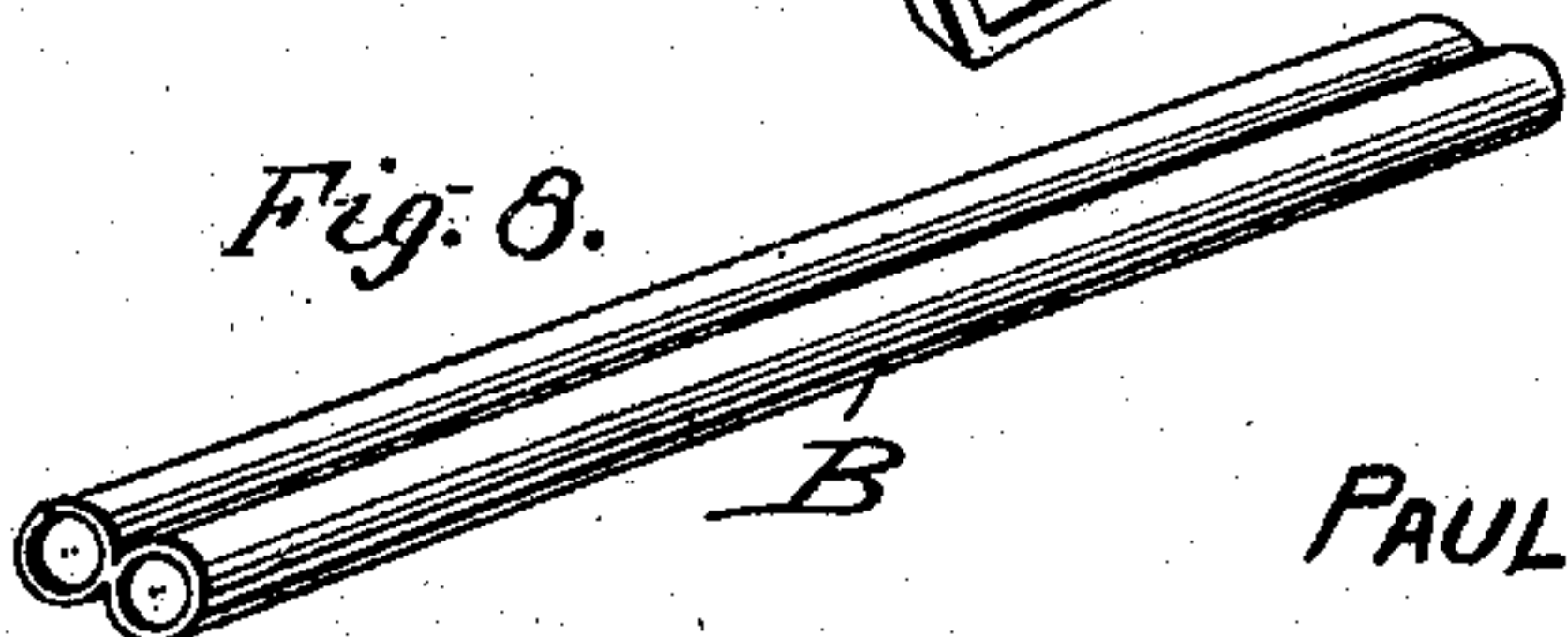
