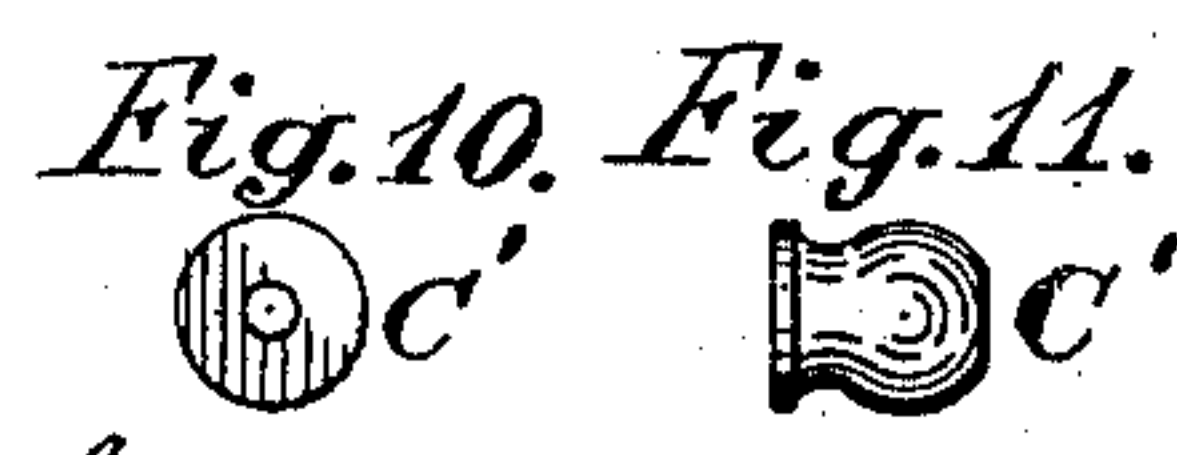
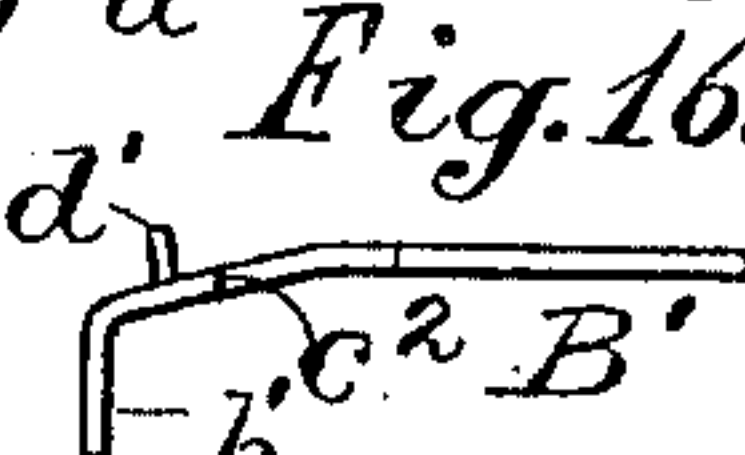
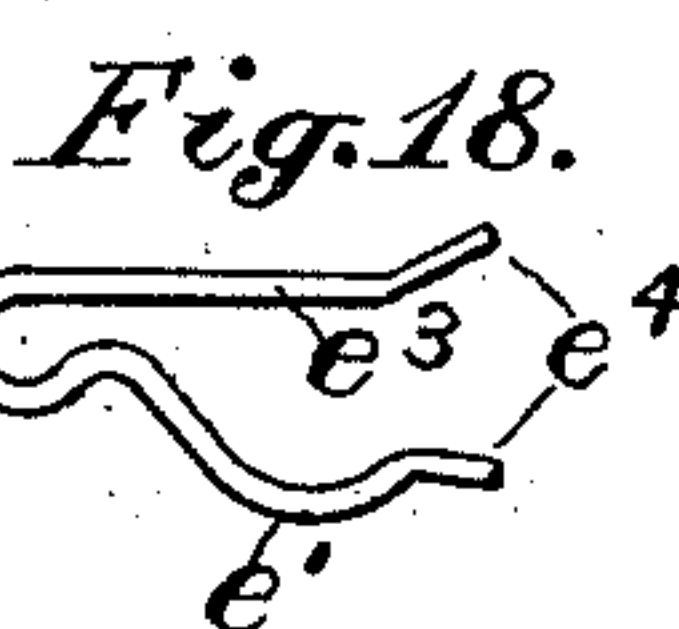
