(No Model.)

I. BEST.

FIBER GUIDE FOR COMBING MACHINES.

No. 363,794. Patented May 31, 1887.

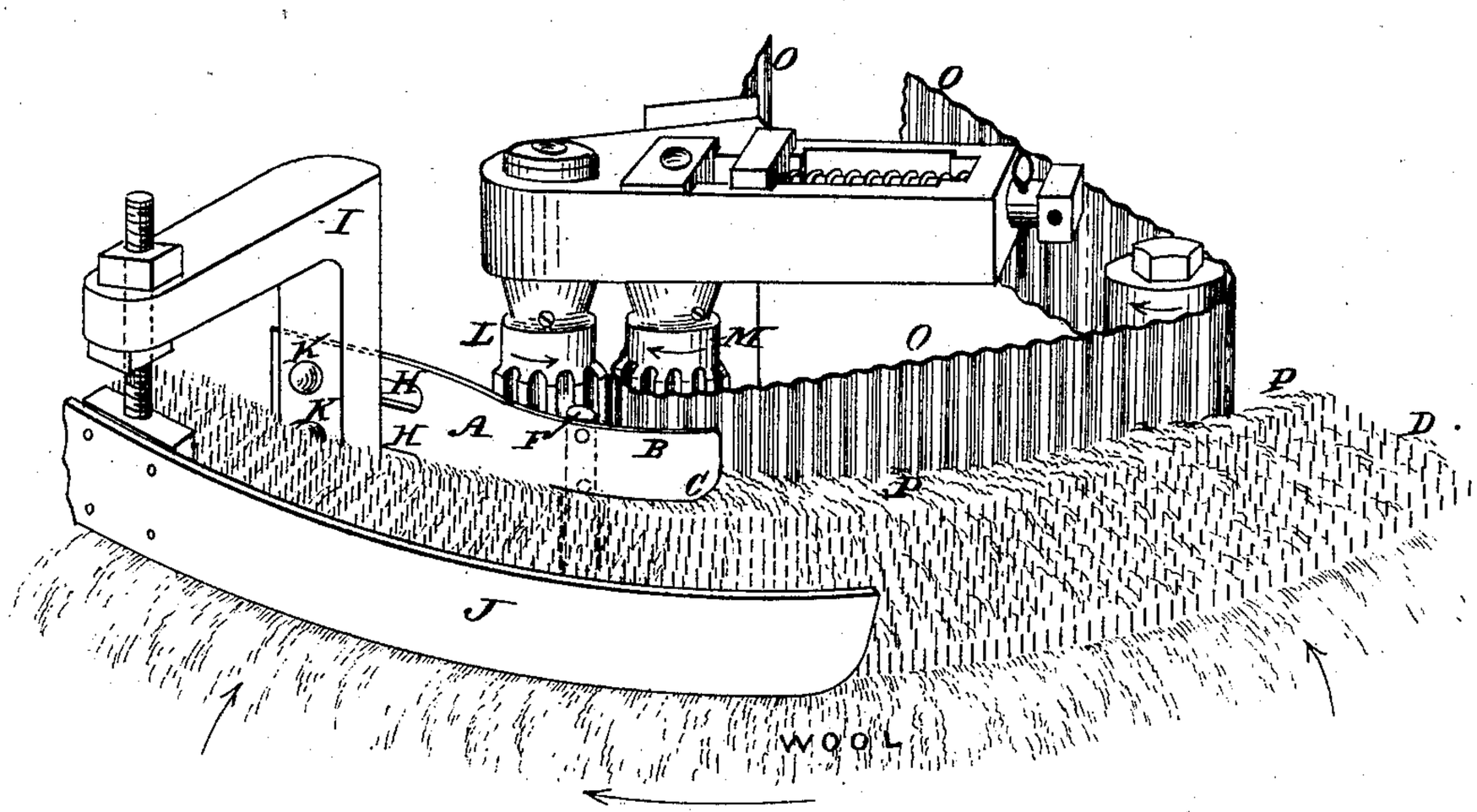

Fig. 1.