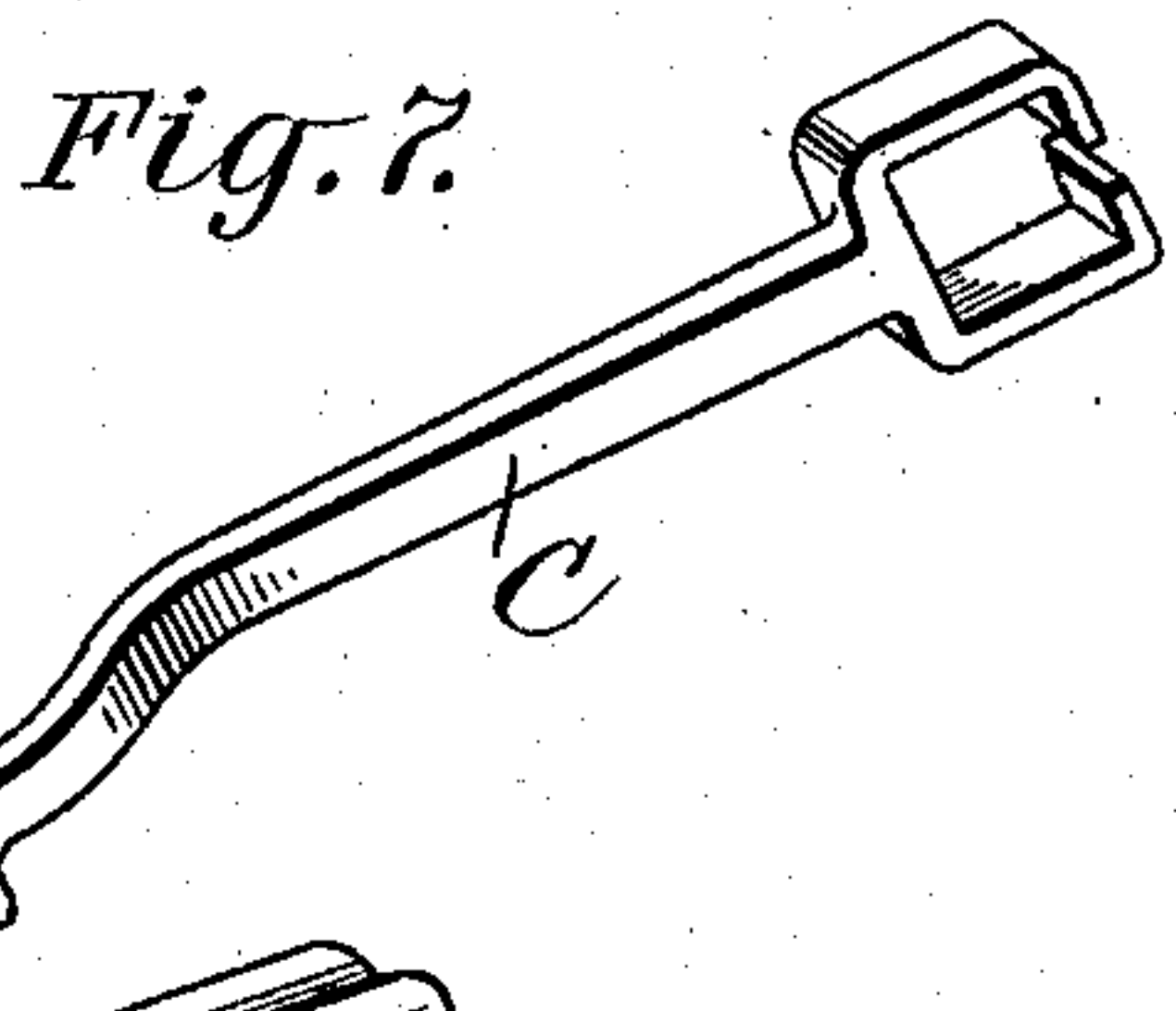
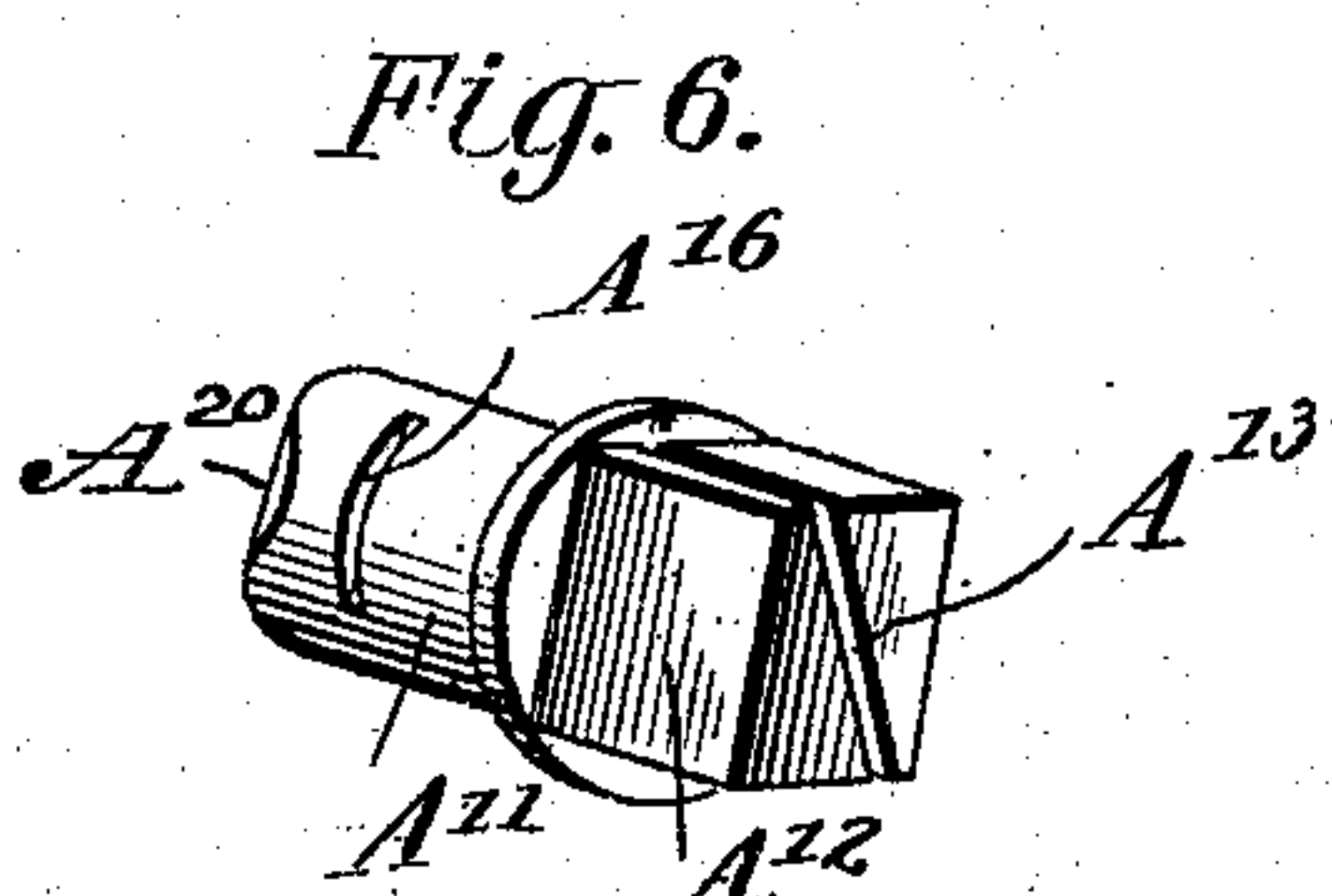