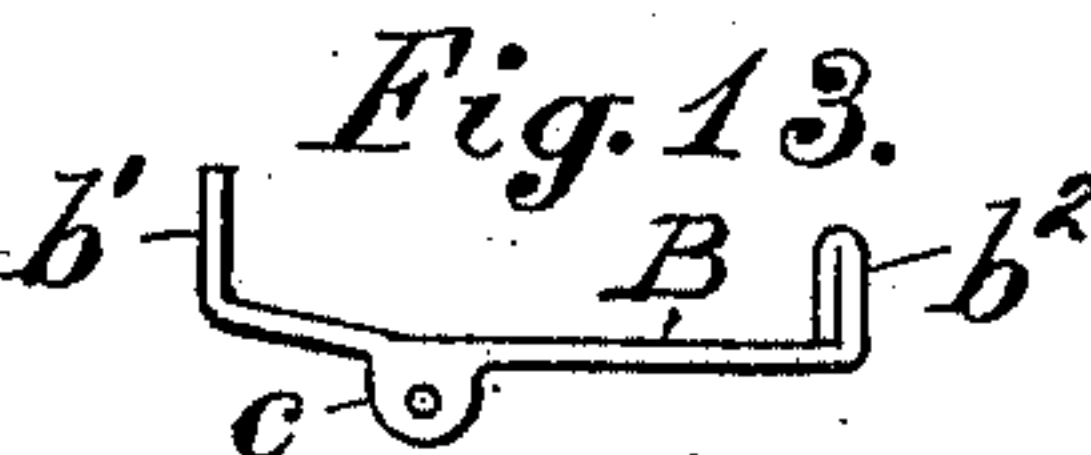
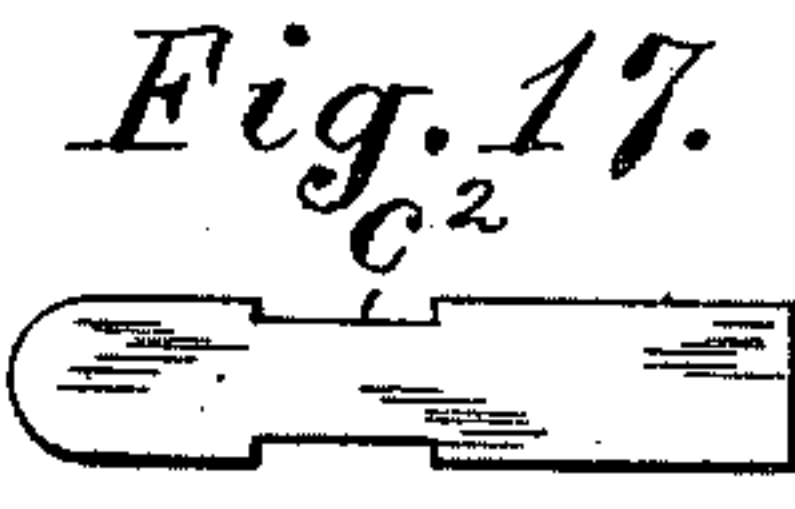
