(No Model.)

G. A. METCALF.

SADDLE FOR TOP ROLLS OF SPINNING MACHINES.

No. 405,584. Patented June 18, 1889.

Fig. 1.

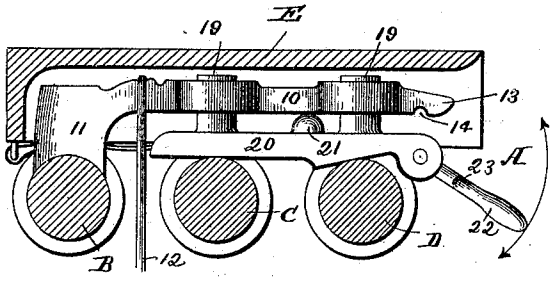


Fig. 2

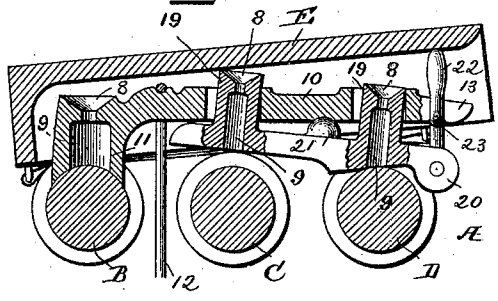


Fig. 3.

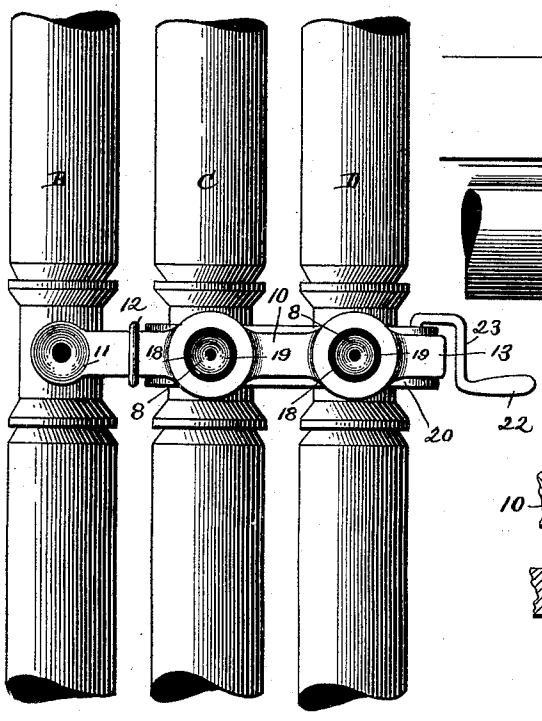


Fig. 4.

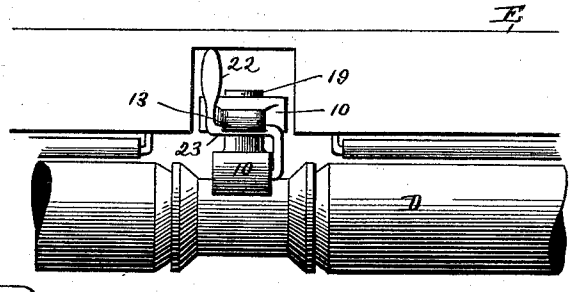
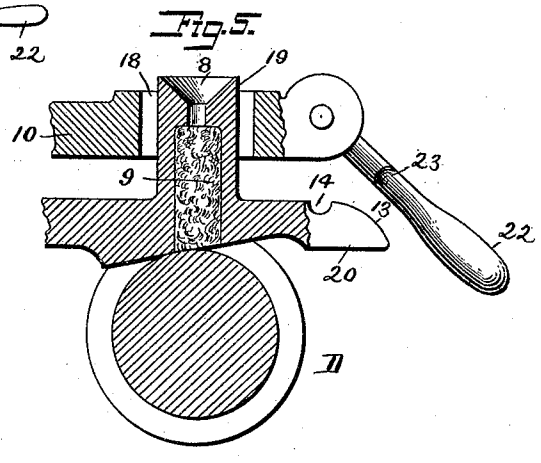


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. METCALF, OF WOONSOCKET, RHODE ISLAND.

SADDLE FOR TOP ROLLS OF SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 405,584, dated June 18, 1889.

Application filed August 25, 1888. Serial No. 283,728. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. METCALF, a citizen of the United States, residing in Woonsocket, in the county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Saddles for Top Rolls of Spinning-Machines, of which the following is a full, clear, and exact description.

This invention relates particularly to that class of devices employed in drawing and spinning frames known as "saddles," and used for the purpose of holding down the top rolls upon the under rolls; and the invention consists, briefly, in a saddle composed of two parts connected together and adapted to be operated, substantially as hereinafter described and claimed, to relieve the pressure of the saddle from the middle roll; and it further consists in certain novel constructions and combinations of parts, also hereinafter fully set forth and claimed.

In the drawings, Figure 1 is a side elevation of the improved saddle in position upon the top rolls and adjusted to bear upon each of them, together with a "clearer" in sectional elevation also in position on the rolls, the latter being likewise shown in section. Fig. 2 is a similar view, the saddle being partly in section and adjusted to relieve its pressure from the middle roll, the clearer being also adjusted from contact with the middle and back rolls. Fig. 3 is a plan view of the saddle and a portion of the rolls, the clearer being removed. Fig. 4 is an end elevation of saddle and clearer when in their adjusted positions. (Shown in Fig. 2.) Fig. 5 is an enlarged vertical transverse section of a portion of the saddle, showing a modification.

