

No. 740,638.

PATENTED OCT. 6, 1903.

G. I. FISKE.
STOP MOTION FOR TWISTING MACHINES.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.

Fig. 1.

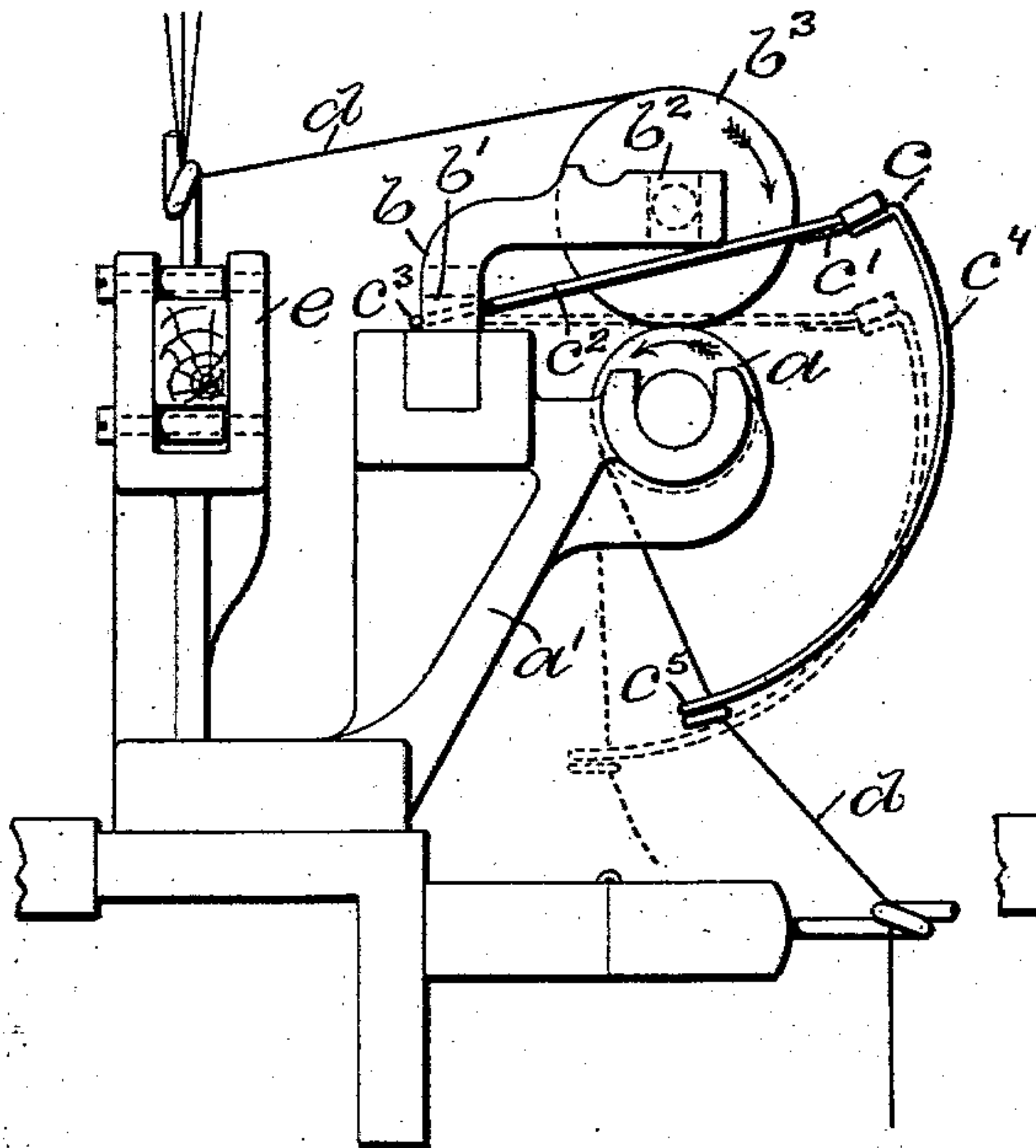


Fig. 2.