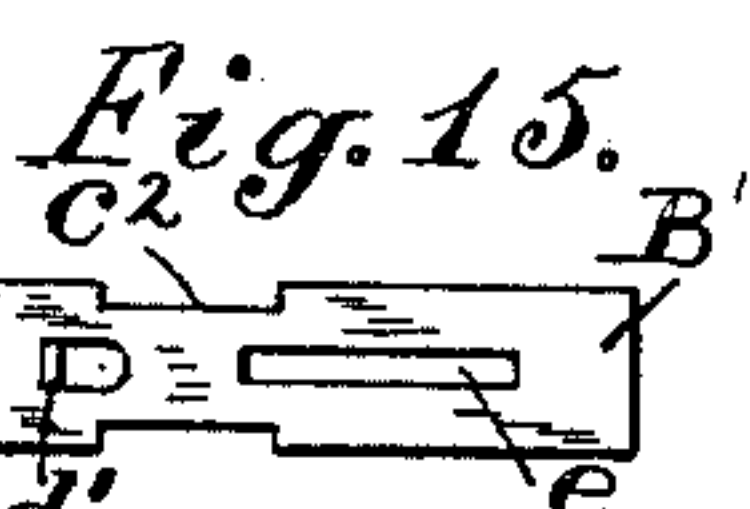
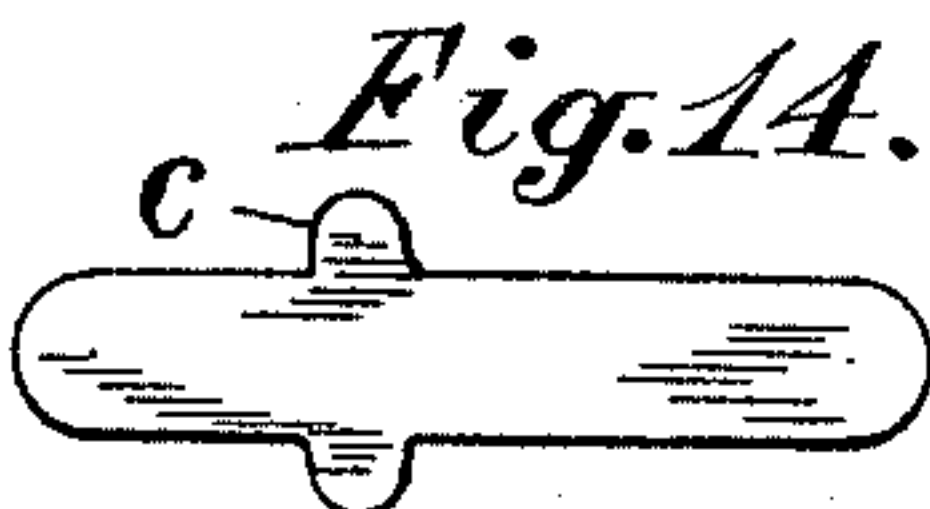
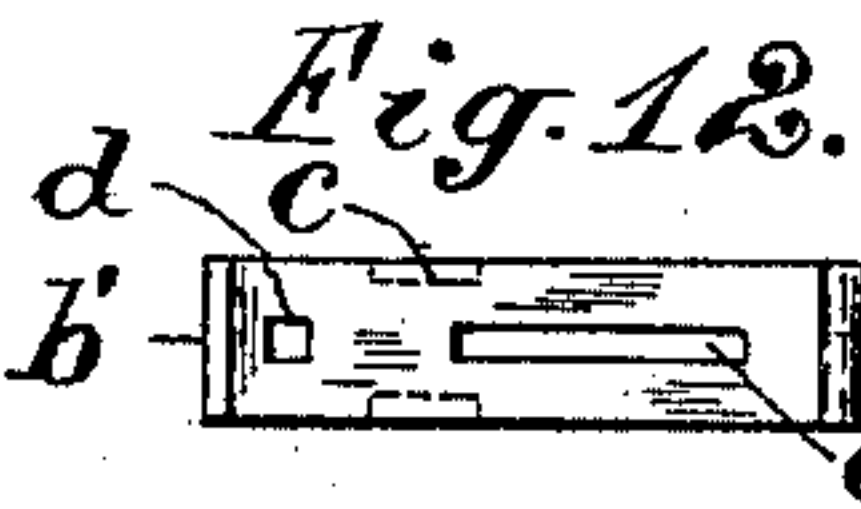
