

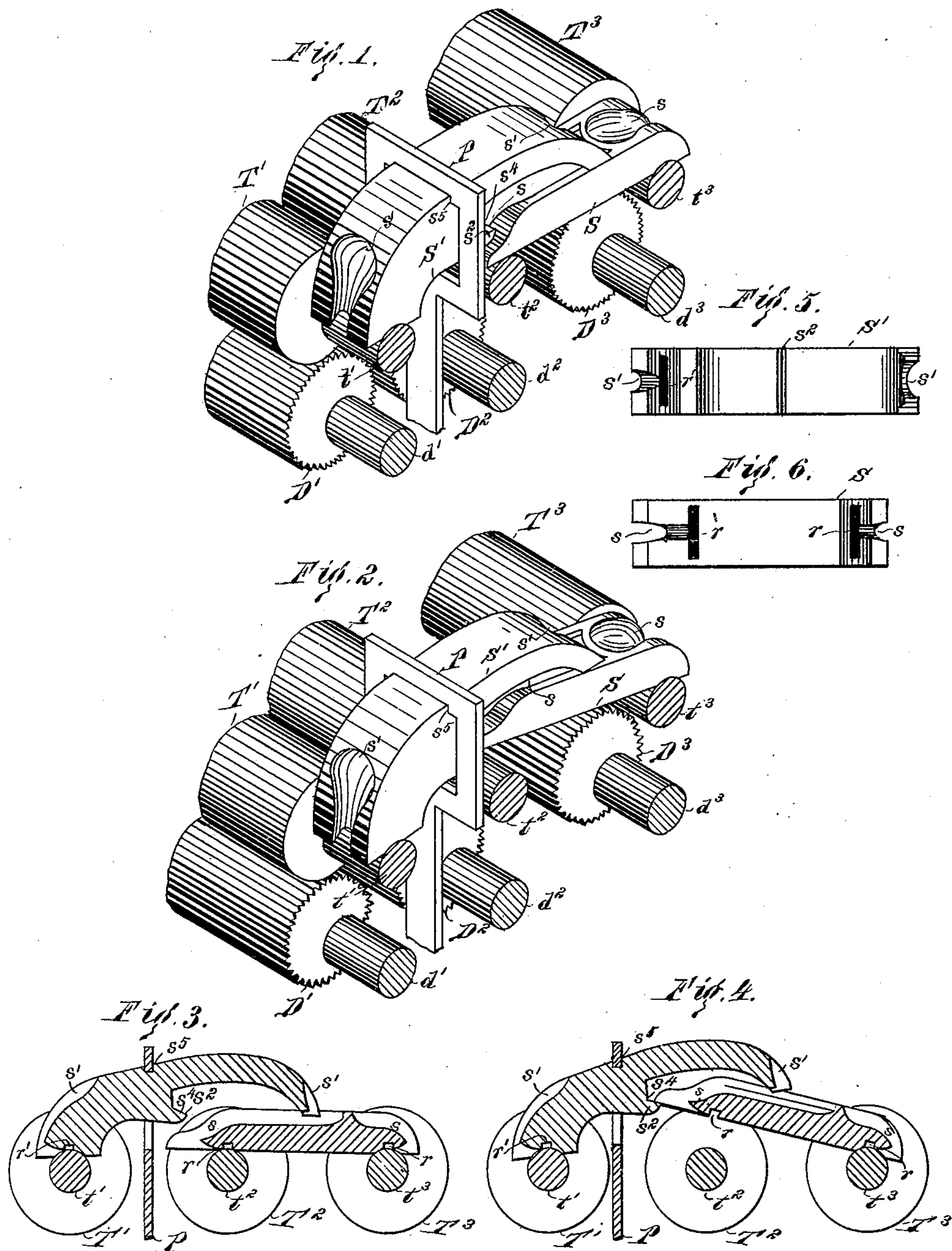
(No Model.)

E. C. WILLEY.

SADDLE FOR THE TOP ROLLS OF SPINNING MACHINES, &c.

No. 356,183.

Patented Jan. 18, 1887.



Witnesses—

Kirkley Hyde.
Hubert M. Day.

INVENTOR—

Eben C. Willey,
By Albert M. Moore,
His Attorney.

UNITED STATES PATENT OFFICE.

EBEN C. WILLEY, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO GILBERT P. WHITMAN, OF SAME PLACE.

SADDLE FOR THE TOP ROLLS OF SPINNING-MACHINES, &c.

SPECIFICATION forming part of Letters Patent No. 356,183, dated January 18, 1887.

Application filed October 18, 1886. Serial No. 216,507. (No model.)

To all whom it may concern:

Be it known that I, EBEN C. WILLEY, a citizen of the United States, residing at Manchester, in the county of Hillsborough and State of New Hampshire, have invented a certain new and useful Improvement in Saddles for the Top Rolls of Spinning and Twisting Machines, of which the following is a specification.

