No. 771,081. PATENTED SEPT. 27, 1904.

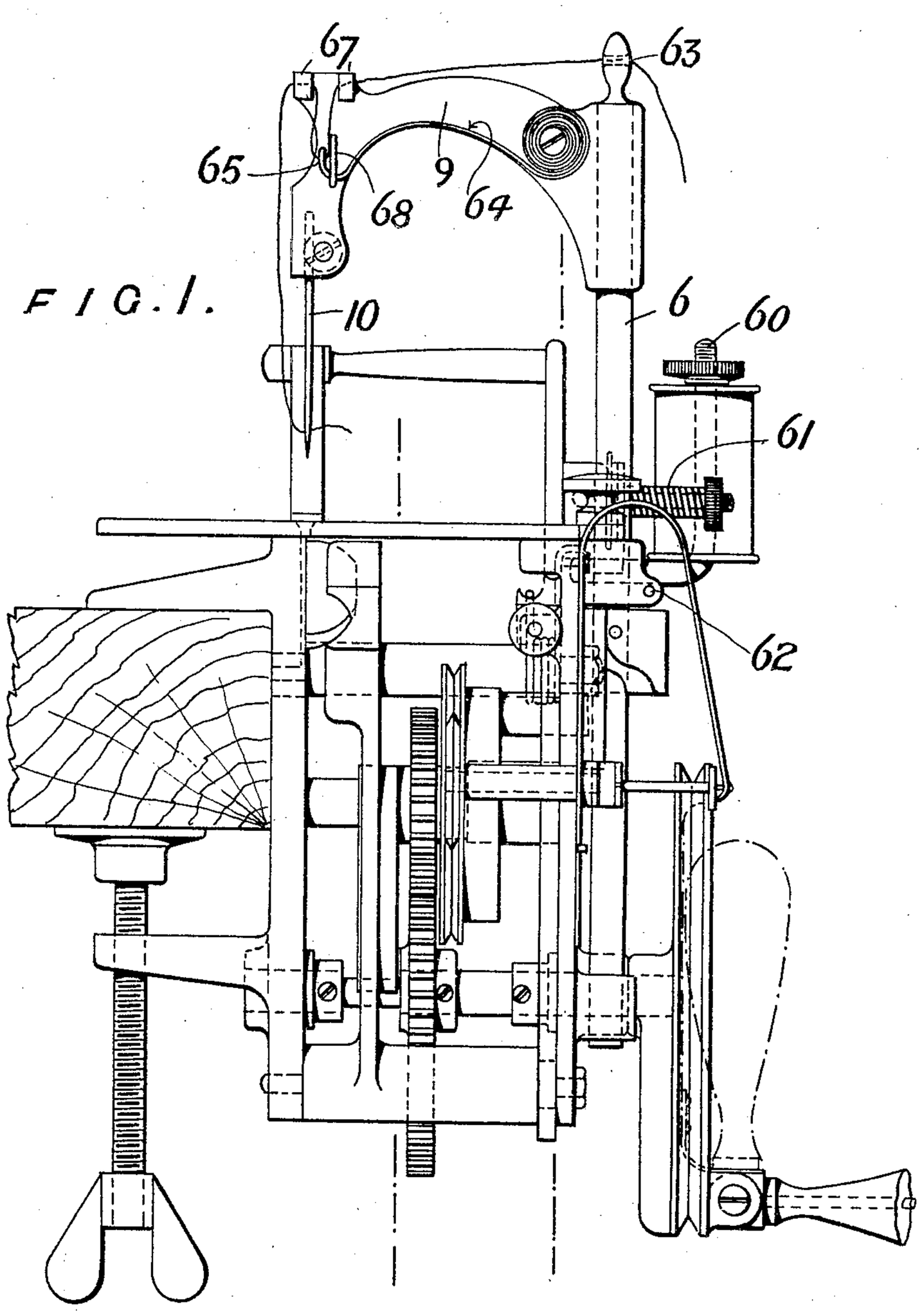
H. MANNING.

SLACK THREAD CONTROLLER FOR SEWING MACHINES.

APPLICATION FILED JAN. 25, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1.



WITNESSES:

W. M. Avery

A. H. Davis

INVENTOR

Henry Manning

BY

Munn & Co

ATTORNEYS.