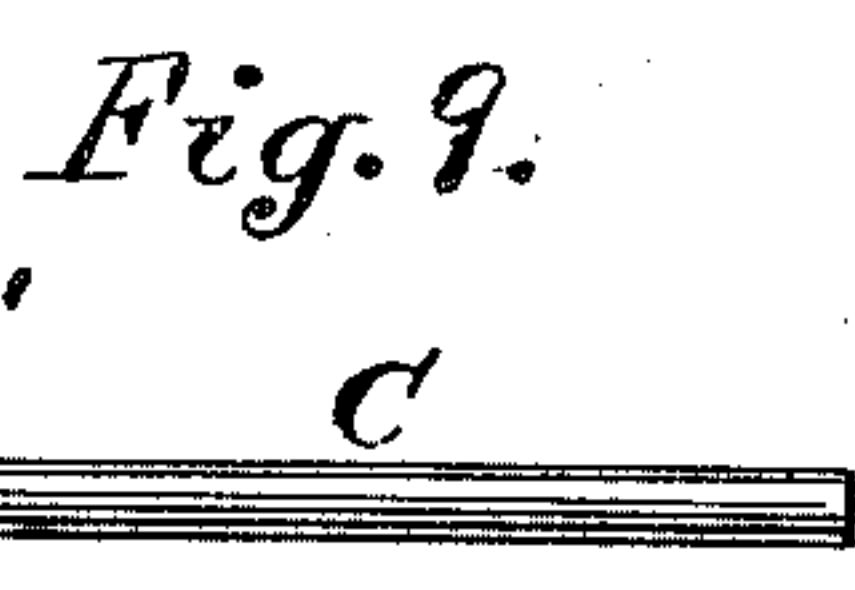
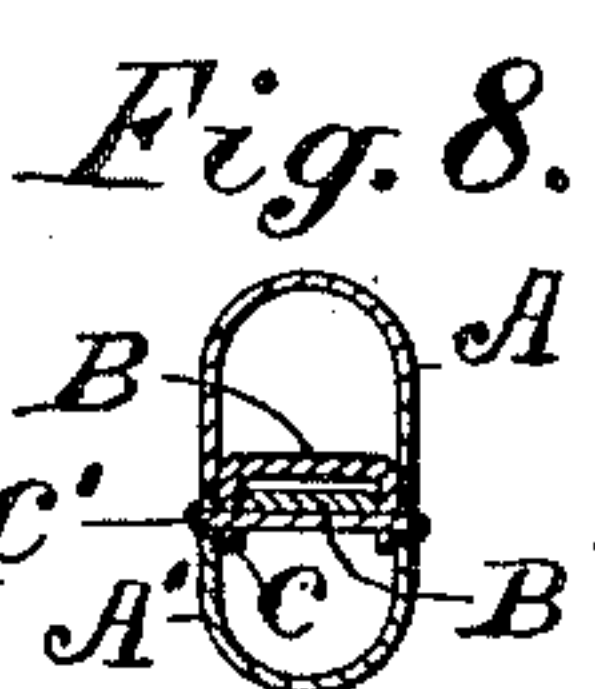