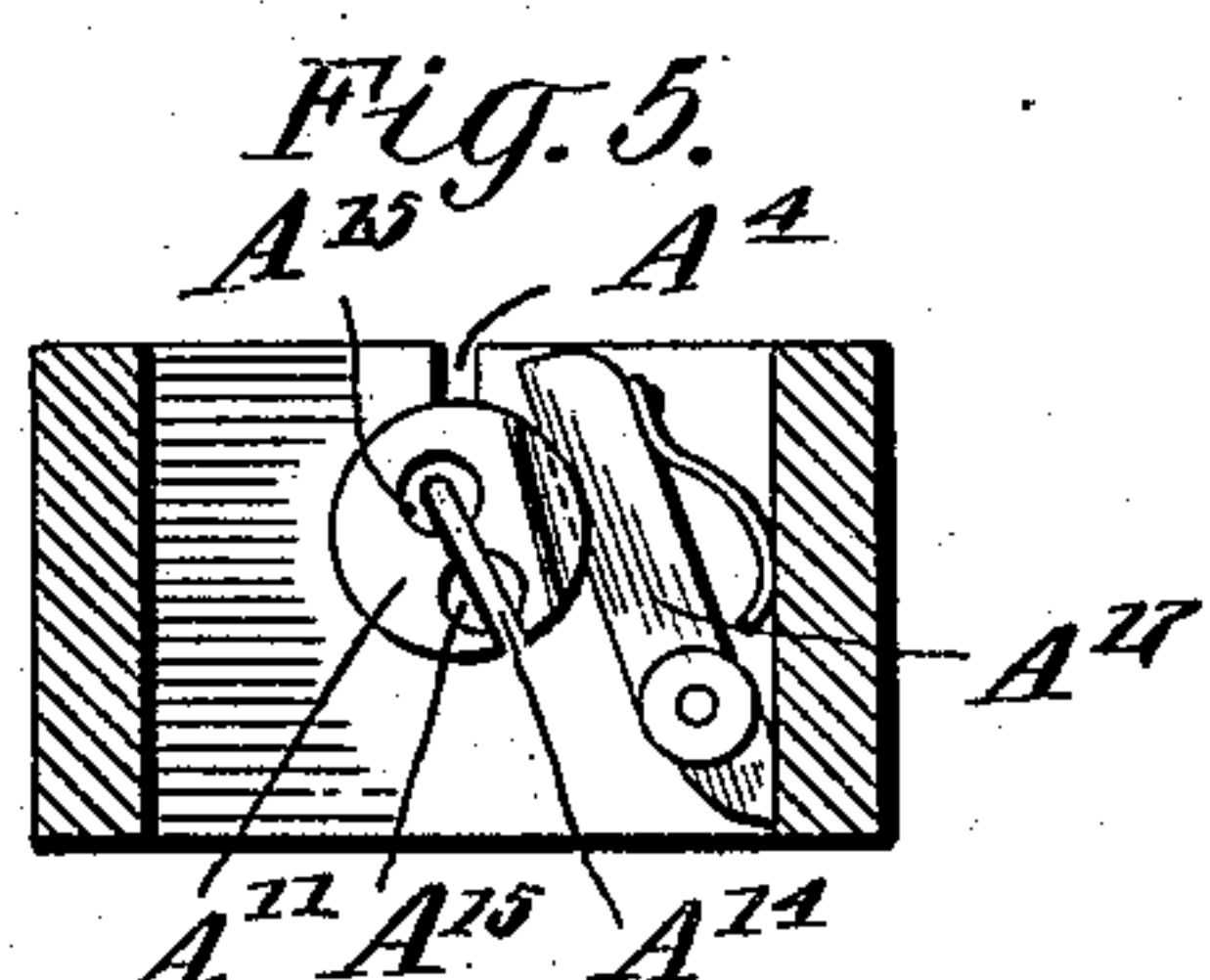
