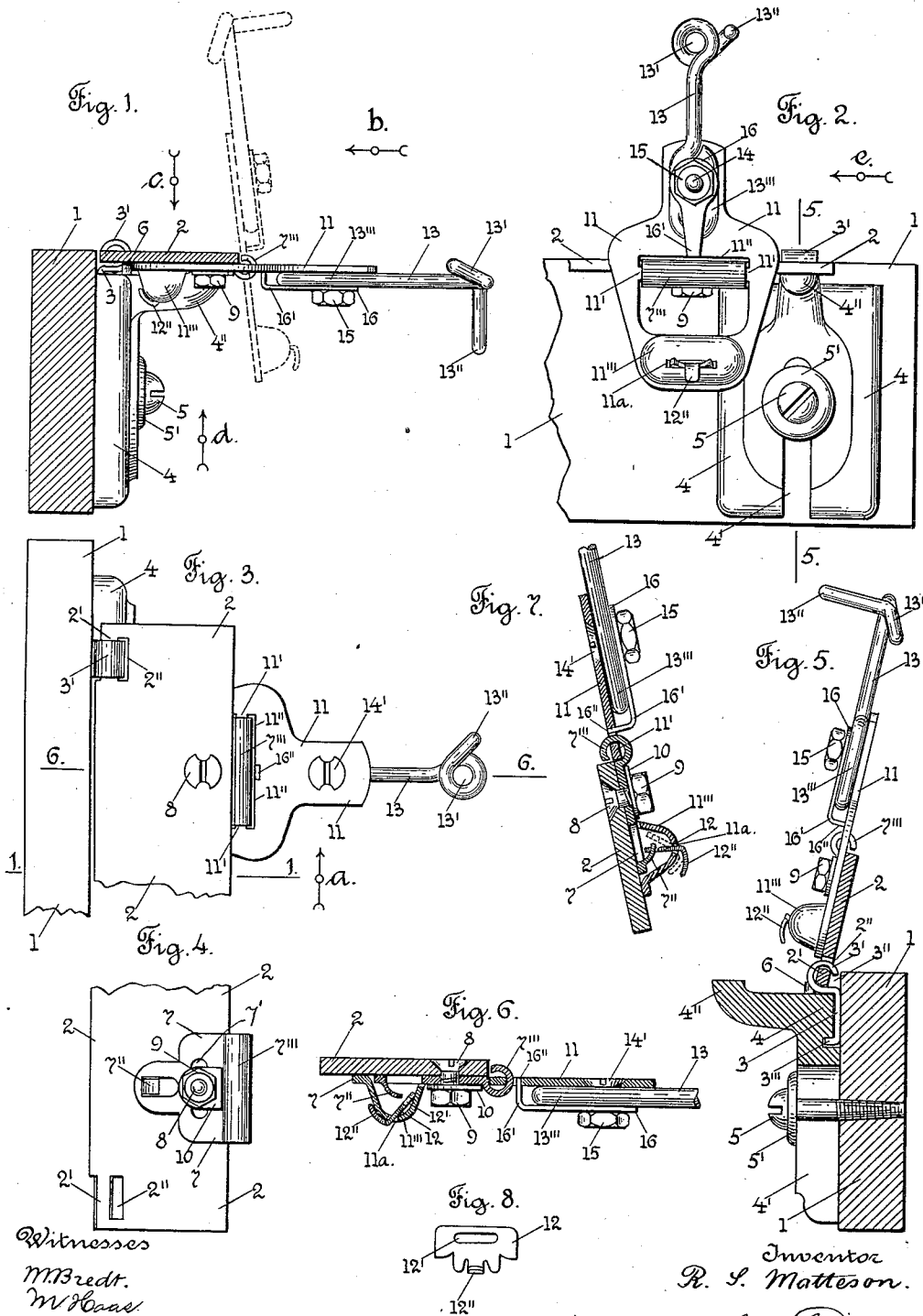


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 THREAD GUIDE SUPPORT FOR SPINNING OR TWISTING MACHINES.
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THREAD-GUIDE SUPPORT FOR SPINNING OR TWISTING MACHINES.

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To all whom it may concern:

Be it known that I, RUFUS S. MATTESON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Thread-Guide Supports for Spinning or Twisting Machines, of which the following is a specification.

My invention relates to thread guide supports for spinning or twisting machines, and the object of my invention is to improve upon the construction of thread guide supports as now ordinarily made.

My invention consists in certain novel features of construction of my improvements as will be hereinafter fully described.

