No. 629,164. Patented July 18, 1899.

W. T. HURLEY.

ATTACHMENT FOR FIBER LAPPING MACHINES.

(Application filed Apr. 7, 1899.)

(No Model.)

Fig. 1.

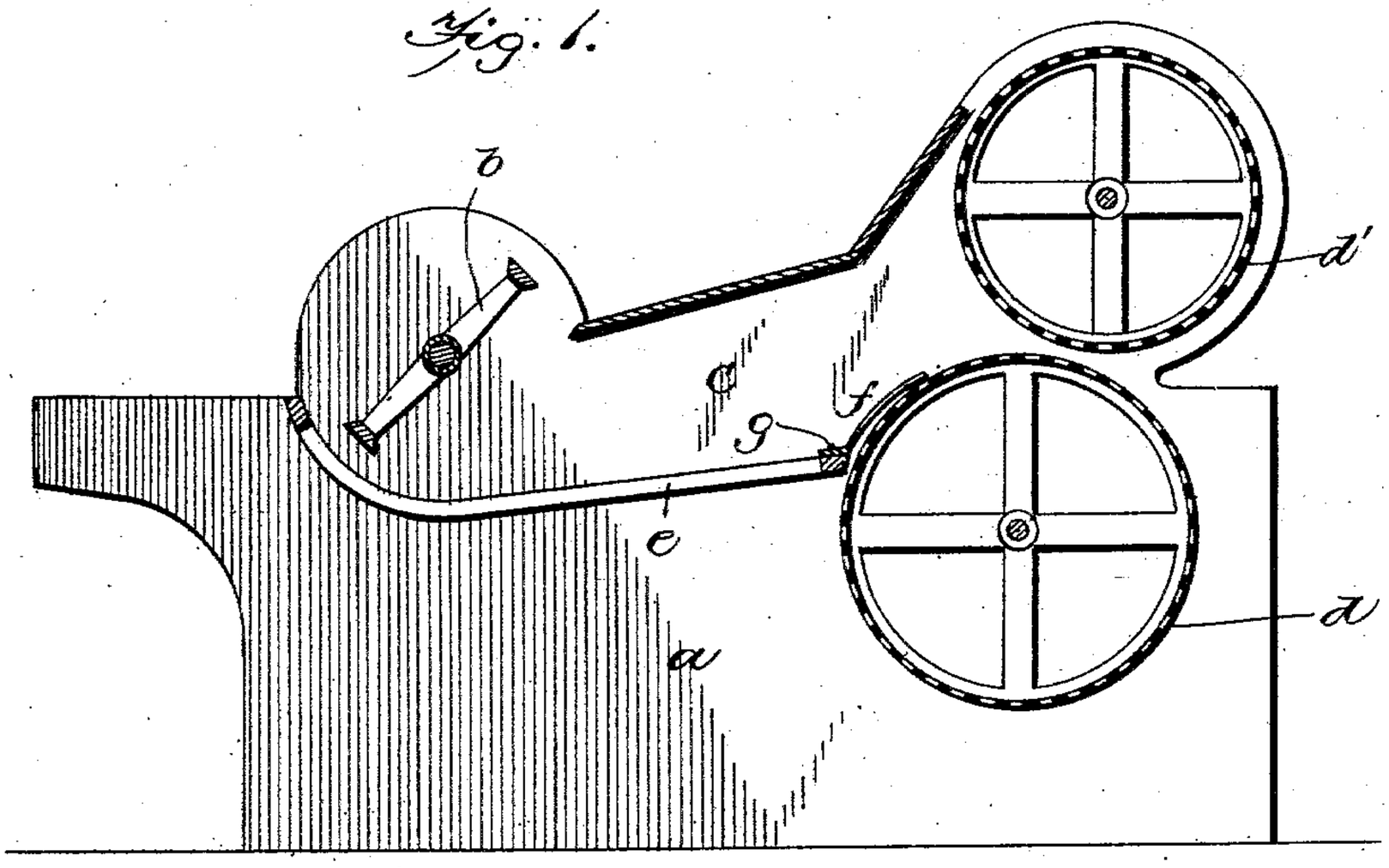
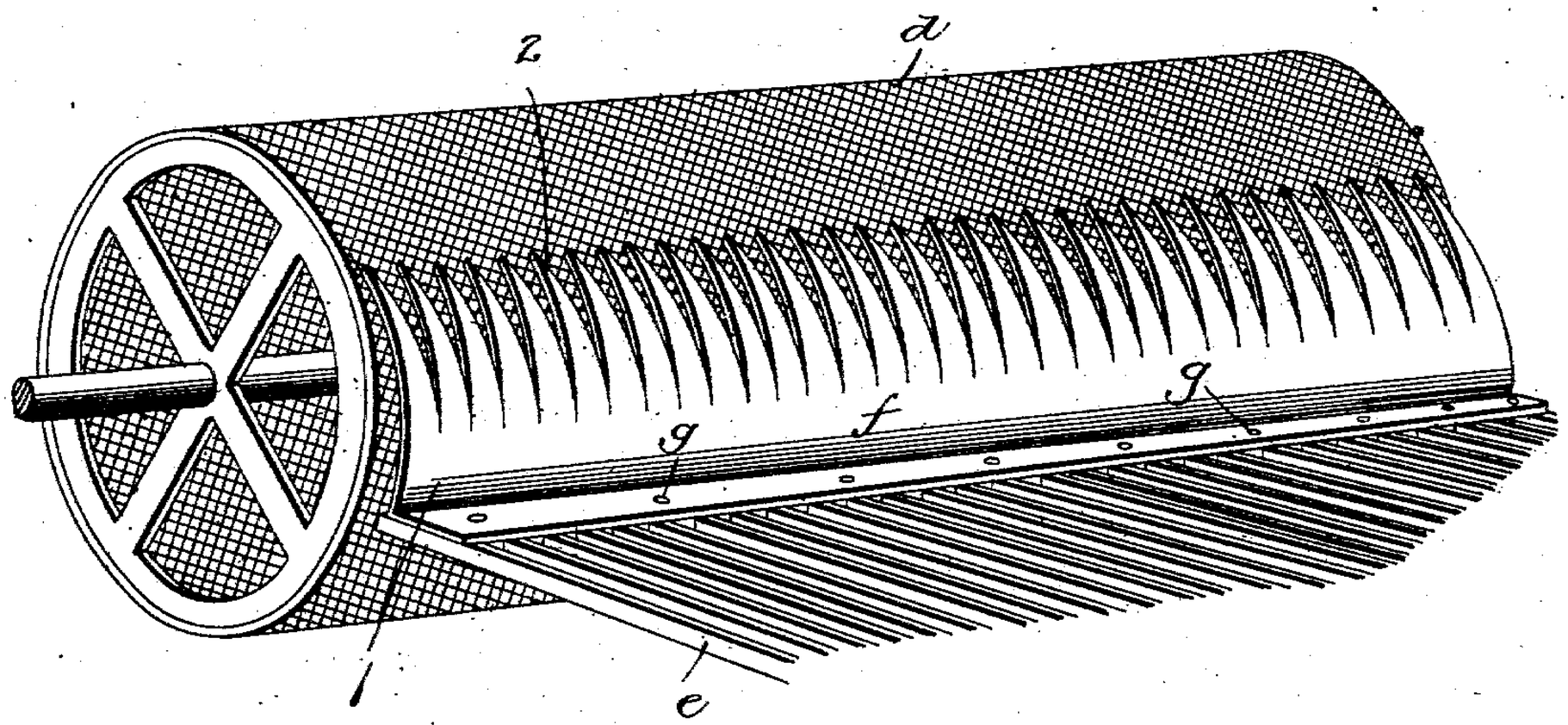


