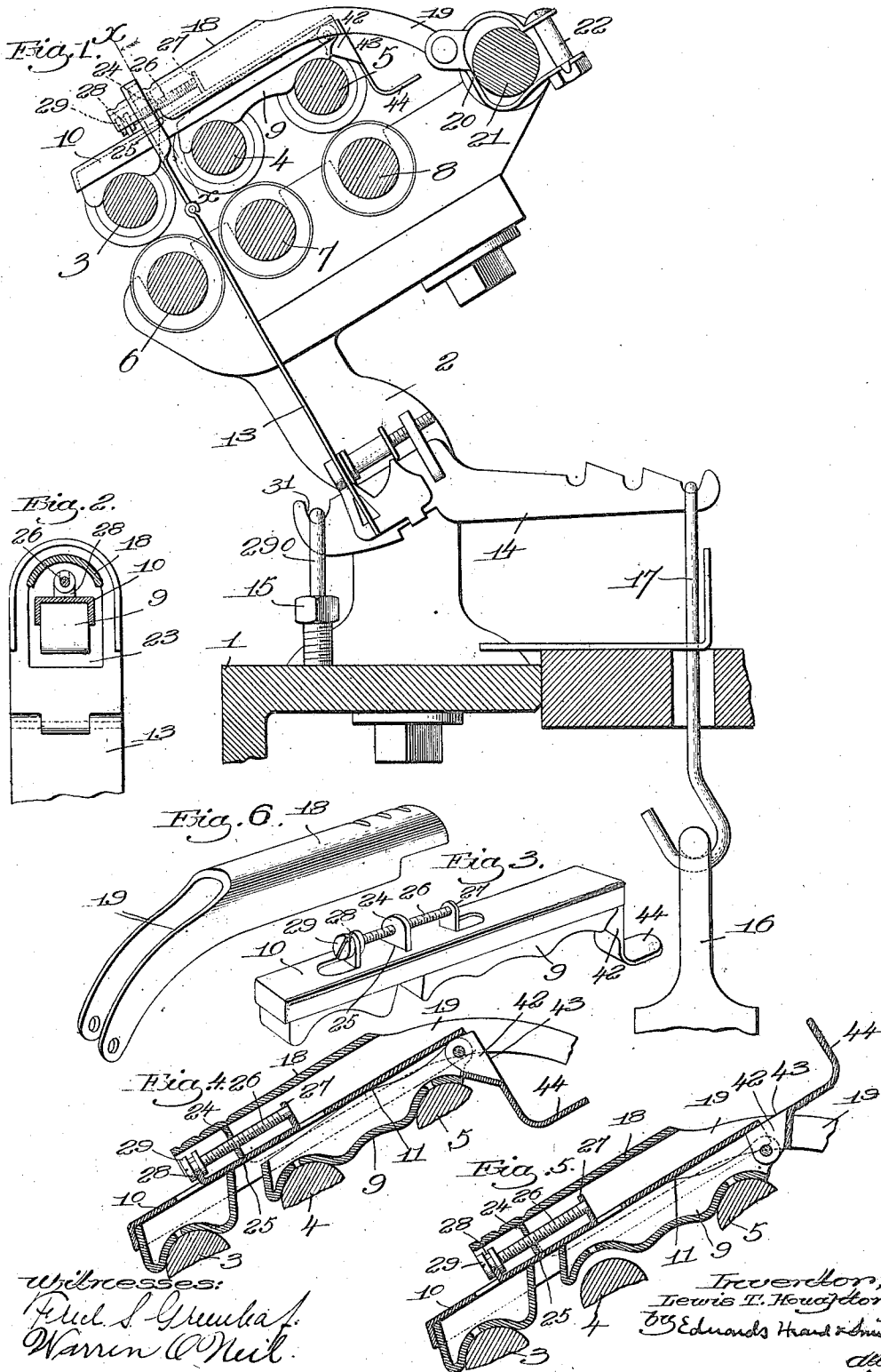


L. T. HOUGHTON.
TOP ROLL SADDLE MECHANISM.
APPLICATION FILED OCT. 20, 1911.

1,238,673.

Patented Aug. 28, 1917.



Witnesses:
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UNITED STATES PATENT OFFICE.

LEWIS T. HOUGHTON, OF WORCESTER, MASSACHUSETTS.

TOP-ROLL-SADDLE MECHANISM.

1,238,673.

Specification of Letters Patent.

Patented Aug. 28, 1917.

Application filed October 20, 1911. Serial No. 655,687.

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-Saddle Mechanism, 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 saddle mechanism and particularly to mechanism of the type wherein the weight of the weighted lever is applied to the top roll saddle through an intermediate or weight-transmitting member which rests loosely on the top roll saddle. The advantages of this construction are that the weight is transmitted to the saddle in a direction at right angles to the plane of the rolls, regardless of the position of the stirrup, and also that the weight can be evenly distributed on the rolls in a way which is not possible where the stirrup is hung directly on the saddle, as has been commonly done heretofore.

One feature of my present invention relates to an improved construction of saddle and weight-transmitting member by means of which the adjustment of the point of application of the weight on the saddle is facilitated.

Another feature relates to a novel construction of top roll saddle having means for relieving the center roll from weight and a tell-tale device which indicates whether or not weight is applied to the center roll.

