

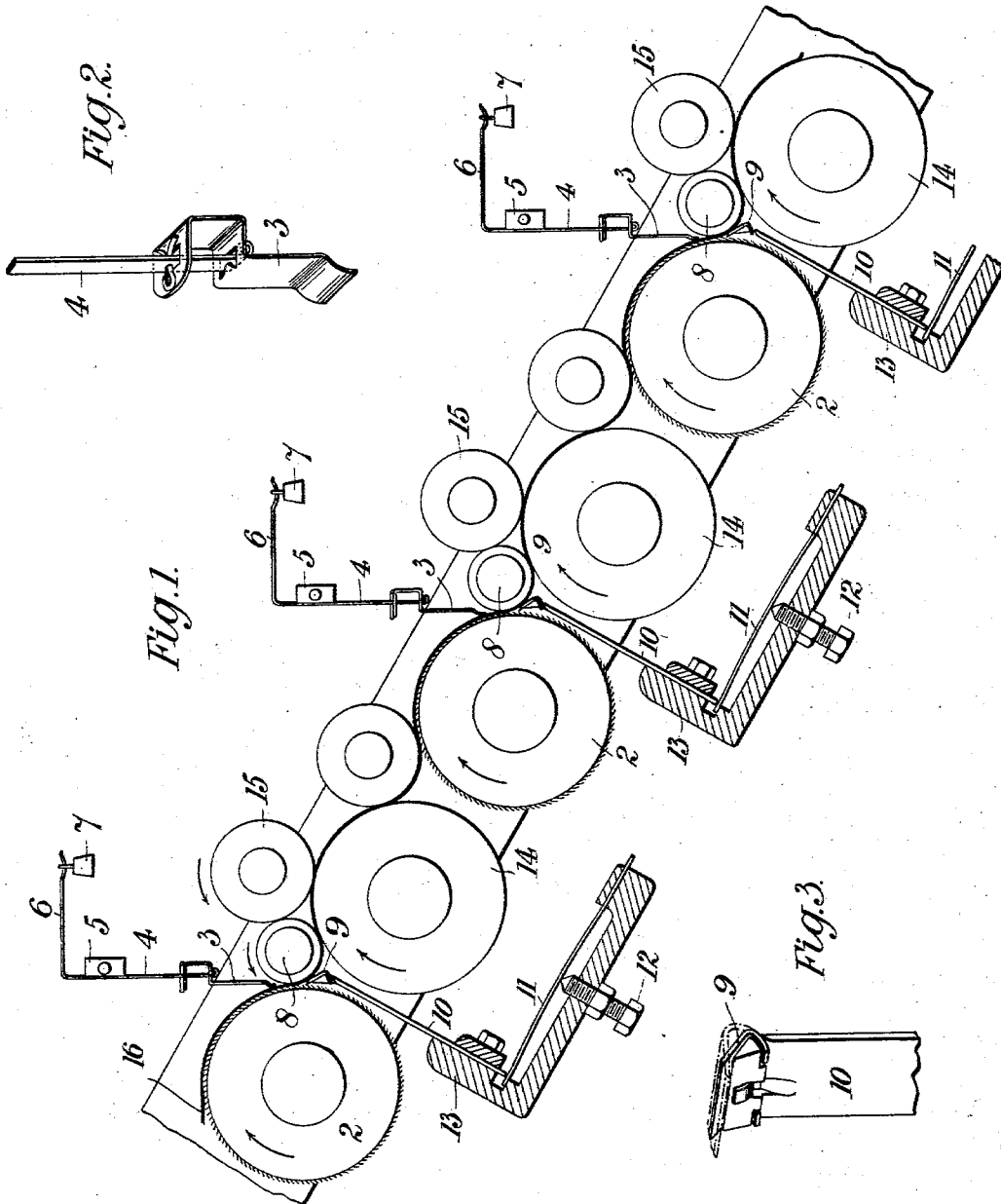
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W. THOMPSON & A. W. GLOVER.
APPARATUS FOR DRAWING FIBERS.

APPLICATION FILED MAY 18, 1903.

NO MODEL.



WITNESSES.
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UNITED STATES PATENT OFFICE.

WILLIAM THOMPSON AND ARTHUR WILLIAM GLOVER, OF LEEDS, ENGLAND.

APPARATUS FOR DRAWING FIBERS.

SPECIFICATION forming part of Letters Patent No. 739,744, dated September 22, 1903.

