(No Model.)

H. ROBINSON.

ATTACHMENT FOR MORTISING MACHINES.

No. 490,502. Patented Jan. 24, 1893.

Fig 1

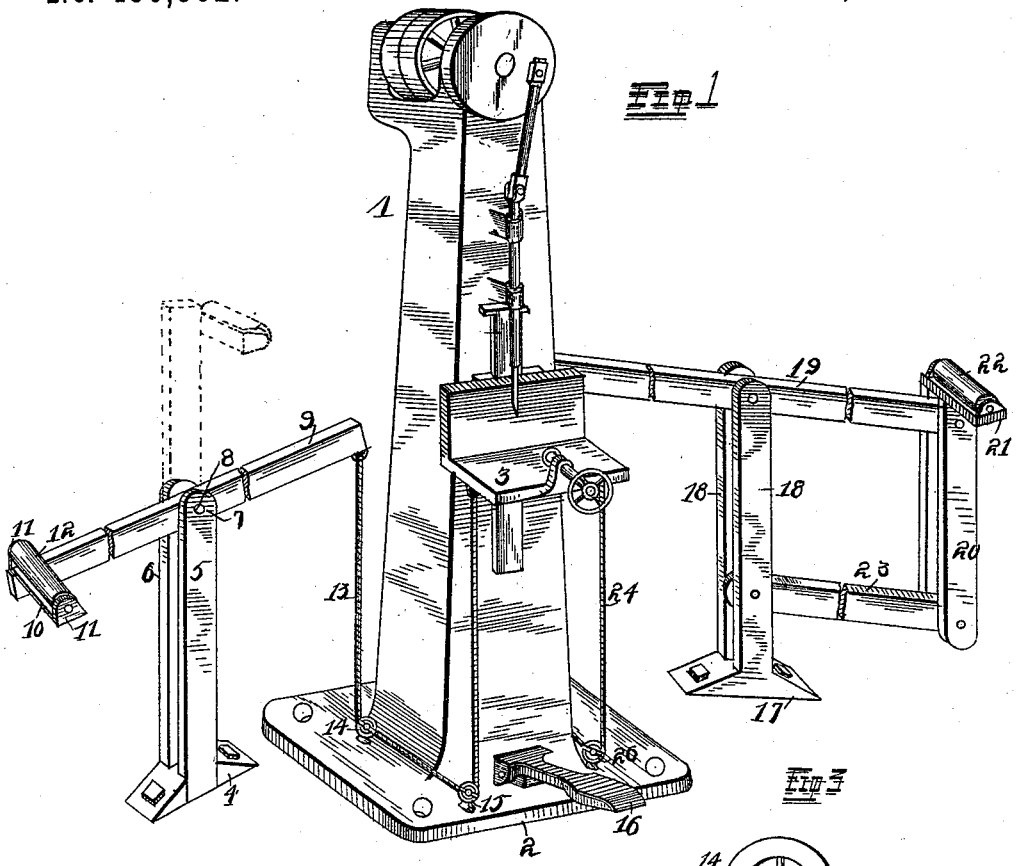


Fig 3

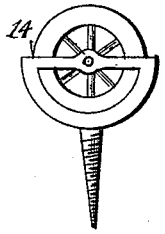
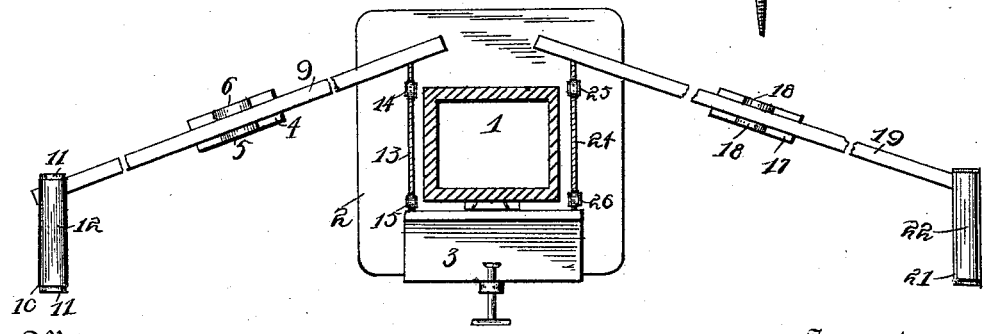


Fig 2



Witnesses

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HARRY ROBINSON, OF ST. LOUIS, MISSOURI.

ATTACHMENT FOR MORTISING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 490,502, dated January 24, 1893.

Application filed June 20, 1892. Serial No. 437,334. (No model.)

To all whom it may concern:

Be it known that I, HARRY ROBINSON, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Attachments for Mortising-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "attachment for mortising machines," and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and designated in the claims.

The object of my invention is to construct an attachment which may be either applied to mortising machines already in use or in the course of manufacture, and which are adapted when in use to act as a rest for long timbers which are being mortised upon the table of the machine. These attachments when not in use, may be folded up and are thus placed out of the way of the operator.

In the drawings: Figure 1 is a perspective view of a mortising machine with my invention applied thereto. Fig. 2 is a top plan view of my attachment taken on a line *x x* of Fig. 1. Fig. 3 is a side elevation of the pulley-wheel that I preferably use, and which forms a part of my invention.

Referring to the drawings: 1 represents an ordinary mortising machine, secured by its base 2 to a suitable foundation. It is provided with a table 3 such as is ordinarily attached to the mortising machines and which travels in a vertical direction.