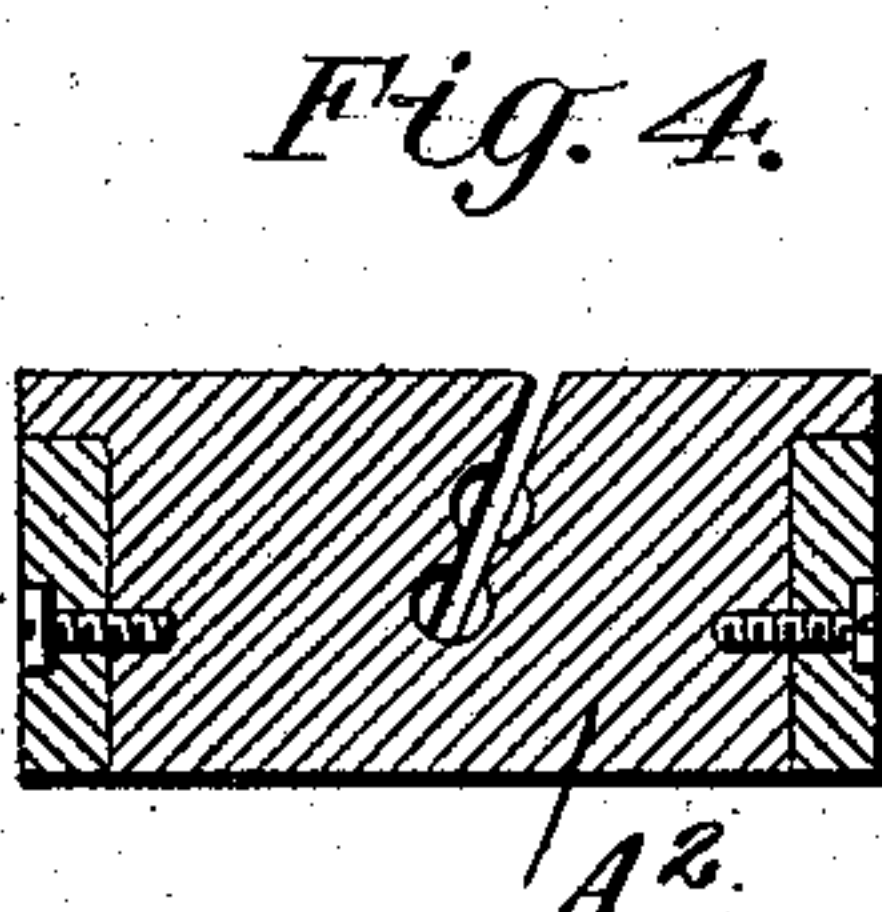
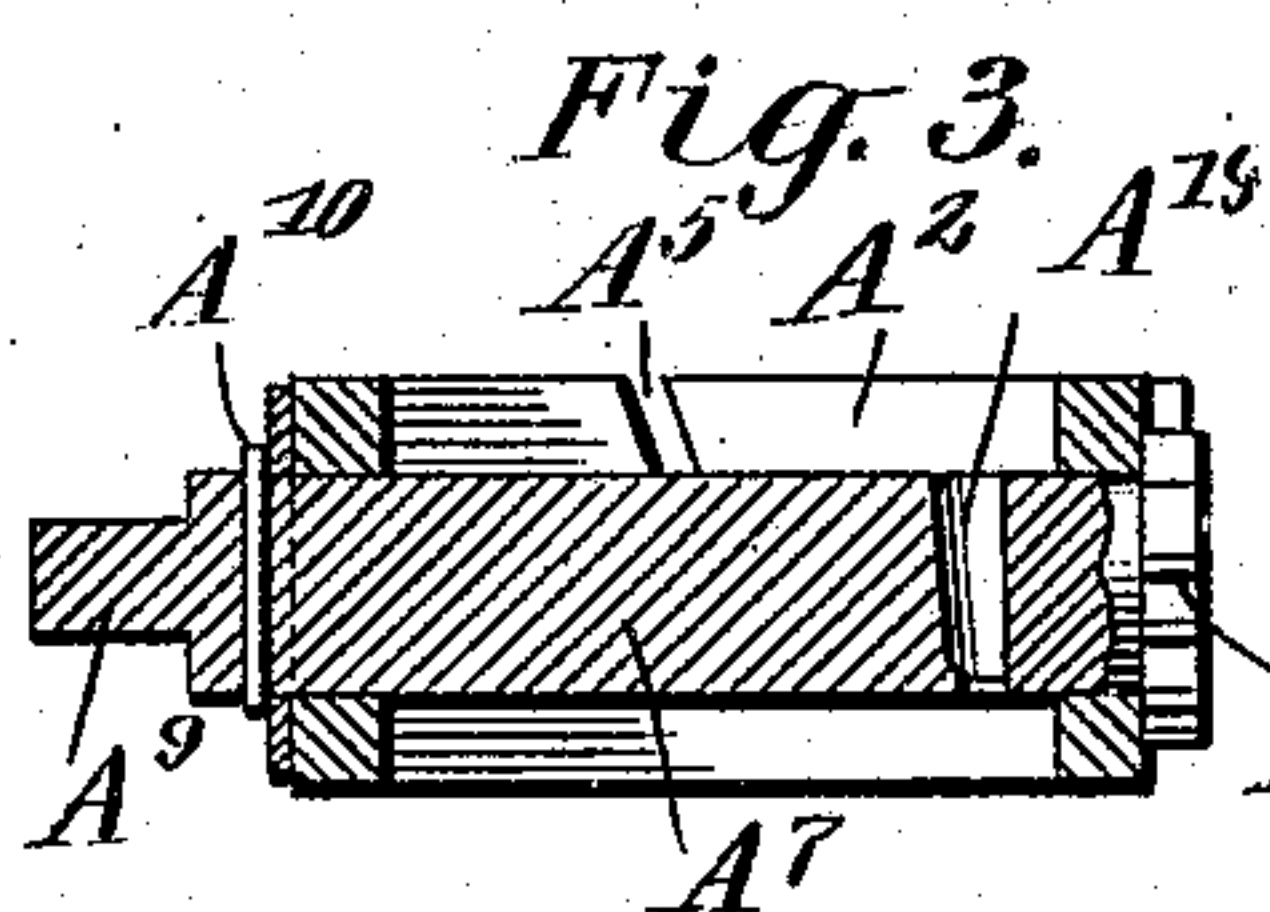
