

No. 715,502.

Patented Dec. 9, 1902.

T. E. NORMAN.  
TOP ROLL SADDLE.

(Application filed Jan. 2, 1902.)

(No Model.)

FIG. 1.

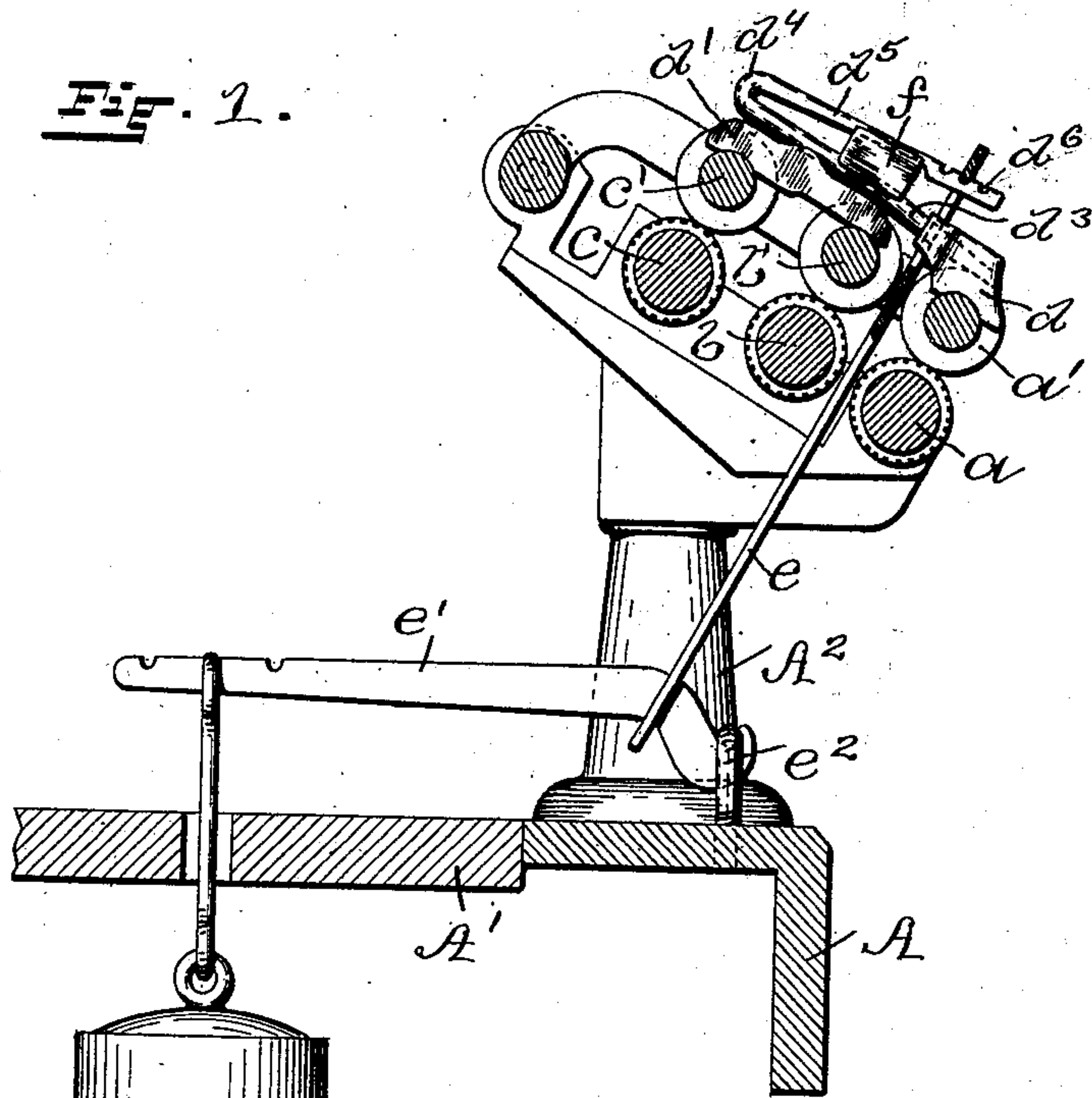


FIG. 3.

