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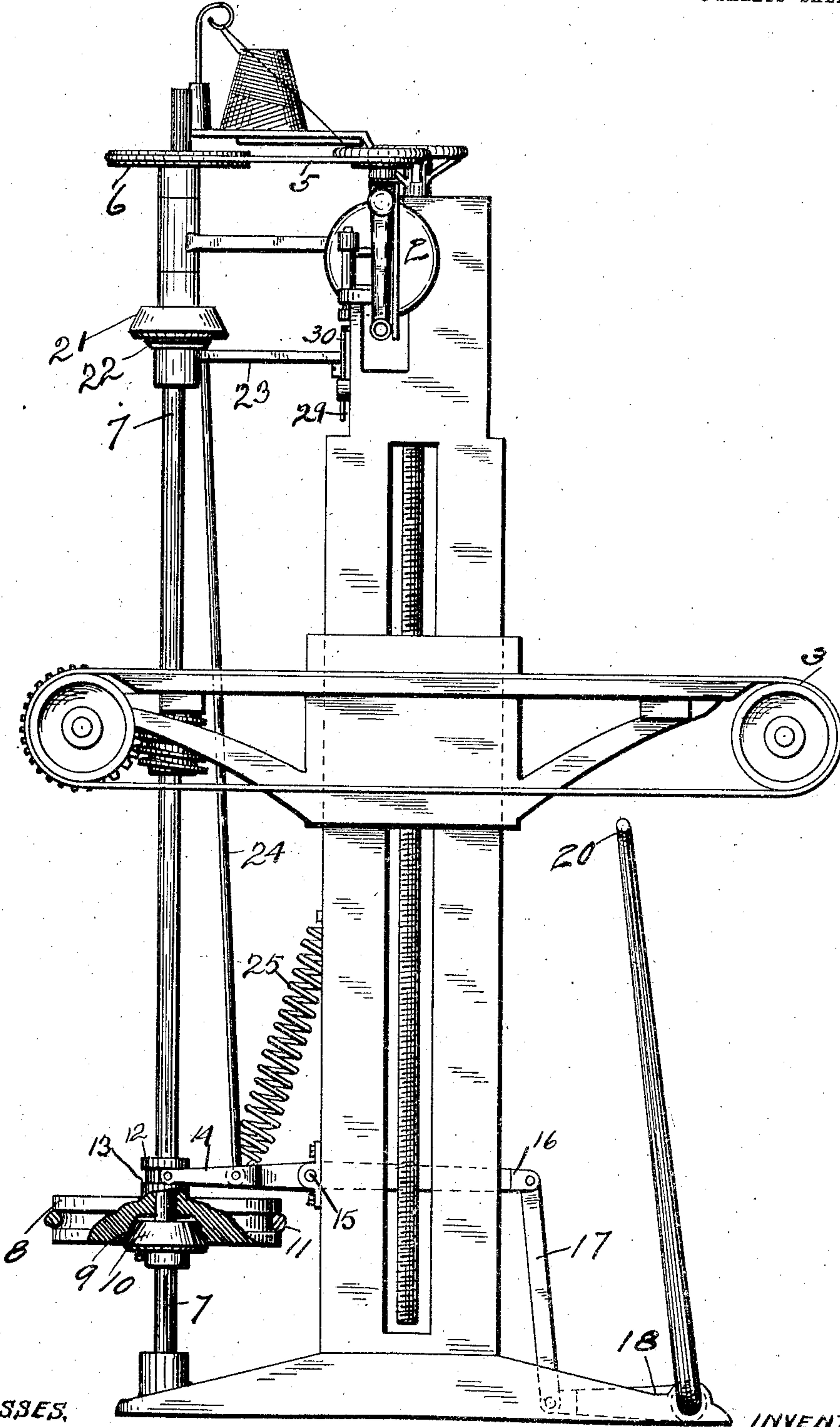
PATENTED AUG. 23, 1904.

E. H. BURGHARDT.
THREAD CUTTER FOR BAG SEWING MACHINES.

APPLICATION FILED OCT. 6, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES,

E. H. Burghardt
P. G. Hanson

FIG. 1.

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HIS ATTORNEYS.

