

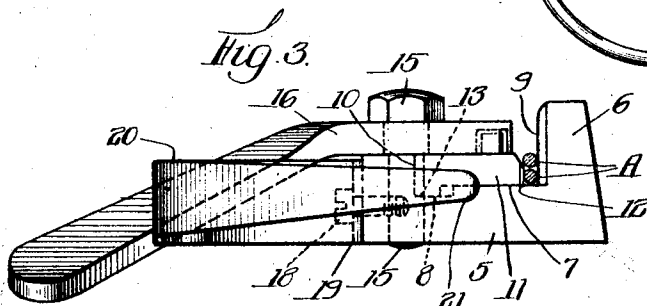
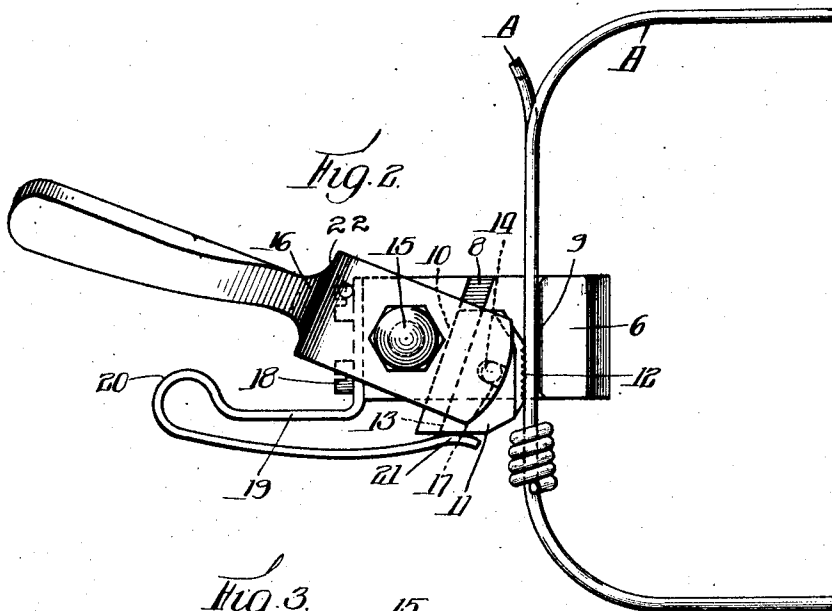
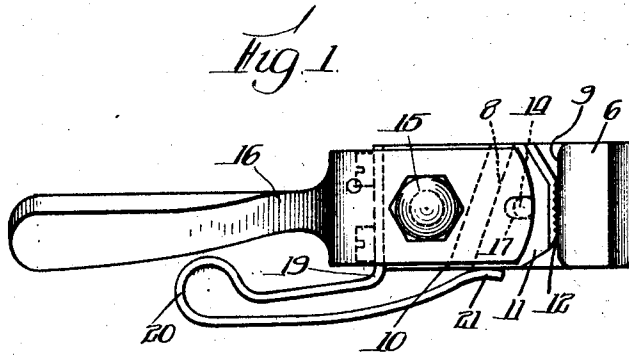
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WIRE CLAMP

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WIRE CLAMP

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This invention relates in general to a wire clamp which may be used separately or in conjunction with another machine or device, and is for the purpose of holding or feeding wire, thin sheets or strips of material, and the like.

The principal object of the invention is in the provision of a gripping device which may be applied or attached to another machine or mechanism for the feeding and holding of wire, thin strips or sheet material, and the like.

Another object of the invention is in the provision of a spring pressed gripper which may be released by means of a handle.

A further object of the invention is in the provision of a spring pressed gripper which moves in a straight line at an angle to the gripping surface.

A still further object of the invention is in the provision of a wire clamp having a removable tension spring of the flat type which is easily removed and applied and exerts a constant attention upon the gripping member.

Other objects of the invention will appear hereinafter, the accompanying drawings illustrating a preferred embodiment of the device.

In the drawings Fig. 1 is a plan view of a wire clamp constructed in accordance with the principles of this invention.

Fig. 2 is a plan view of a wire clamp in engagement with a wire and

Fig. 3 is a side elevation of the wire clamping in the wire clamping position as shown in Fig. 2.

Wire clamps and grippers of various kinds are used separate and in conjunction with other machines and devices, but the present invention relates to a wire clamp which may be made and sold as a separate device and used either alone or as a part of another machine or apparatus.

