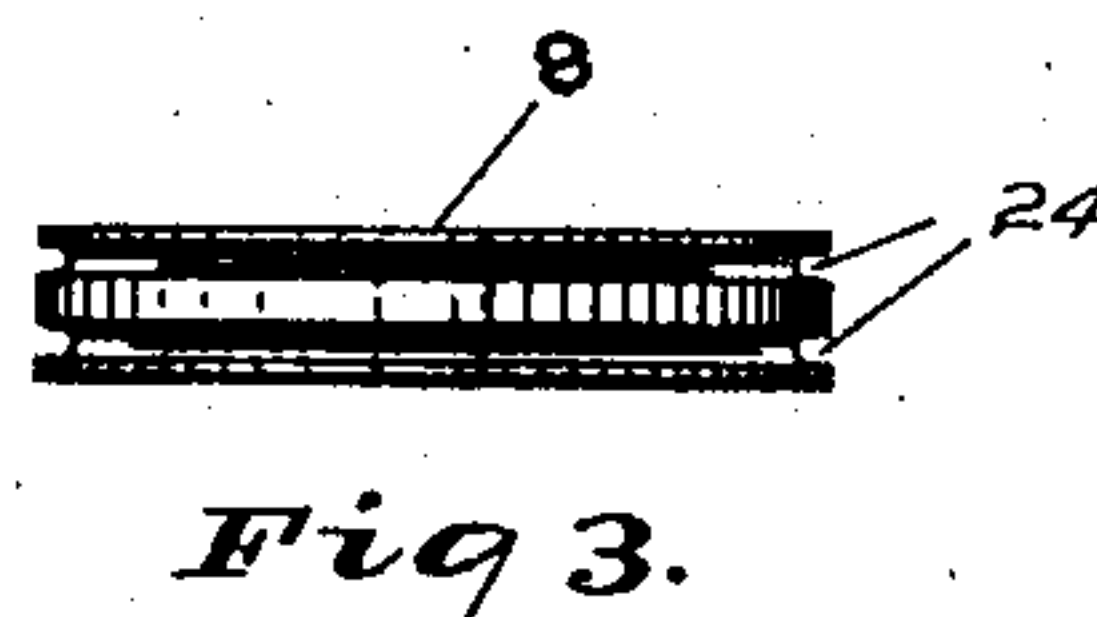
