

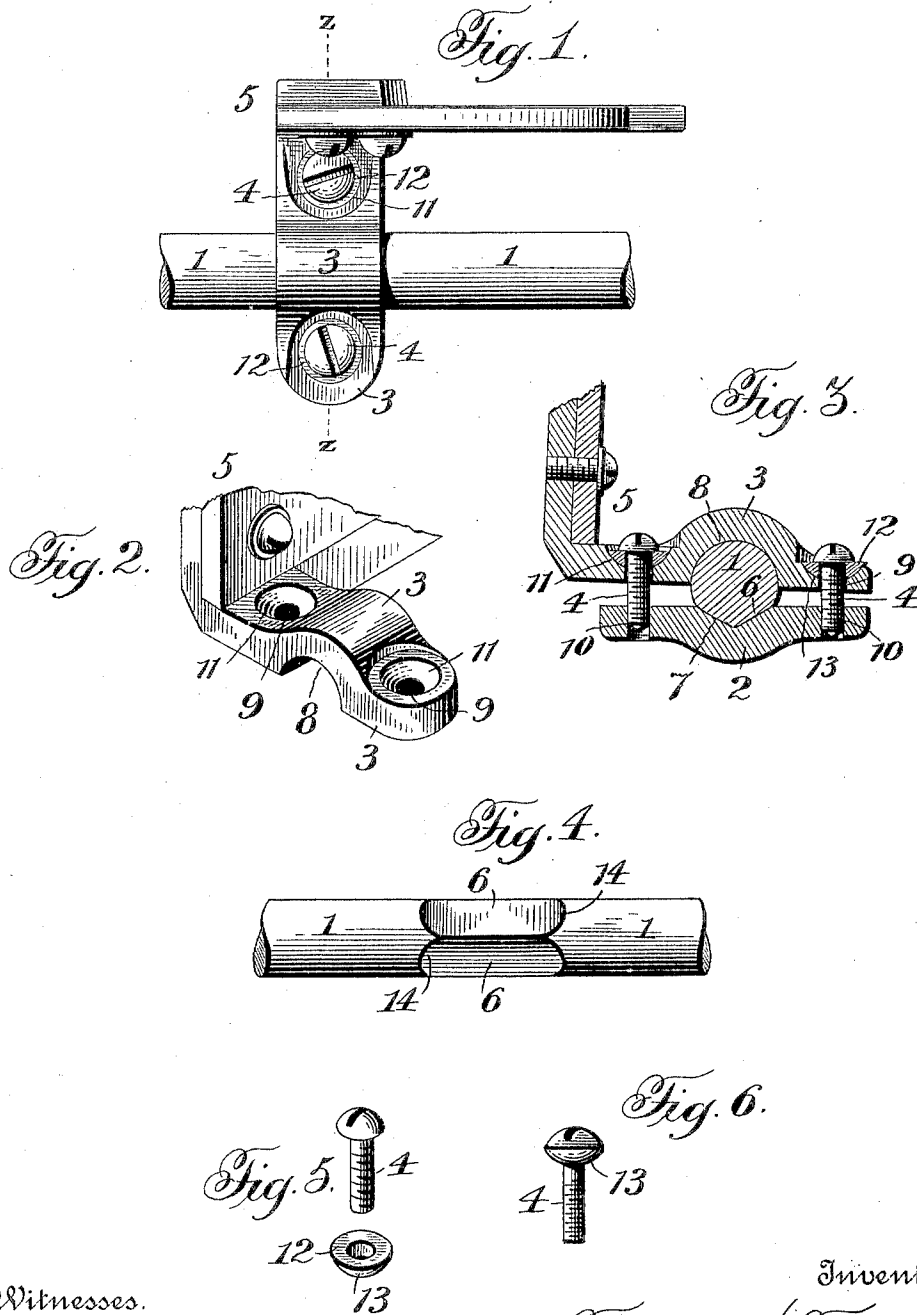
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T. H. FAIRCHILD.

CLAMP.

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Witnesses.
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UNITED STATES PATENT OFFICE.

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CLAMP.

No. 802,203.

Specification of Letters Patent.

Patented Oct. 17, 1905.

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To all whom it may concern:

Be it known that I, THOMAS H. FAIRCHILD, a citizen of the United States, residing at Opelika, in the county of Lee and State of Alabama, have invented certain new and useful Improvements in Clamps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to clamps, and while it is applicable to general use on machinery and elsewhere it is especially adapted to use on textile machinery for the purpose of adjustably securing thread-guides to their supporting means. The means hitherto employed for securing the thread-guides, which permit of adjustment of the inclination of the guides, are not such as will not become misplaced from the proper adjusted positions by constant use.

The primary object of this invention is to provide efficient supporting means adapted for use on any style of thread-guide which will be readily adjustable and which will not be worked from its adjusted positions during long-continued use. For this purpose a clamp is provided which can be adjusted so as to give the guide the proper position to attain the desired results without the use of a set-screw, commonly employed in devices of this character.

A preferable embodiment of the invention as used on spooling-machines is disclosed for purposes of illustration in the accompanying drawings, forming part hereof and reference to which is made hereinafter. It is to be understood, however, that the invention is not restricted to the precise forms shown in the drawings, as various changes can be made in the details of construction without altering the character of the invention.

In the drawings like reference characters refer to corresponding parts in the several views, whereof—

Figure 1 is a top view of the clamp as applied to a guide-supporting rod of a spooling-machine. Fig. 2 is a view of the top member of the clamp. Fig. 3 is a sectional view on the line *z z*, Fig. 1. Fig. 4 is a bottom view of a section of the guide-supporting rod. Fig. 5 is a view of a screw and a washer used with the clamp, and Fig. 6 is a view of another form of screw.

