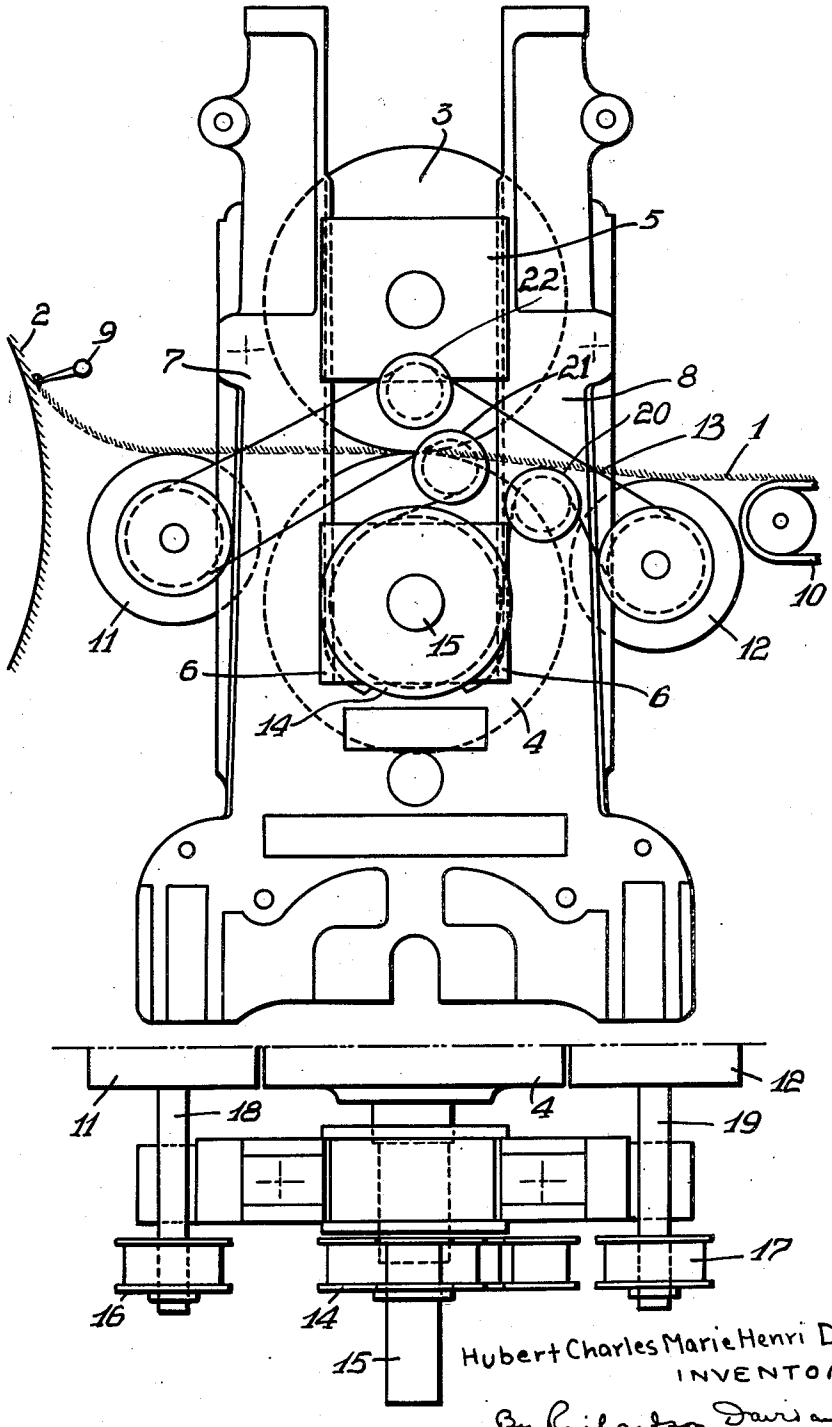
Dec. 23, 1952 H. C. M. H. DUESBERG 2,622,281

PLANT FOR THE TREATMENT OF THE WEB IN THE SPINNING OF TEXTILE FIBERS

Filed Dec. 26, 1947



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Patented Dec. 23, 1952 2,622,281

UNITED STATES PATENT OFFICE

2,622,281

PLANT FOR THE TREATMENT OF THE WEB IN THE SPINNING OF TEXTILE FIBERS

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Application December 26, 1947, Serial No. 793,920
In Belgium December 31, 1946

2 Claims. (Cl. 19—65)

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In the spinning of textile fibres and more particularly in the spinning of carded wool use is made of devices comprising two metallic cylinders arranged one above the other and between which the web formed by the textile fibres passes so as to obtain the crushing and elimination of the burrs, impurities and hard fibres, etc. which occur on the web.

It often happens that at its inlet or at its outlet from this device the web must travel a relatively long distance. Due to this fact the web may break which causes usually a hold up in the manufacture and gives rise to loss of material, time, work and labour.