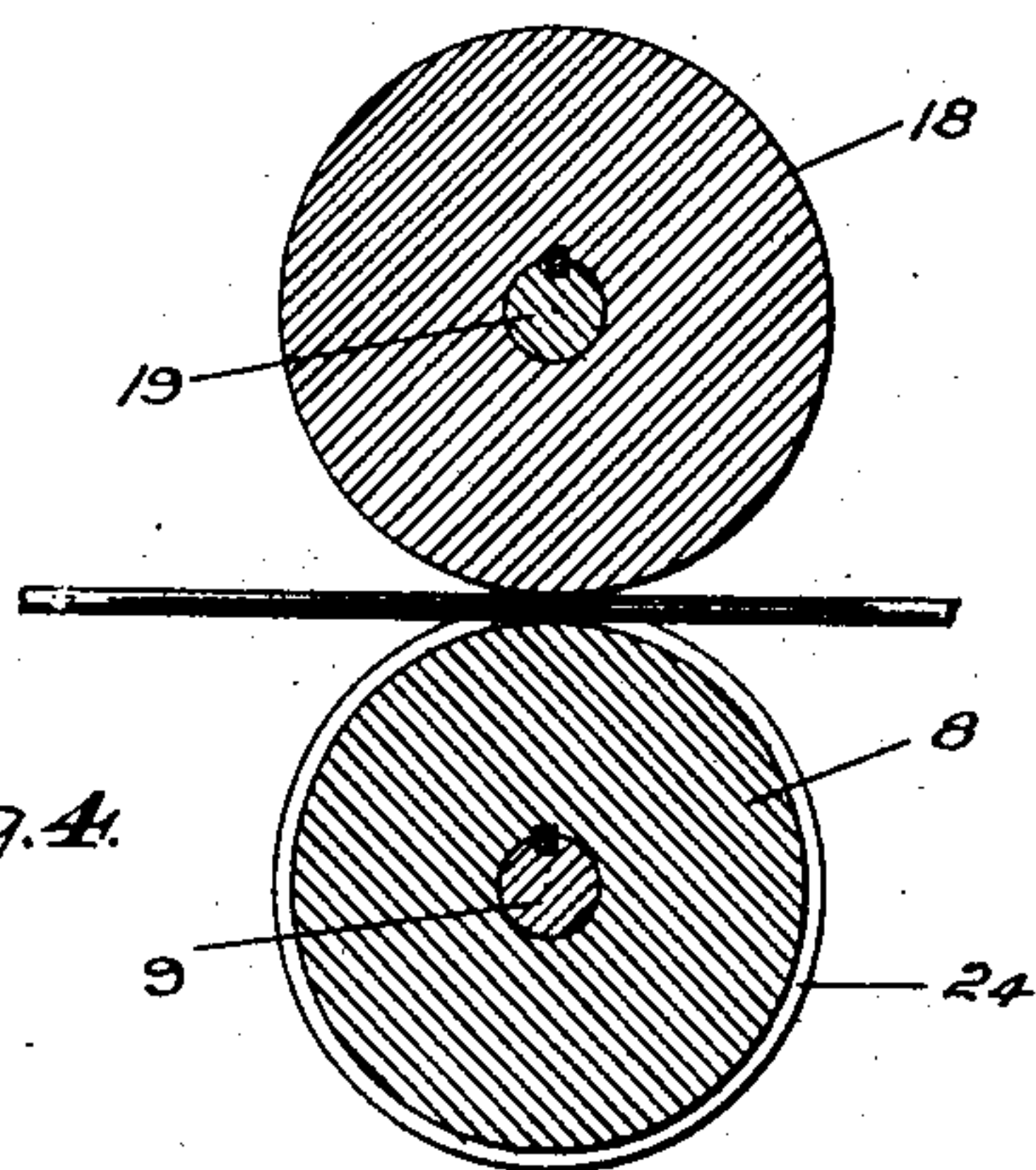
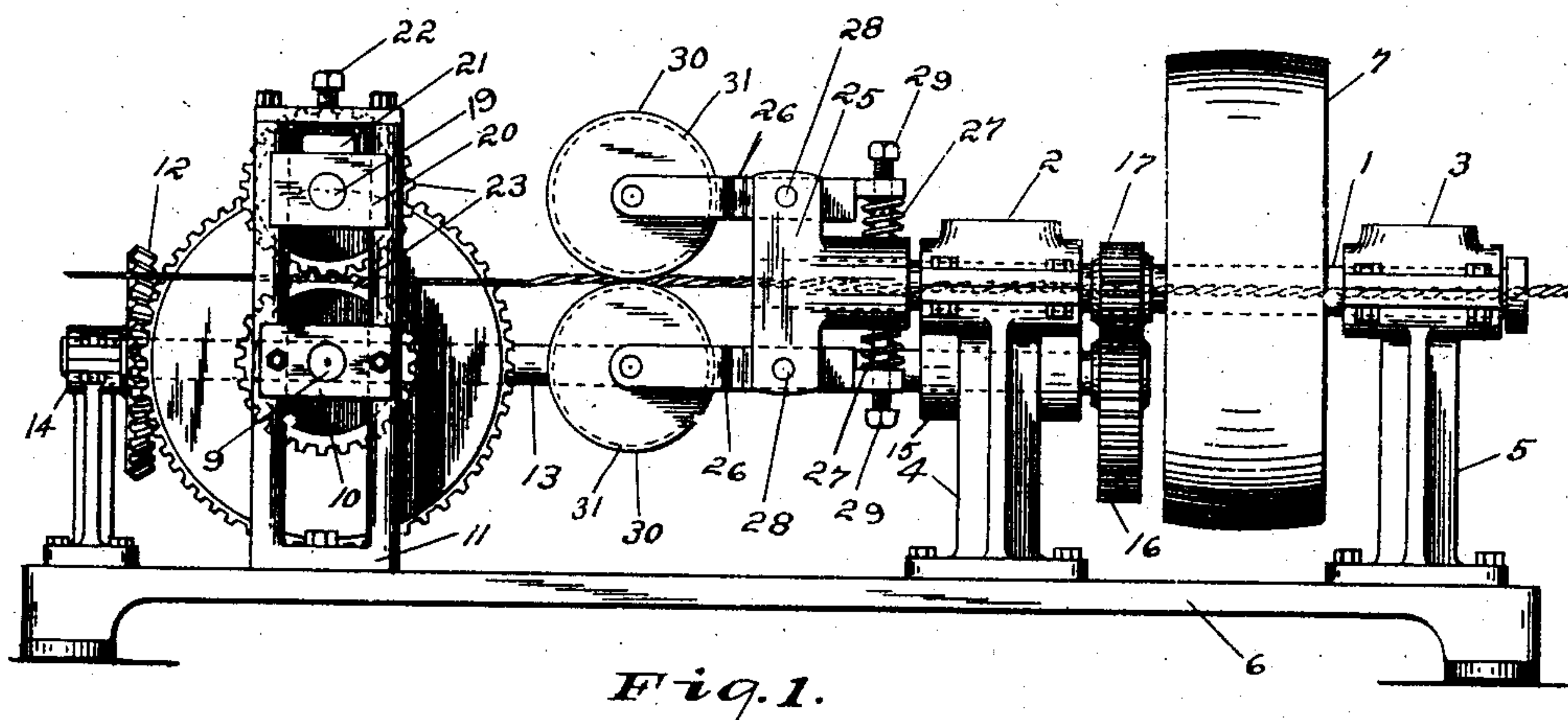