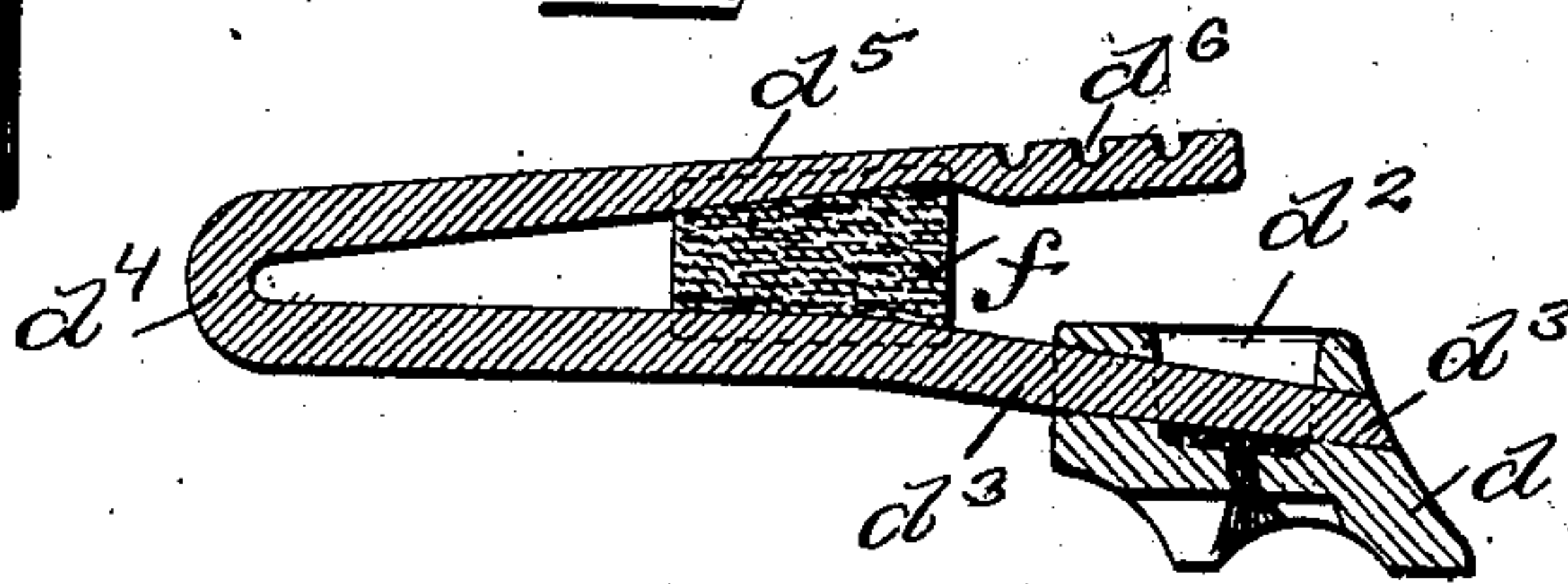


FIG. 2.