In drawing staple of varying lengths it is of great importance to be able to effect a speedy adjustment of the saddle, so that a change may be readily made from two to three rolls, or from three to two rolls, according as the exigencies of the case may require. The present improvement, among other things, is directed to attain this result, whereby loss of time and expenditure of labor are saved.

The saddle A is composed, as usual, of two partially-overlapping sections 10 20, which together are adapted to bear upon the three upper drawing-rolls B C D, pressure being exerted thereby through the medium of the usual stirrup 12, the loop of which rests in notches provided in the upper side of the section 10. The section 10 in the preferred construction is provided with a foot-piece 11, the end of which is adapted to the contour of the journal of the front roll B. The section 20 lies substantially directly beneath the other section, so as to bear against the middle and back rolls C and D, respectively, and is provided with a projection 21, forming a bearing that contacts with the under side of the section 10, and upon which said section 10 bears as the section 20 is adjusted into or out of bearing contact with the middle roll. The ready adjustment of this section 20 is effected by means of a lever 22, pivotally mounted in one end of said section and having a cam or projection 23 adapted to contact with the projecting end 13 of the section 10, and thereby rock the section 20 on its bearing on the journal of the roll D and raising its inner end from bearing contact with the middle roll C, as shown in Fig. 2. The end 13 of the section 10 may be provided with a notch 14, in which a cam or projection 23 of the lever may seat itself and thus insure it remaining in the adjusted position. From this it will be seen that a single movement of the lever 22 in an arc of a circle, as indicated by the double arrow, Fig. 1, will be sufficient to effect the adjustment of the saddle to either free the middle roll from pressure or to bring it into use.

The lever 22 may also be conveniently employed for raising the clearer E from contact with the middle and back rolls C and D simultaneously with the adjustment of the saddle in freeing the middle roll from pressure, and this clearer may be of any suitable or preferred form, that illustrated herein consisting of a rectangular block of wood or framing recessed on its under side, as usual, to receive the saddles and supporting endless bands or belts carried by staples depending from the framing, the bands or belts being adapted, when the clearer is depressed, to rest upon the surface of the top rolls and to remove the fibers therefrom, as is well understood. The normal position of the clearer is shown in Fig. 1, resting in contact with all three of the

rolls. When the lever is rocked into position to free the middle roll, its end may contact with the inner inclined face of the clearer and simultaneously raise it into the position shown in Fig. 2. The lever 22 thus serves the twofold function of freeing the middle roll and raising the clearer from both the middle and the back rolls, and thereby preventing all liability of the weight of the clearer upon the middle roll from stopping it.

In order to render the feeding-orifices for the lubricant of the under section more accessible in the construction set forth, said section 20 is provided with projections 19, bored to provide a chamber 9 for a lubricant absorbent or filter, as sponge, and having at its upper end a feeding orifice 8, the mouth of which is countersunk, as shown, to better guide the lubricant to the orifice.

The projections 19 extend through openings 18, provided in the section 10, and in the preferred construction rise to the surface or a little above the surface of said section, in the normal position of the saddle shown in Fig. 1, so that easy access may be had to the filling-orifices. The openings in the section 10 will be of a size to permit the slight movement of the projections 19, as the position of the saddle is adjusted as before described. A similar chamber 9 may be provided in the footpiece 11, having a filling-orifice 8, so that the contacting portion of the roll B may be properly lubricated.

It is obvious that instead of pivoting the lever 22 to the under section 20 the same result will be effected by pivoting it in the end of the upper section, as shown in Fig. 5.

What I claim is—

1. In a saddle for top rolls, the combination, with a saddle composed of two sections, one overlapping the other, of a lever pivoted to one section and contacting with the other section to raise the inner end of one of the sections from contact with one of the rolls, substantially as described.

2. In a saddle for top rolls, the combination of a saddle composed of two sections, one overlapping the other, a bearing projection on one of the sections contacting with the other section, and a lever pivoted to one section and contacting with the other section to raise the inner end of the lower section from contact with one of the rolls, substantially as described.

3. The combination of a saddle composed of two sections, one overlapping the other, a bearing projection on the lower section contacting with the overlapping section, a lever pivoted to the outer end of said lower section having a projection for contact with the overlapping section, and a notch in said last-named section, in which the projection may be seated to hold the section in its adjusted position, substantially as described.

4. The combination of the top rolls of a drawing or spinning frame, a clearer for said rolls, a saddle composed of two sections, and a lever pivoted to one of the sections and adapted to contact with the other for simultaneously freeing the middle roll and raising the clearer therefrom, substantially as described.

5. The herein-described saddle for top rolls, composed of two sections, one overlapping the other, the lower one provided with projections extending the lubricating-orifices, and the upper section provided with openings for the passage of the said projections, substantially as set forth.

6. The combination of a saddle composed of two sections, one overlapping the other, the under section provided with projections extending the lubricating-orifices, and the upper section having openings for the passage of said projections, and a lever pivoted to one of the sections and contacting with the other section, whereby the under section is adjusted with respect to the middle roll, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE A. METCALF.

Witnesses:

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TERRANCE MCGINLEY.