C. A. TEAL.

Hair-Picker.

No. 166,824. Patented Aug. 17, 1875.

Fig. 1.

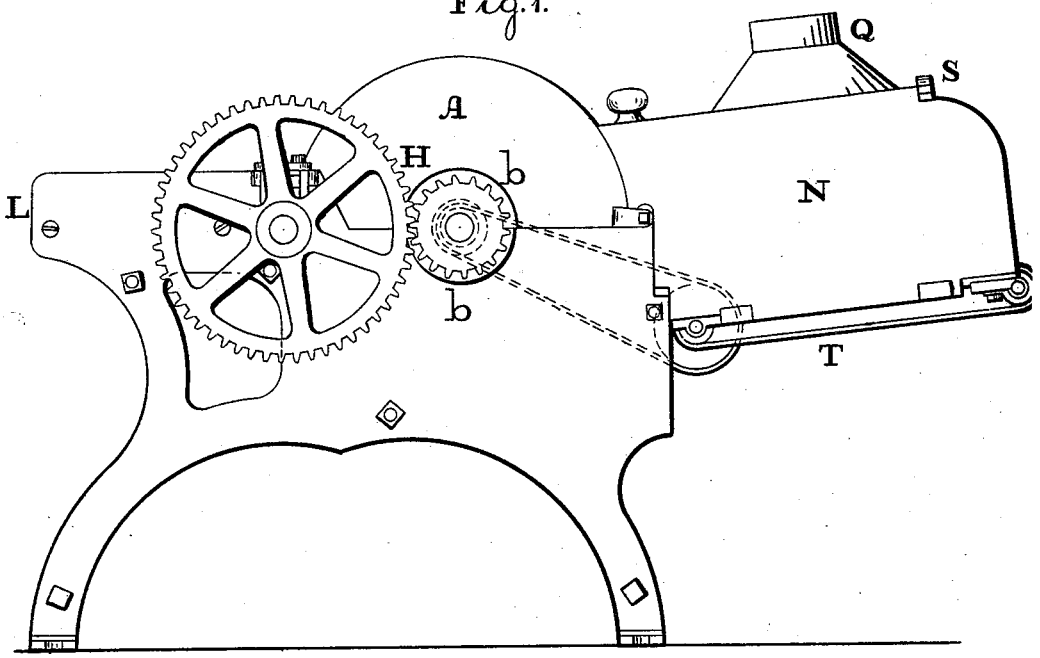
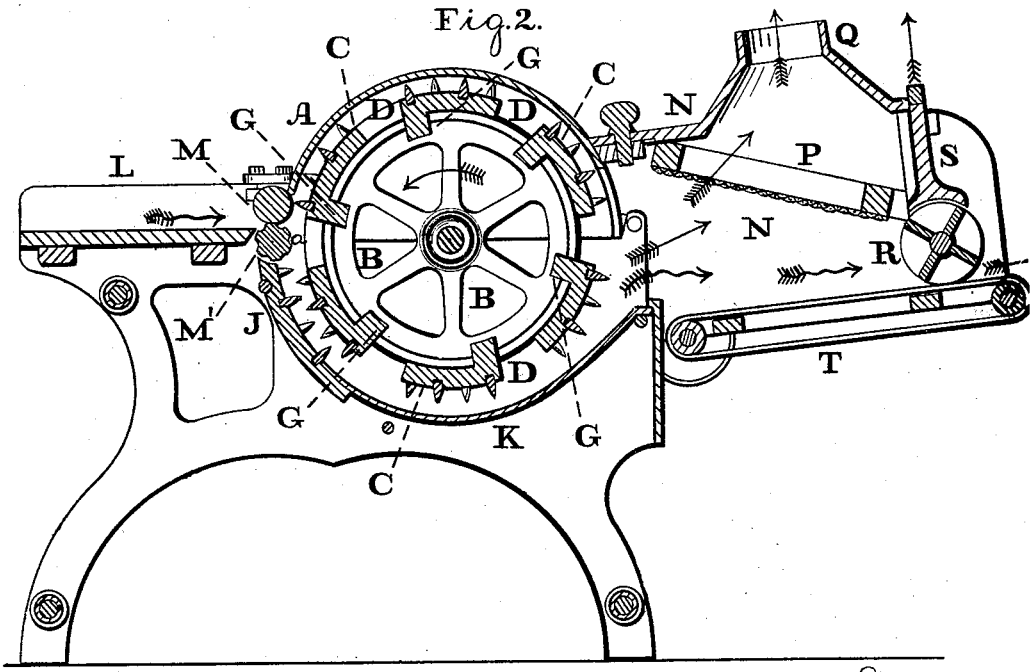


Fig. 2.