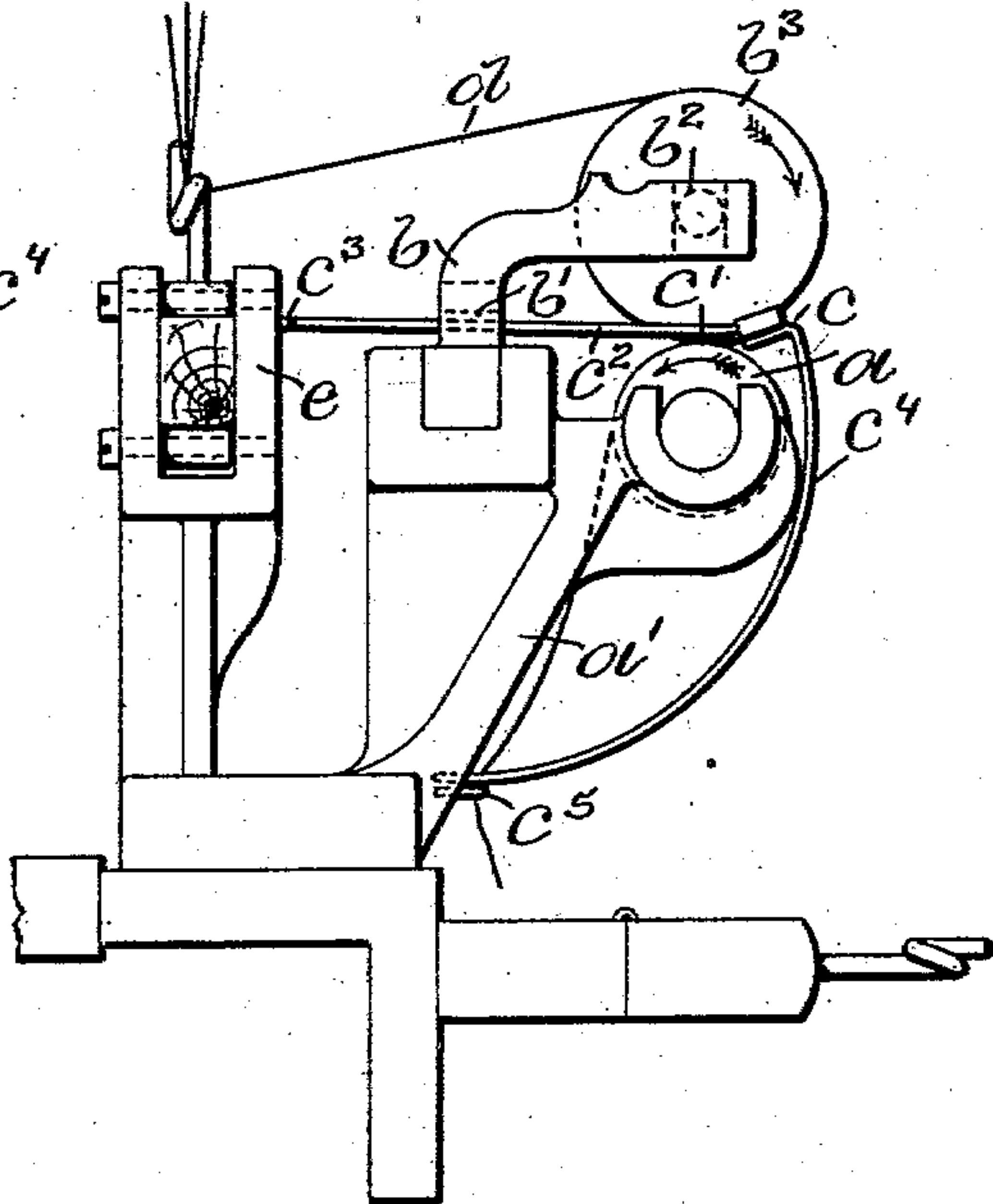


Fig. 3.