Referring more particularly to the drawings, a clamping block 5 has a projection 6 at one end, adjacent the projection is a recess 7 with a transverse cut or groove 8 at an angle to the inner face 9 of the projection 6 and forming an inclined shoulder 10.

Fitted in the recess 7 is a gripping mem-

ber 11 having a knurled or gripping edge 12 adapted to be disposed opposite the inner surface 9 of the projection 6 and forming with this surface a pair of jaws between which a wire or wires A are held.

At the opposite portion of the gripping member 11 is a ridge or projection 13 inclined to the gripping edge 12 and adapted to be fitted in the groove 8 of the block 5 with the top of the gripping member flush with the shouldered top of the block.

Extending upwardly from the top of the gripping member 11 is a projection 14 and pivoted to the block 5 by means of a bolt 15 is a lever 16 having an end recess 17 adapted to loosely engage the projection 14 for moving the gripping member 11 transversely of the block 5 and at an angle to the gripping surface of the projection 6 by means of the transverse cut 8. The looseness of the slot permits the gripping member to move toward and from the axis of the lever 16 as it is rotated.

Attached to the end of block 5 by means of screws 18 is a flat spring 19 having a flat rearwardly extending spring loop 20 having a free extremity 21 adapted to bear against the side of the gripping member 11 and tending to press it toward and to engage with the inner surface 9 of the end projection 6 so that when the gripping member is not in engagement with a wire, as shown in Fig. 1 the sides of the gripping member are flush with the sides of the block 5. A top pin 22 projecting from the under side of the lever 16 is adapted to engage the rear end of the block or the spring 19 attached to the block for limiting the rotation of the lever in one direction.

In operation the lever 16 is rotated to separate the gripping surface, 1 or more wires A or other members to be gripped or placed in contact with the inner surface of the projection 6, or they are placed between the gripping surfaces and the action of the spring 19 forces the gripping member 11 into gripping engagement. To release the grip, the lever 16 is rotated in the reverse direction against the tension of the flat spring 19.

With this construction it is obvious that

the block 5 may be applied to another machine or mechanism with minimum effort and trouble and the other parts of the clamp may be attached thereto and easily removed for repair and replacement.

I claim:

1. A wire clamp comprising a pivoted lever and a slidable gripping member, means including a groove for guiding the gripping member in a straight path which varies in distance from the axis of the lever and means connecting the lever and the member for moving the member in its path as the lever is rotated, said connecting means including a pin on the member and a slot in the end of the lever.

2. A wire clamp comprising a block, a lever pivoted to the block, means including a groove forming a transverse guide in the block with its ends at different distances from the axis of the lever, a gripping member slidable in and retained by the groove, the gripping member and lever having a co-operating pin and slot connection for moving the member in the guide as the lever is rotated.

3. A wire clamp comprising a supporting block having a fixed gripping jaw at one end and a transverse guide comprising a groove inclined with respect to the jaw, a gripping member having a portion retained and slidable in the guide and a gripping surface to co-operate with the fixed jaw, means to move the gripping member toward and from the fixed jaw and resilient means attached to the block and bearing against the member tending to press the gripping member into engagement with the fixed jaw.

4. A wire clamp comprising a support having a fixed jaw at one end, an intermediate recess with a transverse guiding groove extending at an angle to the gripping side of the jaw, a gripping member seated in the recess having a portion engaging with groove and having its top surface flush with the top of the supporting member, a lever pivoted on top of the supporting member and extending over the top of the gripping member to hold it in place, a pin and slot connection between the gripping member and the lever for moving the member transversely in the support when the lever is rotated and a spring attached to the support for engaging one side of the member and tending to press it into engagement with the gripping jaw.

5. A wire clamp comprising a block having a gripping jaw at one end, an intermediate recess with a transverse groove inclined to the jaw, a lever pivoted on top of the block, a gripping member seated in the recess with a portion in engagement with the groove and held in place by one end of the lever, means for connecting the gripping member and the lever for moving the gripping member in engagement with the jaw and a flat spring attached to the block having a side loop and

a resilient extremity engaging one side of the member and tending to press it in engagement with the gripping jaw.

6. A structure in accordance with claim 5 comprising a stop pin in connection with the lever for engaging the spring at the end of the block and thus limiting the movement of the lever in one direction.

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