Still another object is to improve generally top roll saddle mechanism, all as will be more fully hereinafter described and then pointed out in the appended claims.

Referring now to the drawings wherein I have illustrated some embodiments of my invention, Figure 1 illustrates a portion of a spinning machine and shows the top roll saddle and its weighted lever in side elevation and the top rolls in section;

Fig. 2 is an enlarged section on the line $x-x$, Fig. 1;

Fig. 3 is a perspective view of the top roll saddle;

Figs. 4 and 5 are vertical sectional views through the top roll saddle showing the under member in different positions;

Fig. 6 is a perspective view of the weight-transmitting member.

1 indicates the usual roller beam, 2 a stand or support rising therefrom, 3, 4 and 5 the top rolls, and 6, 7 and 8 the under rolls, the latter being journaled in bearings carried by the stand 2 as usual in top roll saddle mechanism. The top roll saddle herein shown comprises an under member 9 which rests on the center top roll 4 and the rear top roll 5, and an upper member 10 which rests on the front top roll 3 and on the under member 9. The under member is shown as made of sheet metal stamped or formed into the desired shape and the upper edges 11 of the sides of the under member on which the upper member rests are rounded so as to provide a rocking engagement between the upper and under member, as will be more fully hereinafter described.

13 designates the stirrup which is shown as extending between the front and center top rolls and which is connected at its lower end to a weighted lever 14 having a notch 15 at its end which fulcrums in the eye 16 of a fulcrum member or lever eye 15 carried by the roller beam and from which a weight 16 is hung by a link 17. Any suitable manner of connecting the stirrup to the weighted lever may be employed without departing from the invention, that herein shown being similar to that which is described and claimed in my co-pending application Se. No. 655,685, filed October 20, 1911. The weight of the weighted lever is transmitted from the stirrup 13 to the top roll saddle through a weight-transmitting member 18 which is made of sheet metal and the body of which is preferably cylindrical in shape and overlies and extends longitudinally of the saddle. Said member is formed with the two legs 19 which are pivotally connected to a clip 20 that embraces the usual cap bar 21 and is clamped thereabout by a suitable clamping bolt 22.

The stirrup 13 is hung on the weight-transmitting member, said stirrup being provided with an aperture 23 through which the top roll saddle and the end of the weight-transmitting member extend. A bearing block is interposed between the weight-transmitting member and the upper member of the saddle. In the present invention, this

bearing block is carried by the saddle and means are provided for adjusting it longitudinally of the saddle without disturbing any of the operative parts. The bearing block is 5 designated by 24 and it will preferably have a flat under edge 25 to rest on the saddle member 10 and a rounded upper edge to fit the under side of the weight-transmitting member 18. This bearing block is screw-threaded 10 onto an adjusting screw 26 which is journaled in ears 27, 28 that are extended upwardly from the saddle member 10. Said ears can be conveniently made by striking up portions of the saddle member. The head 15 29 of the adjusting screw is exposed at the end of the weight-transmitting member 18 so that said screw is always accessible for adjustment without taking the weight off from the saddle or changing the position of 20 any of the parts. By the adjustment of the bearing block 24 the manner of distributing the weight on the various rolls can be varied, as will be obvious.

It is sometimes desirable to take the weight 25 of the under member 9 from the center top roll 4. In the present embodiment I have shown a means for doing this which combines with it a tell-tale to indicate the position of said under member. As shown in Figs. 30 4 and 5 the under member has pivoted on the rear end thereof a cam device 42 having the flat face 43 and the finger 44. When this cam device is thrown into the position shown in Figs. 1 and 4, it does not contact with the 35 under side of the upper saddle member and the under saddle member 9 will, therefore, rest on the front and center top rolls. When the finger is swung upwardly into the position shown in Fig. 5, however, the under 40 saddle member is turned relative to the upper member thereby to lift said under member off from the center roll, and the engagement of the flat face 43 with the under side of the upper saddle member will hold the parts in 45 this position. In such position the finger 44 stands upright and furnishes an indication as to the position of the under member.

While I have herein illustrated one embodiment of my invention, I do not wish to be limited to the construction shown. 50

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

1. In a top roll saddle mechanism, the combination with a top roll saddle having 55 upwardly-directed ears, of an adjusting screw sustained by said ears, a bearing block having screw-threaded engagement with said adjusting screw, and a weight-transmitting member resting on said bearing block. 60

2. In a top roll saddle mechanism, the combination with a top roll saddle having upwardly-directed ears, of an adjusting screw sustained by said ears, a bearing block 65 having screw-threaded engagement with said adjusting screw, and a weight-transmitting member resting on said bearing block, the head of said adjusting screw being exposed at the end of the weight-transmitting member. 70

3. In top roll saddle mechanism, the combination with front, center and rear top rolls, of an under saddle member resting on the rear and center top rolls, an upper saddle member resting on the front top roll and 75 said under saddle member, a weight-transmitting member resting on the upper member, a weighted stirrup hung from said weight-transmitting member, said member having a forked portion, a cam device for 80 elevating the rear saddle member from the center top roll, said cam device having a tell-tale portion which projects through the forked portion of the weight-transmitting member when the under member is thus elevated from the center roll. 85

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

LEWIS T. HOUGHTON.

Witnesses:

LOUIS C. SMITH,
THOMAS J. DRUMMOND.

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