

No. 819,848.

PATENTED MAY 8, 1906.

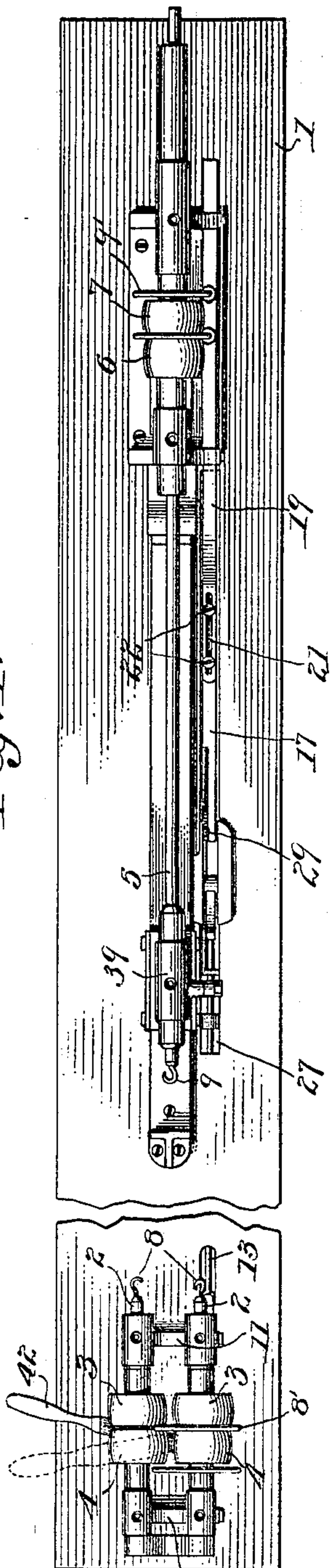
M. S. BURDETTE.

MACHINE FOR MAKING BANDS FOR SPINNING AND TWISTING MACHINES.

APPLICATION FILED JULY 19, 1905.

2 SHEETS SHEET 1.

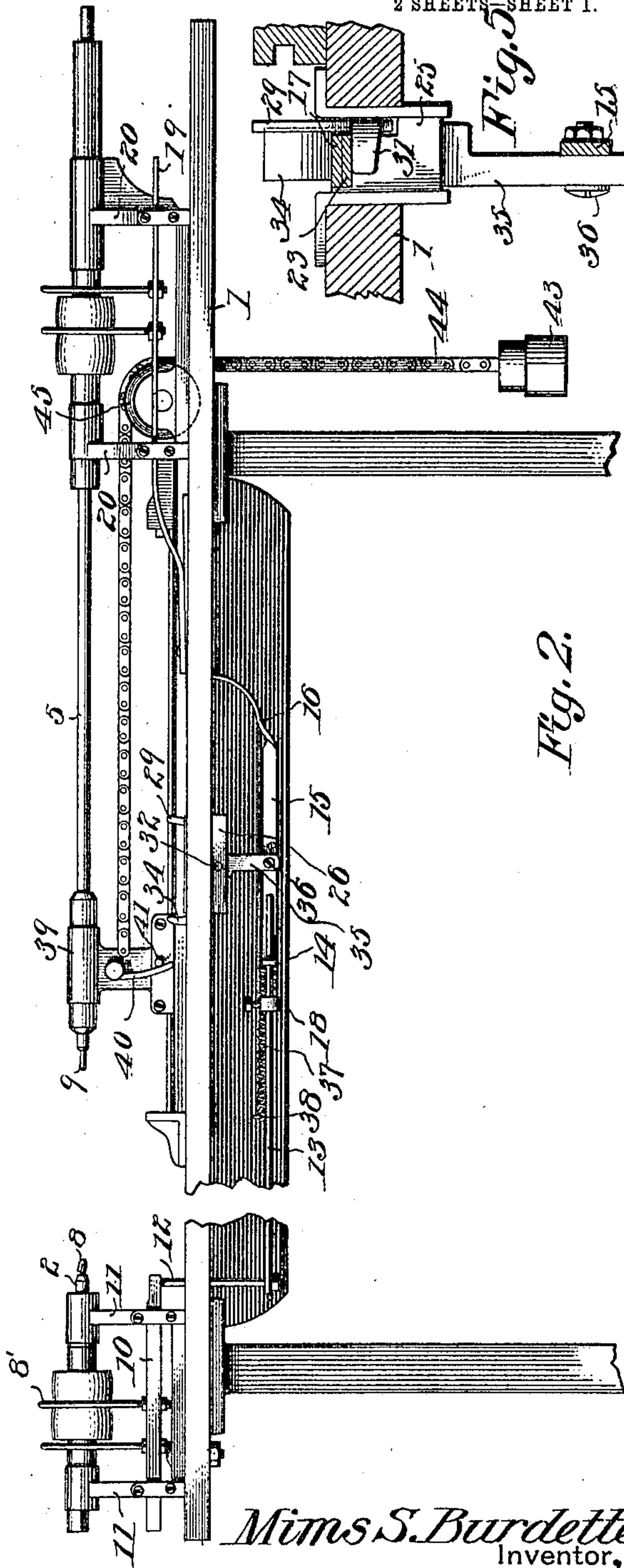
Fig. 1.



