J. E. JOHNSON, J. M. PERRY & B. McMAHON.

WIRE STRETCHER.

APPLICATION FILED MAR. 17, 1910.

975,247. Patented Nov. 8, 1910.

Fig. 2.

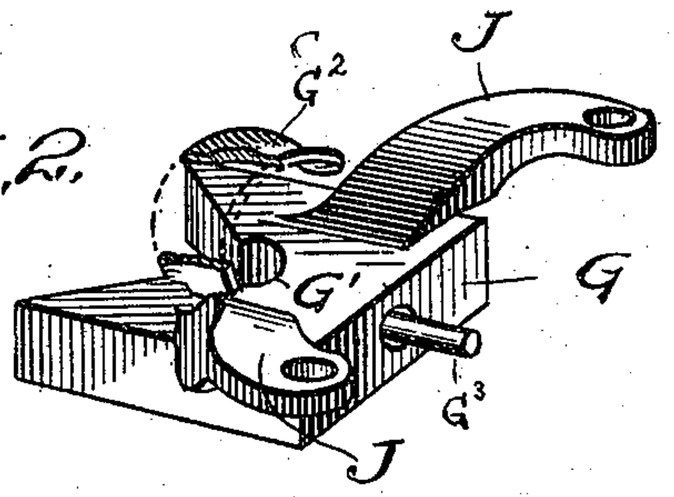


Fig. 1.