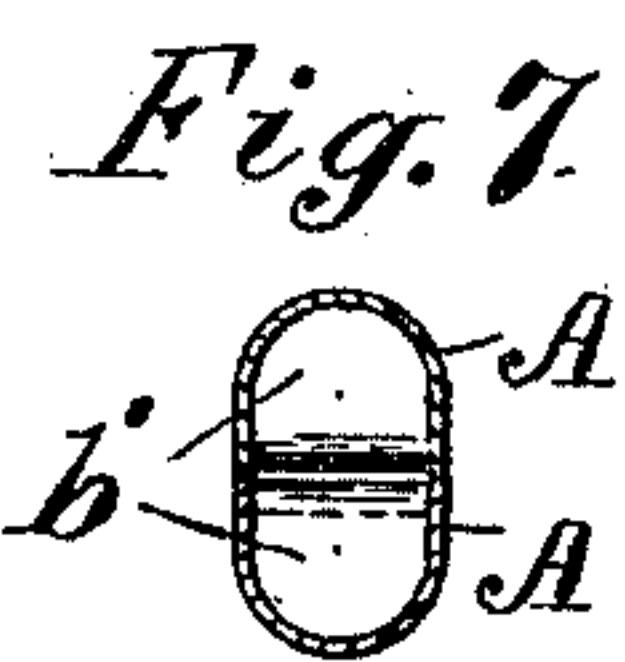
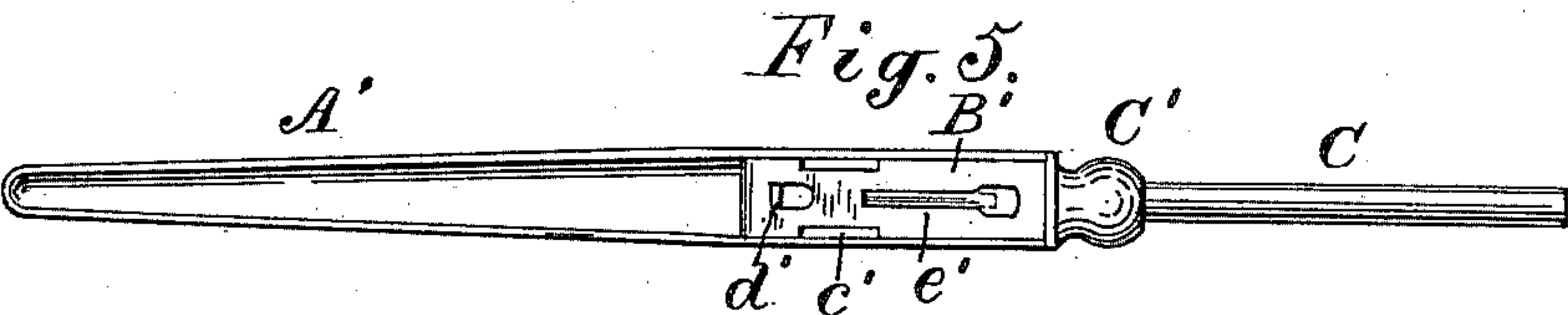
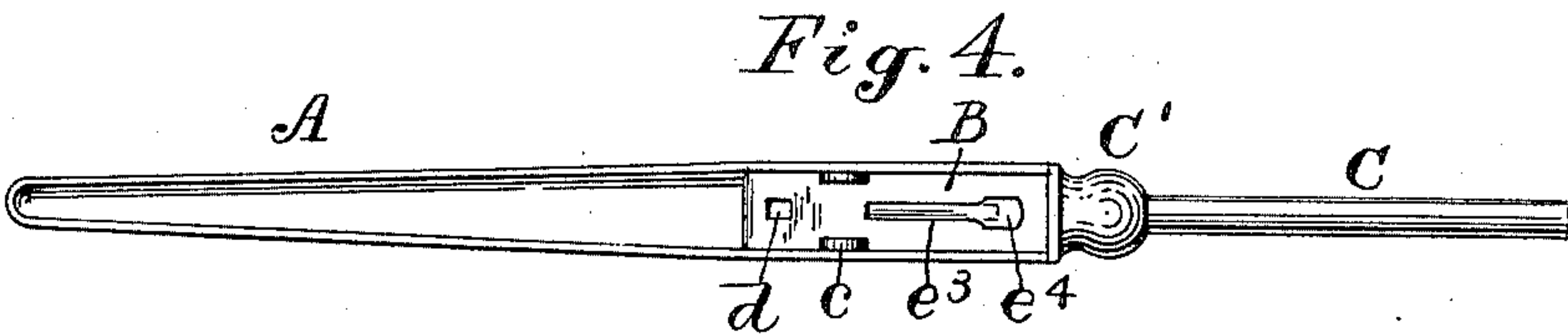