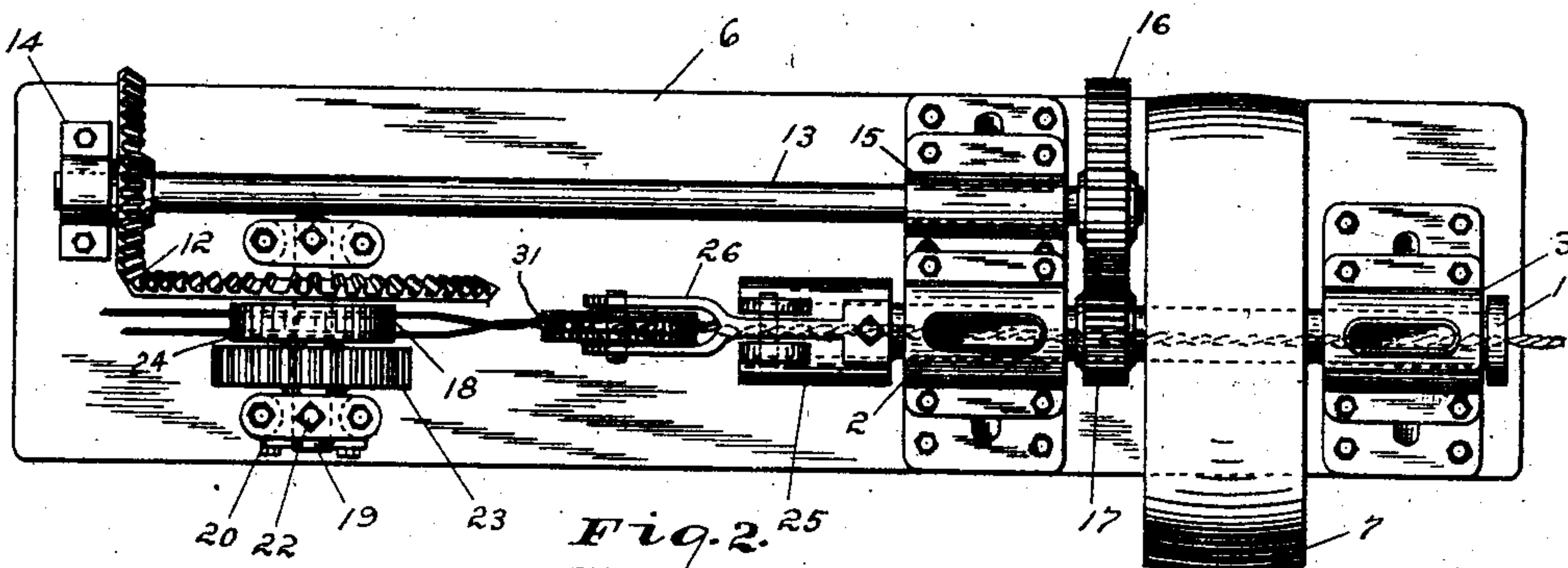


