

W. ROTHE.

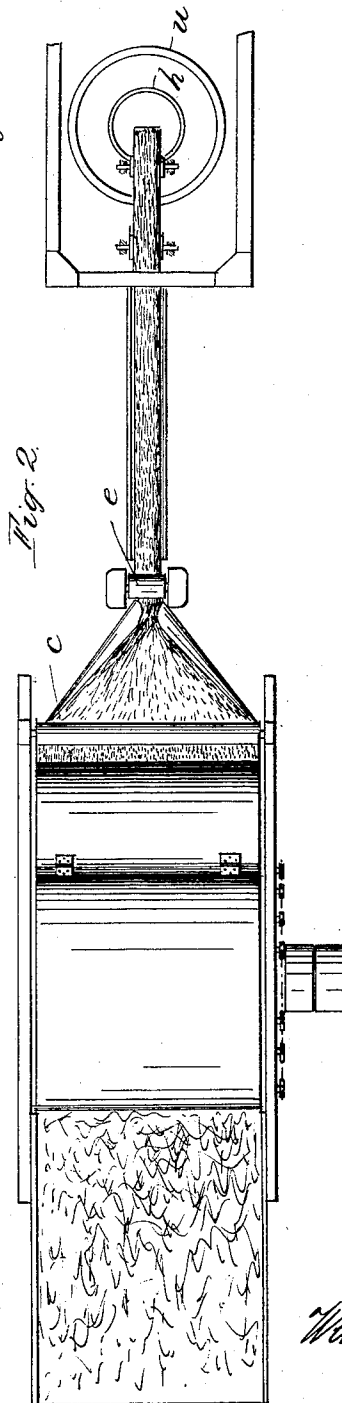
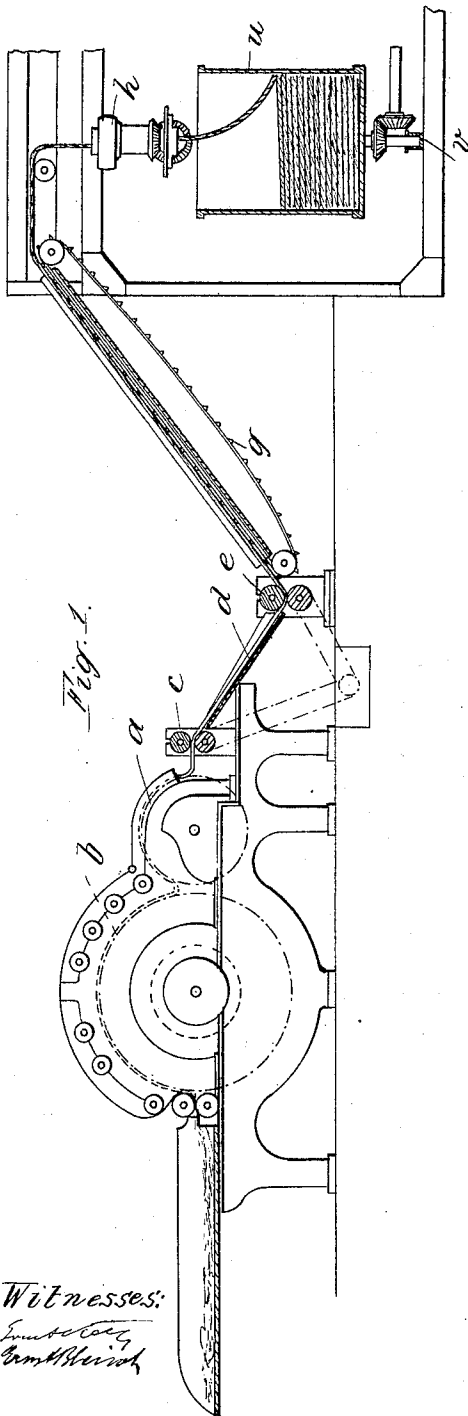
APPARATUS FOR OBTAINING COTTON WASTE IN A ROPE LIKE FORM.

APPLICATION FILED MAY 27, 1913.

1,114,293.

Patented Oct. 20, 1914.

2 SHEETS-SHEET 1.



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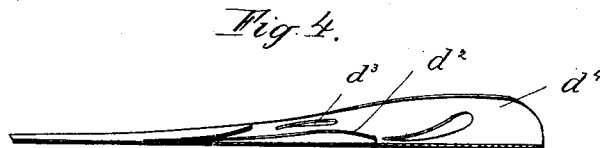
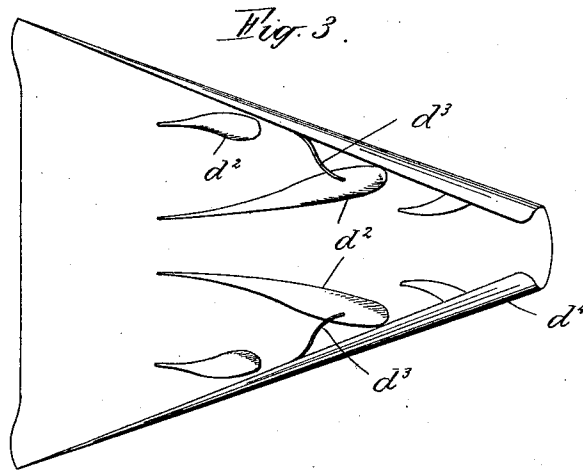
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2 SHEETS-SHEET 2.



