

No. 765,890.

PATENTED JULY 26, 1904.

J. HARRISON.

ROLLER STOPPING MECHANISM FOR SPINNING MACHINES.

APPLICATION FILED JAN. 14, 1903.

NO MODEL.

4 SHEETS—SHEET 1.

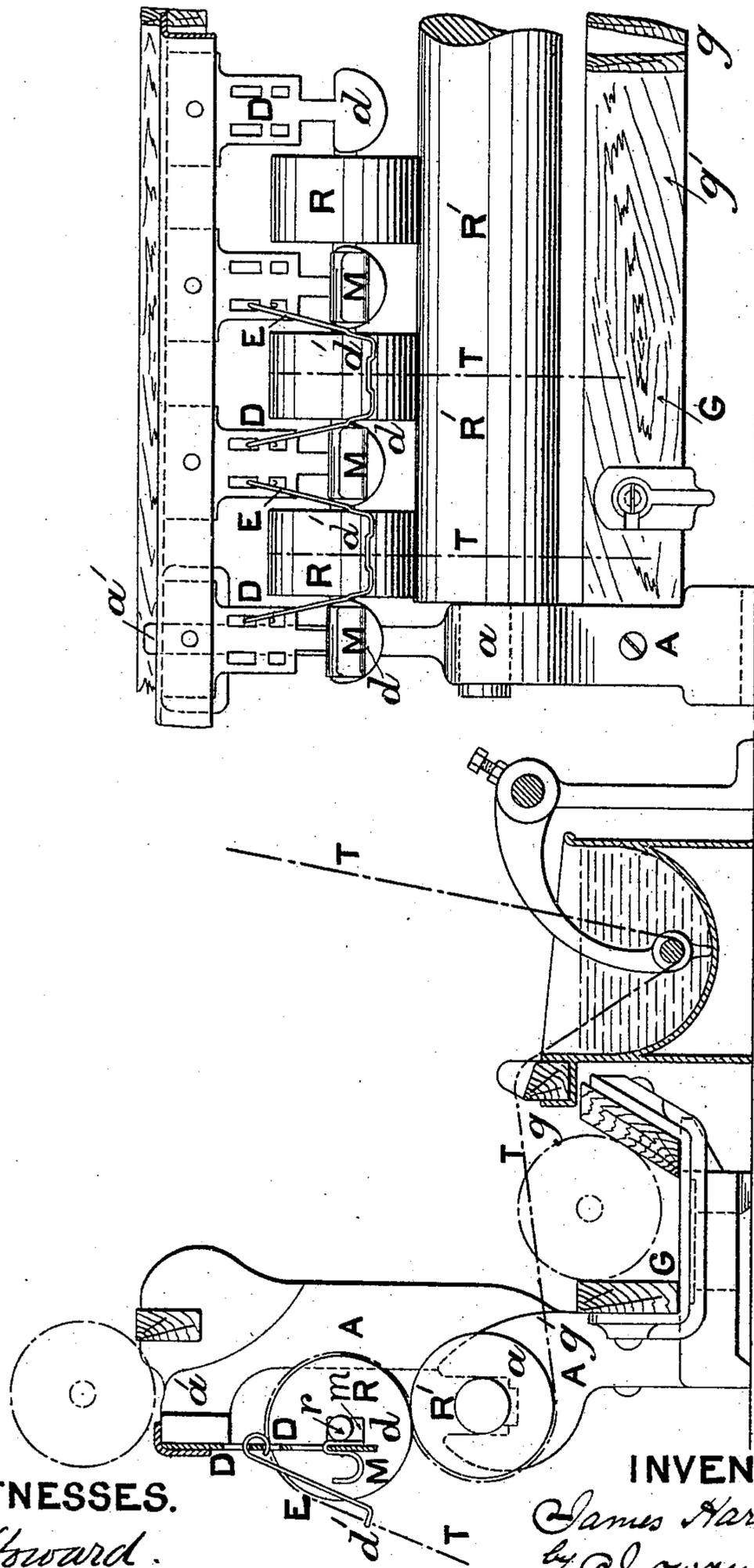


FIG. 2.

FIG. 1.

WITNESSES.

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4 SHEETS—SHEET 2.