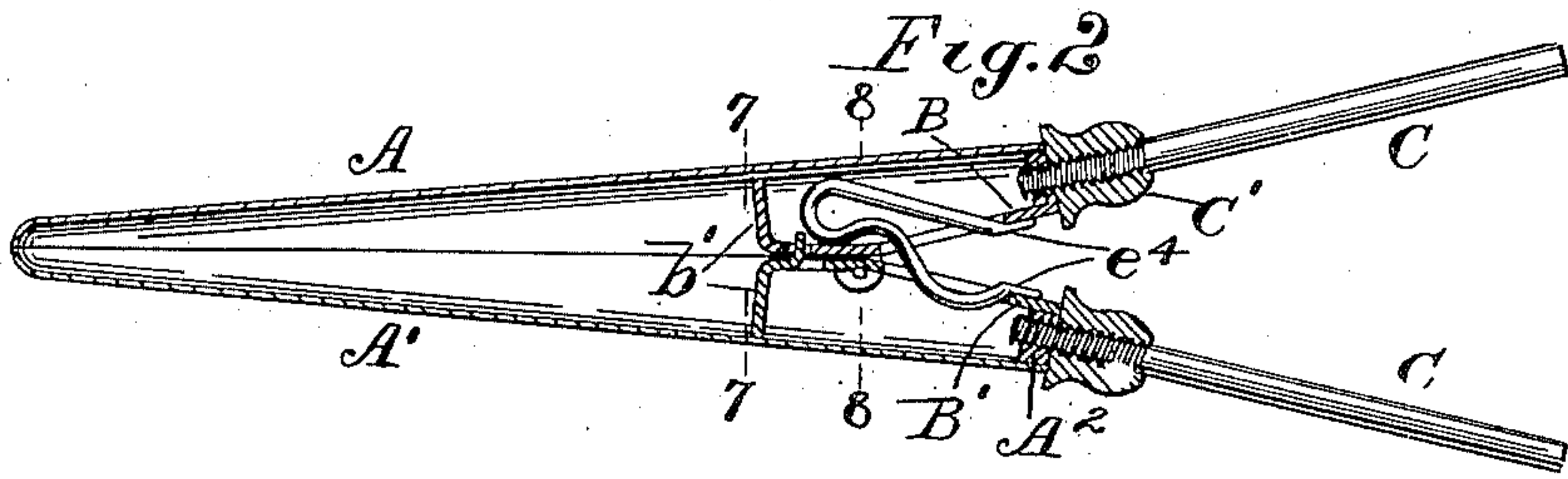
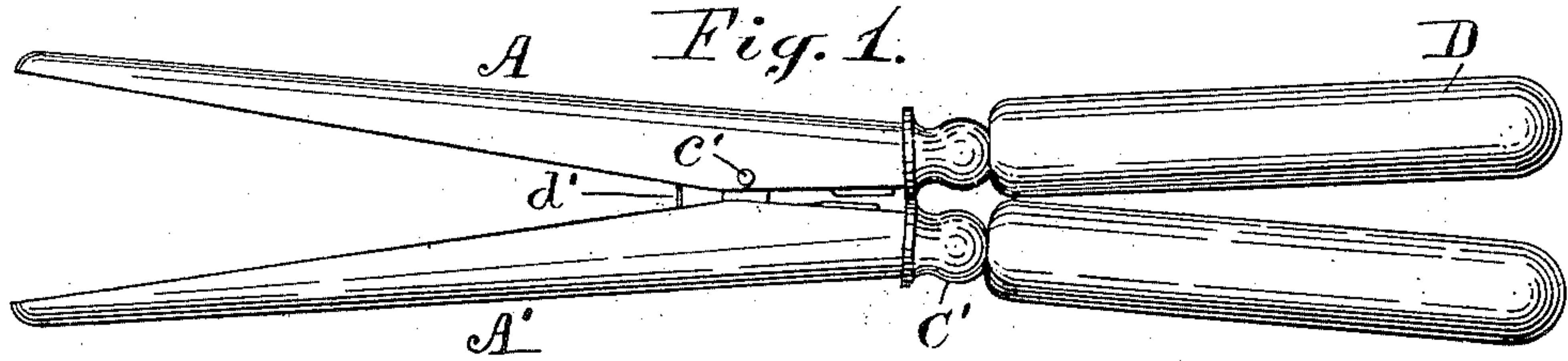