I will first proceed to describe the figure shown in the left hand of Fig. 1. It consists of a base 4 with two upright supporting pieces 5 and 6 mortised therein, and provided near the top with transverse perforations 7, which receive a pivot 8, on which a balancing lever 9 is mounted at its center. The inner sides of the upright pieces 5 and 6 form a bearing for the lever 9. The outer end of said lever has secured upon its upper edge a projecting piece 10 set at right angles with the side thereof and having projections 11 upon its end into which a roller 12 is pivoted. To the inner end of said balancing lever 9, and preferably on its under side is secured a rope 13 which runs downward and through a pulley 14 secured in the base 2, transversely across said base 2, and through a pulley 15 upward to the table to which it is secured in a suitable and mechanical manner. The vertical reciprocating motion applied to the table 3 by the movement of the foot-treadle 16 by means of the foot of the operator applies a similar movement to the balancing bar 9 by means of the rope 13 connected with said table and the balancing bar.

In operation the roller 12 upon the outer end of the balancing bar 9 is in alignment with the table 3, and with either movement of the table the roller moves simultaneously by reason of the automatic connection between the balancing bar 9 upon which the roller 12 is secured, and the reciprocating table 3.

I will now proceed with the description of the attachment shown at the right hand of Fig. 1, and which is intended as a modification upon the simpler form shown at the left hand. It is provided with a similar base 17 with two upright supporting posts 18 mortised therein, and a balancing lever 19 similar to the lever 9 pivoted at their upper ends. Depending from and pivoted to the outer end of said balancing bar 19 are connecting bars 20, which project a short distance above the upper side of said bar 19, and to these ends is secured a block 21 similar to the block 10 hereinbefore described, and upon which a roller 22 is mounted. Pivoted at one end between the two upright posts 18, and at the other end between the free ends of the depending connecting bars 20, is a connecting lever 23. A rope 24 connected to the inner end of the balancing bar 19 passes through pulleys 25 and 26, secured relatively in the base and upward from said pulley 26 to the table 3 to which it is mechanically secured. The operation of this supporting device is similar to the one heretofore described, and by the movement of the table the ropes are correspondingly adjusted, thus keeping the roller 22 in alignment with the table 3 in whatever position said table may be.

Having stated the object and described the parts in detail, of my invention, I will now proceed with its operation. The movement of the table is vertical, and controlled by the treadle 16. When the table is raised the rope

13, passing through pulleys 14 and 15 is drawn up with said table by reason of its connection therewith, the balancing bar 9 has its inner end to which the other end of the rope 13 is secured, lowered, and consequently the outer end of said bar 9, and the roller 12 connected therewith is correspondingly raised the same distance that the table is. When the table is lowered, the rope is allowed to become slack, although this slack is taken up by the weight of the lever 9.

The operation of the modification shown in the right hand of Fig. 1 is the same as the one I have just described and the results obtained from raising and lowering the table are similar.

As I stated before, the object of my invention is to provide an adjustable support for long timbers when they are being mortised upon the table of the machine. But when it is not necessary to have such a support, my device is adapted to be folded up as shown in dotted lines in Fig. 1 which throws the same out of the way of the table.

In the setting of my device, the foundation or base piece is set at an angle directed toward the back of the base, and consequently the balancing lever occupies the same position, so that when the device is folded up the entire construction is entirely out of the way. I may either use one or two of these devices for each machine. The use of same being controlled by the amount of space at hand, and the size of the timbers, which it is the custom of the user to handle.

If desirable a chain may be used in the place of the rope for connecting the balancing bar with the table.

Having fully described my invention, what I claim is,

1. An attachment for mortising machines, comprising a supporting roller means for supporting said roller in alignment with a mortising table and in the same horizontal plane, and means for connecting said supporting roller with said table, whereby said roller is automatically raised or lowered during the respective movement of the latter; substantially as and for the purpose set forth.

2. An attachment for mortising machines, comprising a support, a lever fulcrumed therein and carrying at its outer end a supporting roller adapted to be arranged in alignment with a mortising table and in the same horizontal plane, and means for connecting the inner end of said lever with the mortising table, whereby the supporting roller is automatically raised or lowered during the respective movement of the latter; substantially as and for the purpose set forth.

3. The combination, with a mortising machine provided with a vertically-movable table, of a roller arranged in alignment with said table and in the same horizontal plane, and devices connecting the roller with the table, whereby when the latter is raised or lowered a corresponding movement is automatically imparted to the roller; substantially as and for the purpose set forth.

4. An attachment for mortising machines having a base 4, upright supporting pieces 5 and 6 mortised therein, a balancing bar 9 pivoted at its center thereto, a roller suitably mounted upon the outer end of said balancing bar 9, a rope secured to the inner end of said bar 9, and passing through pulleys 14 and 15 to the table of the machine, and said roller 12 fitted to be kept in alignment with the table 3 by means of the connection between the inner end of the balancing bar 9, and the table 3 by means of the rope 13, substantially as set forth.

5. An attachment for mortising machines, having a base 17, upright supporting posts 18 mortised therein, a balancing bar 19 pivoted between the upper ends of said upright posts 18, depending connecting bars 20 pivoted upon the outer end of said bar 19, their lower ends connected with the upright posts 18 by means of a connecting lever 23, a roller suitably mounted upon the upper projecting ends of the connecting bars 20, and said roller adapted to be kept in alignment with the table 3 by means of a rope 24 passing through pulleys 25 and 26, and connecting the inner end of the bar 19 with the table 3, substantially as set forth.

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

HARRY ROBINSON.

Witnesses:
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