

No. 897,129.

PATENTED AUG. 25, 1908.

H. C. NIGHTINGALE.

DEVICE FOR PREVENTING SINGLES IN DOUBLING AND SPINNING.

APPLICATION FILED NOV. 3, 1906.

Fig. 1.

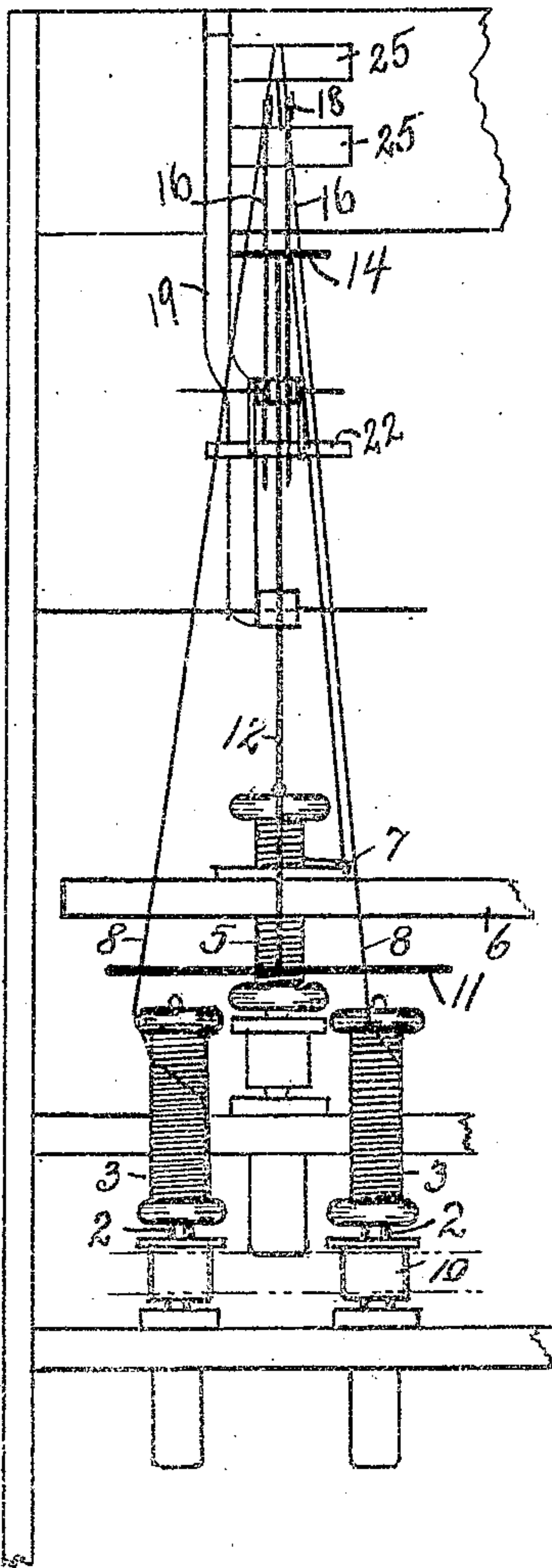


Fig. 2.