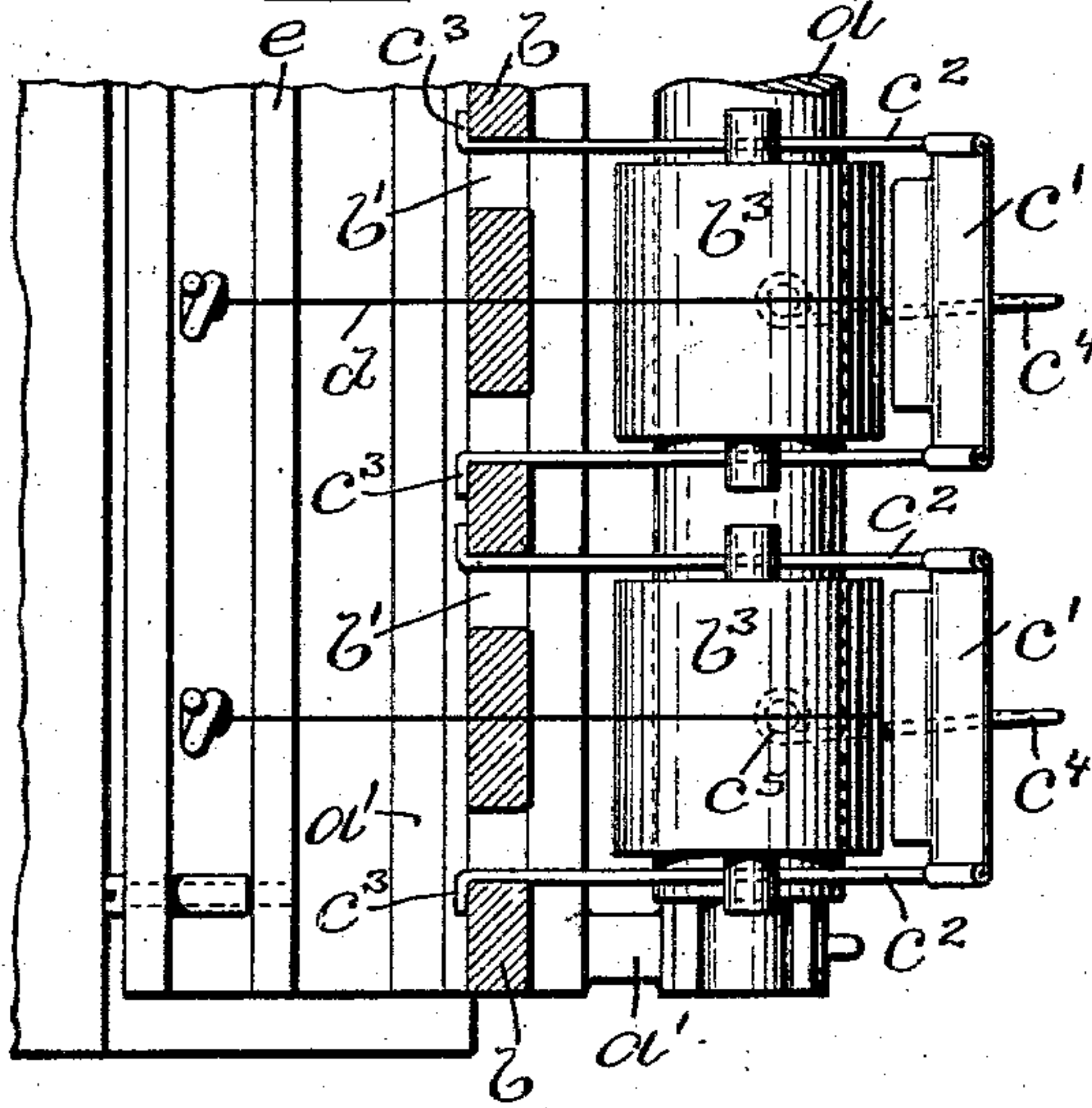