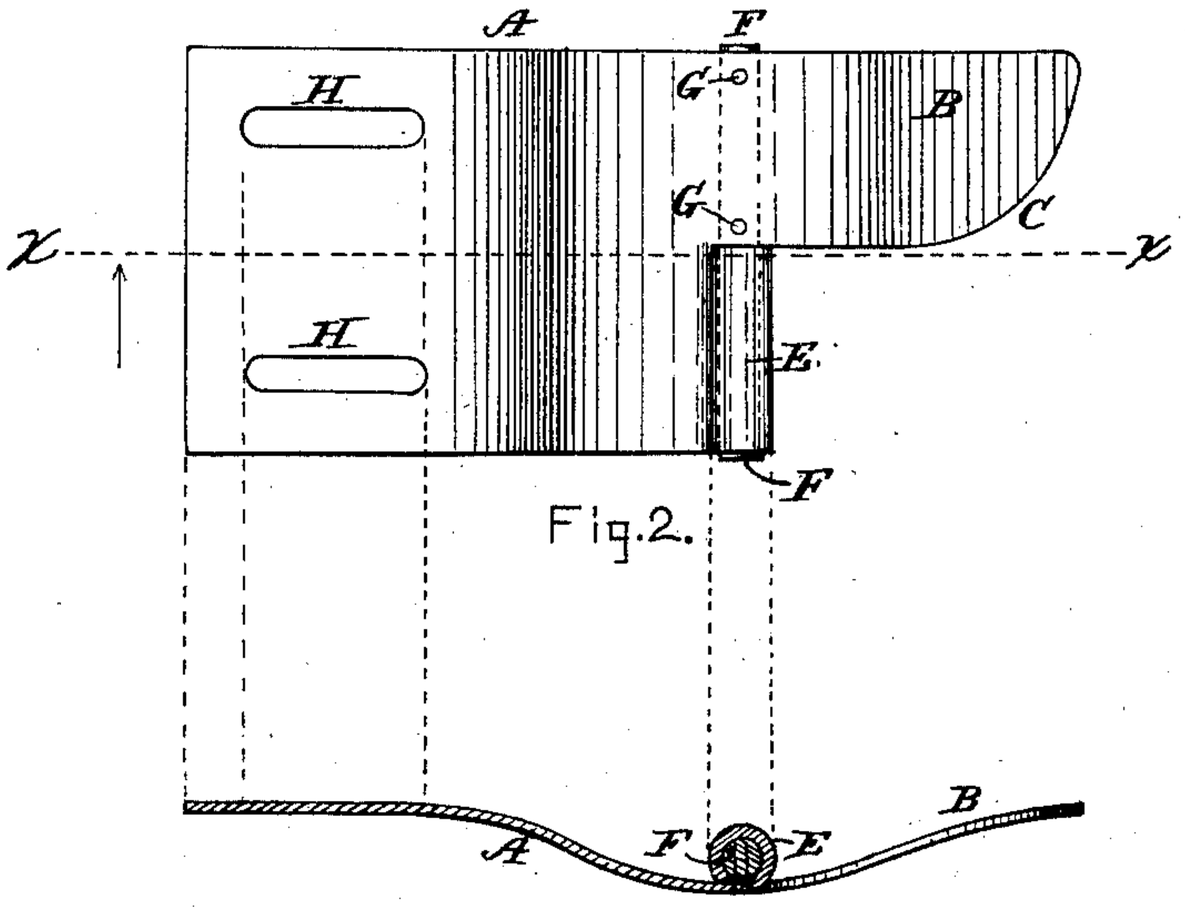

Fig. 2.