Witnesses:

*E. J. Stewart*  
*R. M. Elliott*

Fig. 2.



*Mims S. Burdette*  
Inventor,

by

*C. A. Snow & Co.*

Attorneys.

No. 819,848.

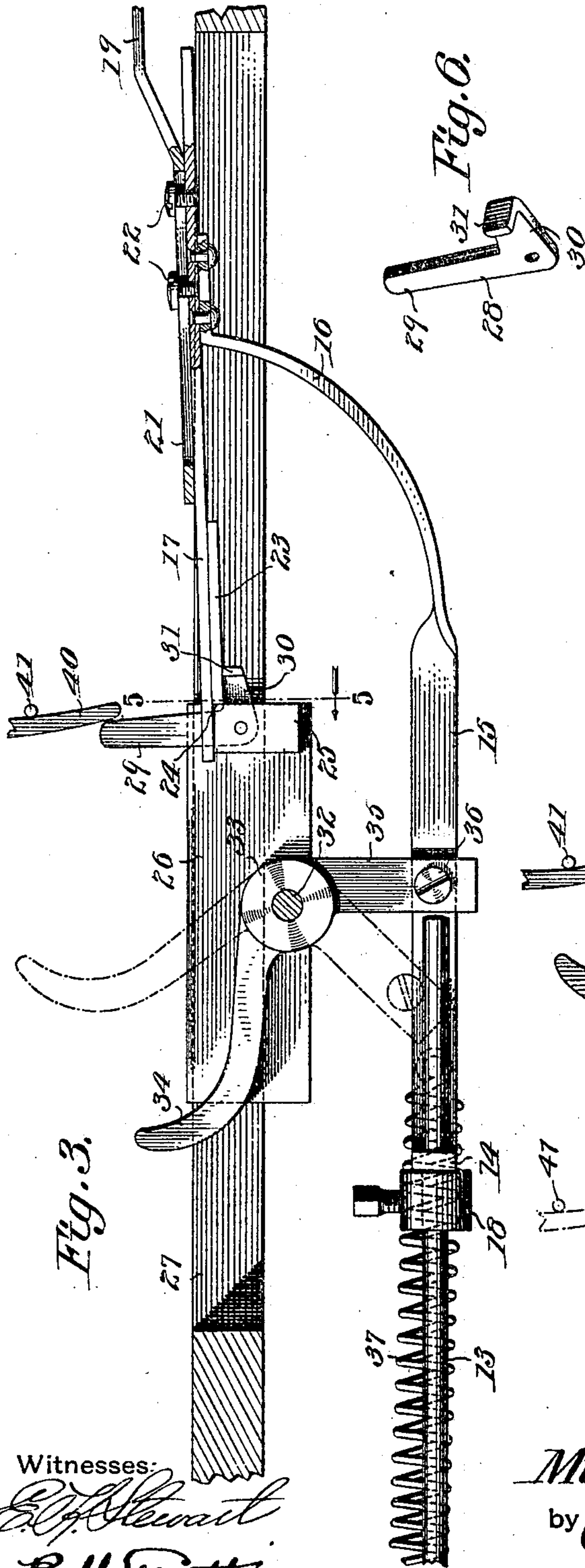
PATENTED MAY 8, 1906.