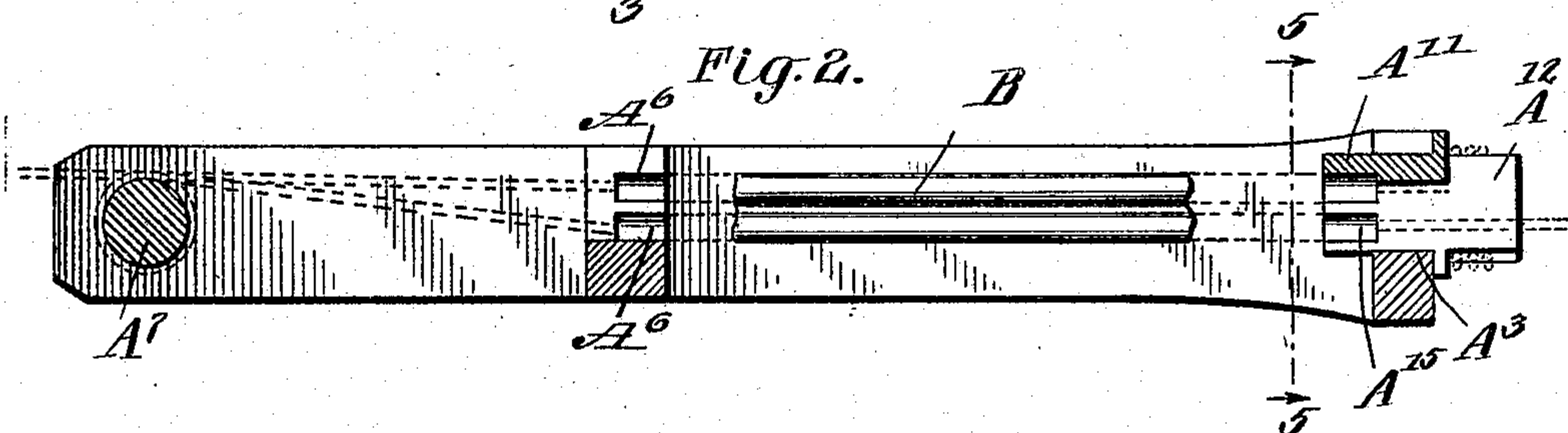