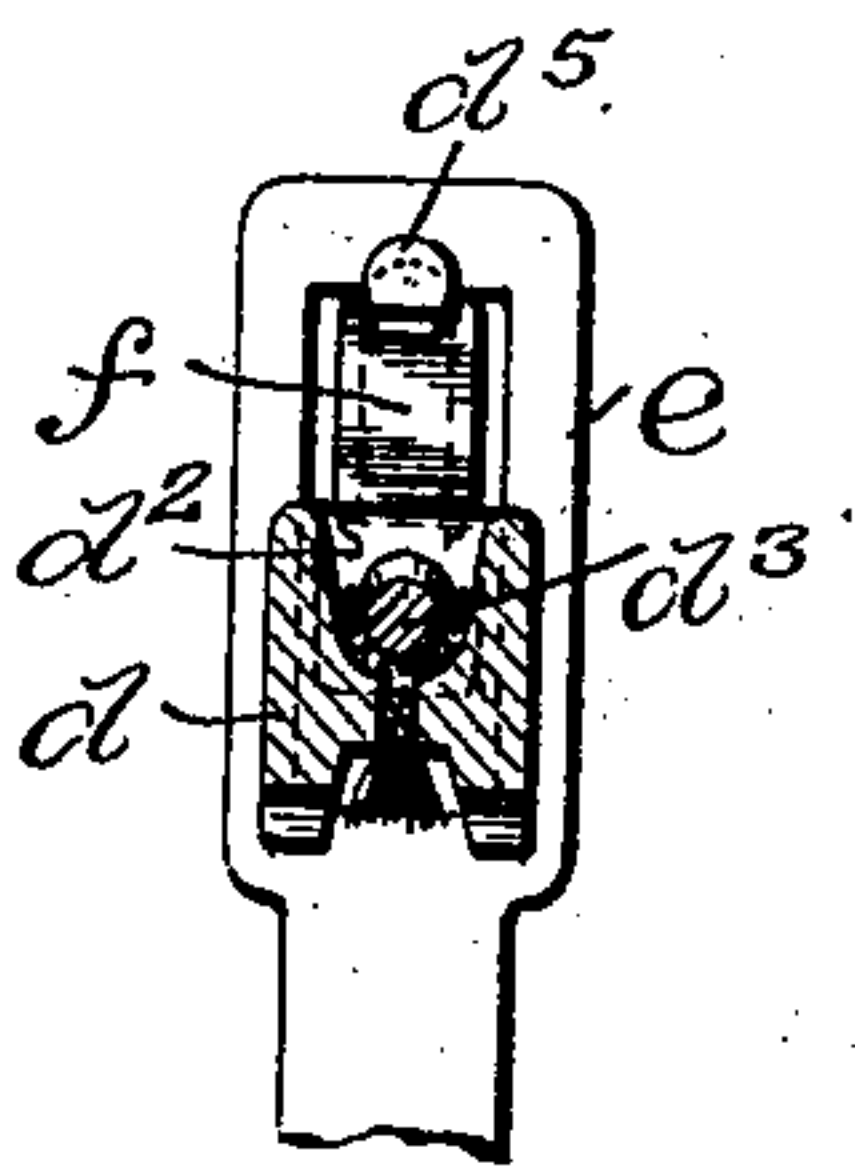
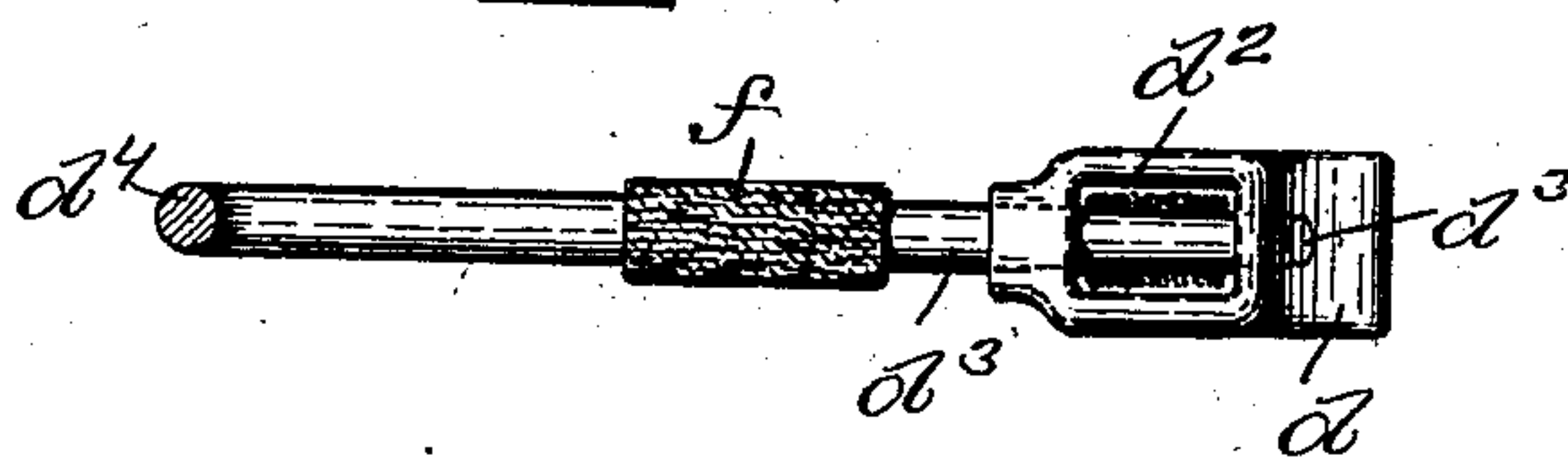


FIG. 4.



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# UNITED STATES PATENT OFFICE.

THOMAS E. NORMAN, OF FALL RIVER, MASSACHUSETTS.

## TOP-ROLL SADDLE.

SPECIFICATION forming part of Letters Patent No. 715,502, dated December 9, 1902.