In my improvements in thread guide supports for spinning or twisting machines, I preferably make the thread board, and the finger heads, hinged thereto, of metal. The thread board is preferably provided with slots or openings therein, which, in connection with metal straps, form the hinged connection between said board and the roller beam, to which said hinged board is attached. A block or plate, adjustably secured upon the front of the stationary board, acts to secure the strap part of the hinge to the stationary board, and also acts as a rest for the thread board. I provide a supplemental attachment or device, combined with the hinged thread board, and with the hinged finger head carrying the thread guide, by means of which the finger heads are automatically locked to the hinged thread board, when said hinged board is raised to its upright position, but are unlocked from the hinged thread board when said board is in its lowered normal position, leaving the finger heads free to be raised and lowered independently of the hinged thread board, all as will be herein described.

Referring to the drawing:—Figure 1 is a section, on line 1, 1, Fig. 3, looking in the direction of arrow *a*, same figure. The broken lines show the finger board carrying the thread guide in its raised position. Fig. 2 is a front view of the parts shown in Fig. 1, looking in the direction of arrow *b*, same figure, with the finger head, carrying the thread guide, in its raised position, shown by broken lines in Fig. 1. Fig. 3 is a plan view of the parts shown by full lines in Fig. 1, looking in the direction of arrow *c*, same

figure. Fig. 4 shows the underside view of one end of the thread board detached, looking in the direction of arrow *d*, Fig. 1. Fig. 5 is a section, on line 5, 5, Fig. 2, looking in the direction of arrow *e*, same figure, and showing the thread board, and the finger head hinged thereto and carrying the thread guide, in their raised position. Fig. 6 is, on an enlarged scale, a central section through the thread board, and finger head, on line 6, 6, Fig. 3, looking in the direction of arrow *a*, same figure. Fig. 7 corresponds to Fig. 6, but shows the parts shown in Fig. 6, in their raised position, with the finger head locked to the thread board, and, Fig. 8 shows the lock latch, detached.

In the accompanying drawing, 1 is the roller beam or bar to which the thread board 2 is hinged. The thread board 2 is preferably made of sheet metal, and has at each end thereof, and intermediate the ends, slots or openings 2'' therein, and the part 2' back of said slot 2'' preferably has its edges rounded, and forms an integral bar or pin-
tiple, or one member of the hinge joint. Combined with the pintle or hinge member 2', is a plate or strap 3, preferably of metal, see Fig. 5, which has its upper end 3' of rounded shape, with an opening 3'' therein, for the passage of, and to loosely receive the pintle 2'. The strap 3 forms the second member of the hinge connection for the thread board 2, and is preferably secured to the roller beam 1 by means of a separate and independent adjustable block or plate 4, which is undercut upon its inner surface, as shown in Fig. 5, to receive the strap 3, said strap preferably having its lower end bent or hook shape as shown at 3''' in Fig. 5.

The adjustable block or plate 4 has a vertically extending longitudinal recess or slot 4', through which extends a screw or bolt 5, having in this instance a washer 5' thereon. The screw 5 is screwed into the stationary board 1, as shown in Fig. 5, and secures the block or plate 4 to said board. By turning out the screw 5, the block or plate 4 may be raised or lowered or adjusted in a vertical plane as desired, and secured in its adjusted position.

The plate or block 4 has an extension or arm 4'' thereon, see Figs. 1 and 5, which forms a rest or support to hold the thread board 2, when in its lowered horizontal position, as shown in Fig. 1. The block or plate 4 has in this instance a projection 6 on

its upper edge, which, when the thread board 2 is raised to its upright position, acts as a stop, when engaged by the lower edge of said board.

5 The thread board 2 has upon its lower side a metal plate 7, which in this instance has an elongated slot 7' therein, through which loosely extends the shank of a bolt or screw 8. The head of the screw 8 is in this instance made of irregular shape, as shown in 10 Fig. 3, and extends into a corresponding irregular shaped recess in the upper side of the thread board 2, to prevent the turning of said screw. A nut 9 on the lower end of 15 the screw 8, when screwed up against a washer 10 on said screw, secures the plate 7 on the underside of the thread board 2.

On the inner lower side of the plate 7 is a lug or projection 7'', see Figs. 4 and 6, 20 which is preferably integral with said plate, and struck up therefrom. The front edge of the plate 7 is made of curved shape, as shown at 7''', Fig. 6, and forms one member of the hinge joint, between the thread board 2 and the finger head 11. The curved edge 25 7''' is made open to receive the edge of the finger head 11.

The finger head 11 is made of metal, and preferably of the shape shown in Fig. 2, 30 with a central opening therethrough to receive the plate 7, and having a bar 11' formed on the finger head 11, and a slot or recess 11''. The bar 11' extends within the curved end 7''' of the plate 7, and forms the 35 second member of the hinge joint, between the thread board 2 and the finger head 11.