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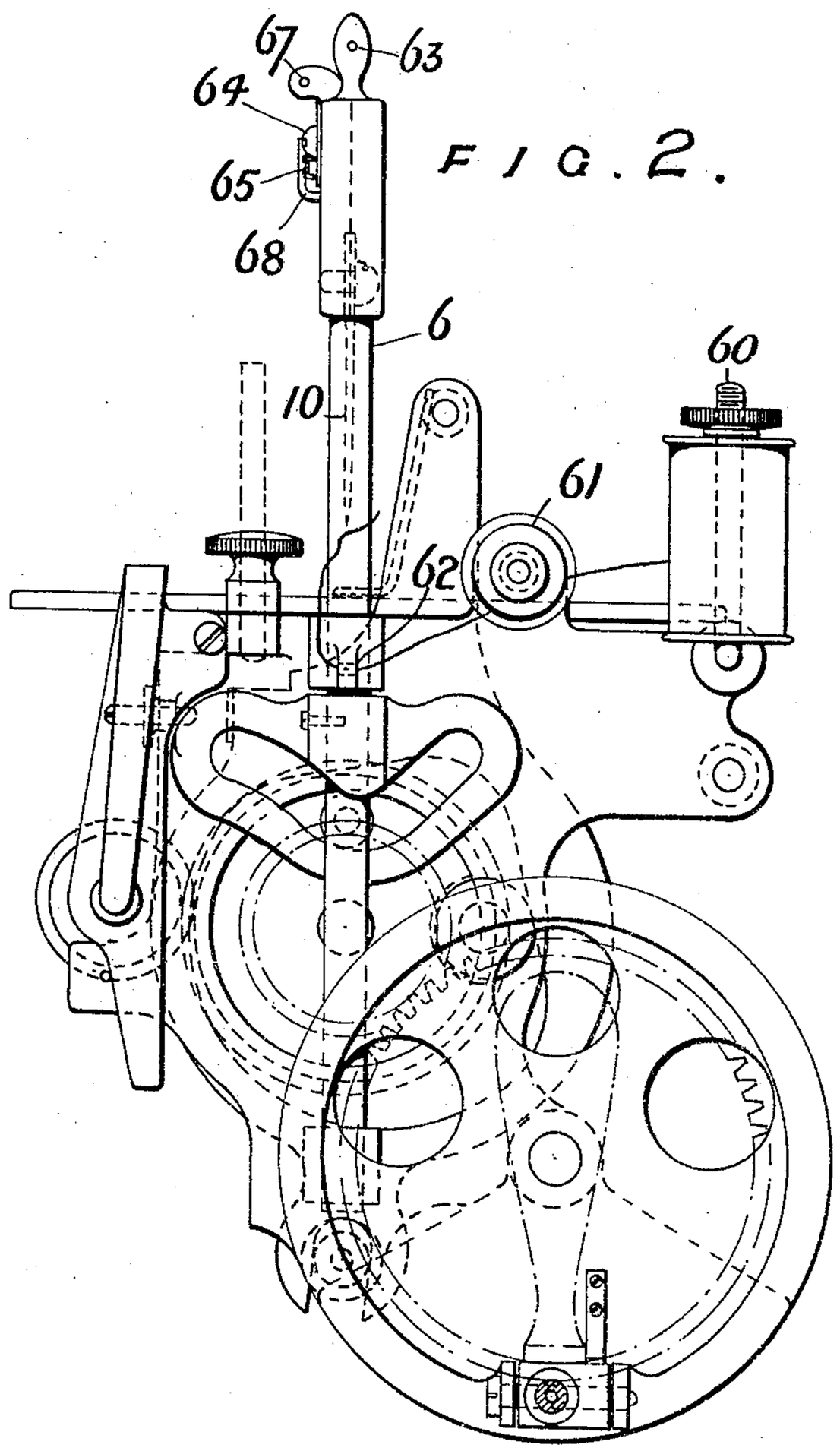
NO MODEL. 2 SHEETS—SHEET 2.

FIG. 2.



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UNITED STATES PATENT OFFICE.

HENRY MANNING, OF LONDON, ENGLAND.

SLACK-THREAD CONTROLLER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 771,081, dated September 27, 1904.

Application filed January 25, 1904. Serial No. 190,501. (No model.)

To all whom it may concern:

Be it known that I, HENRY MANNING, engineer, a subject of the King of Great Britain, formerly of 46 Grays Inn road, and now a resident of 1ª Foster Lane, in the city of London, England, have invented certain new and useful Improvements in Slack-Thread Controllers for Sewing-Machines, of which the following is a specification.

This invention relates to the lock-stitch sewing-machine described in an application for United States Patent, Serial No. 165,573, in which all the movements are derived from only three cams and practically the entire operative mechanism is situated beneath the work-plate.

The present invention relates to an improved take-up device for the thread.

The invention is illustrated in the drawings, in which—

Figures 1 and 2 show front and side views of the machine, respectively.

The needle-thread reel is mounted to turn about a pin 60, outstanding from the machine-frame clear of the work-plate, the thread being led from the spool through a spring-tension device 61 of ordinary construction and thence through guide-eyes 62 and 63 in the frame and at the top of the needle-bar, respectively, to the eye of the needle 10 by way of the improved take-up device, whereby the slack of the thread is drawn tight after each stitch. This take-up device consists of a light flexible spring-arm 64, spirally coiled at one end, whereby it is attached to the needle-arm 9 and having at its free end a loop 65 for the passage of the thread-bight formed between a pair of guide-eyes 67 on the needle-arm (preferably directly over the needle, as shown) and through which the thread is rove, the spring 64 tending to stretch the bight of the thread, but being capable of yielding in the opposite direction, so that when the needle-bar in rising draws the thread through the work the spring 64 will yield and (by permitting the shortening of the thread-bight) prevent an excess of slack being formed, whereas on the tension of the thread being released by the descent of the needle-bar the spring 64 will recover its previous position and in so doing will take up the remaining slack of the thread. 68 is a combined guide and stop for the spring-arm 64.

I claim—

1. In a sewing-machine in combination, a reciprocating needle-bar, a needle carried thereby, means for guiding a thread on said needle-bar to said needle, a spiral spring attached to said needle-bar and having an extension therefrom adapted to guide said thread and forming a loop from a straight course thereof, and a member attached to said needle-bar through which said extension passes, said member constituting a guide therefor.

2. In a sewing-machine in combination, a table, a reciprocating needle-bar coöperating therewith, a needle carried thereby, the said needle-bar having eyes in the upper portion thereof constituting guides for a thread running to said needle, a tension device attached to said table from which said thread passes to said eyes, a resilient member attached to said needle-bar and normally occupying a depressed position, said resilient member presenting an eye receiving a loop from a straight course of said thread, and a guide for said resilient member and constituting stops for limiting the movement thereof, said guide being attached to said needle-bar.

HENRY MANNING.

Witnesses:
H. D. JAMESON,
A. NUTTING.