In order to prevent the falling of the web various means have been employed, in particular leather aprons which come into contact with the lower metallic cylinder and a supplementary function of which is to clean this lower cylinder.

Those leather aprons present difficulties as they do not always maintain their original dimensions. They sometimes have a tendency to stretch and become irregularly deformed particularly when they are submitted to the influence of the products on the fibres (oils, greases, etc.).

Various other means have also been suggested, in particular wooden or metal cylinders which are smooth, grooved or covered with card clothing, leather or rubber aprons, wooden lath aprons, etc.

The wood is influenced by the heat and humidity which exists in textile mills and moreover this material often presents a certain roughness which catches on to the fibres. Metal (steel, tin plate, cast-iron, etc.) may be polished and does not then present any roughness but it is not to be recommended when the temperature of the workroom is low; in this case the greasy materials (grease oil products etc.) which impregnate the textile fibres have a tendency to coagulate principally where the temperature is lowest as occurs in passing on to the metallic cylinders.

This results in the web sticking to the cylinders and it is not easily detached therefrom.

Lath aprons have the defect of gripping certain fibres between two laths or at the fastening of the laths and thus cause catches or tears in the web. Cylinders covered with card clothing avoid those inconveniences but they must afterwards be stripped by some means (comb beater, various kinds of cylinders etc.). This results in considerable loss of space, a higher price and greater complication for the drive of these additional members.

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The rubber aprons have the same inconveniences as the leather aprons.

With a view to remedying these inconveniences my invention consists in placing at the inlet and at the outlet of the pressure device under the web and at proximity of the lower cylinder of a roller of an agglomerate of asbestos and susceptible of receiving a good polish.

According to a particular form of the invention these rollers may be made of asbestos or an agglomerate basically of asbestos.

The chosen material is preferably treated in such a way as to have a very smooth and highly polished exterior surface so as to prevent the fibres being caught thereby.

The use of these cylinders is as follows: the direction of rotation of the cylinders is determined by the direction of movement of the web which they have to support, but the speed should be regulated so as to ensure the best transportation of the web either at the inlet or at the outlet of any apparatus.

The annexed drawing shows by way of a non-limiting example a form of embodiment of the invention.

In the drawing, 1 represents the web which has to be supported and comes from a carding cylinder 2, and 3 and 4 are the two cylinders arranged one above the other. The upper cylinder 3 rests on the lower cylinder 4 and its effective weight is increased by some pressure means (for example a spring not shown). The rollers 3 and 4 are mounted in bearings 5 and 6 which can slide vertically in guides formed by the uprights 7—8 of the frame.

The effect of the pressure on the web produced by the cylinders 3 and 4 causes the crushing and eliminating of the burrs, impurities and hard fibres, etc. which occur on the web.

In accordance with the invention and in order to support the web between the doffing comb 9 and the pressure cylinders 3—4, and again between the latter and the delivery mechanism of the card (endless band or travelling ribbon 10 or a metal drum) there is provided at the point of entry and at the outlet of the pressing apparatus a supporting cylinder 11—12 arranged as explained below, one of these cylinders being disposed between the card 2 and the cylinder 4 and the other between the latter and the delivery mechanism 10. The cylinders 11 and 12 are made of an agglomerate of asbestos and can have a high polish.

The distance between each supporting cylinder 11 or 12 and the lower pressing cylinder 4 is ad-

justable, it never however reaches zero. The position in height of these cylinders may also be variable.

The speed of the cylinders 11 and 12 may likewise be adjusted to obtain adequate and most suitable removal of the textile web.

The drive of the cylinders 11—12 is obtained by means of a belt 13 passing (*a*) over a pulley 14 journaled on the shaft 15 of the roller 4; (*b*) on pulleys 16—17 fixed on the shafts 18—19 of the cylinders 11 and 12 and (*c*) on the guide pulleys 20—21—22.

The drive of the cylinders 11 and 12 may be obtained by a flat or trapezoidal belt. In the latter case the rollers 16—17 fixed on the shafts 18—19 may be expandable pulleys with adjustable diameters so that they can regulate the speed of the cylinders 11 and 12.

In the case of a flat belt the rollers must be changed or their diameters must be varied by the inserting of leather or other means.

What I claim is:

1. A machine for the removal of foreign bodies from a web produced by a carding engine, comprising: at least one pair of superposed rotary pressing cylinders between which said web passes and by which said foreign bodies are removed; two rotary supporting cylinders for said web disposed at opposite sides of said pressing cylinders and extending parallel thereto, said supporting

cylinders being disposed in proximity to the lower of said pressing cylinders, the axis of each of said supporting cylinders being located beneath the common tangent to said pressing cylinders, each supporting cylinder having a peripheral surface portion for engagement with said web consisting of an agglomerate of asbestos, the surface of said asbestos being polished; and means for simultaneously driving said supporting cylinders and said pressing cylinders.

2. A machine according to claim 1, in which said driving means comprises a pulley rotatable with each of said cylinders and an endless belt interconnecting all of said pulleys.

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