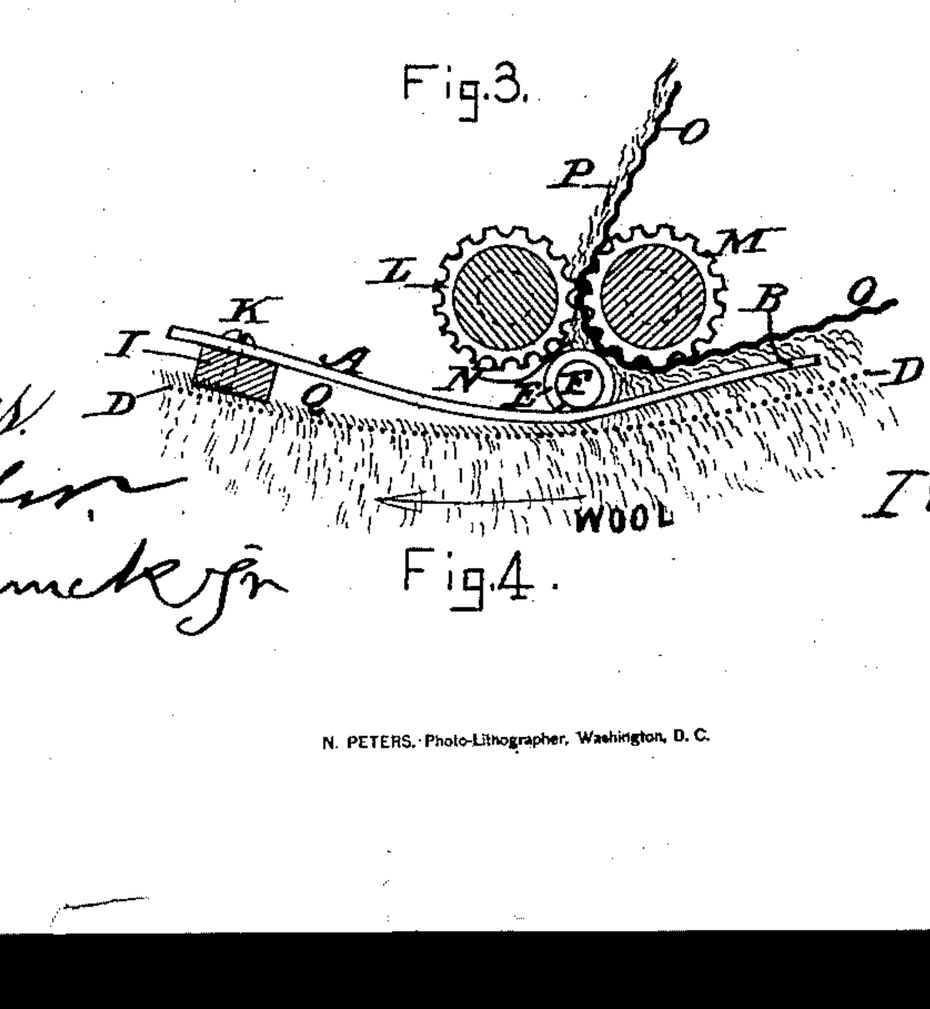

Fig. 3.

Witnesses:
W. D. Miller
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Fig. 4.

Inventor:
Isaac Best
per H E Remick
his atty.

UNITED STATES PATENT OFFICE.

ISAAC BEST, OF LAWRENCE, MASSACHUSETTS.

FIBER-GUIDE FOR COMBING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 363,794, dated May 31, 1887.

Application filed March 20, 1886. Serial No. 196,021. (No model.)

To all whom it may concern:

Be it known that I, ISAAC BEST, a citizen of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented a new and useful Fiber-Guide for Combing-Machines, of which the following is a specification.

My invention relates to improvements in wool-combing-machine attachments, and my object is to increase the bulk of clean long-staple wool drawn from the large circle of combs.

To accomplish this result my invention consists in an adjustably-attached shield of thin metal, which I designate as a "wool-fiber guide." Said guide may be in form rectilinear, with one of its ends pierced with two or more slots for the reception of binding-screws, while the remaining or forward end is separated into two flaps or arms, the lower one of which (when the guide is vertically adjusted) is inwardly reflexed to form a stationary roll, which may be strengthened or re-enforced by a round bolt secured thereto by stay-pins. The lower corner of the upper unbended flap is rounded to offer no impediment to the passage of the wool fiber. The otherwise conformation of said fiber-guide is arbitrary, depending upon the method of adjustment and its relation to the combs.

