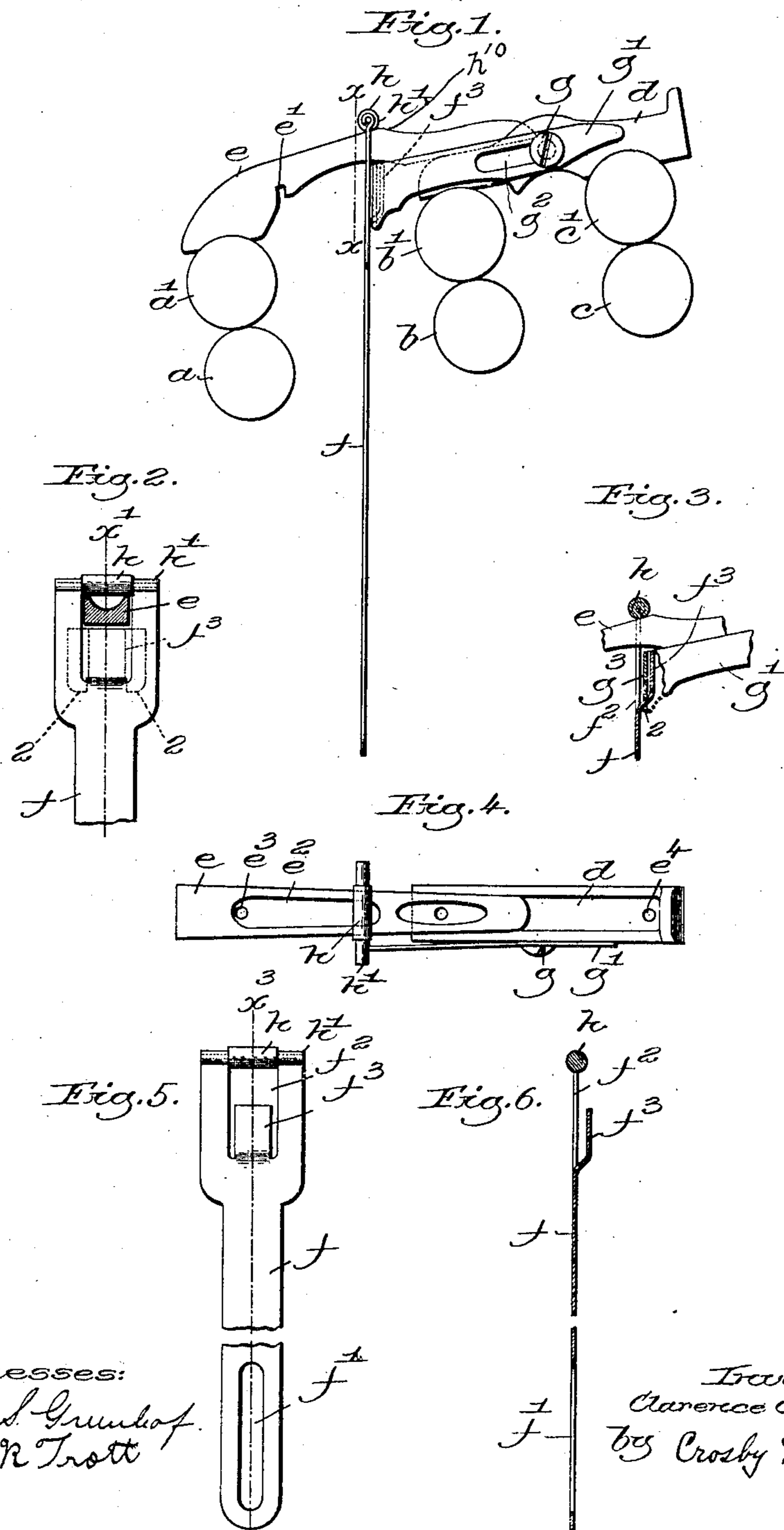


No. 871,293.

PATENTED NOV. 19, 1907.

C. A. PIERCE.
TOP ROLL SADDLE AND STIRRUP.
APPLICATION FILED APR. 26, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

CLARENCE A. PIERCE, OF MANCHESTER, NEW HAMPSHIRE.

TOP-ROLL SADDLE AND STIRRUP.

No. 871,293.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed April 26, 1906. Serial No. 313,728.

To all whom it may concern:

Be it known that I, CLARENCE A. PIERCE, a citizen of the United States, residing in Manchester, county of Hillsboro, State of New Hampshire, have invented an Improvement in Top-Roll Saddles and Stirrups, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawings representing like parts.

Heretofore it has been customary to sustain the stirrups to which are attached the weights for weighting the top rolls from the front roll saddle, and said stirrups have been made adjustable on the front saddle, adjustment being necessary to prevent contact of the stirrup with the roll in different adjusted positions of the roll. In accordance with my invention, I have for the first time provided means whereby the stirrup is connected with the back saddle, leaving the front saddle free to be adjusted longitudinally with the top roll, the top saddle moving through a passage in the stirrup. The stirrup rests on the top saddle and the front saddle is movable freely longitudinally with relation to the back saddle, while the stirrup is locked with relation to the back saddle, the construction of the top roll saddle being such that it may be detached from the stirrup when the front saddle occupies a certain defined position with relation to the back saddle. To insure ease of movement of the front saddle through the opening in the stirrup I have provided the stirrup with a roller that acts on the top of the front saddle.

