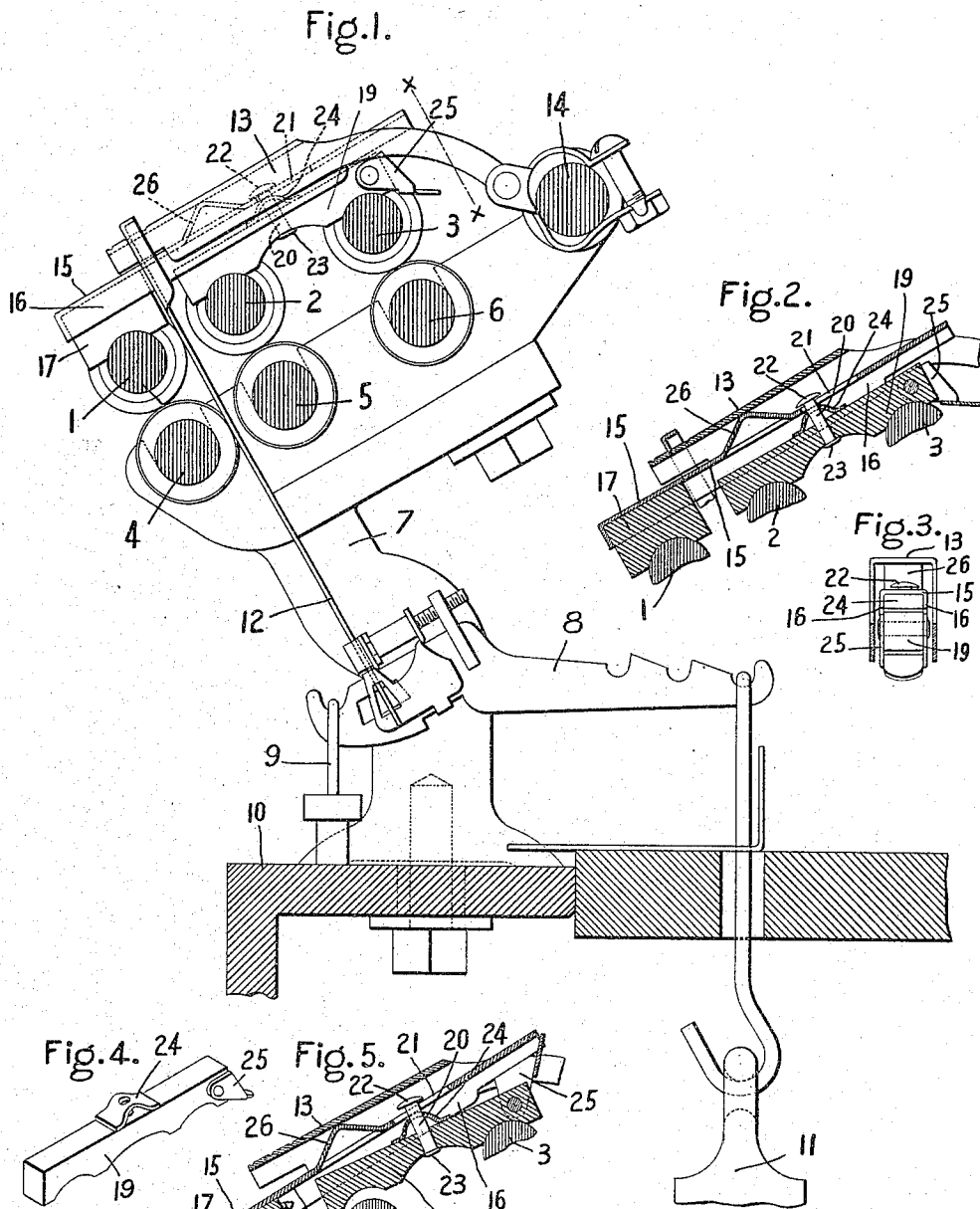


L. T. HOUGHTON,
TOP ROLL SADDLE.

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1,176,756.

Patented Mar. 28, 1916.



Witnesses.
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UNITED STATES PATENT OFFICE.

LEWIS T. HOUGHTON, OF WORCESTER, MASSACHUSETTS.

TOP-ROLL SADDLE.

1,176,756.

Specification of Letters Patent.

Patented Mar. 28, 1916.

Application filed April 7, 1913, Serial No. 759,356. Renewed August 12, 1915. Serial No. 45,256.

To all whom it may concern:

Be it known that I, LEWIS T. HOUGHTON, a citizen of the United States, residing at Worcester, county of Worcester, State of Massachusetts, have invented an Improvement in Top-Roll Saddles, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to top roll saddles and has for its objects to provide a novel top roll saddle which is self-lubricating and thereby dispensing with the necessity of any attention so far as keeping the bearing between the saddle members and the top rolls lubricated is concerned, and which is inexpensive to manufacture, and which has other advantages to be hereinafter pointed out.

In order to give a proper understanding of the invention I have shown in the drawings a selected embodiment thereof, and after describing the same, the novel features will be pointed out in the appended claims.

Referring to the drawings Figure 1 illustrates a portion of a spinning machine and shows my improved top roll saddle in side elevation; Fig. 2 is a longitudinal vertical sectional view through my improved top roll saddle; Fig. 3 is a rear end view of the top roll saddle; Fig. 4 is a perspective view of the under member of the top roll saddle; Fig. 5 is a view similar to Fig. 2 showing the under member adjusted to take the weight from the center roll.

The drawings 1, 2 and 3 designate the upper rolls and 4, 5 and 6 the lower rolls. The lower rolls are journaled in the stand or support 7 which may have any suitable or usual construction.

