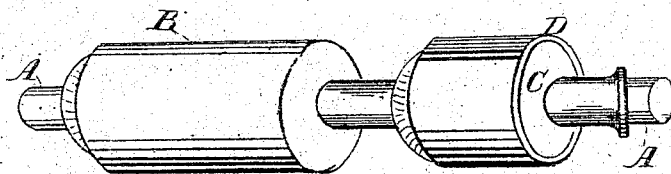


I. Read,
Spinning Machine.
No. 48,134. Patented June 6. 1865.



Witnesses
John Ambrose
Peter Van Antwerp

Inventor
Dan Read

UNITED STATES PATENT OFFICE.

DAN READ, OF NEW YORK, N. Y., ASSIGNOR TO AMOS A. TAYLOR, OF
SAME PLACE.

IMPROVEMENT IN ROLLS FOR MACHINES FOR PREPARING FIBROUS MATERIAL FOR SPINNING, &c.

Specification forming part of Letters Patent No. 48,134, dated June 6, 1865.

To all whom it may concern:

Be it known that I, DAN READ, of the city and State of New York, have invented a new and useful improvement in the construction of rolls used in preparing wool, cotton, and other fibrous materials for spinning, spinning yarn, and manufacturing cloth.

My invention consists in making these rolls of elastic gums compounded with sulphur and other substances and covering them with leather, parchment, or paper, or the equivalent of either, in such a manner that while the main body of the roll is left elastic and yielding the outer surface is firm and smooth.

Heretofore, when the body of the rolls has been formed of elastic materials, the leather or other covering, made of materials differing from that of which the body of the roll is formed and forming the outer surface, has been put on after the body was finished and vulcanized, and fastened at the ends of the roll only, thus leaving the intermediate space which comes into contact with the yarn or cloth loose and liable to friction between the body of the roll and the covering. This I remedy by making the leather, parchment, or paper, or their equivalents, adhere to the elastic body, so that the roll and cover, when completed, form one entire mass.

To enable others skilled in the art to practice my invention, I will proceed to describe it.

In the accompanying drawings, forming part of this specification, A A is a shaft or spindle, having on it one complete roll, B, and one having a portion cut off, so as to exhibit the body C and covering D.

The construction and operation are as follows:

A A is a shaft or spindle, with bearings to attach the roll to the machinery; B, a roll complete. C is the elastic body of the roll, and D is the covering.

As there is a great variety of these rolls used for the various operations in preparing the materials for spinning, spinning yarn, and manufacturing cloth, the shafts or spindles will necessarily

differ in length and size. There may be flanges on these shafts to form the rolls between, or the rolls may be formed around the shafts without them. Around the shaft or spindle, between the flanges, or where flanges are omitted, at the required position on the shaft, I form the body of the roll of a preparation made of gutta-percha, india-rubber, or other fibrous or globular gums prepared with sulphur and other substances well known to persons skilled in the art of preparing gums for vulcanization, of the consistency of putty, until the required body is obtained. If flanges are used, this body should extend beyond their circumference. After the body of the roll is thus formed I put a covering of leather, parchment, or paper, or the equivalent of either, closely fitted and neatly joined, around it, covering its entire surface, and then apply to the roll so covered steam or heated air at a temperature of about 260° Fahrenheit. This causes the material used in covering to unite with and adhere to it so firmly that the whole becomes one entire mass, having an uniform elastic with the required surface for the various uses to which the roll is to be applied.

The degree of heat will, of course, be varied according to the proportion of sulphur and other substances in the compound, and also according to the different degrees of elasticity required.

Having thus described the rolls and the mode of constructing them, what I claim as new, and desire to secure by Letters Patent, is—

Covering rolls for preparing materials for spinning and spinning yarn and manufacturing cloth with an inner covering of vulcanized rubber, gutta-percha, or other suitable gums, and with an outer covering of leather, parchment, paper, or the equivalent of either, these two coverings being united together in the manner as and for the purpose described.

DAN READ.

Witnesses:

T. VAN ANTWERP,
PETER VAN ANTWERP.