Witnesses:

*Samuel A. [unclear]
Grant [unclear]*

Inventor:

Wilhelm Rothe

UNITED STATES PATENT OFFICE.

WILHELM ROTHE, OF REICHENBACH, GERMANY.

APPARATUS FOR OBTAINING COTTON-WASTE IN A ROPE-LIKE FORM.

1,114,293.

Specification of Letters Patent.

Patented Oct. 20, 1914.

Application filed May 27, 1913. Serial No. 770,188.

To all whom it may concern:

Be it known that I, WILHELM ROTHE, a subject of the German Empire, residing at Reichenbach, Silesia, Prussia, Germany, have invented a certain new and useful Improvement in and Relating to Apparatus for Obtaining Cotton-Waste in a Rope-Like Form; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object an improvement in apparatus for obtaining cotton waste in a rope-like form and pertaining particularly to a device for transforming the fleece running off of a carding machine into a small rope, the fleece being arranged and laid by guide ridges as hereinafter described and claimed.

In the accompanying drawing Figure 1 is an elevation and Fig. 2 a plan view of the entire apparatus represented diagrammatically. Fig. 3 is a plan view of the part of the apparatus in enlarged scale, by which the fleece is formed or rolled into a small rope, and Fig. 4 is a longitudinal section of the device shown in Fig. 3.

There exists a peculiarity in connection with carding machines for obtaining cotton waste, which rests in the fact that in preparing the fleece the lower side of the bat is the smoother and more finished side, the upper side of the fleece as moved through the machine representing that portion which laid against the surface of the doffer-cylinder between the prongs and so presents a surface not so smooth and slightly as the normal top surface. In order to utilize this feature to the fullest extent, in the formation of a rope, having the highest degree of slightly and compact texture, it is necessary to roll in equally from each edge the fleece as it runs off the machine in such a manner that the more evenly laid side forms the outside of the future rope. The above purpose is effected preferably by a guide surface or folding device to which the fleece obtained from a carding machine or the like is fed. This guide surface or folding device, according to the application filed Jan. 5, 1912, Serial No. 669,625, is ribbed longitudinally in order to impart to the fleece a guiding influence.

In the present invention, the guide-surface is structurally improved as shown particularly in Figs. 3 and 4.

The folding device consists of sheet iron or any other suitable metal, rolled and tapered at one end to form a drawing trumpet and being provided with downwardly bent fins or blades d^2 and laterally arranged resilient members or guides d^3 . The number of these guide-ribs or fins varies according to the quality of the material employed. The drawing trumpet is connected to the doffing cylinder c , as is evident in Figs. 1 and 2, the fleece being drawn through the trumpet by guiding rollers e . The guide ribs d^2 are devised to prevent the fleece from being irregularly contracted transversely of its movement, so that it will be rolled inwardly from its side edges without folds. The guide ribs cut into the fleece being drawn thereover and preserve its flattened condition in the middle portion of the trumpet so that longitudinal folds cannot be formed, while the fleece bat is gradually narrowed in its progress through the drawing trumpet. As the fleece is drawn through the trumpet blades or fins d^2 in combination with the turned-in edges of the trumpet and with the resilient members d^3 cause both sides of the fleece to roll in more and more until the machine-wide fleece running off of the carding cylinder is contracted into the desired width from which the rope is drilled. The said rolling-in operation is aided by the transversely extending resilient members d^3 over which the partly rolled-in material is drawn by the rollers e . The side portions of the fleece are laid thereby in the middle portion of the fleece by directing the rolling-in operation so that the lower smooth side of the fleece always comes outside, the resiliency of the members d^3 acting as a backing or support to the fleece as it is turned over by the trumpet.

a indicates the taking-off cylinder in a type of carding machine which is provided with prongs (not shown), said cylinder a taking the fleece from the drum or cylinder b over the whole width of the machine and feeding the fleece to the drawing trumpet.

What I claim is:—

1. An apparatus for transforming a fleece into a rope-like form, comprising a trumpet-shaped guide surface having its edges formed to turn the edges of the fleece in-

wardly, and a series of substantially longitudinal fins provided within said trumpet-shaped guide-surface to hold the fleece in spread relation on the bottom of the guide surface while the edges of the latter roll the edges of the fleece inwardly.

2. An apparatus for transforming a fleece into a rope-like form, comprising a trumpet-shaped guide surface, having in-turned edges for rolling the fleece, substantially longitudinal fins projecting upwardly from

the bottom of said guide surface to hold the fleece in spread relation in the middle portion of the guide-surface and resilient members for supporting and directing the rolling of the edge portions of the fleece. 15

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

WILHELM ROTHE.

Witnesses:

LOUIS A. NALLY,
ERNEST BLEIROT.

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