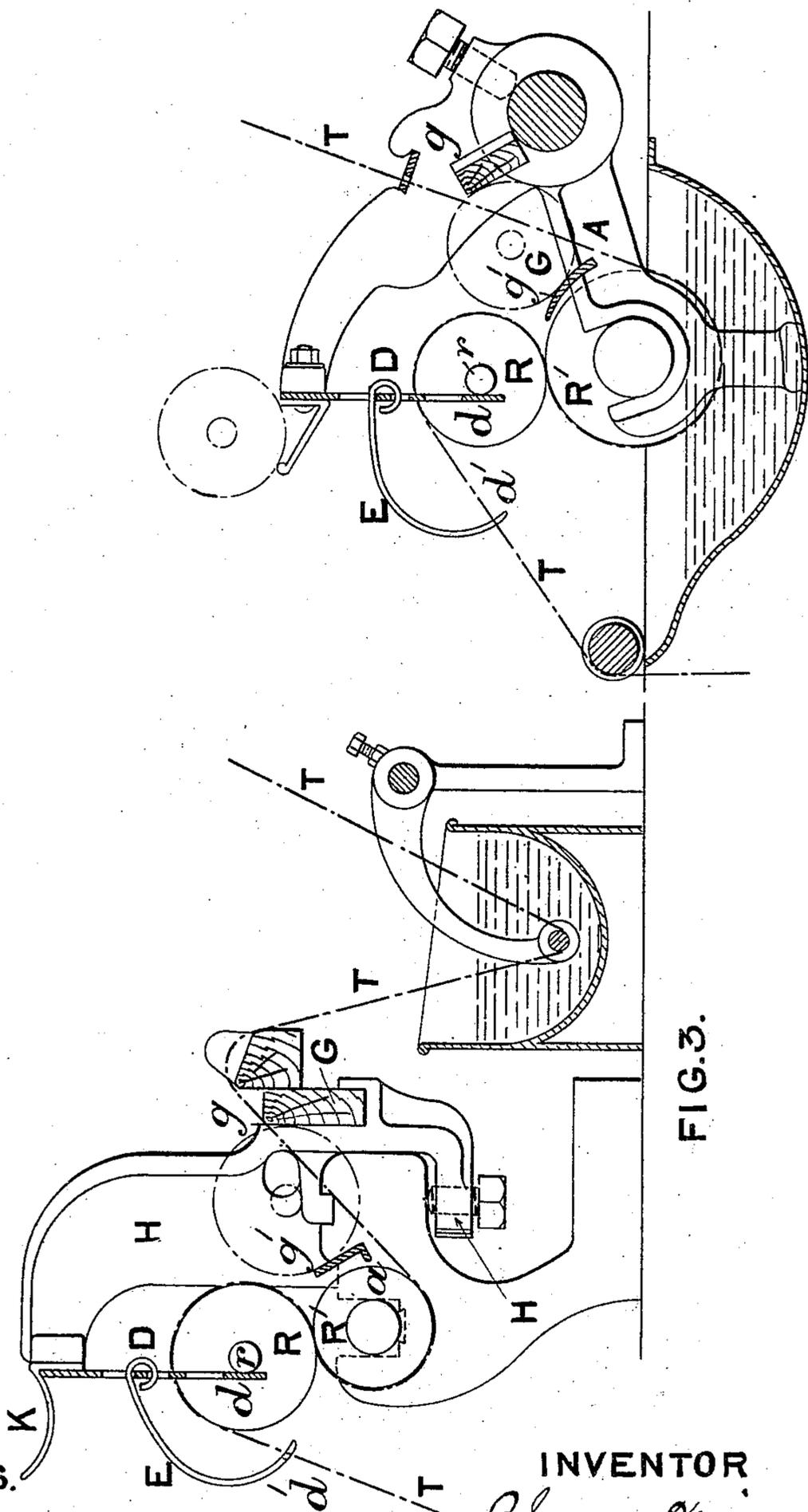


FIG. 4.

FIG. 3.

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4 SHEETS—SHEET 3.