(No Model.)

G. HAVELL.  
GLOVE STRETCHER.

No. 599,295.

Patented Feb. 15, 1898.



Attest:  
L. Lee,  
Edw. C. Minsey.

Inventor.  
George Havell, per  
Thomas S. Crane, Atty.



# UNITED STATES PATENT OFFICE.

GEORGE HAVELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE HAVELL MANUFACTURING COMPANY, OF NEW JERSEY.

## GLOVE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 599,295, dated February 15, 1898.

Application filed July 10, 1897. Serial No. 644,052. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE HAVELL, a citizen of the United States, residing at Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Glove-Stretchers, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 The object of this invention is to furnish a cheap and efficient construction for a glove-stretcher and to combine sheet-metal stretcher-arms with wire shanks adapted to receive handles of any desired material and shape.

15 By the use of sheet metal for the stretcher-arms they may be constructed with great economy, while the provision of tangs or shanks projected from the arms beyond their pivot adapts the stretcher to be finished with handles of silver, wood, mother-of-pearl, celluloid, or any other suitable material.

20 As the style of handle modifies the appearance of the article very greatly, my invention furnishes a means of producing a great apparent variety of glove-stretchers with the same tools and method of manufacture.

25 The sheet-metal arms are connected by joint-blocks secured within the bases of the arms, such joint-blocks being preferably formed of sheet metal, with one or both ends bent transversely to the arm, and thus fitted to its interior section. The arms need a spring to hold them normally closed, and such construction forms a hollow joint-block and furnishes a hollow space to admit the fold of a loop-shaped spring, made of wire and fitted to play in slots in the joint-blocks.

30 The invention includes various details of construction hereinafter set forth and claimed.

The construction will be understood by reference to the annexed drawings, in which—

35 Figure 1 shows the glove-stretcher with the arms open and handles applied to the handle-shanks. Fig. 2 is a view of the same parts, excepting the handles, with the arms closed and all the parts except the handle-shanks and the spring represented in section at the center line. Fig. 3 represents the sheet-metal blank to form the shell of each arm. Fig. 4 shows the inner side of one arm, and Fig. 5

the inner side of the opposite arm. Fig. 6 is an end view of the arm, showing the socket for the handle-shank. Fig. 7 is a cross-section on line 7 7 in Fig. 2, looking toward the joint-blocks. Fig. 8 is a section upon line 8 8 in Fig. 2. Fig. 9 is a side view of the handle-shank and its bolster. Fig. 10 is an end view, and Fig. 11 a side view, of the bolster detached from the shank. Fig. 12 is a plan, and Fig. 13 a side view, of the joint-block having the hinge-lugs; and Fig. 14, the blank for the same. Fig. 15 is a side view; Fig. 16, an edge view of the joint-block having the notched sides, and Fig. 17 the blank for the same. Fig. 18 is a side view of the wire spring.

40 A and A' designate the two arms, formed of sheet-metal shells of trough shape, as shown in Figs. 6 to 8, stamped each from sheet-metal blanks. (Shown in Fig. 3.) The joint-blocks B B' are secured each by solder within the trough-shaped cavity of the arm at its base, the block consisting, mainly, of a flat plate adapted to close the cavity at the inner edge of the arm and having each the forward end bent into a flange b' at right angles to the arm to fit the interior of the shell.

45 The block B is formed with two lugs c, which are bent from its edges to fit within the sides of the shell A', to which they are hinged by rivet c'. The block B' is formed in its opposite edges with notches c<sup>2</sup>, through which the lugs c are passed to reach the rivet. One of the blocks is formed with a short slot d and the opposite block with a stud d', adapted to fit the sides of such slot and hold the arms from lateral movement when opened. The stud is stamped upwardly from a hole in the middle of the block. Slots e are formed in the contiguous faces of the blocks in the rear of the hinge-lugs, and the wire spring is bent into loop shape with a fold e<sup>2</sup> at one end, as shown in Fig. 18, and its arms e' and e<sup>3</sup> bent to fit within the slots, as shown in Fig. 2. The arm e' is curved to bend into one slot and then out again adjacent to the pivot, the fold e<sup>2</sup> extending into the opposite slot behind the hinge-lugs, with its arm e<sup>3</sup> extended outwardly through such opposite slot.

50 The ends e<sup>4</sup> of the wire are widened by flattening to hold them upon the contiguous faces of the blocks when its arms are extended through the slots. By curving the wire



through the slot in one of the blocks, as at  $e'$ , it is held from lateral displacement and its elasticity is increased, while the extension of the fold or loop  $e^2$  within the body of one of the blocks gives the spring greatly-increased length and thus secures the desired elasticity without extending the spring conspicuously into sight. The block B is shown with flange  $b^2$  bent at the rear end to close such end of the arm, and a threaded hole is made in such flange to form a socket  $a'$  for the handle-shank. The metal of the flange  $b^2$  is bent upon itself to increase its thickness where the socket is formed thereon.