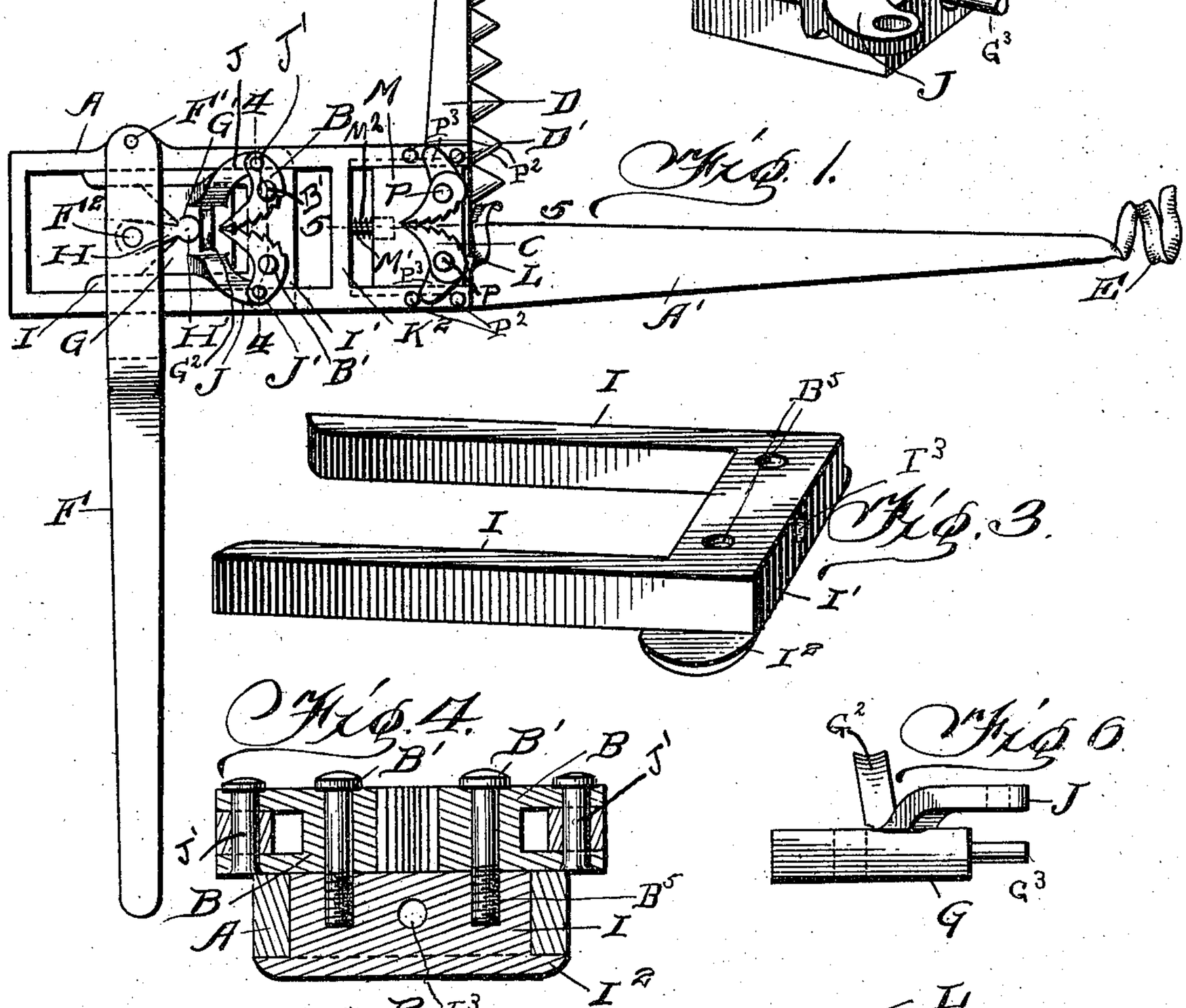


Fig. 3.

Fig. 4.

Fig. 6.

Fig. 5.

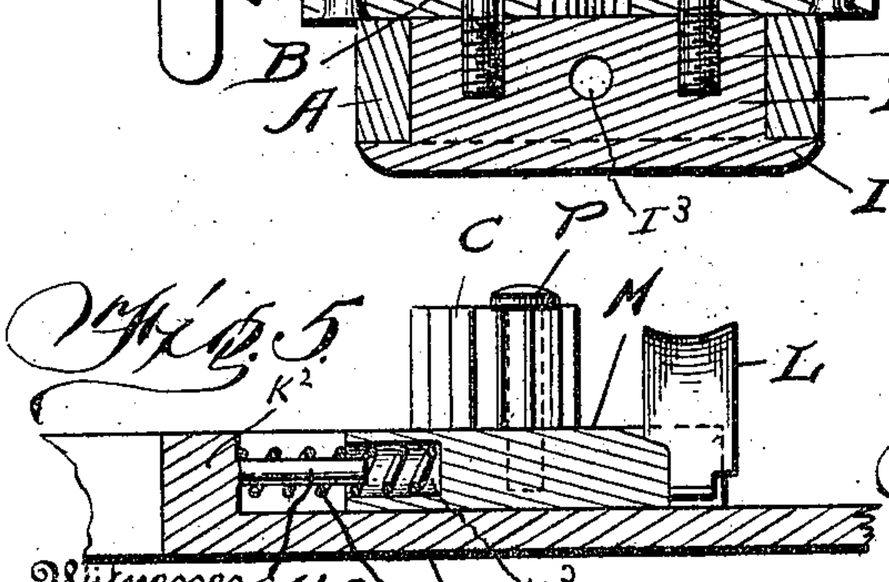
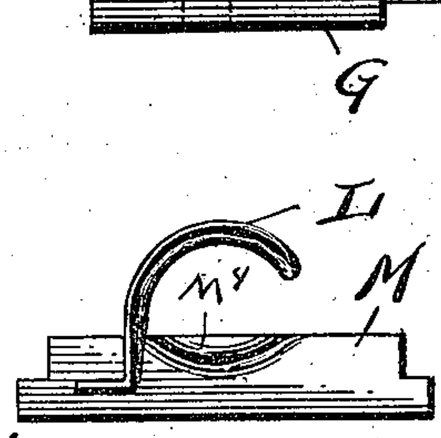


Fig. 7.



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WIRE-STRETCHER.

975,247. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed March 17, 1910. Serial No. 549,976.

To all whom it may concern:

Be it known that we, JOSEPH E. JOHNSON, JOHN M. PERRY, and BYRD MCMAHON, citizens of the United States, residing at Princeton, in the county of Mercer and State of Missouri, have invented certain new and useful Improvements in Wire-Stretchers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in wire stretchers and comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a top plan view of the device showing the parts assembled. Fig. 2 is a detail view of a sliding clamp actuating plate. Fig. 3 is a detail view of a movable clamp carrying plate with the clamps removed. Fig. 4 is a sectional view on line 4—4 of Fig. 1. Fig. 5 is a sectional view on line 5—5 of Fig. 1. Fig. 6 is a detail in elevation of the sliding plate shown in Fig. 2, and Fig. 7 is an end view of an additional clamp carrying plate.