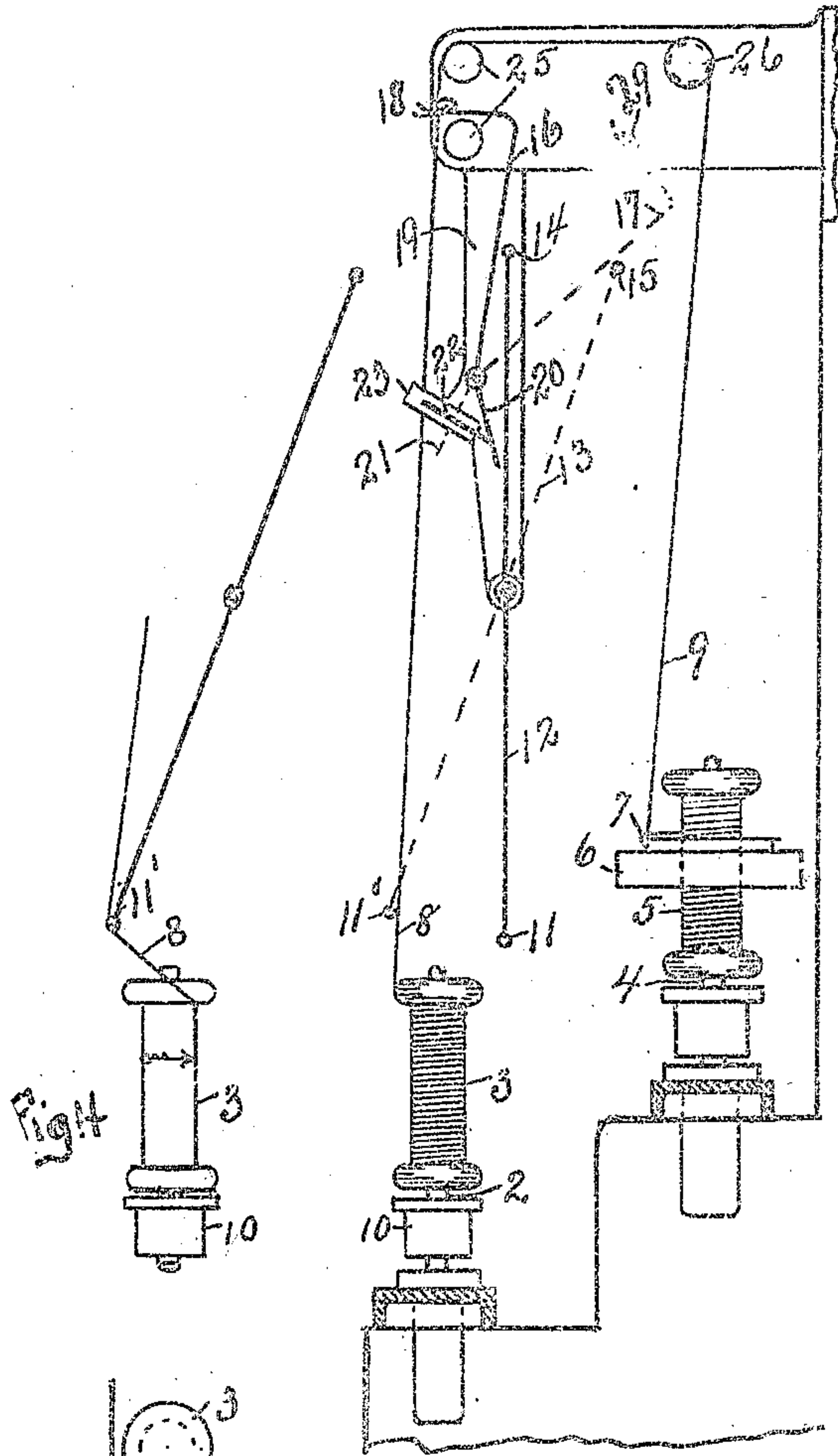


Fig. 4.

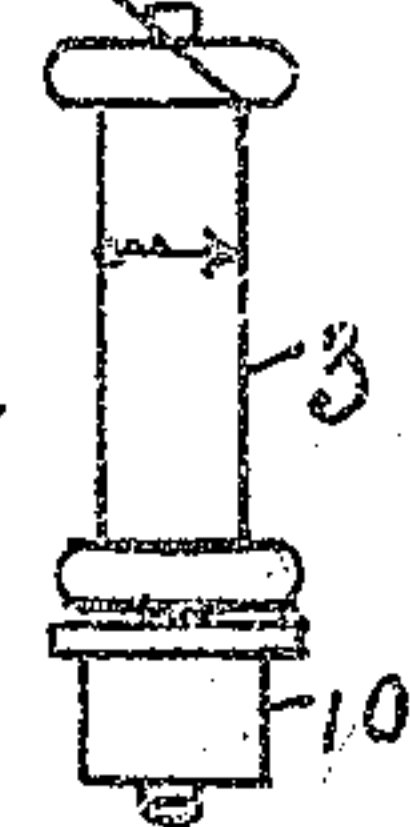
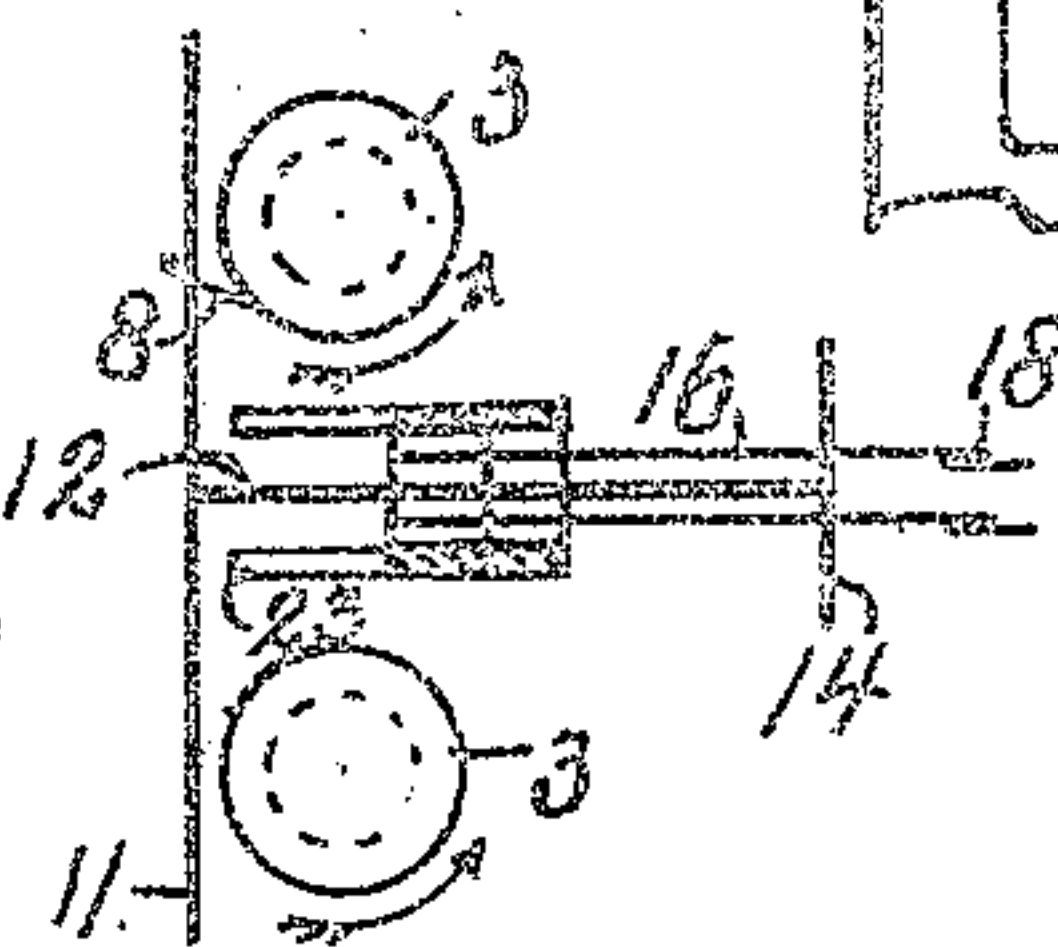