My invention relates to saddles for drawing-rolls of spinning and twisting machines; and it consists in the devices and combinations hereinafter described and claimed, the object of which is to facilitate the moving of such saddles out of or into bearing upon the journals of the middle top roll.

In the accompanying drawings, Figure 1 is an isometric view of a set of six drawing-rolls as used in a spinning-frame, the arbors of said rolls being in section and the journals of all the top rolls being weighted; Fig. 2, an isometric view substantially like Fig. 1, except that the journal of the middle top roll is not pressed upon by a saddle; Fig. 3, a vertical longitudinal section through the center of the saddles and a transverse section of the journals of the top rolls, each of said journals being weighted; Fig. 4, like Fig. 3, except that the journal of the middle top roll is not weighted; Figs. 5 and 6, reversed plans of the top and lower saddles shown in the other figures.

In operating upon stock which has a short fiber it is customary to weight the journals of all the top rolls of a set; but where the fibers are long enough to reach from the bite of one pair of rolls to the bite of the next pair of rolls, the middle top roll must be unweighted, because otherwise (the speed of the front pair being greater than that of the middle pair of rolls) the fibers would be broken or pulled apart.

My invention shows an easy method of instantly applying weight to the journal of the middle top roll and of removing said weight from said journal.

In the drawings, $D^1 D^2 D^3$ are longitudinally-fluted steel rolls, the journals or reduced necks $d^1 d^2 d^3$ of which turn in bearing-notches in suitable roller-stands, (not shown,) and $T^1 T^2 T^3$ are top rolls, these being commonly covered with leather and resting upon the fluted rolls, the top rolls being arranged in pairs, or there being two bosses upon a single arbor, $t^1 t^2 t^3$, the

portion of which arbor between the pair of bosses or top rolls serving as the journal of said pair. The journal of the middle pair supports the front end of the lower saddle, S , the rear end of which rests upon the journal of the rear top roll in the usual manner. The front end of an upper saddle, S' , rests upon the journal of the front top roll, and its rear end rests upon the top of the saddle S between its ends. Pressure is applied to the top rolls by a weight suspended from a sheet-metal hook or link, P , a portion only of which is shown.

In the respect above described the saddles are of the usual construction and operation, and they are represented in the drawings as provided with grooves $s s'$, which extend from the top of the saddles $S S'$, respectively, over the ends of the same to the bearings of said saddles on the arbors $t^1 t^2 t^3$, where they terminate in transverse grooves $r r'$, the object of which grooves last named is to accumulate and retain oil placed upon the tops of said saddles and conducted by the grooves $s s'$ over the ends of said saddles to said transverse grooves, substantially as described in another application, No. 213,285, filed by me September 11, 1886, said means of lubrication not being herein claimed.

Any customary means of lubrication may be used without interfering with the use of my invention.

The saddles are described above as being in their ordinary position, as shown in Figs. 1 and 3, the lower saddle resting upon the journals of the middle and rear top rolls. The under side of the upper saddle, S' , is provided, near its middle, with a ledge, s^2 , or backward projection, which forms, with the body of said saddle, a recess, s^1 , capable of receiving the front end of the lower saddle, S , said front end of said lower saddle projecting forward of its bearing upon the journal of the middle top roll for some distance, as shown in Figs. 3 and 4. If the rear end of the upper saddle and the front end of the lower saddle are lifted sufficiently, the front end of the lower saddle may be placed in the recess s^1 without removing said saddles from their bearings upon the rear and front top rolls, and by allowing the raised ends of said saddles to fall the front end of the lower saddle will rest upon and be supported

by the ledge s^2 , and the rear end of the upper saddle will rest upon the lower saddle nearly in its normal position, and the front end of the lower saddle will thereby be held out of contact with the journal of the middle top roll, as shown in Figs. 2 and 4, so that the only pressure exerted upon the yarn by the middle top roll will be due to its own weight and will not be sufficient to break the fibers. By again raising the rear end of the upper saddle and the front end of the lower saddle until said front end of said lower saddle is drawn out of said recess s^4 , and allowing said front end to fall first, the saddles may be restored to their normal position. In removing the pressure of the saddles from the journal of the middle top roll, or in restoring said pressure to said journal, the position of the hook or link P on the upper saddle is not disturbed, because the inner part of the top of said hook rests in a transverse retaining-notch, s^5 , formed in the top of said upper saddle in the usual manner.

I claim as my invention—

The combination of the lower saddle adapted to bear normally upon the journals of the rear and middle top rolls of a set of drawing-rolls and the upper saddle adapted to bear at one end upon the journal of the front top roll of said set and at the other end to rest normally upon said lower saddle, and provided with a backwardly-extending ledge arranged to be normally above the front end of said lower saddle, but adapted when said front end is placed upon said ledge to hold the front bearing of said lower saddle out of contact with the journal of said middle top roll, as and for the purpose specified.

In witness whereof I have signed this specification, in the presence of two witnesses, this 9th day of October, 1886.

EBEN C. WILLEY.

Witnesses:

ALBERT M. MOORE,
GERTRUDE M. DAY.