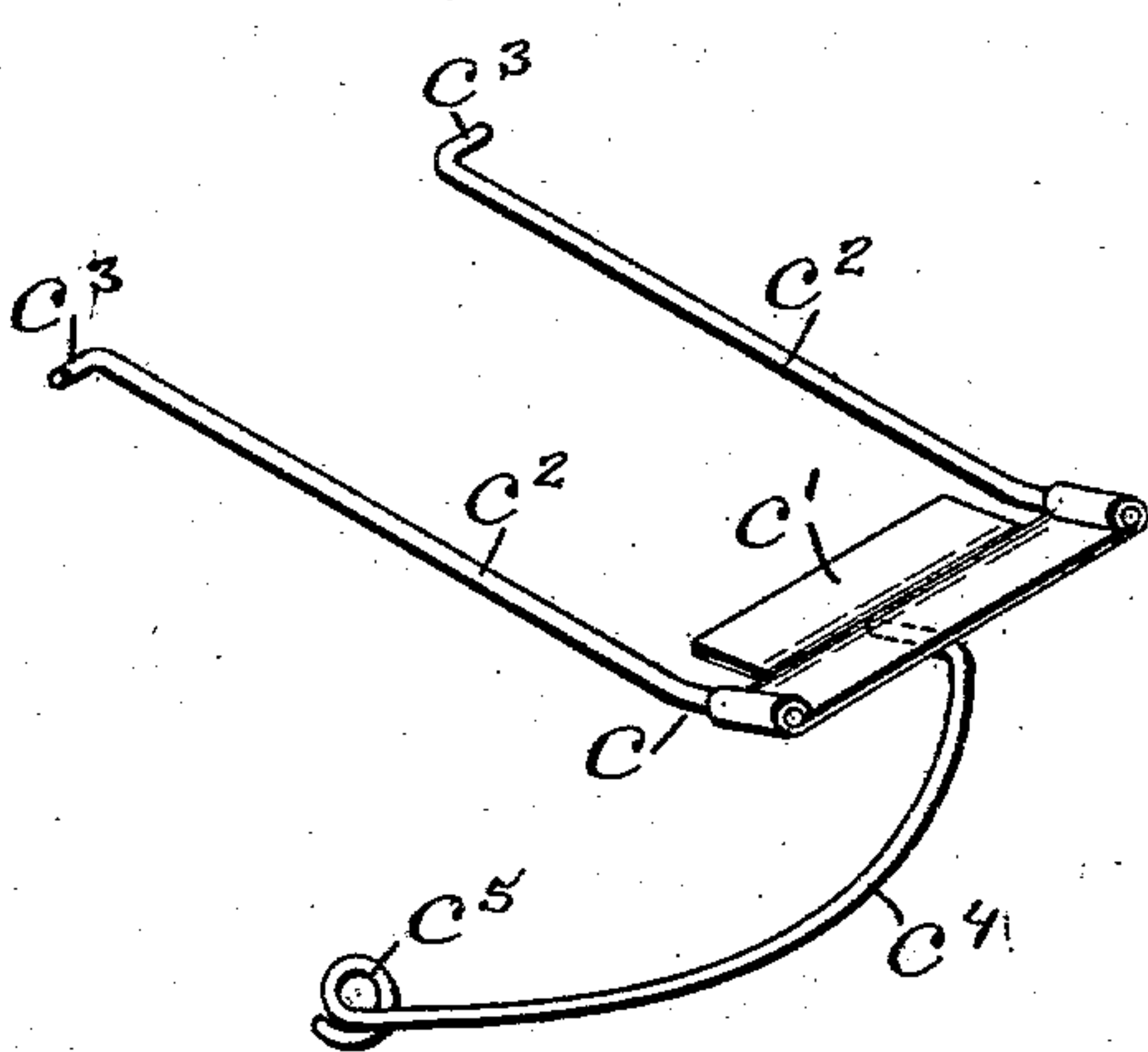