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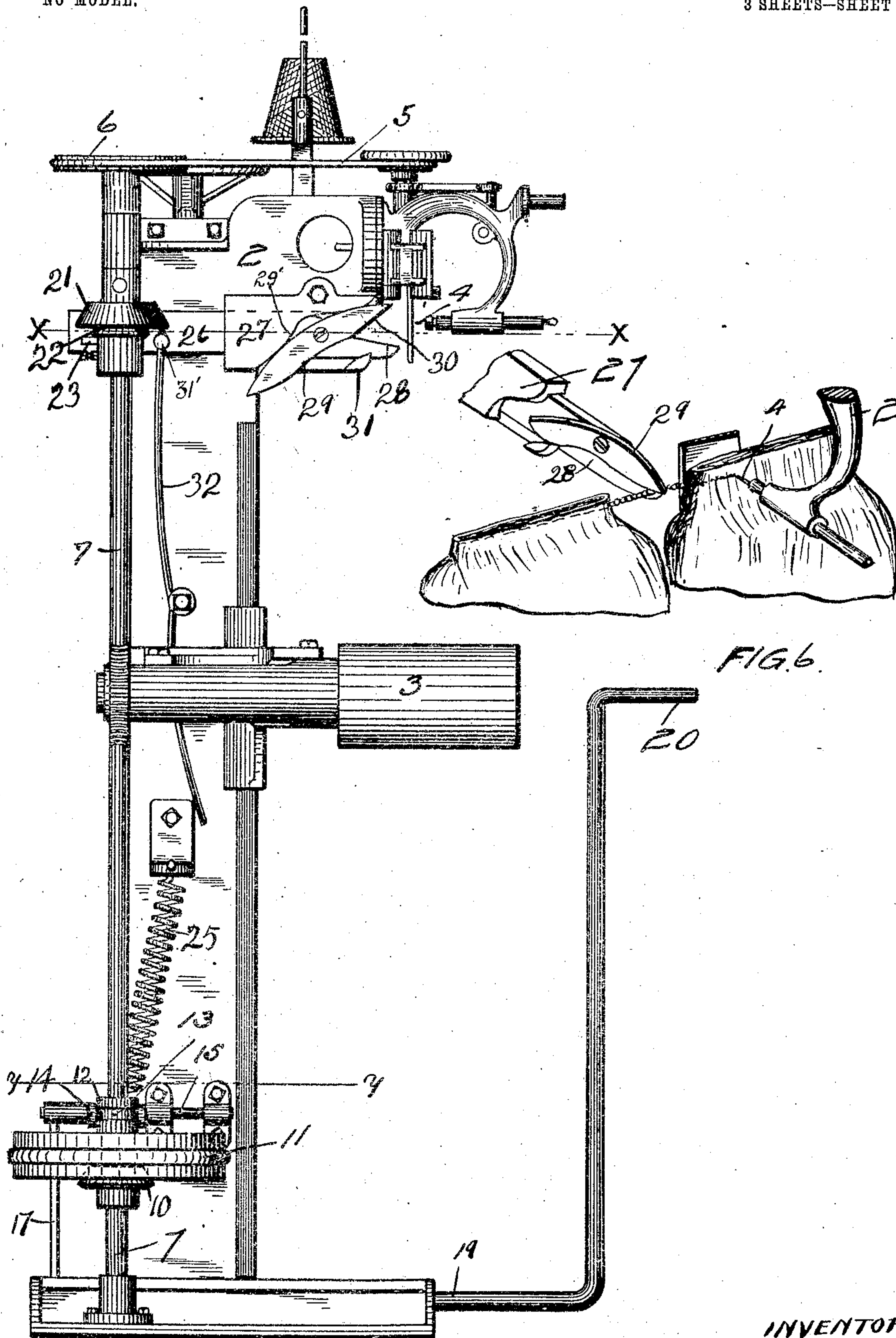
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FIG 2