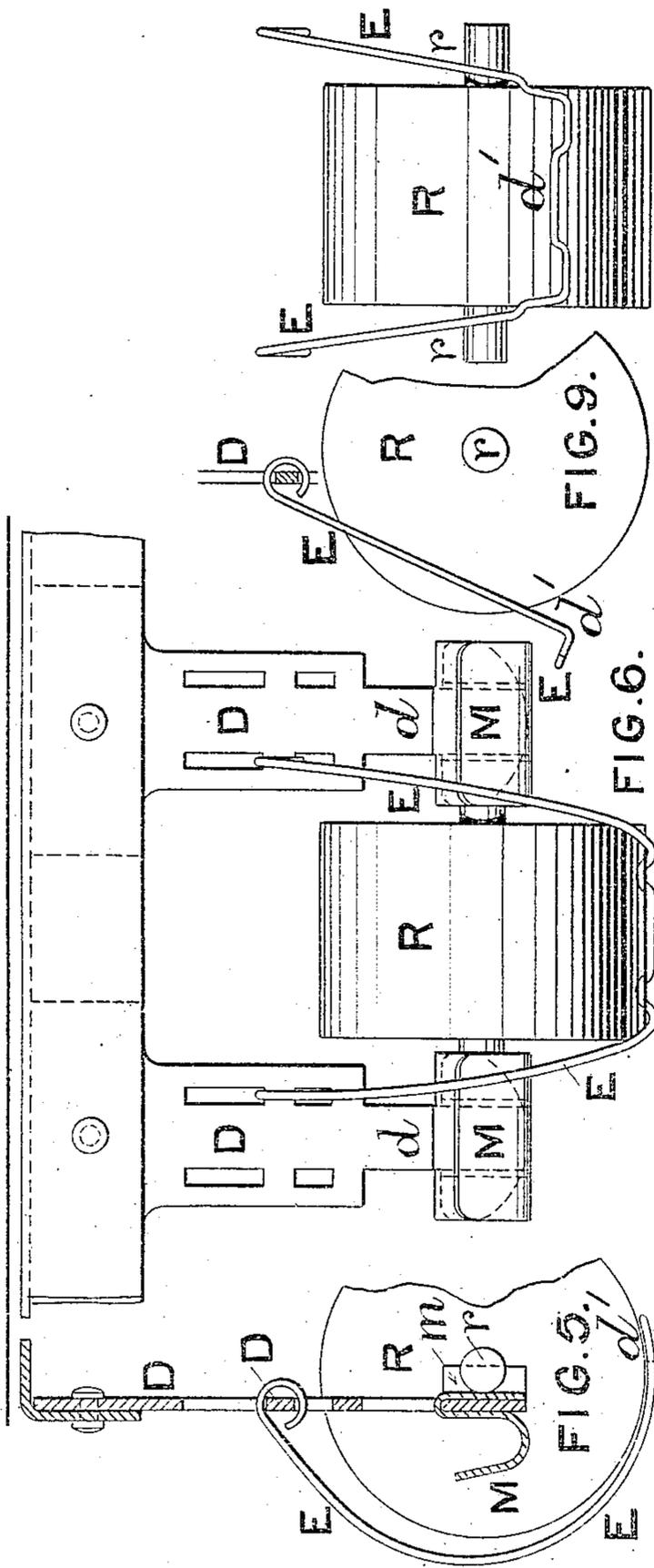


FIG. 10.

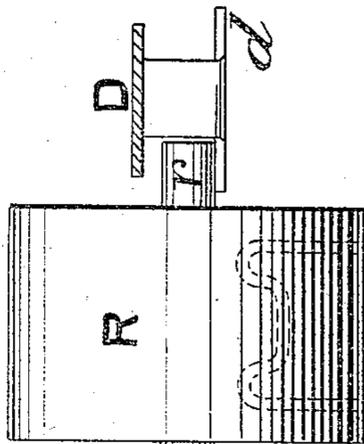


FIG. 11.