M. S. BURDETTE.

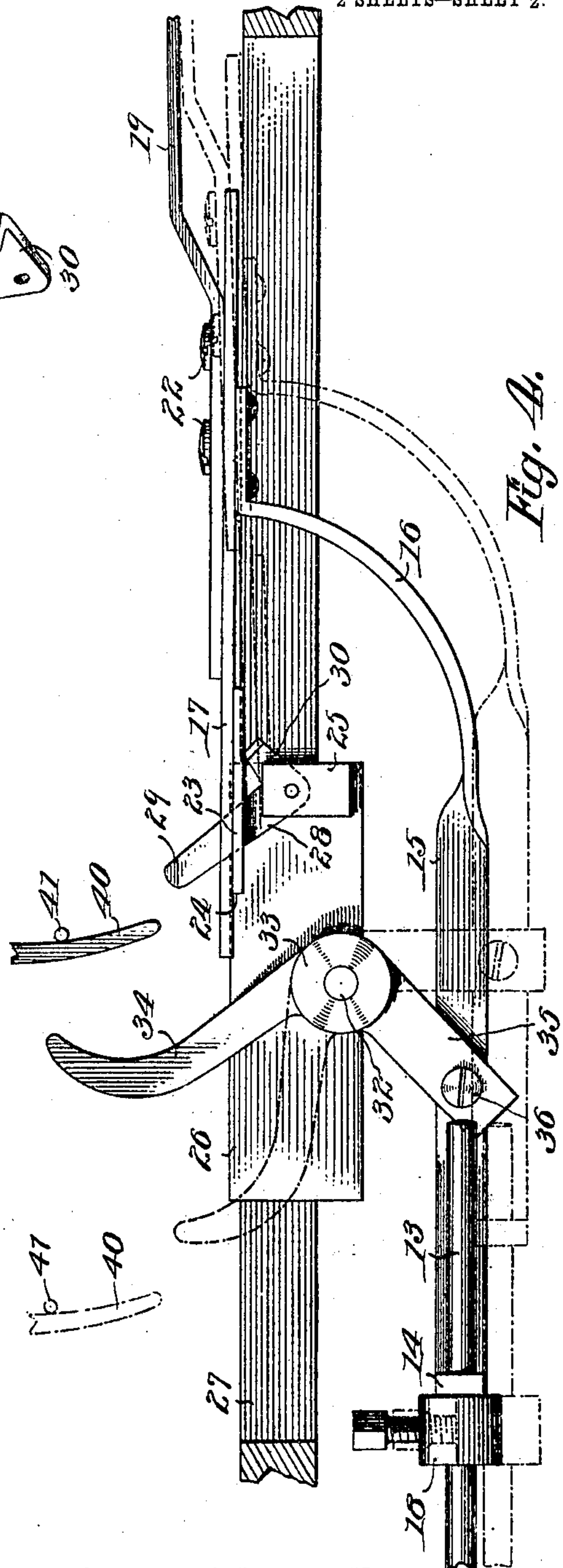
MACHINE FOR MAKING BANDS FOR SPINNING AND TWISTING MACHINES.

APPLICATION FILED JULY 19, 1905.

2 SHEETS—SHEET 2.



Witnesses:  
*E. J. Stewart*  
*R. M. Elliott*



*Mims S. Burdette*, Inventor,  
by *C. A. Snow & Co.*  
Attorneys.



# UNITED STATES PATENT OFFICE.

MIMS S. BURDETTE, OF GREENVILLE, SOUTH CAROLINA.

MACHINE FOR MAKING BANDS FOR SPINNING AND TWISTING MACHINES.

No. 819,848.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed July 19, 1905. Serial No. 270,394.

*To all whom it may concern:*

Be it known that I, MIMS S. BURDETTE, a citizen of the United States, residing at Greenville, in the county of Greenville and State of South Carolina, have invented a new and useful Machine for Making Bands for Spinning and Twisting Machines, of which the following is a specification.

This invention relates generally to machines for making bands for spinning and twisting machines, and more particularly to a novel form of belt-shifting apparatus therefor.

The object of the invention is to provide a form of belt-shifter which after the machine has been manually started will operate automatically when the initial twisting has been completed to stop the initial twisters and to throw into operation the final twister and when the twist is finished to cause the latter twister automatically to be thrown out of operation, whereby bands of uniform character may readily and expeditiously be secured.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a belt-shifter for machines for making bands for spinning and twisting machines, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in plan viewed from the top of the machine. Fig. 2 is a view in side elevation. Fig. 3 is an enlarged detail fragmentary view, partly in section, exhibiting the position of the parts of the shifter while the initial twisters are in operation. Fig. 4 is a similar view showing the position of the parts when the final twister is in operation. Fig. 5 is a transverse sectional view taken on the line 5 5, Fig. 3, and looking in the direction of the arrow thereon. Fig. 6 is a perspective detail view of the lock-bar-tripping dog.

Referring to the drawings, 1 designates the bed-plate of the machine, upon which is supported the twisting mechanism, the same consisting of a pair of initial-twister shafts 2, each of which carries a tight pulley 3 and a loose pulley 4, and a final-twister shaft 5, carrying a tight pulley 6 and a loose pulley 7. The shafts have combined with them hooks 8

and 9, respectively, which are engaged by the band to be twisted and operate in the manner usual to such devices.

Each of the twister-heads, by which is meant the journals supporting the twister-shafts, the shafts themselves, and the fast and loose pulleys, has combined with it a belt-shifter 8' and 9' of the usual or any preferred construction. The shifter 8' is carried by a rod 10, which is mounted for sliding movement in the standards 11, that support shafts 2, and depending from the slide-bar is an arm 12, with which connects one end of a rod 13, the other end of which projects through an angular offset 14, carried by a rod 15, which is curved upward at 16 and is secured to the under side of a locking-bar 17. The rod 13 has mounted upon it an adjustable stop 18, which is adapted to engage with the offset 14 at a certain period in the operation and for a purpose that will presently appear. The locking-bar has secured to it one end of a slide-bar 19, the other end of which is mounted for sliding movement in the standards 20, that support the shaft 5 and carry the shifter 9'. As shown in Fig. 1, the slide-bar 19 is adjustably connected with the locking-bar 17 by providing the former with a slot 21, through which pass bolts 22, that are engaged with the bar 17, and by this arrangement the two bars may be adjusted relatively to each other.