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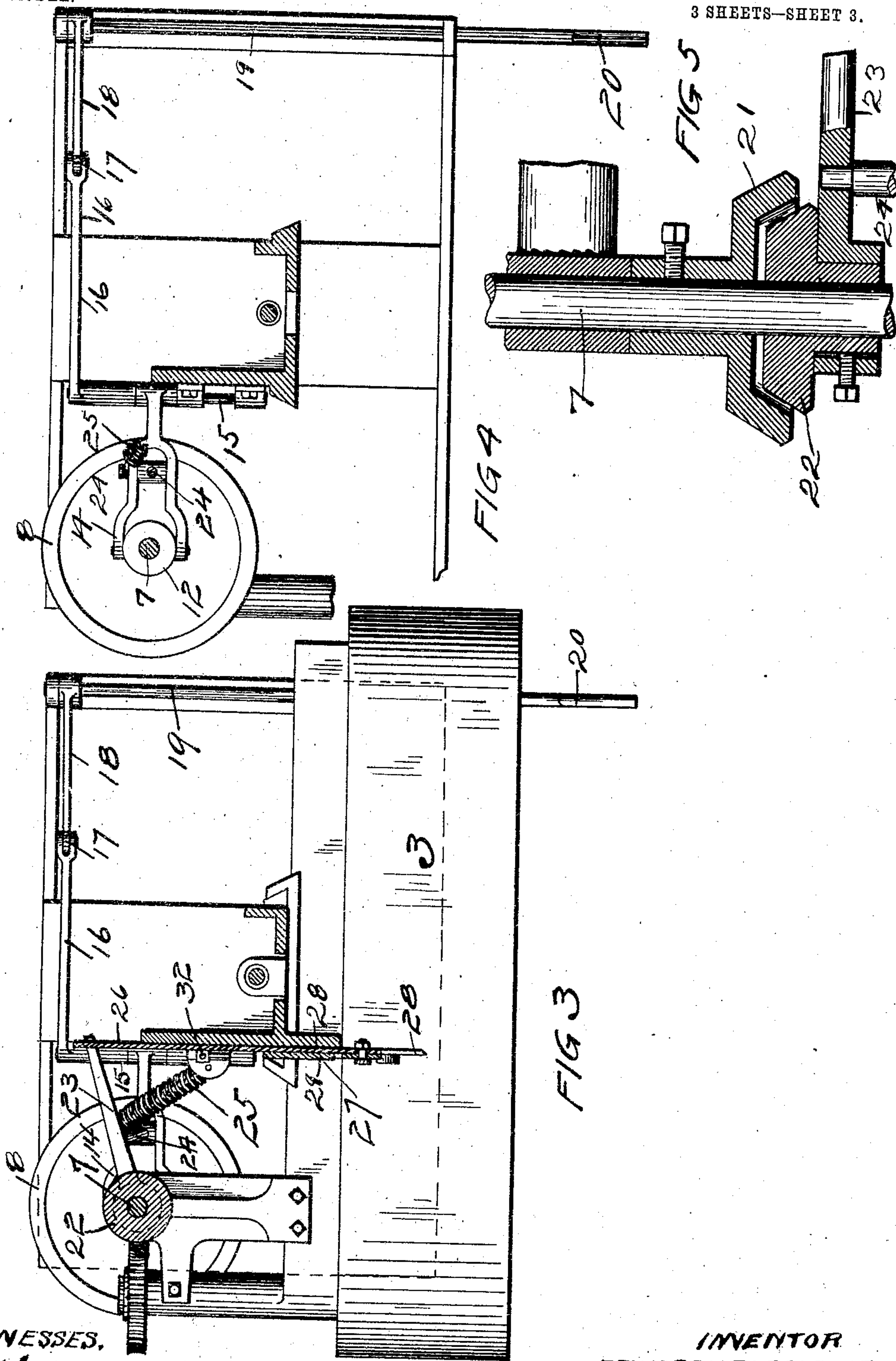
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

EDWARD H. BURGHARDT, OF ST. PAUL, MINNESOTA, ASSIGNOR TO WASHBURN-CROSBY CO., OF MINNEAPOLIS, MINNESOTA, A CORPORATION.

THREAD-CUTTER FOR BAG-SEWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 768,111, dated August 23, 1904.

Application filed October 6, 1903. Serial No. 175,929. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. BURGHARDT, of St. Paul, county of Ramsey, State of Minnesota, have invented certain new and useful Improvements in Thread-Cutters for Bag-Sewing Machines, of which the following is a specification.

My invention relates to machines for sewing up or closing the mouth of a sack or bag after it has been filled; and the object of the invention is to provide means for severing the thread after the sack has been sewed up.

A further object is to effect a saving in thread by stopping the sewing mechanism immediately after the sewing operation has been completed.

The invention consists generally in providing means for automatically severing the thread as soon as the sewing operation is completed.

Further, the invention consists in various constructions and combinations, all as herein-after described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front view of a bag-sewing machine embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a horizontal section on the line *xx* of Fig. 2. Fig. 4 is a horizontal section on the line *yy* of Fig. 2. Fig. 5 is a detail of one of the clutch mechanisms. Fig. 6 is a perspective view showing the severing device in the act of cutting the thread.

In the drawings, 2 represents a bag-sewing machine of the type in general use, which I have illustrated merely to show the application and operation of my invention.

3 is a feed-belt on which the sacks containing flour or other material are placed.