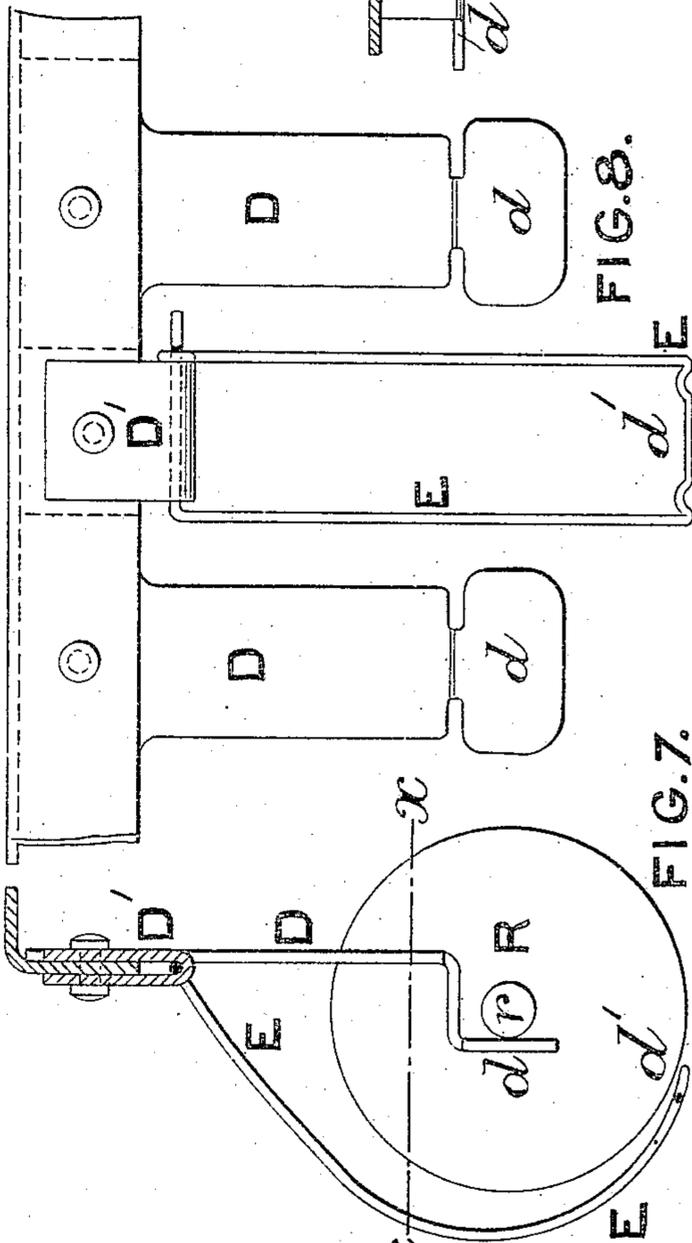


FIG. 8.

FIG. 7.

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4 SHEETS—SHEET 4.

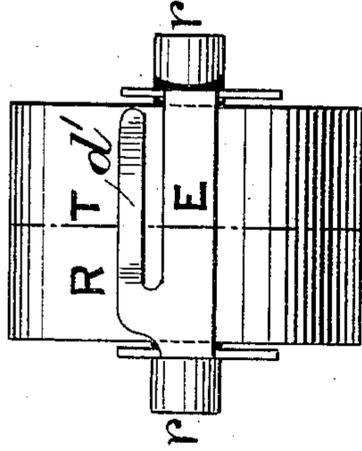


FIG. 14.

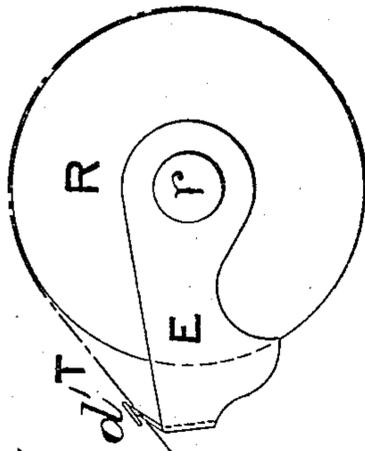


FIG. 13

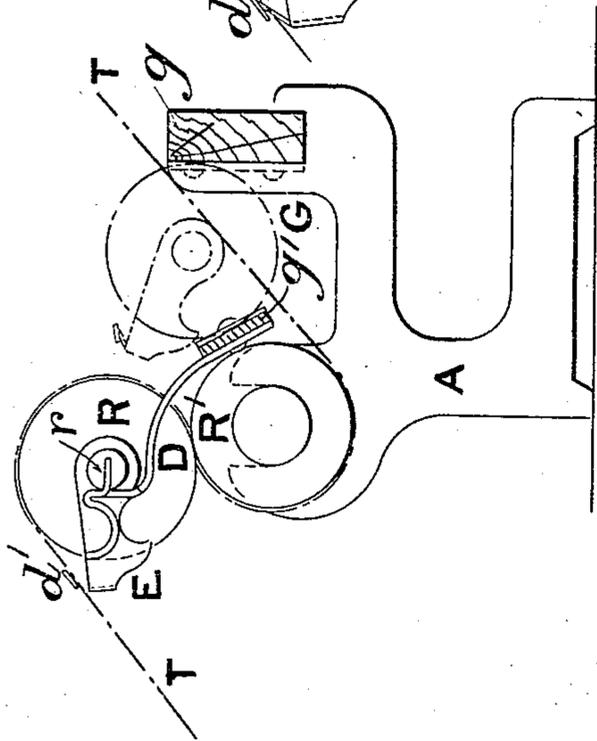


FIG. 12.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JAMES HARRISON, OF MANCHESTER, ENGLAND.