The under side of the locking-bar is provided with an offset 23, in this instance formed by combining a piece of metal with the locking-bar to form a shoulder 24, which is designed to interlock with the edge of a block 25, carried by a head 26, which consists of two plates that are connected at one end by the block 25 and are secured in a longitudinal slot 27, formed in the bed-plate of the machine, as shown in Figs. 1, 3, and 4. The block 25 is provided in one side with a recess in which is pivoted a locking-bar-tripping dog 28, which is an approximately L-shaped structure and has one member 29 extending above the bed of the machine in Fig. 3 and its other member 30 provided with a toe 31, which extends at right angles to the length of the member 30 and is adapted to engage with the under side of the locking-bar, as clearly shown in Figs. 3 and 4. Pivoted upon a pin 32, secured in the head, is a locking-bar-setting dog 33, one member 34 of which extends upward above the bed of the machine and is curved and the other



member of which projects downward, and is pivotally connected with the rod 15 at 36, Fig. 4.

Secured to the rod 15 is one end of a coiled spring 37, the other end of which is secured at 38 to the depending portion of the bed of the machine, as shown in Fig. 2. The function of this spring is, as will presently appear, to effect shifting of the belt-shifter of the final twister from the loose to the tight pulley at the instant the operation of the initial twist-ers ceases.

In order to effect tripping of the dog 28, there is combined with the front stock 39 of the final-twister shaft a pivoted hanger or knock-off 40, which is free to swing toward the initial-twister shafts, but is held against movement in the opposite direction by a stop-pin 41 on the base of the stock 39, as shown in Fig. 2.

In the use of the machine the band to be twisted is combined with the twister-hooks 8 and 9 in the usual manner, and at this point of the operation the shifters are in the positions shown in Fig. 1. To start the initial twister to work, a lever 42, which coacts with the bar 10, is shifted from the position shown in full lines in Fig. 1 to the position shown in dotted lines in the same figure, whereby the belt is shifted from the loose pulleys 4 to the tight pulleys 3 and the twist-ers 8 begin their work. As the band is twisted it shortens, and thereby exerts a longitudinal draft upon the shaft 5, the band being kept under suitable tension by means of a weight 43, which is connected by a chain 44 with the stock 39 and engages a sheave 45, carried by the tail-stock of the final-twister shaft. As the shaft 5 moves forward from the cause stated the knock-off 40 engages with the member 29 of the tripping-dog and throws the shoulder 24 of the locking-bar out of engagement with the block 25, whereupon the spring 37 exerts its function and draws the rod 13 toward the stock of the initial-twister shafts, bringing thereby the offset 14 into engagement with the stop 18 and forcing the bar 10 to one side, thus shifting the shifter 8 and moving the belt from the fast pulley 3 to the loose pulley 4. The final twister now continues its opera-

tion, and on further forward movement of the shaft the knock-off engages with the setting-dog 33, moving it from the position shown in full lines in Fig. 4 to the position shown in full lines in Fig. 3, which is its normal position, and this movement causes the locking-bar again to engage with the block 25 and sets the machine for further operation, at the same time stopping the final twist-ers.

It will be seen from the foregoing description that although the mechanism herein described is simple in character it will be thoroughly efficient in use for the purposes designed and will in a ready and practical manner effect the objects sought.

Having thus described the invention, what is claimed is—

1. A mechanism of the class described embodying a pair of belt-shifters, a locking-bar connected with one of the shifters, a spring-retracted rod connected with the other shifter, a tripping-dog coacting with the locking-bar, and means for effecting resetting of the locking-bar when tripped.

2. A mechanism of the class described embodying a pair of belt-shifters, a locking-bar coacting with one of the shifters, a spring-pressed rod coacting with the other shifter, a tripping-dog coacting with the locking-bar, a setting-dog, and means for releasing the tripping-dog, and for actuating the setting-dog.

3. A mechanism of the class described comprising a pair of belt-shifters, a shifter-rod having an offset, a locking-bar combined therewith, a tripping-dog coacting with the locking-bar, a spring-retracted rod connected with one of the shifters, a rod connecting the locking-bar and the spring-retracted rod, a locking-bar-setting dog carried by the bar, and a stop carried by the rod and adapted to engage an offset on the shifting-rod-actuating member.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MIMS S. BURDETTE.

Witnesses:

H. M. PICKETT,  
R. H. STEWARTS.