Application filed January 2, 1902. Serial No. 88,169. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS E. NORMAN, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Top-Roll Saddles, of which the following is a specification.

This invention has reference to the saddles used to hold the top rolls in contact with the usually-fluted drawing-rolls to permit of the drawing out of the sliver passing between the top rolls and the drawing-rolls.

The top rolls of spinning-machines, eveners, and other machines used to draw out the textile roving are usually covered with leather or other yielding material. These top rolls are liable to injury by inequalities and imperfections in the textile sliver, unequal wear of the fluted drawing-rolls, and other causes. The top rolls are held against the drawing-rolls by saddles bearing on the journals of the top rolls and are held by stirrups connecting the saddles with levers, on which weights are suspended.

The object of this invention is to protect the top rolls against injury by arranging the same to yield more readily to imperfections or inequalities in the drawing-rolls or the levers; and to this end the invention consists in the peculiar and novel construction whereby a cushion is interposed between the stirrup and the top roll, as will be more fully set forth hereinafter.

When a top roll has to yield to any irregularity in the sliver or drawing-roll, it has, when weighted in the manner heretofore used, to transmit to and overcome the vis inertiae of the stirrup, the lever to which the stirrup is connected, and the weight suspended on the lever. Any vibration of the machine affecting the weight exerts irregular pressure on the top rolls and injury to the covers of the same. By placing the cushion between the saddle and the stirrup each one of the set of top rolls may yield independently and quickly to irregularities.

Figure 1 is a transverse sectional view of part of a spinning-machine, showing my improvement. Fig. 2 is a sectional view of the front saddle, showing the connection of the stirrup with the spring-cushion on the saddle. Fig. 3 is a sectional view of the front saddle

and the spring-cushion connected with the same. Fig. 4 is a longitudinal sectional view showing the lower part of the cushion and the top of the front saddle.

In the drawings, A and A' indicate parts of the frame of a spinning-machine; A<sup>2</sup>, the stand supporting the drawing-rolls; a, the front drawing-roll; a', the front top roll; b, the intermediate drawing-roll; b', the intermediate top roll; c, the rear drawing or feed roll, and c' the rear or feed top roll. The front saddle d has a concave bearing on the journal of the front top roll. The saddle d has a concave bearing on the journal of the rear or feed top roll. A flat bearing on the saddle d' bears on the intermediate top roll. The front saddle has the oil-chamber d<sup>2</sup>, partly filled with felt or similar absorbent and filtering material. The arm d<sup>3</sup> of the bent spring d<sup>4</sup> is made tapering and is driven into the tapering holes in the front saddle. The arm d<sup>5</sup> of the bent spring d<sup>4</sup> has near its front end the notches d<sup>6</sup>, in which the stirrup e is supported. The lower end of the stirrup e connects with the lever e', the hooked end of which engages with the eye e<sup>2</sup>, secured to the frame of the machine. The weight e<sup>4</sup> is suspended from the rear part of the lever e'. The elastic cushion f, of rubber or other suitable material, is interposed between the arms d<sup>3</sup> and d<sup>5</sup> of the spring d<sup>4</sup>. The saddle d' is provided near its center with a convex bearing, on which the arm d<sup>3</sup> of the spring rests, so that the saddle may yield at either end with the top rolls.

By the use of the spring d<sup>4</sup> a yielding cushion is interposed between the stirrup and the saddle. The top rolls are held under the strain of the weight e<sup>4</sup> multiplied by the leverage and are yet free to yield individually to inequalities.

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

1. The combination with the front saddle d, the oil-chamber d<sup>2</sup> in the saddle, and the rear saddle d', of the spring d<sup>4</sup> having two arms d<sup>3</sup> and d<sup>5</sup>, the arm d<sup>3</sup> being secured to the front saddle and bearing on the rear saddle, the stirrup e connecting the arm d<sup>5</sup> of the spring with the weighted lever, and the weighted lever, as described.

2. The combination with the saddles  $d$  and  
 $d'$  and the weighted-lever connection with the  
saddles, of the bent spring  $d^4$  having one end  
secured in the front saddle and the other end  
5 connected with the stirrup, and the elastic  
cushion interposed between the two arms of  
the spring, as described.

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

THOMAS E. NORMAN.

Witnesses:

B. S. WEBSTER,

J. A. MILLER, Jr.