

(No Model.)

C. A. TAFT.
STOP MOTION FOR DRAWING FRAMES.

No. 485,997.

Patented Nov. 8, 1892.

Fig. 1.

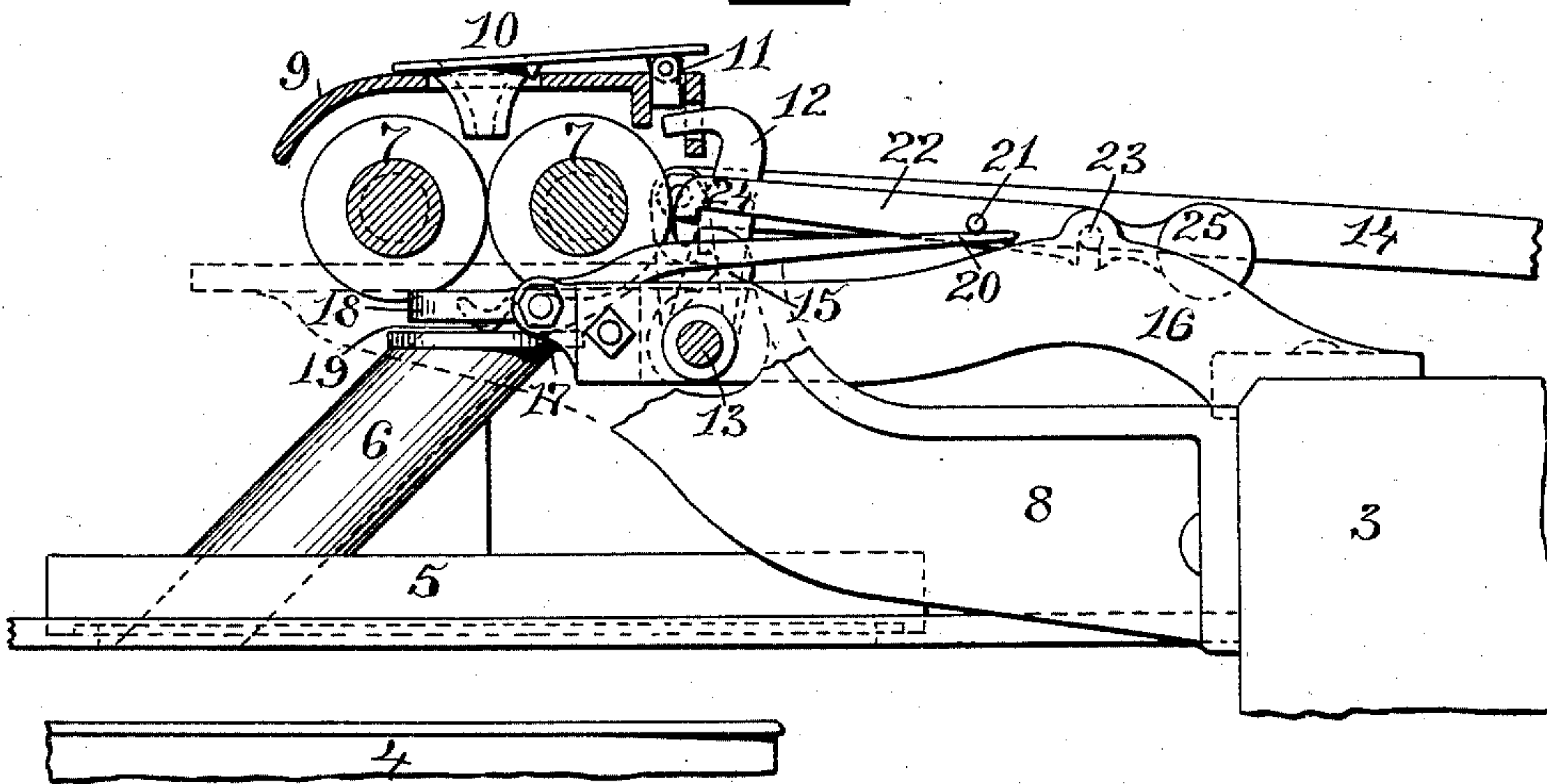
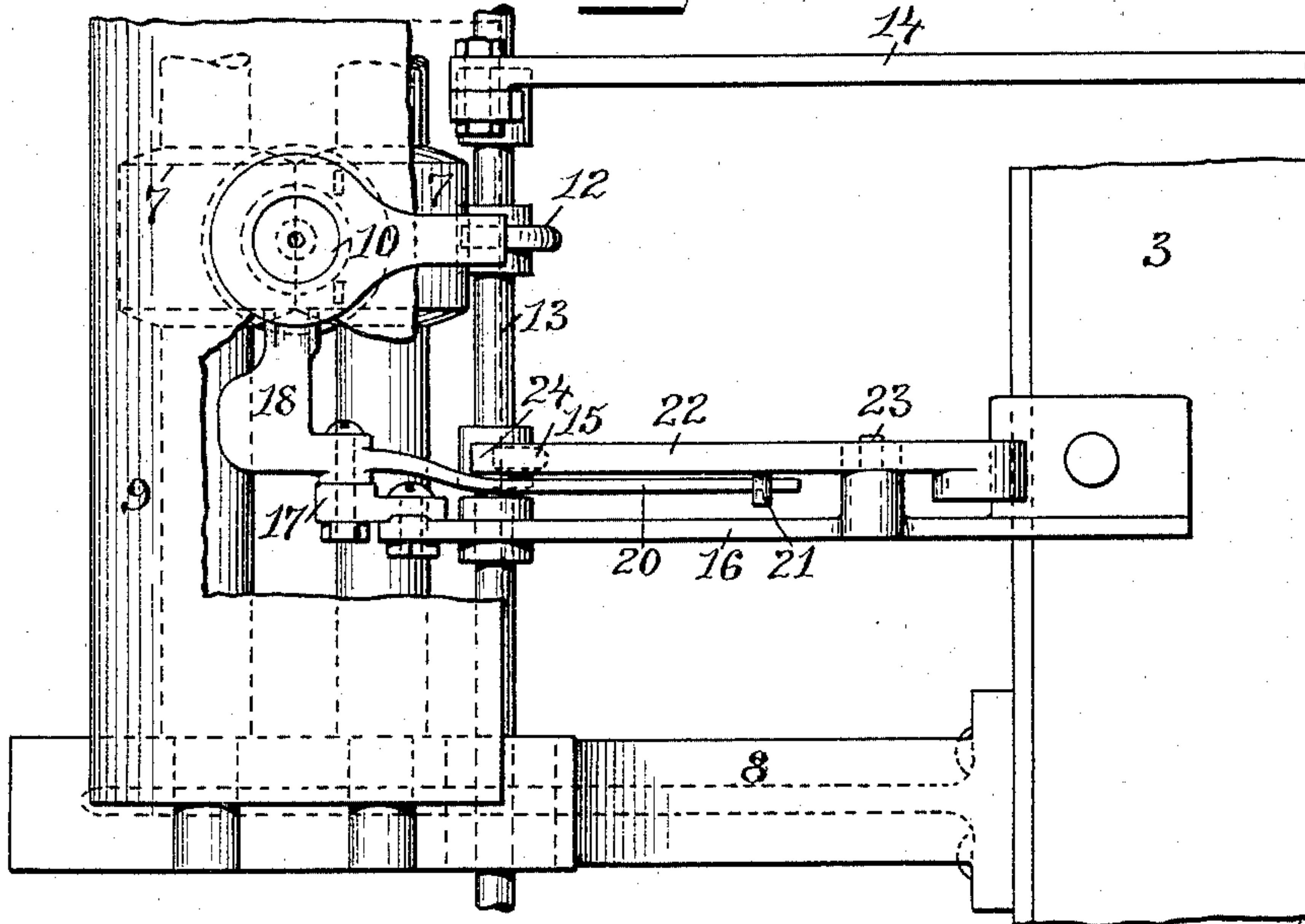