At the rear end of the block B' a separate nut  $A^2$  is shown fitted in the rear end of the arm A' and made with a threaded hole to form a socket  $a'$  for the handle-shank. The nut, as well as the blocks B and B', is secured within the shell of the arm by solder and serves, the same as the flange  $b^2$ , to form the socket for the shank.

The shank C is shown formed of a wire threaded at one end, with an internally-threaded bolster C' screwed thereon and the extremity of threaded end screwed detachably into the socket, as shown in Fig. 2. A plain round handle D is shown upon each shank in Fig. 1, and a handle of any material, style, or pattern may be readily secured upon such wire shank and any style or quality thus imparted to the stretcher.

Fig. 3 shows the blank  $a$  for the shell which forms the outside of the arm, and the blanks of the two so-called "joint-blocks" are also shown in Figs. 14 and 17, illustrating the simple character of the sheet-metal parts and the facility with which they may be punched and stamped to the shape shown in the drawings.

By making the joint-blocks of sheet metal they can be made more cheaply, more rapidly, and of more accurate form than if they were made solid by casting or stamping.

By the above construction the parts are all cheaply formed by machine-tools and may be adapted to lower or higher grades of goods by merely changing the external finish (as by electroplating with different metals) and by changing the material and style of the handles.

Having thus set forth the nature of the invention, what I claim herein is—

1. In a glove-stretcher, the combination, with arms formed of sheet-metal shells, of joint-blocks secured within the shells at the base and pivoted together, and handle-shanks attached to such joint-blocks, substantially as herein set forth.

2. In a glove-stretcher, the combination, with arms formed of sheet-metal shells, of joint-blocks secured within the shell at the base and pivoted together, and handle-shanks detachably connected with the arms, substantially as herein set forth.

3. In a glove-stretcher, the combination, with arms formed of the hollow sheet-metal shells, of the joint-blocks formed of sheet metal with ends bent to fit the section of the

shell, opposite slots in the blocks, and a spring-wire loop fitted to the slots to press the blocks normally apart, substantially as herein set forth.

4. In a glove-stretcher, the combination, with arms formed of sheet-metal shells as set forth, of the joint-block B secured in one shell and having hinge-lugs  $c$  connected by pivot  $c'$  with the opposite shell, the joint-block B' secured within such shell and formed with notches  $c^2$  at the sides to clear the lugs  $c$ , and the blocks being provided respectively with the stud  $d$  and slot  $d'$ , to prevent lateral movement of the arms, substantially as herein set forth.

5. In a glove-stretcher, the combination, with arms formed of sheet-metal shells, as set forth, of the joint-block B secured in one shell and having hinge-lugs  $c$  connected by pivot  $c'$  with the opposite shell, the joint-block B' secured within the other shell and formed with notches  $c^2$  at the sides to clear the lugs  $c$ , the joint-blocks being formed with the slots, as set forth, and the loop-shaped spring bent with fold  $e^2$  and arms  $e'$  and  $e^3$  fitted to the slots, and adapted to play within the same, as and for the purpose set forth.

6. In a glove-stretcher, the combination, with arms formed of the hollow sheet-metal shells, of the joint-blocks formed of sheet metal with ends bent to fit the section of the shell, and having a handle-socket at the base of each joint-block, and handle-shanks fitted to such sockets, substantially as herein set forth.

7. In a glove-stretcher, the combination, with arms formed of sheet-metal shells, of joint-blocks provided with a spring to close the arms, and threaded wire handle-shanks having a threaded bolster, and secured by a threaded connection to the joint-blocks, substantially as herein set forth.

8. In a glove-stretcher, the combination, with arms formed of hollow sheet-metal shells, of the joint-blocks formed of sheet metal with ends bent to fit the section of the shell, and having a threaded handle-socket at the base of each joint-block, with a threaded wire handle-shank fitted detachably to such threaded socket, as and for the purpose set forth.

9. In a glove-stretcher, the combination, with arms formed of hollow sheet-metal shells, of the joint-blocks formed of sheet metal with ends bent to fit the section of the shell, and having a threaded handle-socket at the base of each joint-block, with a threaded wire handle-shank fitted detachably to such threaded socket, and provided next to such socket with a threaded bolster, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE HAVELL.

Witnesses:

HARRY C. HAVELL,  
THOMAS S. CRANE.