

D. E. ROWLAND.
WIRE CLAMP.
APPLICATION FILED MAY 13, 1910.

1,052,969.

Patented Feb. 11, 1913.

Fig. 1.



Fig. 2.

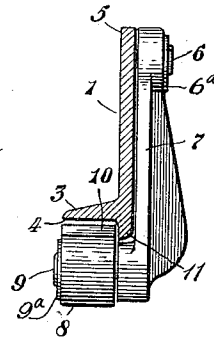
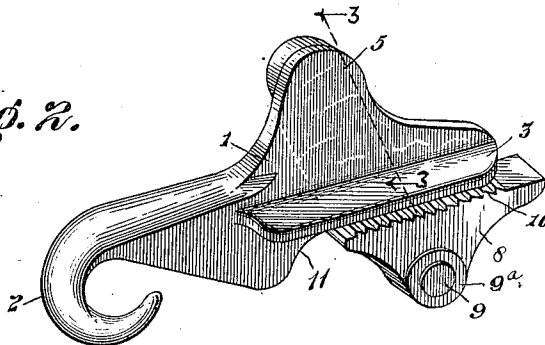


Fig. 3.

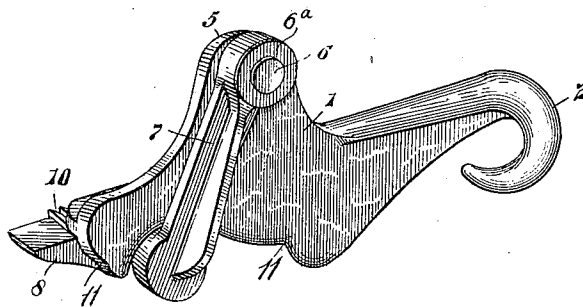


Fig. 4.

Witnesses

J. H. Bishop.
Irene Lutz.

Inventor
David E. Rowland.

By

Bond & Miller

Attorneys

UNITED STATES PATENT OFFICE.

DAVID E. ROWLAND, OF CANTON, OHIO, ASSIGNOR TO THE NEY MANUFACTURING COMPANY, OF CANTON, OHIO, A CORPORATION OF OHIO.

WIRE-CLAMP.

1,052,969.

Specification of Letters Patent.

Patented Feb. 11, 1913.

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To all whom it may concern:

Be it known that I, DAVID E. ROWLAND, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Wire-Clamp, of which the following is a specification.

My invention relates to improvements in wire clamps used for gripping or clamping the end of a fence, telephone, telegraph, clothes line, or other wire to be stretched or drawn up taut, the device however being particularly adapted for stretching wire fence because of the quick and convenient adjustment rendered possible by the construction.

The objects of the invention are to provide a wire clamp which will be strong, durable and positive in operation, readily adjusted to various sizes of wires, and which may be quickly applied to or removed from the wire without the use of tools, the said clamp having no tendency to continue its grip on the wire when effort is made to disengage it, as has been a common defect in clamps heretofore in use. These objects, together with other objects readily apparent to those skilled in the art, I attain by the construction illustrated in the accompanying drawings, although my invention may be embodied in other mechanical forms, the construction illustrated being chosen by way of example.

In the drawings Figure 1 is a view partly in perspective illustrating a wire clamp embodying my invention in use. Fig. 2 is a perspective view of the jaw side of the clamp. Fig. 3 is a transverse section on line 3—3 of Fig. 2. Fig. 4 is a perspective view of the arm side of the clamp.

Throughout the several views similar reference numerals indicate similar parts.

The body portion 1 is provided with means, such as the integral hook 2 for attachment to any desired form of drawing or stretching device, such as a block and tackle, a portion of which is illustrated in Fig. 1. The body 1 is also provided on one side with the stationary jaw 3, the clamping face 4 of which extends outwardly at right angles from the general plane of the body 1 and is plain and straight, running longitudinally and preferably in line with the point of attachment of the drawing or stretching device at the hook 2. On the other side of

the body 1 the integral arm attaching portion 5 extends outwardly in a direction away from and at right angles to the face 4.

To a stud 6 formed integrally with the portion 5 the arm 7 is pivotally connected, the said stud 6, as will appear in the drawings, being a substantial distance away from the face 4 and being nearer that end of the jaw 3 adjacent the hook 2. A washer 6^a is arranged upon said stud 6 and the stud is headed down at the end to hold the washer in place thereon, thus providing a cheap and very substantial attachment for the arm 7. The arm 7 extends across the body 1 to a point beyond the plane of the face 4. The movable jaw 8 is pivotally connected to the arm 7 by the stud 9 formed integrally with said arm, a washer 9^a being arranged upon said stud and the stud being headed down at the end to hold the washer in place. The said jaw 8 is provided with a gripping face disposed opposite the clamping face 4 and preferably provided with teeth 10 in order to more firmly grip the wire. The wire engaging edges of the teeth 10, it will be noted, are arranged in alinement and the gripping face of said jaw lies intermediate the points 9 and 6.