The finger head 11 has on its inner end the cup portion 11''', see Fig. 2, and sectional view, Fig. 6. The cup portion 11''' 40 forms a recess or cavity within the inner end of the finger head 11, and within said cavity is a latch 12 which has a pivotal movement within said cavity. The latch 12 consists in this instance of a plate 12, see 45 Fig. 8, having an elongated slot 12' therein, and a projection 12'' thereon, extending through an opening 11^a in the cup part 11''', forming an engaging part for moving the latch 12, to connect it with, or disconnect 50 it from the lug 7'' on the plate 7.

The thread guide 13 is made of wire, and has the eye 13' on its outer end, and the downwardly extending free end 13''. The inner end of the thread guide 13 has a loop 55 13''' thereon, through which extends a screw 14. The screw 14 has in this instance the irregular shaped head 14', which fits into an irregular shaped opening in the finger head 11, see Fig. 3. On the inner end of the 60 screw 14 is a nut 15. On the nut 15 is in this instance a washer 16, having a tail or extension 16' thereon, with a bent or hooked end 16'', see Fig. 7, which extends into an opening in the finger head 11. The thread 65 guide 13 is moved in or out on the finger

head 11, by loosening the nut 15 on the screw 14 in the usual way.

From the above description in connection with the drawing, the operation of my improved thread guide support will be readily 70 understood by those skilled in the art.

When the thread board 2 and finger head 11 are in their lowered position, as shown in Fig. 6, the latch 12 is so made, that it will automatically assume and remain in the 75 position shown in Fig. 6, that is disconnected from the lug 7'' on the plate 7 on the thread board 2. In this position the finger head 11 is free to be raised on its hinged joint, independently of the thread board 2, 80 as shown by broken lines in Fig. 1. When the thread board 2 is raised, as shown in Fig. 7, the latch 12 will automatically drop into the position shown by full lines in said Fig. 7, and the elongated slot 12' thereon 85 will drop over and engage the projection 7'' on the plate 7 on the thread board 2, and act to connect or lock the finger head 11 to the thread board 2, and prevent its being moved independently of the thread board 2, 90 when said thread board is in its raised position, except the operator, through the projection 12'' on the latch 12, moves said latch to disconnect it from the projection 7'', as 95 shown by broken lines in Fig. 7.

The advantages of my improvements will be readily appreciated by those skilled in the art. When the thread board is raised from its lowered position to its upright position, 100 all of the finger heads will be raised with the thread board, and automatically locked thereto. When the thread board is in its lowered position, any one of the finger heads is free to be raised and lowered on its 105 hinged connection, independently of the thread board.

It will be understood that the details of construction of my improvements may be varied if desired.

Any form of latch or catch device for 110 automatically connecting the finger head with the thread board, when the thread board is raised, and disconnecting it when the thread board is lowered, may be used in 115 place of the form of latch shown in the drawing.

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

1. In a thread guide support for spinning 120 or twisting machines, the combination with the stationary roller beam, of a metal thread board having slots or openings therein with a bar forming one member of a hinge joint, a metal strap, having a curved or hook 125 shaped end, forming the other member of the hinge joint, and an adjustable block or plate for securing said strap to said stationary roller beam, and also forming a support 130 for the thread board in its lowered position,

and having a projection thereon, to be engaged by the thread board, to act as a stop to engage the inner edge of the thread board and limit the upward movement thereof.

5 2. In a thread guide support for spinning or twisting machines, the combination with the hinged thread board, of a finger head hinged thereto, and means for automatically locking said finger head to said thread
10 board, when the thread board is raised.

3. In a thread guide support for spinning or twisting machines, the combination with the hinged thread board, of a finger head hinged thereto, and free to be raised or lowered, when said thread board is in its normal lowered position, and automatically
15 locked to the thread board, to be held rigid relative thereto, when said thread board is in its raised position, and means for automatically locking said finger head to said
20 thread board, said means adapted to be manually operated to unlock said finger head from said thread board.

4. In a thread guide support for spinning
25 or twisting machines, the combination with the hinged thread board, and a plate secured thereto, and having a curved or hook

shaped outer edge, forming one member of a hinge joint, of a finger head having an opening therein, and a bar adapted to enter
30 said curved or hook shaped edge, and form the second member of the hinge joint, between the thread board and the finger head, and a thread guide adjustably secured to
35 said finger head.

5. In a thread guide support for spinning or twisting machines, the combination with the hinged thread board, and a plate adjustably secured thereto, and having a curved or
40 hook shaped outer edge, forming one member of a hinge joint, of a finger head, having a bar thereon adapted to enter said curved or hook shaped edge, and form the
45 second member of the hinge joint, between the thread board and the finger head, and means for locking said finger head to said thread board, when said thread board is raised, and a thread guide, adjustably secured to said finger head.

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