919,893.

Fig. 1.

A perspective view of a mechanical device, likely a typewriter component, showing a long, curved body with various internal and external parts labeled with letters and numbers. A dashed line indicates a disassembled part labeled 'C'.



WITNESSES
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UNITED STATES PATENT OFFICE.

PAUL O. LARSON, OF KELLYS, NORTH DAKOTA.

WIRE STRETCHING AND SPLICING DEVICE.

No. 919,893.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed May 7, 1908. Serial No. 431,492.

To all whom it may concern:

Be it known that I, PAUL O. LARSON, a citizen of the United States, and a resident of Kellys, in the county of Grand Fork and State of North Dakota, have invented a Device for Stretching and Splicing Wires, of which the following is a specification.

My invention relates to devices for stretching and splicing broken telegraph and telephone wires, and is designed to do away with the necessity of using clamps, pulleys etc. now commonly used for this purpose which becomes necessary when wires are cut, or broken by accident, accumulation of sleet etc. My invention consists broadly of a unitary device for stretching and splicing the ends of broken wires; it consists further in certain novel features of construction, arrangement and combination of parts as will be herein- after fully described and pointed out in the claims, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of my improved device; Fig. 2 is a central vertical section of the same; Fig. 3 is a vertical section taken on line 3—3 of Fig. 1; Fig. 4 is a similar section taken on line 4—4 of Fig. 1; Fig. 5 is a vertical section taken on line 5—5 of Fig. 2; Fig. 6 is a perspective view of the twisting plug removed from the frame. Fig. 7 is a perspective view of a wrench used to operate the twisting and stretching members. Fig. 8 is a detail view of a wire splice tube.

In carrying out my invention I use a frame consisting of the side members A A and the end member A' which connects the ends of said side members. The side members are further connected by a brace-plate or bridge A² between their ends, said brace plate being mortised into the upper faces of the side members, and rigidly secured to the side pieces by screws passing through the sides and into the brace plate. The end piece A' has a central circular opening A³ therethrough, and a vertical open slot A⁴ extending upwardly from the opening A³. The brace plate A² has an open slot A⁵ extending diagonally upward to the upper edge of said brace plate; this slot is provided with two circular enlarged spaces A⁶ which extend partly through said plate A²—see Fig. 2—. In the open end of the frame is journaled a spindle A⁷, having on one end a ratchet A⁸ which lies against the outer face of one side piece of the frame, while the opposite end of this spindle is reduced and squared as at A⁹

to receive the jaws of a wrench, the spindle being prevented from slipping out of the frame by means of a pin A¹⁰ passed through the spindle A⁷ outside the frame. 60