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CYRUS A. TAFT, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE
WHITIN MACHINE WORKS, OF SAME PLACE.

STOP-MOTION FOR DRAWING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 485,997, dated November 8, 1892.

Application filed March 8, 1892. Serial No. 424,206. (No model.)

To all whom it may concern:

Be it known that I, CYRUS A. TAFT, of Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Stop-Motions for Drawing-Frames; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in an auxiliary stop adapted to operate the stop-motion of a drawing-frame when the can into which the sliver is delivered is full.

The object of the present invention is to so construct the auxiliary stop-motion that the slightest lifting of the coiler will operate the stop-motion.

To this end the invention consists in the peculiar and novel construction of the detector-lever and a nearly-counterbalanced stop-lever by which the movement of the interfering-stop is increased, as will be more fully set forth hereinafter.

Figure 1 is an end elevation, partly in section, of my improved auxiliary stop-motion, shown in connection with the usual trumpet stop-motion. Fig. 2 is a top view of the same, part of the top plate being shown as broken away and other parts indicated in broken lines.

Similar numbers of reference indicate corresponding parts throughout.

In the drawings, 3 indicates the drawing-frame proper; 4, the upper end of the roving-can; 5, the coiler-disk, supported in the usual manner above the roving-can; 6, the coiler-tube through which the sliver is delivered; 7, the delivery-rolls, supported at opposite ends in journal-bearings.

8 indicates one of the two end brackets secured to the drawing-frame, extending forward over the roving-can, and supporting the delivery-rolls.

9 is the top plate by which the delivery-rolls are covered.

10 is the trumpet through which the sliver passes on its way from the drawing to the delivery rolls. The trumpet is supported in a pivoted lever, at one end of which is the stop 11, which when the sliver breaks descends

and prevents the oscillation of the finger 12, secured to the rock-shaft 13, operated by the rod 14, connected to an arm secured to the rock-shaft 13 at one end and to the operating and shipper mechanism at the other end.

The mechanism so far described is old and forms no part of my present invention, which consists in placing on the rock-shaft 13 the finger 15, so that it will oscillate or vibrate with the rock-shaft. To the drawing-frame the arm 16 is secured, the outer end of which is provided with the journal-bearing 17, in which the lever 18 is pivoted. The forward end of this lever is provided with the downwardly-projecting point or rider 19, which bears on the upper surface of the coiler-tube 6. This rider is made with the inclined sides shown in Fig. 1 and extends slightly beyond the inner edge of the coiler. The end 20 of the lever 18 extends toward the drawing-frame and bears on the pin 21 of the stop-lever 22, pivotally supported on the pin 23, secured to and projecting from the arm 16. The stop-lever 22 is provided at the forward end with the hook 24 and at the other end with the counterbalance 25.

The operation of this auxiliary stop-motion is as follows: In the normal condition while the sliver is delivered and coiled in the can the heavier end of the lever 18 rests on the coiler-tube 6, the end 20 of this lever, bearing on the pin 21, supports the stop-lever 22 in the position shown in the drawings, with the hook 24 clear above the vibrating finger 15. When the can is full, and even a slight lifting of the coiler takes place, the forward end of the lever 18 is slightly raised. This motion is multiplied by the longer end 20 of the lever, which descends through a greater distance. The pin 21, and with it the stop-lever 22, follows the descent and multiplies the movement, because the hook 24 is farther from the fulcrum or pivot 23 than the pin 21. The hook 24 therefore descends and passes in front of the finger 15, and by stopping the vibration of the same arrests the motion of the rock-shaft 13, thus causing the shipper and stop mechanism of the drawing-frame to operate in the same manner as if the stop 11 had come in front of the finger 12.

Should the sliver from any cause cease to

pass through the coiler and bank up between
the top of the same and the rolls, the rider
will be lifted from its normal position by the
sliver and allow the stop-motion mechanism
5 to operate in the same manner as when the
rider is lifted by the upward motion of the
coiler.

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

The combination, with the rock-shaft of a
drawing-frame stop-motion and the coiler, of
a pivoted lever having at one end a rider the
inclined sides of which extend within the cir-

cumference of the coiler, the lower edge of 15
the rider bearing on the coiler, the other and
longer end of said lever supporting a pivoted
stop-arm, and an auxiliary finger secured to
the rock-shaft, the whole adapted to arrest
the motion of the rock-shaft when the rider 20
is lifted, as described.

In witness whereof I have hereunto set my
hand.

CYRUS A. TAFT.

Witnesses:

J. A. MILLER, Jr.,
HENRY J. MILLER.