Application filed May 18, 1903. Serial No. 157,684. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM THOMPSON, manufacturer, of Larkfield, Rawdon, Leeds, and ARTHUR WILLIAM GLOVER, engineer, of Holbeck Lane, Leeds, county of York, England, both subjects of His Majesty the King of Great Britain, have invented a certain new and useful Improvement in Apparatus for Drawing Fibers, of which the following is a specification.

This invention, which is an improvement of the apparatus described in our British specification No. 8,490 of 1901, relates to improvements in apparatus for drawing fibers, and is specially designed for operating on fibers of short staple.

The object of the invention is to insure the "nip" of the first holding-roller being close to the nip of the drawing-roller, the fiber being held between a roller and an upper adjustable spring-presser which accommodates itself to the roller and with it constitutes the holder from which the fiber is drawn and attenuated by a second roller and a lower self-adjusting holder the pressure of which can be regulated. This in turn in order to grip the fiber is assisted by two more rollers running in contact with each other and at the same surface speed. The fiber passes through one or more of such above-described sets of apparatus as may be requisite, after which the slivers may be carried from the last pair of drawing-rollers to the rubbing-leathers and thence to the bobbins in the usual manner.

In the accompanying drawings, Figure 1 shows diagrammatically the invention when three sets of roughened card-rollers are employed. Fig. 2 is a detached view of part of the top spring-presser, and Fig. 3 is a detached view of lower holder or presser.

According to this invention we employ suitably-mounted rollers 2, which are either roughened or covered with short card-teeth or leather. Acting on the face of these are a series of spring-pressers 3, (one for each sliver,) passing through the apparatus, each spring-presser 3 consisting of a blade-spring 4, fixed in pivoted cross-rail 5, the rails being provided with arms or levers 6 and weights 7, by which the amount of pressure of the pressers 3 on the rollers 2 can be regulated, or this can be done by means of a screw or

screws fixing the cross-rail 5 at the desired angle. The lower parts 3 or pressers proper are loosely attached to the spring portions 4 by means of slots and pins, as most clearly seen in Fig. 2, so that the pressers automatically accommodate themselves both to the rollers 2 and the varying thicknesses of the slivers. The edges of the pressers 3 lie close to the nip between the rollers 2 and the small roughened card or leather-covered rollers 8, and in contact with the under surface of the latter are a series of self-adjusting holders 9, (one for each sliver,) each portion 9 being loosely supported by its carrying-bar 10, on which it is free to rock or move, and the edge being beveled and the head movable the fiber can pass between the flat surface of the holder and the rollers 8. The pressure of the holders 9 on the rollers 8 is regulated and rendered more or less elastic by reason of the lower ends of the bars 10 resting on the springs 11, the pressure on which can be regulated by adjusting-screws 12. The bars 10 are carried in slots in cross-rails 13. After passing the roller 8 and holder 9 the fiber passes between a leather-covered roller 14 and a fluted roller 15, which grip the fiber and assist its passage through the other rollers. The slivers 16 may be caused to pass beneath a series of such springs and over a series of rollers; but we have found three such passes to give good practical results. When the slivers pass the last pair of drawing-rollers, they pass to the ordinary rubbers, and thence to the bobbins in the well-known manner.

The improved pressers and holding devices combined with the rollers, as described, allow of extremely short fibers being manipulated, the "drawing-point" being very close to the preceding nip, and owing to rolling or self-adjusting pressers and holders the slivers are not often broken.

What we claim is—

1. In an apparatus for drawing fibers, the combination of a carding-roller, an adjustable spring-presser adapted to bear thereon, a draw-off roller located in proximity to said carding-roller, and an adjustable presser-head bearing thereon, substantially as described.

2. In an apparatus for drawing fibers, the combination of a roughened drawing-roller,

a slotted presser bearing thereon, a spring-arm passing through the slots of said presser, a support for said arm, and a weighted lever attached to said support for applying pressure to said arm, substantially as described.

3. In apparatus for drawing fibers and in combination, a drawing-roller, a spring-presser adapted to bear thereon, a draw-off roller, a movable presser-head bearing thereon, an adjustable arm carrying said head and a spring for regulating the pressure between

the head and the roller substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

WILLIAM THOMPSON.

ARTHUR WILLIAM GLOVER.

Witnesses:

W. C. HOLLAND,

DAVID GRAY.