Within the circular opening A³ of the end bar A' is adapted to be placed a plug which has the circular portion A¹¹ and the square head A¹²; the square head has the diagonal slot A¹³ extending all way through same, while the circular portion A¹¹ has the slot A¹⁴ which coincides with the slot A¹³ in the square head; the slot A¹⁴ has the two circular enlarged spaces A¹⁵, and the circular portion of the plug has in its outer face the notch A¹⁶ which is adapted to be engaged by the spring actuated pivoted latch A¹⁷ disposed within the frame. A spring controlled pawl A¹⁸ is pivoted to the outside of the frame adjacent to the ratchet A⁸ and is adapted to engage the same and prevent and permit its rotation when desired. 65 70 75

In Fig. 2 is shown a portion of a wire joint B, of a common and well known type which consists of two connected tubes made of some malleable substance so that they can be readily twisted; this joint is adapted to be placed in the position shown in Fig. 2 with its ends projecting through the enlargements A⁶ and A¹⁵ in the parts A² and A¹¹ respectively when in use. 80 85

When it is desired to use my device to splice a broken wire one end of the wire is fed through the plug and through the lower tube of the joint and the extreme end passed through the opening A¹⁰ in the spindle A⁷. The other end of the broken wire is passed over spindle A⁷ and through the upper tube of the joint B and through the slot A¹³ in the square head of the plug in the other end of frame, and the wire given a few turns around the said square head; the wrench C is now placed on the square end of spindle A⁷ and the spindle turned, thereby stretching and pulling the wires to take up any slack that may exist. The large end of the wrench C is now placed on the square head of the plug and the plug given several turns which action, by virtue of the ends of the tubes forming the joint B being within the enlarged spaces A¹⁵ of the circular portion of the plug will twist the tubes (they being malleable) and the wires within them and form a perfect splicing of the broken ends of the wire, the latch preventing longitudinal movement of the plug; the spindle A⁷ is now reversed to slacken up the wire; the wire wrapped 90 95 100 105 110

around the plug is now unwrapped and the plug removed from the frame, the latch A¹⁷ being thrown up out of engagement with the plug, and the end of the wire which projects
5 beyond the frame is cut, the end of the wire toward the spindle being cut near the joint B. The splice is now complete.

If desired, a splice of the broken ends of a wire may be made without using a joint
10 sleeve B. The small cut-off space A²⁰ is made to insure the proper position of the plug when putting it into the frame.

It will be seen from the above that I provide a simple and efficient device for splicing
15 wires and also a device which will stretch the wire, both operations being performed by the simple unitary device.

I claim:

1. In a device of the character described, a
20 frame consisting of side bars and an end bar, said end bar having a central circular opening and a vertical slot extending therefrom, a rotary stretching spindle mounted transversely in the opposite end of the frame, a
25 removable rotatable plug having a circular portion mounted in the circular opening in the end bar and a squared head beyond the end bar to receive a wrench, said plug also having an open slot in one side and axial en-
30 largements extending from said slot, and a transverse guide block rigidly mounted in said frame intermediate the stretching spindle and the rotatable plug, said guide block having a diagonal open slot in its upper por-
35 tion to receive the overlapped ends of a broken wire.

2. In a device of the character described, a frame comprising side bars and a transverse

end bar, a rotary stretching spindle trans-
versely mounted in the opposite end of said 40 frame, the transverse end bar having a circular central opening and a slot extending therefrom, a removable rotatable plug having a squared head and a circular portion fit-
45 ting within the circular opening of the end bar, said plug having an open transverse slot and axial enlargements extending from said slot, a transverse guide block rigidly held be-
50 tween the side bars of the frame intermediate the stretching spindle and the aforesaid plug, said guide block having a diagonally disposed open slot from its upper edge and axial en-
55 largements extending from said slot, the enlargements in the guide block and the rotatable plug adapted to receive the ends of a malleable splice tube, and a latch engaging the plug and locking the same against longi-
tudinal movement and detachably holding the plug in place.

3. In a device of the character described, a 60 frame, a rotary stretching spindle mounted in one end of said frame, a removable rotatable twisting plug mounted in the opposite end of the frame, said plug having an open transverse slot and axial enlargements ex- 65
tending from said slot, and a head portion to receive a wrench, a guide block rigidly mounted in said frame intermediate its ends, said guide block having a diagonally disposed open slot extending from its upper edge, and 70
axial enlargements extending from said slot.

PAUL O. LARSON.

Witnesses:

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SVEN LARSON.