

I. LINON.
PROCESS FOR THE PREVENTION OF DOUBLE THREADS AND INTERTWINING IN SPINNING FRAMES.
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1,040,224.

Patented Oct. 1, 1912.

Fig. 1.

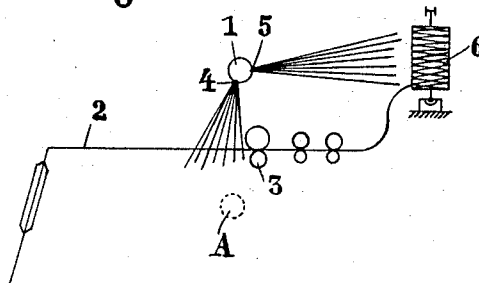


Fig. 2. A

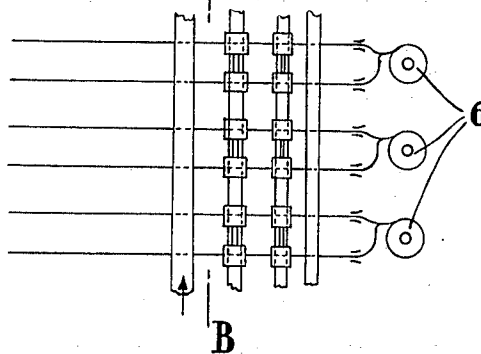
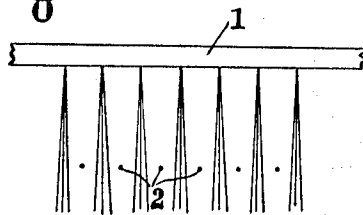


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

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PROCESS FOR THE PREVENTION OF DOUBLE THREADS AND INTERTWINING IN SPINNING-FRAMES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, IVAN LINON, a subject of the Emperor of Germany, residing at Ensival, Route de Lambermont, Belgium, have invented new and useful Improvements in Processes for the Prevention of Double Threads and of Intertwining in Spinning-Frames, of which the following is a specification.

This invention relates to an improved process for the prevention of double threads and of intertwining in spinning frames.

In the various systems heretofore proposed for the prevention of double threads and intertwining in spinning frames, fixed or alternating, or winding machines, the most efficient are those in which metallic plates or rakes are disposed between the threads. These systems are, however, open to the objection that they are complicated and they are unsuitable because they take up too much space and are in the way of the workers.

The object of the present invention is to secure the advantages in point of efficiency that are obtainable by the interposition between the threads of some body through which the threads can not pass and at the same time to do away with the objections due to the rigidity of those interposed bodies. This result is obtained by replacing the metallic bodies above-mentioned by jets or streams of gas. The efficiency remains as great as before since no thread that tends to catch on to the adjoining thread can traverse such a gaseous jet or stream, and all doubling or intertwining is thereby avoided. On the other hand, the presence of these gaseous jets or streams does not in any way obstruct the workers in their operations.

It should be observed that in ordinary spinning it will be generally advantageous to utilize hot and moist air for the gaseous jets or streams. In so doing one has the further advantage of insuring that the threads will be sufficiently moist.

In order the invention may be clearly understood I have hereunto appended explanatory drawings whereon:

Figure 1 is a side elevation of an installation with the invention applied to it. Fig. 2 is a plan of the installation. To keep the drawing in this figure clear, the course or passage of the gas is not shown. Fig. 3 is a cross section taken on the line A, B, Fig. 2.

Referring to the drawings a tube 1 is pierced with a series of holes or slits 4, suitably placed for the distribution of the air or other gas or vapor under pressure contained in the tube, and in this way there is established between each pair of threads a jet or stream of gas preferably spread out in the form of a sheet, which prevents the threads from catching on to each other or twisting around one another.

The arrangement may be completed by a second series of holes or slits 5 which send a current of hot and moist air on to the bobbins 6 of the rack, so as to communicate to them the excess of heat and moisture required for the spinning. It is needless to say that the same result would be obtained by feeding the tube 1 with air mixed with water vapor. The tube may be placed in any convenient position, according to the style of machine in use, for example, under the threads as at A in Fig. 1.

It should be observed that this current of gas may be continuous or non-continuous. It is likewise to be observed that intertwining tends to occur principally in the immediate neighborhood of the drums 3. It is therefore to that point that the currents of gas should be specially directed. To enable us to find in practice the direction it is most advantageous to give to these currents of gas, it is of great advantage to be able to modify the direction, and that can be done simply by turning the tube 1 about its longitudinal axis.

The width of the jets or streams of gas (measured longitudinally of the tube 1) can be regulated by modifying the section of the holes or slits in the tube 1, or by moving that tube farther away from or nearer to the threads.

The form of the holes in the tube 1 is not of course, restricted in any way and the holes may be of circular, elliptic, polygonal or other section.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A method for preventing intertwining and doubling of yarn or thread, which consists, in advancing the yarn or thread in spaced relation along a predetermined path, and in directing pressure gaseous jets through the spaces between the yarn or

thread, substantially as and for the purpose set forth.

2. A method for preventing intertwining and doubling of yarn or thread, which consists, in advancing yarn or thread in spaced
5 relation along a predetermined path toward the bobbins, in projecting gaseous pressure jets toward the yarn or thread in advance of the bobbins, and projecting moist jets upon

the yarn or thread while the same is wound upon the bobbins, substantially as described. 10

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

IVAN LINON.

Witnesses:

GEORGES VONDER HAUGHEN,
LEONARD LEVER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."