L. BLESSING.
WIRE TWISTING MACHINE.
APPLICATION FILED SEPT. 23, 1907.

919,309.

Patented Apr. 27, 1909.



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UNITED STATES PATENT OFFICE.

LOUIS BLESSING, OF JACKSON, MICHIGAN.

WIRE-TWISTING MACHINE.

No. 919,309.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed September 23, 1907. Serial No. 394,065.

To all whom it may concern:

Be it known that I, LOUIS BLESSING, a citizen of the United States of America, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Wire-Twisting Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to a wire machine adapted to twist two or more strands together and consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

15 Referring to the drawings, Figure 1 is a view in side elevation of a machine embodying features of the invention. Fig. 2 is a plan view of the machine. Fig. 3 is a view in detail of a wire feed drive roll. Fig. 4 is a sectional view of the feed rolls.

20 In the drawings, a hollow main shaft 1 is journaled in horizontal bearings 2 and 3 secured in pedestals 4 and 5 on a suitable base 6 and is driven by a pulley 7 or other preferred means. The drive member 8 of a pair of feed rolls in tangential contact in alignment with the main shaft axis, is keyed or otherwise secured to a journal 9 rotatable in bearings 10 in a bracket 11 of the frame.

30 The journal 9 is driven through a bevel gear train 12 by a countershaft 13 secured in bearings 14 and 15 in parallel relation to the main shaft, by which it is rotated through a gear 16 in mesh with a pinion 17, or other suitable positive means. The upper feed roll 18 is secured on a journal 19 which rotates in bearing blocks 20 having sliding engagement with vertical gibs or ways above the bearings 10 in the bracket 11, the rolls being held in yielding engagement by rubber blocks 21 or other spring members in adjustable compression between the bearing blocks 20 and set screws 22 in the bracket. The rolls are rotated in unison by intermeshing equal gears

45 23. Two or more peripheral grooves 24 are formed in the lower roll to accommodate two or more wires. A hollow head 25 is keyed or suitably secured to the inner end of the main shaft opposite the feed rolls, and yokes 26 whose outer ends are forked and whose inner ends bear against springs 27 are pivoted on pins 28 in the head to lie substantially parallel to the shaft. Studs or cap-screws 29 limit their movement. A twisting wheel 30 is secured between the arms of each yoke to rotate in a plane parallel to the main shaft

and has a peripheral groove or channel 31 adapted to engage and roll on a strand of wire. A twisting wheel is provided for each strand; as herein shown, they are two in number for two wires. Obviously they may be of any number which can be conveniently mounted on the head around its axis to grip the strands.

60 In operation, the several strands of wire are drawn through the feed rolls and thence between the twisting wheels, each of which is adjusted to bear against a wire; thereafter the machine automatically forces the strands along and the twisting wheels roll them together, the ratio between the speed of the feed rolls and of the revolving twisting wheels determining the number of turns given the strands around each other and the tightness of the coils. Obviously this ratio is dependent on the driving connections between the main shaft and feed rolls which may be varied to obtain the result desired.

75 A feature of the machine is the use of twisting rolls in place of revolving dies which are usually employed, so that there is no tendency to cut or crimp the wire as the latter is in contact with rolling surfaces only and these are yieldingly held against it so as to readily pass irregularities in the wire itself.

80 Details in the construction of the machine may be changed without departing from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

What I claim as my invention is:—

1. A wire twisting machine comprising a base, bearing brackets thereon, a hollow main shaft journaled therein, a pair of feed- 95 ing rolls alined with the shaft adapted to feed wire therethrough, a countershaft, a gear therein connecting the shaft, a bevel gear train adapted to drive the rolls from the counter shaft, a hollow head secured to one end of the hollow shaft, yokes pivoted to the head to oscillate in planes radial to the shaft axis whose forked outer ends project beyond the shaft, springs in compression between the inner ends of the yokes and the shaft, twisting wheels each journaled in the fork of a yoke to rotate in a plane radial to the main shaft, and an adjustable cap screw in the inner end of each yoke adapted to limit the movement of the yoke. 110

2. A wire twisting machine comprising a base, bearing brackets thereon, a hollow

main shaft journaled in the brackets, a pair of feeding rolls alined with the shaft adapted to feed wire therethrough, a countershaft journaled in the brackets and geared to the
 5 main shaft, a gear train connecting the lower feed roll to the counter shaft, a pair of gears positively coupling the rolls to rotate at equal speeds, a hollow head secured to one end of the shaft, yokes pivoted to the head
 10 to oscillate in planes radial to the shaft axis whose forked outer ends project beyond the shaft, springs in compression between the inner ends of the yokes and the shaft, twisting wheels each journaled in the fork of a
 15 yoke to rotate in a plane radial to the main shaft, and an adjustable cap screw in the inner end of the yoke adapted to limit the movement of the yoke.

3. A wire twisting machine comprising a
 20 base, bearing brackets thereon, a hollow main shaft journaled in the brackets, a pair of feed rolls in spring-pressed yielding rela-

tion, adapted to force strands of wire through the shaft, mechanism journaled in the brackets adapted to positively drive the rolls from
 25 the main shaft in definite speed ratio thereto, a hollow head secured to one end of the shaft, yokes pivoted to the head to oscillate in planes radial to the shaft axis whose forked outer ends project beyond the shaft, springs
 30 in compression between the inner ends of the yokes and the shaft, and twisting wheels each journaled in the fork of a yoke to rotate in a plane radial to the main shaft, and an adjustable cap screw in the inner end of each
 35 yoke adapted to limit the movement of the yoke.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS BLESSING.

Witnesses:

F. H. NEWKIRK,
 H. W. BUCKNELL.