4 is the needle driven by the belt 5 from a pulley 6, secured on a vertically-arranged shaft 7. This shaft is normally stationary. Near the lower end of the shaft 7 I provide a continuously-running loose pulley 8, having a conical recess 9 in its under side to receive a cone-faced member 10, that is secured on the shaft 7. The pulley 8 and the member 10 form the two parts of a cone friction-clutch

through which the shaft 7 is driven. A belt 11 is provided on the pulley 8 to operate the same continuously from a suitable source of power, and a collar 12 is provided on the said pulley, having an annular groove 13, in which the forked end of an arm 14 is secured, the opposite end of said arm being mounted on a rock-shaft 15, that is provided with a crank 16, connected by a link 17 with a crank 18 on a rock shaft or rod 19, that has an upwardly-turned end 20 in position to be engaged and oscillated by the knee of the operator in charge of the machine. A cup-shaped member 21 is secured on the shaft 7 near the upper end thereof, forming one member of a second cone-clutch, the other part 22 of which is loosely mounted on the shaft 7 and arranged to slide vertically thereon to engage the member 21 or be moved out of contact therewith. An arm 23 is secured to the member 22 and connected with the arm 14 by a rod 24. A spring 25 normally holds the members 21 and 22 in contact with each other and the pulley 8 out of contact with the friction-cone 10.

26 is a member arranged to reciprocate in a guide 27 and connected with the arm 23. The member 26 at its forward end is provided with a beveled cutting edge 28, forming a stationary jaw, and a movable jaw 29, having a cutting edge 30, is pivoted on the forward end of the member 26 and forms therewith a scissors-like device that is adapted to engage and sever the thread when the member 26 is projected. A lug 31 is provided in the path of the movable jaw 29 to engage the same and swing its cutting edge toward the corresponding edge of the member 26, and a stud 31' is mounted on the member 26 in position to engage the guide 27 and limit the forward movement of the severing device when it is projected to cut the thread. On the return movement of the member 26 the jaw 29 will be engaged by an edge 29' on said guide and returned thereby to its normal position.

The friction-clutch members 21 and 22 not only serve to actuate the thread-severing device, but act as a brake to arrest the revolu-

tion of the driven shaft 7 and stop the sewing mechanism immediately following the sewing operation, thereby affecting a considerable saving in thread with every bag sewed.

5 The operation of the device is as follows: The attendant having placed the filled sack on the carrier will press the arm 20 toward the right, causing the continuously-moving pulley 8 to slide down into engagement with the friction-cone 10 and move the cone 22 out of contact with the member 21 against the tension of the spring 25. The shaft 7 will be set in motion, and from its connection with said shaft the sewing mechanism will be started to sew up the open mouth of the sack. As soon as the sack has been sewed the operator will release the arm 20 and the spring 25 will raise the pulley 8 out of engagement with the friction-cone 10 and return the friction-cone 22 to its normal position in engagement with the member 21. The momentum of the revolving shaft 7 will then be sufficient to oscillate the arm 23 and project the member 26 toward the sack. The jaws of the severing device will straddle the thread as the member 26 is projected, and the movable jaw 29, engaging the lug 21, will be swung on its pivot toward the fixed jaw and sever the thread. By the time the thread has been severed the shaft 7 will have lost its momentum and will have stopped, and the spring 32 will return the cutting or severing device to its normal position. The operation of sewing up the sack and cutting the thread may then be repeated.

35 I claim as my invention—

1. The combination, with a sewing-machine, of a normally stationary shaft, a clutch mounted on said shaft and comprising a continuously-running loosely-mounted member and a fixed member, an operating device connected with said loosely-mounted member, a second clutch comprising a member fixed on said shaft and a part slidable thereon, means con-

necting said operating device and said sliding part, and a reciprocating thread-severing device connected with said sliding part and arranged to be projected against the thread by the momentum of said shaft when said first-named clutch is operated to stop the machine. 50

2. The combination, with a sewing mechanism and means for operating the same, of a friction-clutch mechanism within control of the operator for disconnecting said sewing mechanism from said operating means, a thread-severing device having operative connections with said sewing mechanism, and a second friction-clutch connected with said operating means and said thread-severing device and arranged to operate the latter through the momentum of said sewing mechanism immediately following the operation of said first-named clutch. 60

3. In a bag-sewing machine, the combination, with a sewing mechanism and means for operating the same, of means within control of the operator for disengaging said mechanism from said operating means, a reciprocating jaw having a cutting edge and operatively connected with a moving part of said mechanism, a second jaw also having a cutting edge mounted on said first-named jaw, a lug arranged in the path of said second jaw and adapted to move its cutting edge toward the edge of said first-named jaw when they are projected toward the thread, means for retracting said jaws, and an inclined surface arranged to engage said second jaw and separate its cutting edge from the corresponding edge of said first-named jaw when they are retracted. 75 80

In witness whereof I have hereunto set my hand this 30th day of September, 1903.

EDWARD H. BURGHARDT.

In presence of—

RICHARD PAUL,
C. G. HAUSON.