ROLLER-STOPPING MECHANISM FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 765,890, dated July 26, 1904.

Application filed January 14, 1903. Serial No. 139,072. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARRISON, a British subject, and a resident of Longsight, Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Apparatus for Spinning, Twisting, and Doubling Fibrous Materials, of which the following is a specification.

This invention relates to apparatus for spinning, doubling, or winding yarns or threads, its object being to prevent the thread or yarn when an end breaks wrapping round the delivery-roller and also to prevent the broken end coming into contact with the adjacent thread or yarn on either side of it, and thus avoid doubles or flaws in the yarn consequent on a broken end becoming twisted up with another.

The invention consists, essentially, in so constructing the machine that the top delivery-roller will on the breaking of the yarn fall from its position into a suitable receptacle and there grip or secure the broken end of yarn, so that it can neither lap upon the rollers or engage or become entangled or doubled upon an adjacent end or thread of yarn.

The invention will be fully described with reference to the annexed drawings, in which it is shown applied to a doubling-frame, sufficient of the head of the machine being shown to illustrate the invention.

Figure 1 is a transverse sectional elevation through the drawing-head; Fig. 2, a front elevation of same; Fig. 3, a transverse sectional elevation showing arrangement for applying the invention to existing drawing-heads; Fig. 4, a transverse sectional elevation showing the invention applied to another formation of stand; Fig. 5, a side elevation, partly in section, showing roller-stand A and swing-loop B; Fig. 6, a front elevation of Fig. 5; Fig. 7, a side elevation, partly in section, showing another form of swing-loop B; Fig. 8, a front elevation of Fig. 7; Fig. 9, a side elevation, partly in section, showing a modified form of roller-support A and swing-loop B; Fig. 10, a front elevation of Fig. 9; Fig. 11, a sectional plan on line *x x*, Fig. 7; Fig. 12, a transverse sectional elevation, showing another form of stand; Fig. 13, a side elevation of another form of swing-loop E, which falls with roller R; Fig. 14, a front elevation of Fig. 13.

The top roller R and the bottom roller R' and the other parts of the machine either for drawing, doubling, twisting, or spinning are of any ordinary construction.

The bottom roller R' is supported in the bearing *a* of the roller-stand A, but the top roller R is supported upon the bottom roller R' by a nib or supporting-bracket D, placed at the front side only of the roller, against which the roller journals *r* rest, leaving the roller R free to fall off at the back.

The roller-stand A is made with an arm *a'* projecting over to the front side to provide a support for a nib-bar or top roller-support D. The bar or support D is secured to the roller-stand arm *a'* by screws and hangs down in front of the journals *r* of the top roller R.

The top roller R is set a suitable distance toward the front over the center of the bottom roller R' to cause it to retain its position as it rotates. The pivots or journals *r* of the top roller R rest against the nibs *d* of the bar D by reason of the weight of the roller.

Above the top roller R a swinging loop E, of light wire, is pivoted, which hangs in front of the top roller R and is held out of contact with it by the resting upon yarn or thread T. The swinging loop is pivoted or hinged in any suitable way either between two bars D or in a bearing D' and is formed with yarn guide or eye *d''* along one edge. It rests upon the yarn T as it passes from the rollers R and R' to the thread guide or spindle, (not shown,) and should the yarn break it falls and engages the top roller R, lifting it from its position off the bottom roller R' and causing it to fall down behind. The light-wire loop E when it falls by the breaking of the thread either engages the peripheral edges of the top roller R and the frictional resistance caused thereby forces the roller backward or the lower edge is drawn in between the nip of the two rollers and dislodges the top one. The light swinging loop E may be pivoted to the journal *r* of the top roller R, as in Figs. 13 and 14, and the supporting-bar D may be affixed to the stand to project up between the two rollers, as in Fig. 12.

Behind the bottom roller R' a receptacle G is constructed to receive the top roller R when it falls and hold it fast. The receptacle G is of

