B. H. JENKS.

Mode of Treating Wood for the Manufacture of Carding Engines.

No. 55,111. Patented May 29, 1866.

Fig: 1.

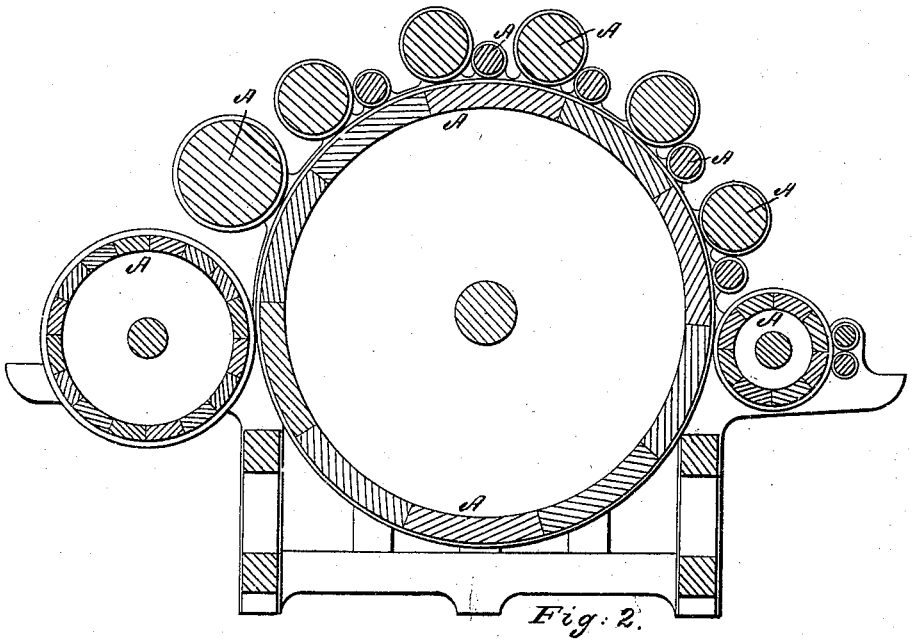
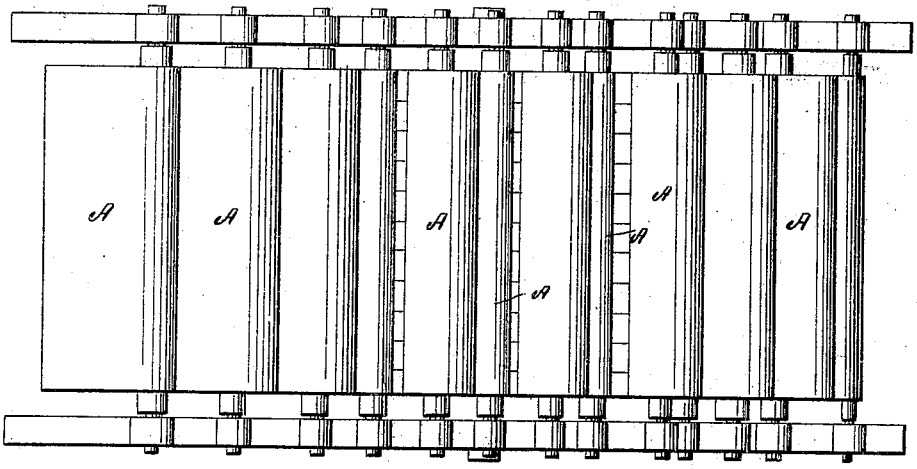


Fig: 2.



Witnesses:
R. F. Campbell
Edw. Schafer

Inventor:
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UNITED STATES PATENT OFFICE.

BARTON H. JENKS, OF BRIDESBURG, PENNSYLVANIA.

IMPROVED MODE OF TREATING WOOD FOR THE MANUFACTURE OF CARDING-ENGINES.

Specification forming part of Letters Patent No. **55,111**, dated May 29, 1866.

To all whom it may concern:

Be it known that I, BARTON H. JENKS, of Bridesburg, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Treating Wood for Carding-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section taken vertically through a carding-engine. Fig. 2 is a top view of a carding-engine without the card teeth or clothing on the cylinders.

Similar letters of reference indicate corresponding parts in the two figures.

The usual mode of preparing wood for the cylinders of carding-engines is to thoroughly season it and dry it. This wood rapidly absorbs moisture at varying temperatures, and thus causes the cylinders to swell and shrink and to make imperfect carding. With a view to prevent this, iron cylinders have been used; but the objection to them is that the condensation of moisture upon their surfaces, by changes of temperature in the factories, rusts the card-clothing, notwithstanding paper and other substances have been interposed between the cylinders and such clothing. The great weight of iron cylinders, which consumes power and causes rapid wearing of their journals, besides the difficulty of applying the card-clothing to them, renders them even more objectionable than the wooden cylinders.

It has been discovered that wood as a base for the teeth of the card-clothing to rest upon is superior to metal, or metal covered with paper or cloth, as the wood possesses properties of softness and elasticity which prevent the card-teeth from breaking when heavy carding is done.

To obviate these objections, and to employ wood in the construction of the card cylinders, my invention consists in so treating the wood that it shall not be liable to change from exposure to extremes of temperature, thereby adapting wood especially for use in the construction of such cylinders, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe one mode of treating wood for the purpose above named.

The drawings represent a common form of carding-engine without the card-clothing applied to the cylinders. This card-clothing may be applied to the several cylinders A (shown in Fig. 1) in the usual manner, as this forms no part of my invention. These cylinders may also be constructed and arranged in any of the well-known modes where wooden cylinders are employed instead of metal cylinders.

I first hew out the wood in the rough, ready to be worked up into cylinders, and expose this wood in a vacuum-chamber for the purpose of expelling all the moisture or juices of the wood, and also the air, from its spiracles or pores, thus to some extent seasoning the wood. While the pieces of wood are in the vacuum I introduce either caoutchouc, paraffine, or some oleaginous fluid into the vacuum-chamber, which substance will be quickly absorbed by the wood and the pores of the latter filled.

I prefer to use paraffine on account of its abundance and cheapness; but other substances which will have the effect of solidifying and rendering the wood water-proof may be employed.

I prefer to conduct the process of impregnating the wood with such substances in vacuums, as the work can be done in this way very rapidly and effectually. I also find that wood which is unseasoned can be used, as in the act of exhausting the air the moisture is extracted from the wood, so as to allow the oily matter to permeate its substance.

I have found that when wood has been thus treated the card cylinders and rollers made of it will not shrink or swell, and that the card-teeth applied to one cylinder will always maintain the same relative position with respect to the card-teeth of another cylinder.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The construction of the cylinders and rollers of carding-engines of wood which is impervious to the action of moisture, substantially as described.

2. Applying card-clothing to a base or backing which is composed of a combination of wood and paraffine, or other equivalent substances, substantially as described.

Witness my hand in the matter of my application for a patent for a mode of treating wood for the cylinders of carding-engines.

BARTON H. JENKS.

Witnesses:

R. T. CAMPBELL,

HENRY SYLVESTER.