Figure 1 shows a set of rolls with front and back saddle, and stirrup embodying my invention; Fig. 2 is a section in the line x , Fig. 1, looking toward the right; Fig. 3 is a partial section in the line x' , Fig. 2; Fig. 4 is a plan view of the device shown in Fig. 1; Fig. 5 shows the stirrup detached, and Fig. 6 is a section in the line x^3 , Fig. 5.

The lower front roll a , its coacting top roll a' , the middle roll b , its coacting top roll b' , the back roll c , its coacting top roll c' , and the back saddle d are and may be all as usual, the back saddle being sustained by the rolls c' , b' . The front saddle e resting at its front end on the adjustable front top roll a' and at its rear end on the back saddle has a notch e' for a purpose to be described. The front and back saddle will be provided with openings, as usual, to receive wicking to permit

the oil to flow slowly onto the journals of the uppermost rolls of the various sets of rolls.

The stirrup f , shown detached in Fig. 5, has a bottom slot f' a portion of the stock being removed from the upper end of the stirrup to form a hole f^2 and leave a tongue f^3 that is offset as best shown in Figs. 1 and 3. The back saddle has attached to it in suitable manner, as by a set screw g , a finger g' slotted at g^2 and having an angular portion g^3 , said angular portion being adapted to be interposed between the body of the stirrup and its offset portion or lip f^3 said finger co-acting with the lip constituting a locking device for the stirrup f and enabling the same to be held in any position in which it may be adjusted with relation to the rolls b , b' and a , a' , said locking device maintaining the stirrup stationary while the top front roll a' is adjusted about the roll a in order to adapt the top rolls to the particular length of staple and at the same time the front saddle is movable longitudinally through the hole f^2 at the upper end of the stirrup, the latter being sustained with its weight from the upper side of the top saddle. Holding the stirrup in this way obviates any possibility of the stirrup contacting with the bottom front roll a .

When the stirrup is sustained wholly by the top saddle, and the latter is adjusted, the front side of the stirrup is apt to contact with the exterior of the bottom roll a and the friction of said roll on the stirrup tends to negative the action of the weight sustained by the stirrup, which is apt to result in the production of irregular yarn. The top saddle has a projection h^{10} thus making the same thicker in line with said projection, and this shoulder prevents the top saddle from being withdrawn longitudinally from the stirrup during any outward adjustment of the upper member a' of the top rolls, but whenever it is desired to remove the top saddle, the latter must be pushed to the right, viewing Fig. 1, until the notch e' therein comes directly over the inturned portion g^3 of the finger, in which position the finger may be raised so that its upper edge enters said notch, the raising of the portion g^3 freeing its lips 2 from engagement with the offset portion f^3 so that the stirrup and top saddle may be moved laterally off from the inturned portion g^3 . The lips 2, by embracing the offset portion, serve to prevent the escape of the stirrup from the

finger except when the upper edge of the in-turned portion enters the notch e' .

The upper end of the stirrup is provided with a roller h having journals that are embraced by eyes or looped portions h' at the upper end of the stirrup. The position of the roller in the stirrup to act on the upper side of the top saddle reduces the friction of the stirrup on the top saddle.

e^3 and e^4 designate the usual oil holes through which the lubricating wicking extends in usual manner, e^2 designating the usual wick cavity in the front saddle.

I have not attempted to illustrate herein all embodiments of my invention, but have merely selected one embodiment which sufficiently illustrates the principle thereof.

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

1. In top rolls, a front saddle, a back saddle, a stirrup and a device attached to said back saddle and connected with and locking said stirrup thereto, the front saddle being movable through said stirrup while the latter occupies its locked position with relation to the back saddle.

2. In top rolls, a back saddle, a stirrup having an opening therethrough and an off-set portion, an adjustable finger connected with said back saddle and engaging the off-set portion of the stirrup, and a front saddle having its tail end extended through the opening in said stirrup.

3. In top rolls, a back saddle, a front saddle and a stirrup having a tongue, and a device connected with the back saddle and shaped to co-act with the tongue of the stirrup to form a locking device to prevent the escape of the front saddle from the stirrup while adjusting the front top roll.

4. The combination with a back roll saddle and a front roll saddle longitudinally adjustable thereon, of a stirrup having a tongue and resting on the upper side of the front roll saddle, combined with means connected

with the back roll saddle and engaging said tongue to prevent the movement of said stirrup with the top roll saddle as the latter is being adjusted on the back roll saddle. 50

5. A back roll saddle, a front roll saddle movable thereover, a stirrup having a tongue and sustained by said front roll saddle, combined with an adjustable finger connected with the back roll saddle and engaging the tongue of the stirrup to prevent the movement of said stirrup with the top roll saddle when the top roll is being adjusted. 55

6. A back roll saddle, a front roll saddle movably sustained thereon and provided with a notch at its under side, a stirrup having an off-set tongue and sustained on the top or the front roll saddle, combined with a finger having a portion thereof entering the space between said saddle and its tongue, the top roll saddle, when adjusted with a notch at its under side in line with the projection of said finger, being capable of being disconnected from the stirrup. 65

7. A back roll saddle, a front roll saddle sustained thereby and adjustable longitudinally thereon, and a stirrup having an off-set tongue, of a finger connected with said back roll saddle and having a projection notched at its under side to present ears to co-act with the side edges of said tongue where off-set from said saddle. 70

8. In top rolls, a stirrup, and a back saddle, combined with a front saddle extended through a hole in the stirrup and provided with a projection to prevent the longitudinal movement outwardly of the front saddle through the hole in the stirrup, and means for connecting and locking the stirrup to the back saddle. 85

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

CLARENCE A. PIERCE.

Witnesses:

WILLIAM H. BICKFORD,
JOHN W. CENTER.