8 designates the weighted lever which is fulcrumed at one end on the lever eye 9 that is secured to the roller beam 10 and carries at its other end the usual weight 11, said weighted lever being connected to the lower end of the stirrup 12 by which the weight is applied to the top rolls. The stirrup and weighted lever may have any suitable or usual construction, although for the purpose of illustration I have shown it as having the constructional features illustrated in my co-pending application Se. No. 655,685, filed October 20, 1911.

The top roll saddle mechanism herein shown is of that type wherein the weight is applied to the saddle members through an intermediate weight-transmitting member, but the invention is not limited to such a construction and the invention may be embodied in top roll saddles of other types. In the construction herein shown the stirrup 12 is hung from a weight-supporting member 13 which is pivoted to the usual cap bar 14 of the spinning machine. The advantage of this method of weighting the top rolls is that the weight can be applied to the top roll saddle at a point out of line with the stirrup and the weight can be more effectively distributed on the top rolls than with the old method. This particular method of weighting is described more at length in my co-pending application Se. No. 655,685, filed October 20, 1911.

My top roll saddle comprises upper and lower members as usual, the lower member resting on the center and rear top rolls 2 and 3, and the upper member resting on the front top roll 1 and on the lower member. The upper member is formed with a metal body portion 15 which can conveniently be made from sheet metal bent or formed into the desired shape. This body portion is shown as being U-shape in cross section and as having the two side flanges 16 and at the front end thereof a bearing block 17 is inserted between the side flanges 16 and held in place by any suitable means. This bearing block 17 is preferably made of wood treated in oil to make it self-lubricating, and it forms the bearing between the top roll saddle and the front top roll 1. As herein shown the bearing block 17 is held in place by fingers 18 which are struck up from the flanges 16 and forced inwardly to embrace the block.

The under member of the saddle is shown at 19 and it is made of wood treated in oil to render it self-lubricating, it being constructed to rest on the center and rear top rolls 2 and 3. The under member is secured to the upper member by means of a coupling pin 20 which extends down through a slot 21 in the upper member and through the under member. Said pin is provided with a head 22 at its upper end and it may be headed over at its lower end, as shown at 23, to prevent it from being withdrawn from

the under member, or it may have a sufficiently close fit in the aperture through the under member so that it will be frictionally held in place without the necessity of up-
5 setting the lower end.

24 is a bearing member interposed between the upper saddle member and the lower saddle member. This bearing member can conveniently be made from a piece of sheet
10 metal which is bent into an arch-shape, as shown, thereby to provide a fulcruming bearing between the two saddle members. The coupling pin 20 is shown as extending
15 24 thereby holding said member in place. The under saddle member 19 has pivoted to its rear end a cam member 25 by which the under member can be rocked relative to the
20 upper member, as more fully shown in my said co-pending application Se. No. 655,635.

When the cam member is in the position shown in Fig. 2 the under member will rest on both the center and rear top rolls, but
25 by throwing the cam member upwardly into the position shown in Fig. 5, thereby to bring it against the lower edges of the flanges 16, the under member will be rocked to lift the front end thereof from the center
30 top roll. The slot 21 allows for a longitudinal adjustment of the two saddle members to provide for any desired distance between the front top roll and the center and rear
35 top rolls. The upper saddle member has a portion 26 struck up therefrom to form a rest on which the weight-transmitting member 13 is sustained. Said weight-transmitting
40 member is made of sheet metal having a general U-shape in cross section and is adapted to straddle or embrace the top roll saddle, as shown in the drawing. The construction whereby the under member 19 sets
45 into the upper member 15 and whereby the entire top roll saddle sets into the weight-transmitting member 13 provides a very compact construction which takes up very little room.

My top roll saddle can be cheaply made and since the portions thereof which engage the top rolls are formed of wood specially
50 treated in oil the saddle is a self-lubricating one.

While I have illustrated one embodiment of my invention I do not wish to be limited to the constructional details shown.

Having fully described my invention, 55 what I claim as new and desire to secure by Letters Patent is:—

1. In a top roll saddle mechanism, the combination with an upper member formed from sheet metal and having at its front
60 end a bearing for the front top roll, of an under member of wood treated in oil and adapted to bear on the center and rear top rolls, a bearing member interposed between the upper and under saddle members, and a
65 connecting pin extending through the under member, bearing member and upper member for securing them together.

2. In a top roll saddle, the combination with an upper member having a bearing for
70 the front top roll, of an under member of self-lubricating material adapted to bear on the center and rear top rolls, a bearing member interposed between the under and upper saddle members, and a connecting
75 member extending through the upper member, bearing member and under member for connecting them together.

3. In a top roll saddle, the combination with an upper saddle member having a bear-
80 ing to rest on the front top roll, of an under saddle member of non-metallic self-lubricating material adapted to bear on the center and rear top rolls, a rounded bearing member interposed between the upper and under
85 saddle members and constituting a fulcruming bearing for the under member; and a connecting pin extending through the upper member, bearing member and under member.

4. In a top roll saddle, the combination 90 with an upper saddle member having a sheet metal slotted body and provided at its front end with a bearing for the front top roll, of an under saddle member of wood treated in oil adapted to rest on the center
95 and rear top rolls, an arched bearing member interposed between the upper and under saddle members, and a connecting pin extending through the slot of the upper member, through the bearing member and con-
100 nected to the under member.

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

LEWIS T. HOUGHTON.

Witnesses:

HENRY F. HARRIS,
J. OTIS SIBLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."