

G. S. Harwood.

Wool Oiling Mach.

N^o 44,951.

Patented Nov 8, 1864.

Fig. 2.

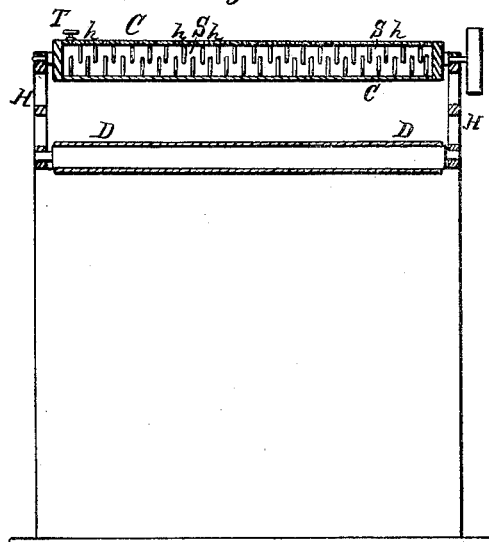
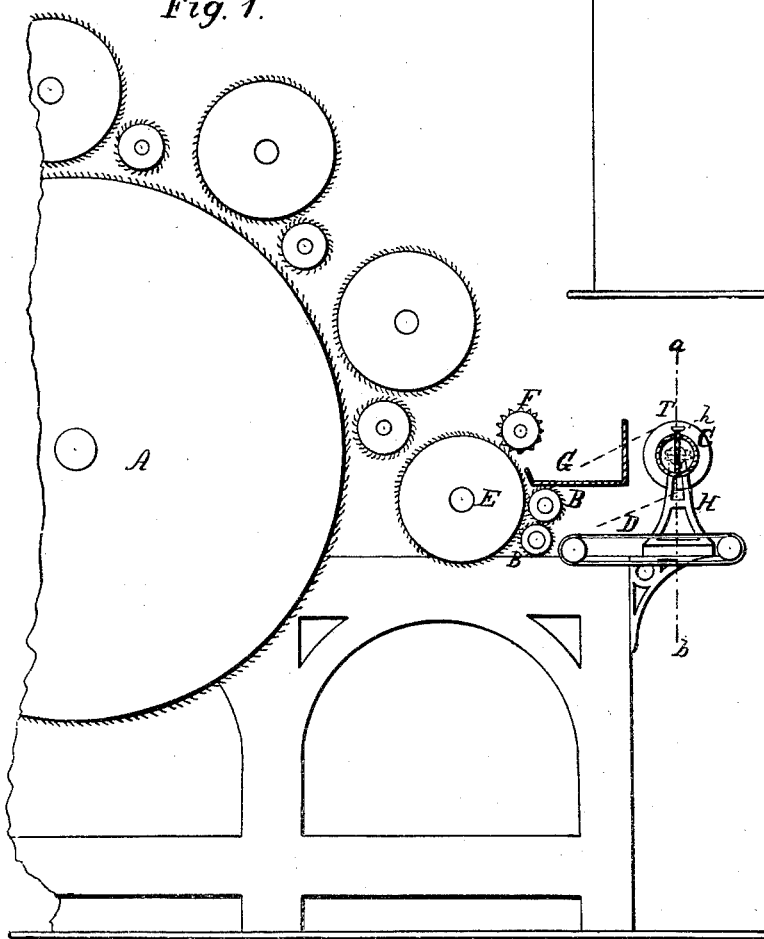


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE SHAW HARWOOD, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND GEORGE H. QUINCY.

IMPROVEMENT IN MACHINERY FOR OILING WOOL.

Specification forming part of Letters Patent No. 44,951, dated November 8, 1864.

To all whom it may concern:

Be it known that I, GEORGE SHAW HARWOOD, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machinery for Oiling Wool; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional elevation of an apparatus constructed in accordance with this my invention, and Fig. 2 is a longitudinal section of the same through line *a b* of Fig. 1.