Further improvements in detail are illustrated in the annexed drawings, forming a part of this specification, in which—

Figure 1 indicates a view in perspective of my improved fiber-guide co-operating with a section of the comb-bed of a wool-combing machine having vertical drawing-rollers. Fig. 2 is a side elevation of the exterior face of my fiber-guide. Fig. 3 represents a longitudinal central section (on line *x*, Fig. 2) of the same. Fig. 4 exhibits a section of the parts as would appear when in operation.

Similar letters refer to like parts throughout the several view thereof, referring to which—

A designates my improved fiber-guide, the upper projecting arm, B, having a semicircular foot, C, to permit the unimpeded progress of the wool fiber as it rotates with the combs D. The lower arm, being inwardly reflexed, forms the stationary roll E, which may be re-enforced or strengthened by the bolt F, secured thereto by stay-pins G G. Slotted apertures H H permit the guide A (in the practical application of my invention to the Noble wool-combing machine) to be perpendicularly attached to the inside of the bracket I, sustaining the presser-feed plate J, by screw-bolts K K entering said slots H H, or in any convenient manner, so that the stationary roll E of said guide may rest in juxtaposition to the approaching peripheries of the perpendicular drawing-rolls L and M, which form at the junction of their perimeters a re-entering or curvilinear angle, as at N, Fig. 4. One side of said angle is formed by the belt or comb-apron O, and within this angle said stationary roll E, as a part of the guide A, is situated. In this position the long "beard" or fiber P P of the wool, unmixed with noils, is drawn along by the surface of the comb-apron O, approaching the curved nose or foot C of the upper arm, B, of said guide, passes under said arm, and on coming in contact with the stationary roll E is pressed so closely against the opposing sides and directly toward the centers of said revolving drawing-rolls L and M as to practically draw out the long fiber close to the combs of the large circle, and thereby increase the production of said machine by decreasing the beard or fiber after escaping the action of said rolls, as observed at Q, Fig. 4, while the long-staple wool is carried by the belt through the ordinary channels to the roving-cans.

In the practical operation of combing the wool occurrences are frequent where the product is to some extent drawn above or over the combs or pins, and thereby escapes their action. The above result is entirely obviated in the present invention, as the position of the projecting arm B is such that it overrides the fiber, confining it to the comb-bed, and particularly below the points of the comb contiguous or in proximity to said arm. This feature I consider appertains to no other similar invention, and completely eradicates the tendency of the upper surfaces of the wool to escape disintegration.

The resultant operation of my improved attachment is an increase in the bulk of long-fiber clean-drawn wool to nearly double the amount obtained before its introduction and an increased effectiveness of the drawing-rolls, while the advantages of a stationary or resist-

ing roll is apparent from the non-accumulation of wool fiber or residuum, as would occur in the case of a rotating spindle or friction-roll.

In the adaptation of my improved invention I apply it preferably to co-operate with the large circle of combs, as they contain the bulk of the product to be worked. It will be obvious, however, that said fiber-guide can be effectively applied to smaller circles and produce similar results. It will also appear in the construction of my guide that it could be modified to the exclusion of the round bolt and stay-pins without detracting from its capacity or departing from the spirit of my invention.

Having described the construction and operation of my improved fiber-guide, what I desire to secure by Letters Patent, and claim, is—

1. The standard I, the presser-feed plate J, the circle-comb D, and drawing-off rolls L M, combined with the fiber-guide A, having a reflexed arm, forming a fixed roll, E, and a projecting arm, B, the elliptic foot C, and the apertures H H, and the confining screw-bolts K K, substantially as and for the purpose specified.

2. The adjustable fiber-guide A, having a reflexed arm enwrapping a bolt, F, forming the stationary roll E, a curved arm, B, and the adjusting-apertures H H, and screw-bolts K K, in combination with the circle-comb D, drawing-off rolls L M, standard I, and feed-plate J, as illustrated and described.

3. The fiber-guide A, formed with an arm, B, and having the apertures H H, the standard I, and the screws K K, whereby said guide is adjustably secured to the standard I, combined with the comb D, comb-apron O, drawing-off rolls L and M, and feed-plate J, substantially as set forth.

In testimony whereof I have signed this specification in presence of two subscribing witnesses.

ISAAC BEST.

Witnesses:

PETER W. LYALL,

A. M. FAY.