Reference now being had to the details of the drawings by letter, A designates a rectangular outlined frame having an arm A′ projecting from one end thereof and which terminates in a spiral coil E adapted to receive a wire and guide the same through the stretcher apparatus. Said frame A has a lever F pivotally connected at F′ to one side thereof and said lever carries a pin F^2 which is pivotally connected to a link H having a rounded end H′ adapted to engage a similar outlined recess G′ formed in the sliding block G, which latter is adapted to have a longitudinal sliding movement intermediate the parallel arms I, I having laterally projecting lugs I^2 movable against the under edges of the frame A, as shown in Fig. 4 of the drawings and having holes B^5 for the reception of the screws B′. Said block G has a guide pin G^3 projecting from an aperture in one end which pin G^3 is adapted to engage a hole I^3 formed in the member or block I′. Integral with the block G are the curved arms J which project forward in the manner shown in Figs. 1 and 2 and are pivotally connected by means of the pins J′ with the toothed jaws B, each of which is pivotally connected by means of the screw B′ with the member I′, as shown clearly in Figs. 1 and 4 of the drawings. Said jaws B are mounted opposite each other, the teeth of said jaws being adapted to grip and hold a wire while it is being stretched. A curved or arched projection G^2 upon the block G serves to guide the wire as it is being stretched. Said frame has a cross piece K^2 from which a pin M′, shown in Figs. 1 and 5 of the drawings, projects. A coiled spring M^2 is mounted upon the pin M′ and bears against the cross-piece K^2 and its other end is seated in a hole K^3 formed in the adjacent edge of the movable block or member M, which latter is guided in grooves in the inner edges of the opposite sides of the frame A. The member M recessed away as at M^4 has toothed jaws C mounted upon the pivots P and opposite each other. Lugs P^2 project from the face of the frame A and arranged in pairs, spaced apart, between which integral projections P^3 of the jaws C are disposed so that, as the block M moves back and forth, the jaws C will be caused to move toward or away from each other by the projecting portion P^3 engaging said pins P^2. Projecting from the block M is a curved arm L designed for the purpose of guiding the wire between the clamped jaws C. Projecting laterally from the frame A is an arm D having serrations D′ upon the forward end thereof which are designed to engage a post when the stretcher is in use.

The operation of our invention is as follows:—The wire being fed through the coil E is carried back through and between the two sets of clamping jaws C and B, the arm L serving to guide the same between the jaws. When it is desired to stretch the wire, the lever F is tilted upon its pivot F′, thus causing the block G to be moved backward and with it the jaws B which grip the wire and will pull the latter toward the lever, the jaws C allowing the wire to pass idly between them. When the lever is moved in the opposite direction, the jaws C will frictionally grip and hold the purchase while the lever is being thrown forward to get a new grip.

The serrations D′ serve as means for holding the stretcher securely while the device is being manipulated.

From the foregoing, it will be noted that, by the provision of a stretching device as shown and described, a simple and efficient means is afforded whereby wire strands may be drawn to any desired tension, the purchase being securely held while the lever is operated to regulate the tension.

What we claim to be new is:—

A wire stretching device comprising a rectangular outlined frame, a sliding member mounted between two of the opposite walls thereof, projections upon said member adapted to bear against the face of the frame, a lever pivoted to the latter, said member having integral arms, a block movable between and in contact with said arms and provided with a circular outlined recess in one end, a link pivoted to the lever and having a rounded end swiveled in said recess, laterally projecting arms upon said block, serrated jaws pivotally mounted upon the frame and having pivotal connection with said integral arms, a spring-pressed block mounted between the sides of the frame, lugs longitudinally arranged in pairs upon the latter, a second pair of jaws pivotally mounted upon said spring-pressed block and having each a projection extending between a pair of said lugs, a tongue fastened to said frame, and a serrated bar projecting from said frame.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

JOSEPH E. JOHNSON.
JOHN M. PERRY.
BYRD McMAHON.

Witnesses:
J. R. Donelson,
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