Fig. 3.



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DEVICE FOR PREVENTING SINGLES IN DOUBLING AND SPINNING.

No. 897,129.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed November 3, 1906. Serial No. 341,879.

To all whom it may concern:

Be it known that I, HARRY C. NIGHTINGALE, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Device for Preventing Singles in Doubling and Spinning.

My invention relates to improvements in doubling and spinning machinery in which two or more ends are run together; and has for its object the prevention of single ends running on the receiving spool when one of the other ends breaks or a thread runs out. I attain these objects by the mechanism illustrated in the accompanying drawing; heretofore numerous devices have been designed and applied with the one object, namely of stopping the spindle or spindles when one end broke or run off. These stop motions, for stopping the spindles when the thread breaks are usually very sensitive and intricate, and are easily put out of order and fail to work causing single ends to run on the receiving spool which have to be unwound again causing waste and loss of time. In my invention when one end breaks or runs off the remaining end or ends are automatically broken and the spindles are left to run until they are again threaded.

Figure 1 is a front view of a spinning machine with my invention attached. Fig. 2 is a side view of Fig. 1. Fig. 3 is a plan view of the two spindles. Fig. 4 is an elevation of the same.

Similar numerals refer to similar parts throughout the several views.

This drawing shows the spin, double and twist process in which the threads of the two spindles doing the first time twisting run together and are received on a spindle giving the opposite or second time twist.

The two spindles 2 having the spools 3 on them and revolving, twist the threads 8 which pass over rods 25 between which the fallers 16 are held in position, as shown in Fig. 2 by the threads 8 passing through the eyes of same.

When a thread breaks the one faller 16, falls to the position indicated by the dotted line 17. Supported near its center so as to nearly balance it is another faller 12 which has a short cross piece 14 at its upper end and another cross piece 11 at its lower end. The faller 16 when it falls back on account of an end breaking engages the faller 12 by

means of the said cross piece 14 and throws the piece 12 to the position 13 thus bringing the cross piece 11 forward over the outside edge of the spool 3, this will cause the thread on the spool with the whole end to break on account of the revolution of the spool and the pull on the thread as shown in Fig. 4.

As an auxiliary a knife or sharp piece of metal is or can be placed in a slide 23 and when the faller drops the end 20 pushes the metal of knife 22 forward so as to engage the thread 8 and the twist of the said thread severs it. Either of the devices can be used separately or together but the breaking of the thread by the bar 11 is preferred. Thus it can be seen that when one end breaks the other end will also be broken at the same time and each spool takes up its own end and no singles will run on the receiving spool as they are all pieced up together.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. The combination in a spinning and doubling machine consisting of first and second time twisting spindles, the bracket 19 supporting the droppers 16, through which the threads pass, the thread supporting rods 25 and the pivoted piece 13 consisting of an upper cross rod 14 and a lower cross rod 11, this latter rod beam thrown forward over and beyond the center of the spindles when the dropper 17 falls back as set forth and described.

2. The combination in a spinning and doubling machine of first and second time twisting spindles, a bracket attached to the frame, droppers supported by the bracket, a pivoted piece 13 adapted to be engaged by the droppers when released upon failure of the thread, said droppers having an end portion 20, a knife engaged by said end portion and adapted to be slid forward in a slide 23 and cooperating in its movement with the lower cross bar 11 to sever the remaining twisting thread or threads, as set forth and described.

Signed at Paterson in the county of Passaic and State of New Jersey this 26th day of Oct. A. D. 1906.

HARRY C. NIGHTINGALE.

Witnesses:

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