F. E. BEAZELL.

WIRE CLAMP.

APPLICATION FILED MAR. 2, 1917.

1,273,809. Patented July 30, 1918.

Fig. 5.

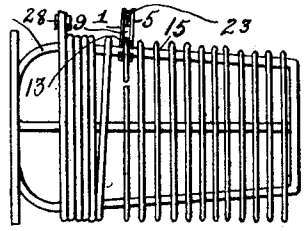
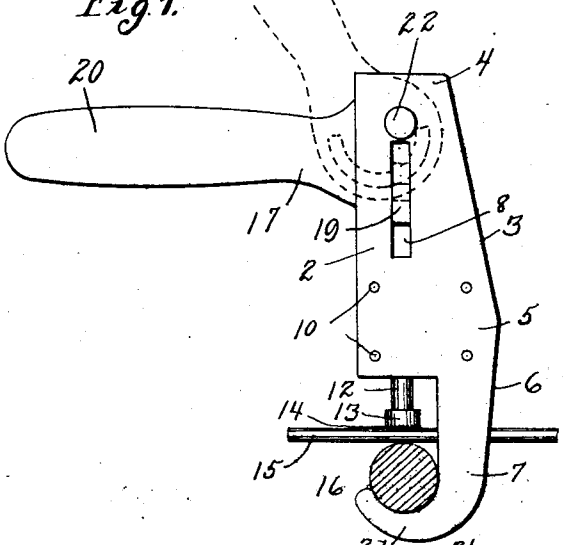


Fig. 2.

Fig. 1.



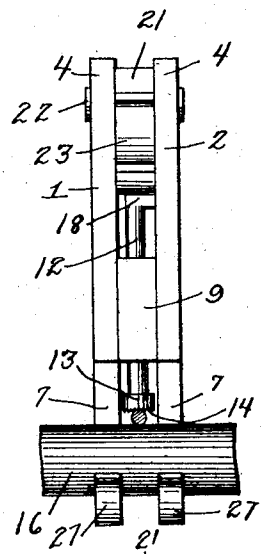


Fig. 3.

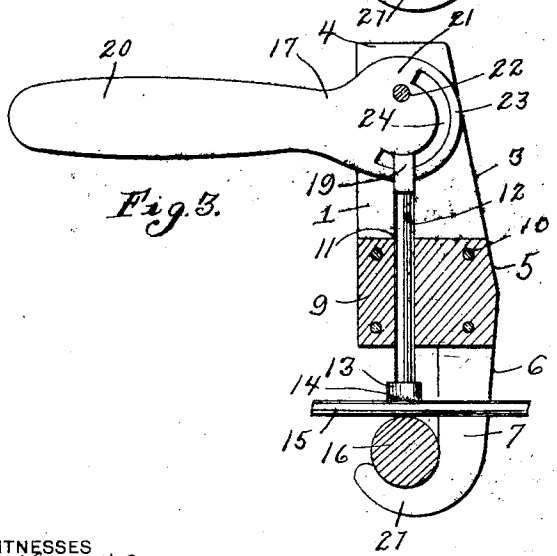
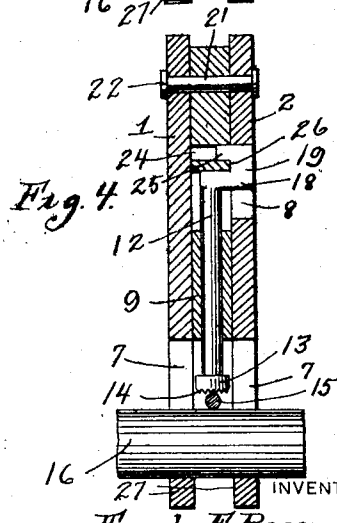


Fig. 4.



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WIRE-CLAMP.

1,273,809. Specification of Letters Patent. Patented July 30, 1918.

Application filed March 2, 1917. Serial No. 152,025.

To all whom it may concern:

Be it known that I, FRANK E. BEAZELL, a citizen of the United States, residing at Speers, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Wire-Clamps, of which the following is a specification.

This invention has reference to means for clamping wire, and its object is to provide a device of this character which is especially adapted for use in a wire mill to engage and clamp a strand of wire to the reel from which several lengths of wire are being unwound and cut.

To this end my invention consists in the construction and arrangement of various parts illustrated in the accompanying drawings and described more fully in the following specification.

In the drawings:

Figure 1 is a view in side elevation,

Fig. 2 is a front view illustrating the manner in which the clamp is attached to a brace rod of a wire reel.