By reason of the pivotal connection as between the body 1 and the arm 7 the stud 9, as the said arm is pivotally moved, will describe an arc of a circle of which the center is the stud 6. The jaw 8, however, is pivotally connected to the arm 7 and the gripping face of said jaw is thus adapted to be maintained parallel to the clamping face 4, in all positions of said arm, by a relative rotary movement as between said arm and jaw. As the said arm 7 with the jaw 8 pivotally moves away from the hook 2 the gripping face of the jaw 8 will move toward the clamping face 4, while at the same time moving away from the stud 6, its movement thus being eccentric with reference to said stud 6. If a wire be placed between the jaws 4 and 8, as illustrated in Fig. 1, the jaw 8 be brought into engagement with said wire, and a draft be made upon the hook 2 in the direction to stretch the wire the frictional contact of said wire against the toothed gripping face of the jaw 8 will cause said jaw to move forward, with its gripping face parallel with the face 4 and in close engagement with the wire, thus causing pivotal movement of the arm 7 upon

the stud 6 and rotary movement of the jaw 8 with relation to the arm 7, thus bringing the gripping face of the jaw 8 into even firmer contact with the wire. The greater 5 the draft upon the hook 2 the more firmly will the jaw 8 grip the wire and clamp it between said jaw and the stationary jaw 3.

It should be noted that the device will readily clamp a variety of sizes of wires 10 without any adjustment of its parts other than the automatic adjustment rendered possible by the pivotal connection of the arm 7 and jaw 8. For this reason the clamp is as well adapted for heavy wires or those 15 composed of a plurality of strands braided or twisted together as it is for smaller wires, the eccentric movement of the gripping face of the jaw 8 with reference to the point 6 being adapted to cause a perfect clamp or 20 grip upon the wire under all circumstances.

It should be noted that the wire is not bent nor kinked by the use of the clamp herein described, as the clamping face 4 being in line with the draft and being plain 25 and straight, will maintain the clamped portion of the wire in a true and straight position and without causing it injury. It should also be noted that when it is desired to disconnect the wire from the clamp all 30 that is necessary is to slacken the draft, thus permitting the jaw 8 to drop away from the wire as it will freely do without the necessity of driving it loose with a hammer or other instrument as has been customary with 35 wire clamps heretofore commonly employed. The plain unflanged clamping face 4 permits the wire to be readily removed from the clamp as soon as the jaw 8 has released its grip.

While the toothed gripping face of the jaw 8 is probably the best adapted for practical use I desire to be unlimited in this respect as it is evident that an otherwise 40 roughened face or even a plain face might well be used in some instances with satisfactory results. Other changes of form and detail of construction may also be adopted 45 without departing from the spirit of the invention.

It should be noted that the body portion 1 extends beyond the clamping face 4 of the jaw 3, producing a retaining flange 11 extending between the jaw 8 and the arm 7 and adapted to guide the movable jaw 8 in its 50 movements and hold it in place even though it should have a tendency to move sidewise

under the heavy strains exerted thereon in stretching wire fences and the like. As will be noted by an inspection of the figures in the drawing the said retaining flange 60 is cut away only sufficiently to permit the arm 7 to freely swing from the open to the clamped position and it will be readily understood that the stud 6 being formed integrally with the body 1, the stud 9 being 65 formed integrally with the arm 7, the arm 7 engaging the outer side of the body 1 and especially the arm attaching portion 5 thereof, and the jaw 8 engaging the flange 11 on the opposite side thereof from 70 that on which the arm 7 is located, a very strong and substantial construction is provided, the parts being very few in number and so arranged as to be well braced against dislocation or bending. It should also be 75 noted that the studs 6 and 9, being formed integrally with the parts 1 and 7 provide a ready and substantial means of connection without the expense of separate rivets or the like and produce a most rigid and mechanically perfect combination. 80

I claim:

A wire clamp comprising a body portion, an integral, unilaterally extending, stationary jaw having a clamping face, an integral 85 arm-attaching portion extending away from and at right angles to said clamping face, an integral retaining flange lying in substantially the same plane as said arm-attaching portion, extending in the opposite 90 direction from said arm-attaching portion and at right angles to said clamping face, an arm pivotally connected to said arm-attaching portion, extending across said arm-attaching portion and said retaining flange 95 on the opposite side thereof from said stationary jaw and a movable jaw pivotally connected to said arm, said movable jaw arranged on the same side of said retaining flange with said stationary jaw and adapted 100 to swing toward and away from said stationary jaw, and said retaining flange extending between said arm and movable jaw and adapted to guide said arm and jaw and prevent lateral displacement thereof. 105

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

DAVID E. ROWLAND.

Witnesses:

WILLIAM H. MILLER,
NILES A. SPONSELLER.