Referring more particularly to the drawings, 1 designates a guide-supporting rod of

a spooling-machine, and 2 and 3 designate clamp members held thereon by screws 4 passing through said members near their respective ends and on each side of said rod, the clamp serving to secure to the rod a thread-guide 5, which is attached to clamp member 3. Rod 1 is made round in cross-section and on the bottom at intervals to suit the spacing of the machine of which it is a part is milled to an angular shape, as indicated at 6, and left round on top. Clamp member 2 is formed with a transverse recess 7, angular to conform to angular formation 6 of rod 1, which angular part is adapted to seat in said recess. Clamp member 3 is formed with a transverse recess 8, rounded to conform to the rounded formation of rod 1, said clamp member being thereby adapted to rock on said rod. The clamp members 2 and 3, with their respective transverse recesses 7 and 8, are so formed that when they are clamped upon rod 1 by means of screws 4 there will normally be considerable space between said members. The member 3 is provided near each end with apertures 9 for the passage of screws 4, and member 2 is provided near each end with screw-threaded apertures 10, arranged to register with apertures 9 for the reception of screws 4. Apertures 9 are made sufficiently large to permit a certain amount of play therein by screws 4, and they are countersunk in a rounded or dish form, as shown at 11. A washer 12, rounded on its under surface, as shown at 13, to conform to the rounded countersink 11, is used with each of screws 4, such as are shown in Fig. 5, said washers being seated in said countersinks. The washer 12 and countersink 11 afford a bearing-surface which is self-adjustable to the head of each screw as the angle of member 3 is changed during the process of adjusting the guide, the washer rocking in the countersink during this operation.

In Fig. 6 there is shown another form of screw which may be used with the rounded countersink, the under part 13 of the head of the screw being rounded to conform to the countersink. When such a screw is used, the washer 12 is dispensed with, as the head of the screw itself is adapted to rock in the countersink.

When it is desired to adjust thread-guide 5 with respect to the supporting-rod 1, one of screws 4 is turned so as to draw the end of clamp member 3 toward the corresponding

end of clamp member 2 on one side of the rod and the other of said screws is turned so as to permit the other end of member 3 to be moved away from the other end of member 2. During this operation member 2 does not rock with respect to rod 1, being held against such movement by angular part 6, which seats in angular recess 7; but the movement takes place in member 3, which carries the guide 5 and which rocks on the rod, and thereby changes the angle of the guide with respect thereto. The screws 4 are turned so as to tightly hold the clamp members 2 and 3 to rod 1, and when so held the guide will remain in its desired position. The guide is not susceptible of turning movement with respect to the rod, because of the milled portion 6 and recess 7 and because of friction of the clamp members on the rod, and is prevented from longitudinal movement along the rod by the friction of the clamp members thereon and also by the engagement of an edge of member 2 against the beveled surfaces, as indicated at 14, between the angular and rounded portions of the rod.

While a supporting-rod milled to an angle on one side at intervals is shown, a rod milled to an angle on one side its entire length may also be used with the clamp when desired.

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

1. In combination with supporting means, a clamp comprising a member having an angular recess therein for engaging an angular portion of the supporting means, another member arranged to rock on said supporting means, and screws passing through said members on either side of said supporting means whereby said members are bound to said means.

2. In combination with supporting means, a clamp comprising a member having an angular recess therein for engaging an angular portion of the supporting means, another member having a rounded recess therein and arranged to rock on said supporting means, and screws passing through said members on either side of said supporting means whereby said members are bound to said means.

3. In combination with supporting means, a clamp comprising members arranged to engage said supporting means, one of said members having an angular recess therein in which a correspondingly-angular portion of said supporting means is arranged to seat, and another of said members being arranged to rock on said supporting means, and screws passing

through said members on either side of said supporting means whereby said members are bound to said means.

4. In combination with supporting means, a clamp comprising members arranged to engage said supporting means, one of said members having an angular recess therein in which a correspondingly-angular portion of said supporting means is arranged to seat, and another of said members having a rounded recess therein and being arranged to rock on said supporting means, and screws passing through said members on either side of said supporting means whereby said members are bound to said means.

5. In combination with supporting means, a clamp, comprising a member having an angular recess therein for engaging an angular portion of the supporting means, another member arranged to rock on said supporting means, screws adjustably holding said members to said supporting means, and means whereby the bearing-surfaces for the heads of said screws are automatically adjusted during adjustment of said clamp.

6. In combination with supporting means, a clamp, comprising a member having an angular recess therein for engaging an angular portion of the supporting means, another member arranged to rock on said supporting means and having therein rounded countersinks, and screws adjustably holding said members to said supporting means and the heads of which are provided with bearing-surfaces arranged to conform to said countersinks.

7. In combination with supporting means, a clamp, comprising members arranged to embrace said supporting means, screws adjustably holding said members to said supporting means, and means whereby the bearing-surfaces for the heads of said screws are automatically adjusted during adjustment of said clamp.

8. In combination with supporting means, a clamp, comprising members arranged to embrace said supporting means and one of which is provided with rounded countersinks, and screws adjustably holding said members to said supporting means and the heads of which are provided with bearing-surfaces arranged to conform to said countersinks.

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

THOMAS H. FAIRCHILD.

Witnesses:

H. H. McCall,
Jno. F. Fairchild.