My invention relates to that class of oiling apparatus which is applied to carding or other wool-preparing machinery, lubricating the wool while being fed to the said machinery, for the purpose of facilitating its being subsequently worked into slivers or drawn into yarns. The apparatus most extensively used and which under most circumstances gives the best results is that known as "Clissold's patent," which was assigned to HARWOOD and QUINCY, and reissued to them on the 13th day of September, 1864, and numbered 1,764. In that apparatus is provided a pressure-roller, which receives the oil and imprints it onto the wool, as fully described in the specification thereto annexed. As originally designed, this pressure-roller was intended to run in close proximity or in contact with the top feed-roller of carding-engines of English structure, whereby the roller was constantly stripped of the fibers which may have adhered to its surface; but in some American carding-engines a burring-roller is used in front of and above the top feed-roller, which appliance involved the use of a burring-box overhanging the apron in that part thereof which is occupied in the English machine by the pressure-roller. This arrangement in American machines interferes with the perfect operation of Clissold's oiler, because the pressure-roller is necessarily set away from and out of reach of the top feed-roll, so that stripping action upon it cannot take place. To remedy this numerous devices or contrivances have been suggested and tried, among others the one which is the subject of this patent, and which consists in allowing the oil to

fall upon and spread over the wool without the intervention of the pressure-roller.

Although for general purposes the oiling without the peculiar action of the pressure-roller is not desirable, yet under some circumstances good results may be had by the employment of an apparatus constructed and operating in the manner hereinafter described, and which I have shown applied, for purpose of illustration, to an American carding-engine.

Referring to the accompanying drawings, A represents the carding-cylinder, having the usual feed-rollers B, and apron D, composed of an endless band, passing over two rollers. Over the top feed-roller and between it and the carding-cylinder is arranged the burring-cylinder E, over which revolves a sort of a fan, F, which removes the burrs from the burring-cylinder and throws them into a burr-box, G.

At a suitable distance in front of the burr-box is arranged the oiling apparatus. It consists of a hollow cylinder, *c*, supported at its ends in suitable journal-boxes in brackets H. Upon the axle of the cylinder is mounted a pulley, over which passes a band, whereby rotary motion is imparted to the cylinder. The cylinder is provided with internal spikes or projecting arms, S, or other equivalent device for agitating the oil or composition during the operation of oiling. A number of holes, *h*, and preferably in rectilinear series, are drilled through the cylinder. Through these holes the oil drops once every revolution of the cylinder.

The arrangement of the holes is deemed important when no other means are contrived for closing the holes as necessity therefor may occur. By the arrangement shown it is only necessary on stopping the revolution of the cylinder to place it with the holes on top.

The operation of the machine is as follows: The cylinder is first placed with the perforations uppermost. The tap or stopper T is then removed and the requisite quantity of oil is introduced. The cylinder being thus charged, revolution is imparted to it by the band or other mode of gearing. During the revolution of the cylinder the oil is violently agitated by breaking against the spikes or

other device for this purpose introduced into the interior of the cylinder, and a quantity of oil is dropped at each revolution, which may be regulated by the relative speed of the apron and the cylinder, or by cocks which may be applied to the openings of the cylinder, or by other means too obvious to require special mention. It will be understood that by the operation of this oiling apparatus the wool will be impregnated with lubricating matter, according to equidistant and parallel lines, which is a mode producing more uniform or equable results than any method other than by the employment of a pressure-roller.

This invention is susceptible of some modifications without departure from the principle thereof. Thus the apparatus shown may be used in combination with a pressure-roller, the cylinder performing the functions of the distributor to the pressure-roller.

I therefore claim as my invention—

1. The method herein described of oiling wool while being fed to a carding or other wool-preparing machine by means of an apparatus attached to and working in unison with said machinery, and operating as set forth, by showering or dripping the oil or lubricating compound upon the wool, either directly or through the intermediary of a pressure-roller.

2. The method herein described of oiling wool while being fed to a carding or other wool-preparing machinery by means of an apparatus attached to and working in unison with said machinery, and operating as set

forth, by first agitating and then showering or dripping the oil or lubricating compound upon the wool, either directly or through the intermediary of a pressure-roller.

3. The method herein described of oiling wool while being fed to a carding or other wool-preparatory machinery by means of an apparatus attached to and working in unison with said machinery, and operating by applying the oil or lubricating compound upon the wool in parallel and equidistant lines, substantially in the manner and for the purposes set forth.

4. In combination with carding or other wool-preparing machinery, an apparatus for oiling the wool while being fed to said machinery, the same consisting of a revolving perforated cylinder, arranged for action substantially as set forth.

5. The combination of a revolving perforated cylinder with internally-projecting arms or other means for agitating the oil or lubricating matter before being dripped from the cylinder, substantially as set forth.

6. The revolving oiling-cylinder when provided with holes arranged in rectilinear series, in the manner and for the purposes set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

GEO. S. HARWOOD.

Witnesses:

A. POLLOK,

EDM. F. BROWN.