Fig. 4.



WITNESSES:

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GEORGE I. FISKE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO HOWARD AND BULLOUGH AMERICAN MACHINE COMPANY, LIMITED, OF PAW-TUCKET, RHODE ISLAND.

STOP-MOTION FOR TWISTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 740,638, dated October 6, 1903.

Application filed February 24, 1903. Serial No. 144,716. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. FISKE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Stop-Motions for Twisting-Machines, of which the following is a specification.

This invention has reference to an improvement in twisting-machines, and more particularly to an improvement in stop-motions adapted to engage with the twisting-rolls of twisting-machines.

In stop-motions for the twisting-rolls of twisting-machines as heretofore constructed the stop attachment is usually supported on the journals of the top rolls. It has been found in practice that this causes wear and friction on the attachment and exerts a pressure on the thread which holds the attachment in its inoperative position greater than the weight of the attachment, causing breakage of the thread.

The objects of my invention are to simplify the construction of the stop-motion attachment, to construct it as light as possible, and to attach it to a fixed part of the machine, preferably to the cap-bar.

My invention consists in the peculiar and novel construction of the stop attachment and the means for attaching it to the cap-bar of a twisting-machine, whereby the attachment is independent of the operative parts of the machine when in its inoperative position, is operated by the breaking of the thread, and carried into its operative position by friction on the bottom roll, as will be more fully set forth hereinafter.

Figure 1 represents a side elevation of a roller-stand, showing my improved stop-motion with the stop attachment in its inoperative position and the position it would assume after the thread breaks shown in broken lines. Fig. 2 is a view similar to Fig. 1, showing the stop attachment carried in by friction on the bottom roll, bringing the tongue of the attachment between the rolls to raise the top roll out of engagement with the bottom roll and stop the feed of the thread. Fig. 3 is a plan view of Fig. 1 with the bearings on the cap-bar for the top rolls broken away to show the means of attaching the stop at-

tachments to the cap-bar, and Fig. 4 is a perspective view of the stop attachment.

In the drawings, *a* represents the bottom roll of a twisting-machine, rotatably supported in the roller-stand *a'* in the usual way. Secured in the top of the roller-stand is the cap-bar *b*, having the openings *b' b'* for the arms of the stop attachments and the bearing *b²* for the journals of the top rolls *b³ b³*. The stop attachment *c* has the thin flat metal tongue *c'*, the two wire arms *c² c²*, secured to it by solder or other means with the L-shaped ends *c³ c³*, and the curved wire leg *c⁴*, secured at its upper end to the tongue *c'* and having the eye *c⁵* on its lower end to engage with the thread *d*. The L-shaped ends on the arms of the stop attachment limit the outward movement of the attachment by engaging with the edges of the openings *b' b'*, as shown in Fig. 3, and the angle in the tongue *c'* forms a stop to limit its inward movement, as shown in Fig. 2. The tongue *c'* of the stop attachment is placed in front of and parallel with the rolls, with the arms *c² c²* over the bottom roll. The arms *c² c²* are spaced to clear the ends of the top roll and enter the openings *b' b'* in the cap *b*, where they are held by the L-shaped ends *c³ c³*.

In the operation of my improved stop-motion the thread *d* comes from the bobbins through a guide-eye on the traverse-bar to the twisting-rolls, where it passes over the top roll and back of the bottom roll, then through the eye *c⁵* in the leg of the stop attachment to a guide-eye on the finger-board, and then downward to a spool, the tension of the thread in twisting holding the stop attachment in its normal or inoperative position. As soon as the thread is broken the attachment falls. This brings the wire arms *c² c²* into frictional contact with the bottom roll. The bottom roll revolving in the direction of the arrow carries the attachment inward, bringing the tongue *c'* between the rolls and raising the top roll out of engagement with the bottom roll, stopping the feed of the thread. The arms *c² c²* are on a plane higher than the tongue *c'*. As the tongue reaches the bite of the rolls the arms are raised out of contact with the bottom roll, preventing wear on the arms and roll.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a stop-motion for twisting-machines, a stop attachment consisting of the thin flat
5 metal tongue c' to engage the bite of the twisting-rolls, the two arms $c^2 c^2$ on a plane higher than the tongue c' to frictionally engage with the bottom roll, and having the L-shaped ends $c^3 c^3$ forming stops to limit its
10 outward movement, and the curved leg c^4 extending downward from the tongue c' and having the eye c^5 to engage with the thread, for the purpose as described.

2. In a stop-motion for twisting-machines,
15 the combination with the bottom roll a rotatably supported in the roller-stand a' , the cap-

bar b having the openings $b' b'$ and the bearing b^2 for the journals of the top rolls $b^3 b^3$, of the stop attachment c consisting of the thin flat metal tongue c' , the two wires $c^2 c^2$ 20 on a plane higher than the tongue c' and movably attached to the cap-bar with the L-shaped ends $c^3 c^3$ and the curved wire leg c^4 with the eye c^5 , all for the purpose as described. 25

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

GEORGE I. FISKE.

Witnesses:

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J. A. MILLER, Jr.