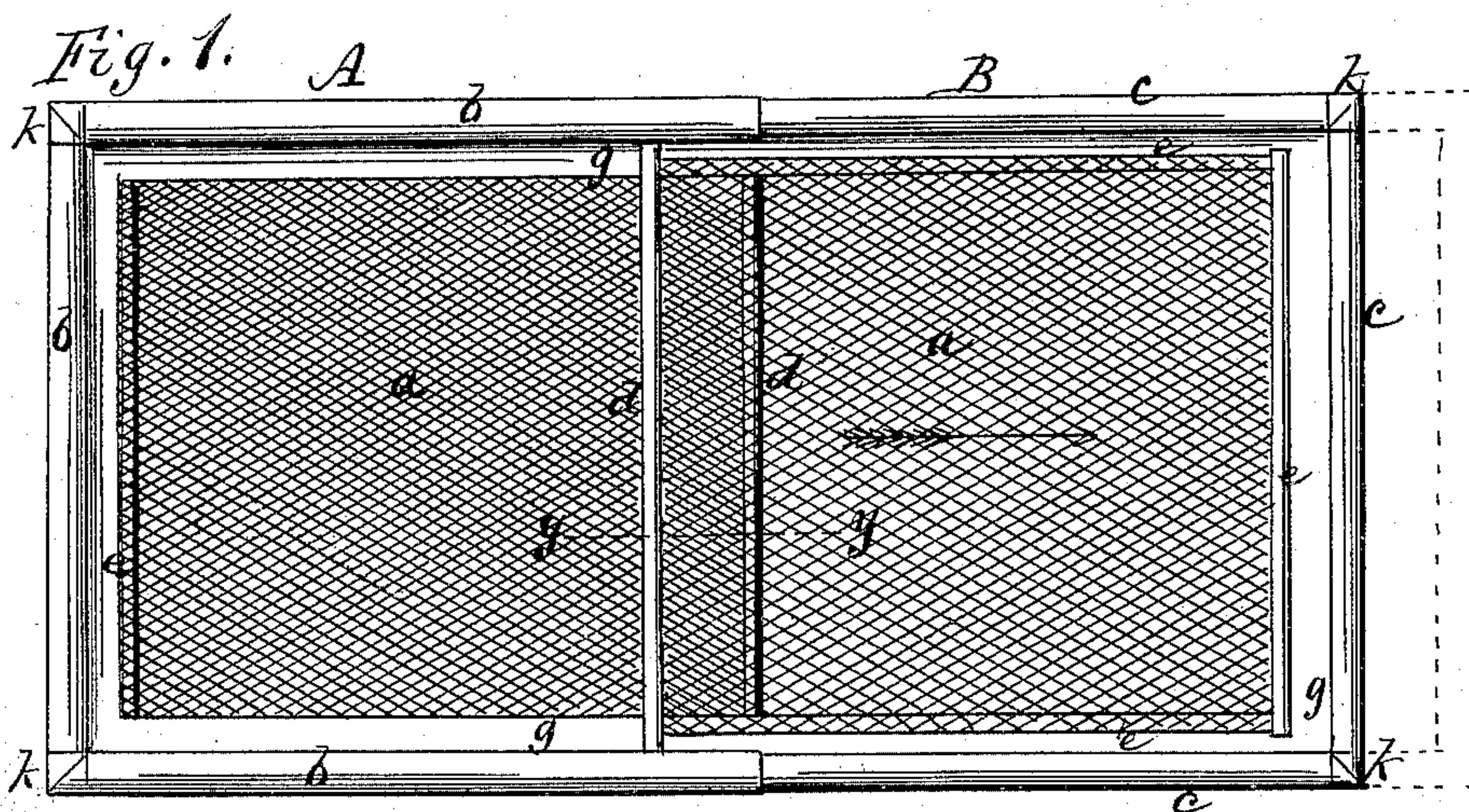


(No Model.)

D. STONE.  
WINDOW SCREEN.

No. 493,664.

Patented Mar. 21, 1893.



Attest.  
A. S. Smith  
Chas. K. Vickers

Inventor.  
Draper Stone,  
per R. F. Osgood  
Att'y



# UNITED STATES PATENT OFFICE.

DRAPER STONE, OF PITTSFORD, NEW YORK.

## WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 493,664, dated March 21, 1893.

Application filed March 3, 1888. Serial No. 266,010. (No model.)

*To all whom it may concern:*

Be it known that I, DRAPER STONE, of Pittsford, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Window-Screens; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to adjustable screens adapted to fit windows of different widths.

It also relates to metallic screens having a tubular frame, the tubes of one section sliding into those of the next.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is a front elevation of the screen. Fig. 2 is an enlarged longitudinal section through the two meeting ends of the frame sections, showing a portion of the net in elevation. Fig. 3 is a vertical cross section of Fig. 2 in line *xx*. Fig. 4 is a longitudinal section of one corner of the frame, showing more particularly the fitting of the tubes to the solid corner piece. Fig. 5 is an elevation of the corner piece. Fig. 6 is an enlarged cross section in line *yy* of Fig. 1.

The device consists of two sections A, B, one of which slides over or past the other in order to extend the screen, as usual. These sections are covered with wire net *a a*. The frame of each of these sections consists of tubes *b c*, one made of less diameter than the other and sliding freely therein, as shown in the sectional view Fig. 2. This sliding movement is sufficient to enable the screen to be extended to fill the widest window. The tube bounds three sides of each section. The fourth side, which is the inner side, has simply a stiff metal stay *d*, double seamed to hold the edge of the wire and to complete the frame. The tubes *b c* do not form complete circles in cross section, but are rolled partially around leaving an opening or slot *f* between the front and rear side as shown in the cross section Fig. 3, and the metal on the back side is carried down in a vertical plane tangent to the tube forming a flat backing *g*, to which the wire net is attached. The slot *f* in the tubes

allows these backings to be carried down, and allows the sliding movement of one tube within the other to expand or contract the frame. The edges of the tube at the break are turned up as shown at *h*, forming lips that keep the parts in position. Tubes entire or whole in cross section could not be used, as the net could not be attached and yet allow the frames to slide. This feature forms an important part of my invention. The tubes stand out bodily in front of the screen, the backings *g g* standing down tangentially at the rear side, as shown in Fig. 3. This not only allows attachment of the wire net, but also adds ornament to the screen.

At the top bottom and outer side the wire net is attached by double seaming of the backing *g*, as shown at *e e*, the edges of the wire being thus turned in and inclosed so as to cover the rough edges and make a stronger connection than in common screens where the net is backed on and the rough edges left outside. In fact, such ordinary fastening cannot be used in this case, since the whole frame is metal. The edges of the wire being doubled and folded in present a smooth edge at the extremities and will wear much longer. On the fourth or inner side of each section of the screen the wire is also double seamed to the cross connections *d d*, which thus presents the same advantages as the seaming at the sides. These stays *d d* are attached to the net so as to project outward in opposite directions, as shown in the cross section Fig. 6, by which means they slide past each other when the screen is extended or the sections drawn apart. When the screen is in place these cross stays substantially close the space between the two networks and prevent the entrance of insects.

To enable the tubes to be made integral with the backings *g g*, as well as to facilitate and cheapen the fitting of the tubes together at the corners, solid metal corner pieces *k k* are used, over which the ends of the tubes are fitted as shown in Fig. 4. Each of these corner pieces consists of two elbow arms, over which the tubes fit, and a central enlarged portion which is of the same caliber as the interior of the tubes, the whole presenting a flush surface when the parts are fitted to-

gether. The tubes may be attached to the corner pieces by soldering, pinning or other means.

5 Having described my invention I do not claim simply and broadly a metallic screen consisting of sections one sliding within the other.

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

10 1. In a window screen, the combination of two sections constructed with tubes not fully closed in cross section, leaving longitudinal slots therein, backings integral with said tubes, and wire netting attached to the back-  
15 ings, the tubes of one section fitting in those of the other and the backings resting in the slots, as shown and described and for the purpose specified.

2. In a window screen, the combination of two sections constructed with tubes not fully 20 closed in cross section, leaving longitudinal slots therein, and provided with upturned lips *h h*, backings integral with said tubes, and wire netting attached to the backings, the tubes of one section fitting in those of the 25 other, the backings resting in the slots, and the lips keeping the parts in position, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing 30 witnesses.

DRAPER STONE.

Witnesses:

R. F. OSGOOD,  
P. A. COSTICH.