Fig. 3 is a side view, partly in section to disclose the plunger,

Fig. 4 is a sectional view taken through the plunger, and Fig. 5 is a detail view of the clamp and the reel with which it is used.

Referring now more particularly to the drawings, it will be seen that my invention includes a pair of oppositely disposed plates 1 and 2 having each a rear edge 3 which tapers gradually toward the upper end 4, thus narrowing the plates at their uppermost ends, but widening out an intermediate portion such as 5, from which point the rear edges 6 taper inwardly again but in a downward direction as shown to advantage in Figs. 1 and 3 of the drawings. Each plate has a portion of its lower end removed in proximity to the tapering edge 6 to provide hook-arms 7. The plate 2 has further provided an elongated vertically extending opening 8 provided therein, the purpose of which will be hereinafter explained. The plates 1 and 2 are spaced from each other by a block 9 to which the plates are securely fastened by means of four or more rivets or bolts 10.

This block 9 is provided with a vertical extending bore 11 through which is guided a plunger rod 12. To the lower end of the rod 12 is secured a gripping block 13 having teeth 14 provided upon its underface so as to firmly grip the wire strand 15 when the latter is caught between the block 13 and the rod 16. The upper end of the plunger is bent into hook shape whereby it may be attached to the cam lever 17. Although this end of the plunger may be formed in any manner suitable for the purpose, as represented by the drawings it consists of a right-angular extension 18 which is adapted to project through the slot 8 in the said plate 2 and which carries a vertical hook 19 which by its abutment with the upper and lower walls of the slot limits the movement of the plunger through the bore 11.

Between the plates 1 and 2 at their upper ends 4 is the cam lever 17 which has the conventional handle portion 20 and the cam shaped head 21 which is pivotally mounted upon the bolt 22 as indicated. Lying adjacent to the forward or working edge 23 of the cam head and extending in arcuate conformity therewith is a slot 24 into which projects the bill 25 of the plunger hook 19. Upon moving the handle 17 from the position shown in dotted lines in Fig. 1 to the position in full lines the edge 23 of the cam lever, working upon the angle extension 18 of the plunger rod and in the recess 26 thereof will cause the plunger to move downwardly to clamp the wire strand 15 and upon reversing the handle, the action will be otherwise and the wire strand will be released.

The nature and purpose of the clamp will perhaps be more fully understood and appreciated by reference to the particular type of reel to which my clamp is adapted. As shown in Fig. 5, the reel is generally supported in a horizontal position and has the drum portion formed of a plurality of rods 16, about which the wire 15 is wound. The reel tapers toward its outer end so that as the wire is fed thereto over the pulley 28, each coil works toward the smaller end in spaced loose convolutions which may readily be pushed to one side when the clamp is to be attached to one of the reel rods 16. The weight of the handle 20 serves to maintain the plunger rod 12 in constant engagement with the strand 15, and the pressure exerted by this action also serves to clamp the rod 16 to the twin bills 27 of the hook-arms 7, whereby the clamp is also retained in engagement with the wire reel by the same action by which it clamps the wire strand 15.

Although the above presents the preferred embodiment of my invention it is to be understood that various changes and corrections may be made in the construction of my invention and in the proportion, and arrangement of parts as may fall within the scope of the appended claims and without sacrificing any of the advantages thereof.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a wire clamp, the combination with spaced plates having twin hooks at their lower ends and one of them having an upright slot, and a longitudinal guide between said plates and interposed between the hooks and the slot; of a plunger slidably mounted in said guide and having a gripping block at its lower end and its upper end extended laterally into said slot and thence upward therein and thence again inward, a pin through the plates above said slot, and a lever whose head is pivotally mounted on said pin and slotted to produce an eccentric working edge standing between the lateral portions of said plunger, as described.

2. In a wire clamp, the combination with spaced plates having twin hooks at their lower ends and one of them having an upright slot, a block between said plates having a guide, and a cam journaled between the upper ends of said plates; of a plunger movable in said guide and having a gripping block above said twin hooks, the upper end of the plunger having a lateral extension movably mounted in said slot and a hook engaging said cam.

3. In a wire clamp, the combination with spaced plates having twin hooks at their lower ends and one of them having an upright slot, a block between said plates having a guide, and a cam journaled between the upper ends of said plates and having a working edge; of a plunger movable in said guide and having a gripping block above said twin hooks, its upper end having a lateral extension underlying said working edge and projecting into and movable within said slot, and an upstanding hook at the outer end of said extension and provided with a bill overlying said working edge.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. BEAZELL.

Witnesses:
GEORGE GASKILL,
HARRY F. JORDAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."