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM T. HURLEY, OF KIMESVILLE, NORTH CAROLINA.

ATTACHMENT FOR FIBER-LAPPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 629,164, dated July 18, 1899.

Application filed April 7, 1899. Serial No. 712,101. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. HURLEY, of Kimesville, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Attachments for Fiber-Lapping Machines, of which the following is a specification.

This invention relates to machines for opening, cleaning, and lapping fibrous material, such as cotton, and has particular reference to the machines used in the first process of manufacturing cotton goods by means of which the cotton from the bale is opened and beaten and carried by currents of air to a screen cylinder or cylinders preparatory to being formed into a lap. With such machines as heretofore most commonly employed the fibers are not collected upon the screen or cage rolls with the most desirable uniformity and smoothness and what are known as "split laps" are produced, causing waste and labor and uneven work by the carding-machine.

The object of my invention is to produce an attachment capable of being applied to any lapping-machine of any size or make without alteration or modification thereof, which attachment will insure the laying of the fibers evenly and uniformly upon the screen or cage rolls, so as to cause the formation of a smooth lap that will unwind without sticking when being run into the carding-machine.

To this end my invention consists in the device substantially as hereinafter described and claimed.

In the drawings which accompany and form part of this specification, Figure 1 represents a section and part side elevation of so much of one form of a lapping-machine embodying my invention as is necessary to explain the construction and utility of said invention. Fig. 2 represents a perspective view of the toothed strip and the lower screen or cage roll shown in Fig. 1, portions of the grid-bars or trunk-floor being also represented in perspective.

A portion of the frame of the machine is represented at *a*, and *b* represents the beater, *c* the trunk, *d d'* the lower and upper screen or cage rolls, and *e* the trunk-floor or grid-bars. All of these parts are or may be constructed according to any of the well-known machines for opening and preparing fibrous material for a carding-machine, and the operation of which is so well known that no further reference thereto is necessary than to say that the fibers are collected on the screen or roll *d*.

In carrying out my invention I cut from thin sheet metal a strip *f*, having a continuous portion 1 and a serrated portion composed of slender tapering teeth 2, integral with the portion 1, said teeth being preferably curved somewhat, as indicated, to approximately conform to the surface of the screen or cage roll. These strips may be formed from thin sheet metal without waste by cutting a sheet so that the teeth of one strip are composed of the metal removed to form the spaces between the teeth of another strip. Said toothed strips may be formed of any length, according to the machines for which they are intended, and as they are very inexpensive a strip that is too long for a certain machine can be cut off to the requisite length without material loss.

The strip *f* may be supported in any suitable way by a fixed or stationary part of the machine, so that the teeth 2 will extend in the direction of rotation of the screen or cage roll and in proximity thereto, so that the fibers as they are collected thereon will be straightened and deposited smoothly and uniformly, the tapering shape of said teeth aiding materially in attaining this result and preventing the formation of ridges, which would be liable to follow the use of teeth having square ends. Owing to the fact that the strip is a continuous one, it not only can be formed in the economical manner hereinbefore described, but it can be secured in position by the use of fastening devices much less in number than the number of teeth. In the drawings I have represented the strip as having its lower or continuous portion bent at an angle and secured to the upper surface of the portion of the trunk-floor or grid-bars adjacent to the lower screen or cage roll by screws *g*; but it is obvious that other fastening devices may be employed instead of screws and that the lower edge of the strip could be attached to the under surface of the grid-frame or to its edge or could be otherwise secured, according to the style of machine to which it is to be applied or according to individual prefer-

ence, without departing from the spirit of my invention, the essential feature of which is the continuous thin metal strip having slender tapering pointed teeth adjoining each other and projecting in a direction at right angles to the axis of rotation of the screen or cage with which it is used, said teeth being adapted to lay the fibers evenly and smoothly on the said roll.

Having thus explained the nature of my invention and having described a way of constructing and using the same, although without attempting to specify all of its applications, I now declare that what I claim is—

A fiber-evener for the screen or cage roll of a fiber-lapping machine, comprising a strip of thin metal one edge of said strip being formed with slender tapering pointed teeth adjoining each other and projecting in a direction at right angles to the axis of rotation of said roll, the other edge of said strip being continuous from end to end to connect the teeth and to form a means whereby said teeth may be attached to a suitable portion of the machine with the teeth adjacent to said screen or cage roll.

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

WILLIAM T. HURLEY.

Witnesses:

H. B. CARTER,

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