Witnesses:
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Fig. 3.

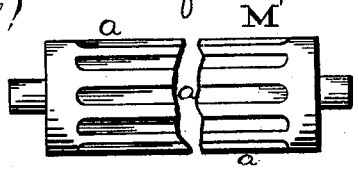
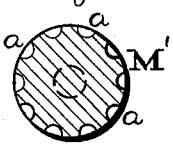


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES A. TEAL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN HAIR-PICKERS.

Specification forming part of Letters Patent No. **166,824**, dated August 17, 1875; application filed May 12, 1875.

To all whom it may concern:

Be it known that I, CHARLES A. TEAL, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Picking Hair, Moss, &c.; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the device embodying my invention. Fig. 2 is a central longitudinal vertical section thereof. Fig. 3 is a face view of a detached feed-roller. Fig. 4 is a transverse section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to an apparatus for picking and cleaning hair, moss, &c.; and it consists in a picking-cylinder, made hollow, and formed with toothed lags, which have blades or flanges projecting radially inward from their forward edges, and spaces between them, whereby the cylinder will act as a fan-blower for driving the dust and dirt from the material to be picked, force the picked material from the casing, and prevent return or rewinding of the picked material on the cylinder, and a discharge-chamber, having therein a screen above, an outwardly-conveying apron for permitting the escape of the dust and dirt without discharging them with the picked material. It also consists in a roller operating automatically for closing the outlet of the discharge-chamber, for permitting the proper discharge of the picked material, and preventing the escape therewith of the dust and dirt.

Referring to the drawings, A represents a closed casing, within which is mounted the hollow picking-cylinder B, whose sides are partly or entirely open. The surface of the cylinder consists of a series of lags or plates, C, which are toothed on their outer faces and separated from each other so as to leave spaces D D. On the forward edges of the lags C there are formed blades or flanges G, which project radially inward. Power will be communicated to the cylinder by means of the gearing H, or otherwise, in any well-known manner. J represents a toothed breast, which is secured in front of the cylinder, and K represents a bed, which is continuous of the breast and curves under the cylinder to the rear of the casing A. Secured to the casing A in front of the cylinder is a platform, L, at whose inner end, or end adjacent to the cylinder, are the feed-rollers M M, which are arranged one above the other, and the lower one is longitudinally fluted, as at *a*, power being communicated thereto by the gearing H of the cylinder, or otherwise. To the casing A, at the rear of the cylinder, I attach the discharge-chamber N, which, at the inner end, communicates with said casing, and at the outer end leads to the room or place of collection or deposit of the picked material. Within the chamber is hung a screen, P, which occupies a horizontal position at or about the base of a discharge spout or outlet, Q, on the upper side of the chamber. At the outer end of the chamber N there is arranged a transversely-extending roller, R, whose axis is attached to a slide, S, which is fitted to the sides of the chamber N, and has a rising and falling motion, the slide and roller thus occupying the outer end of the chamber N. In the lower part of the chamber there is mounted a horizontally-arranged endless belt, T, which receives power from the axis of the cylinder B, or otherwise, and occupies a position below the screen P and roller R.

The operation is as follows: The parts being in motion, the material to be picked is placed on the platform L and advanced to the feed-rollers M M′, which draw in the material and present it to the cylinder B, the action of whose teeth and those of the breast J separate or comb the material, which is then directed along the bed K to the discharge-chamber N. Openings *b* are made in the casing in order to admit into the hollow cylinder B, at the center thereof, the air that is drawn thereinto by the action of the flanges or blades, the air being then forcibly driven from the cylinder out through the space D between the lags, and impelled against and through the material, so as to separate the dust therefrom. The stream of cleaned material moves toward the roller R, and is carried thereunder by

means of the belt T, said roller rising and falling relatively to the inequalities of the stream, but acting with said stream to close the outer end of the chamber N. The dust which is checked by the roller is caused to pass upward through the screen P and out of the spout Q, where it may be collected in any suitable manner. The picked material being subjected to the powerful and continuous blast of air from the cylinder, passes from the chamber N in a separated and cleansed state.

It will be noticed that the spaces D of the cylinder B prevent the return or rewinding on the cylinder of the picked material, since said spaces break the surface of the cylinder, and also direct the blast radially from the cylinder against the material. The flanges D act as paddles, and reliably draw the air into the center of the cylinder, and drive it therefrom through the spaces D. The material passing between the feed-rollers M M′ is taken hold of by the sharp edges of the flutes *a a*, and prevented from slipping or remaining at rest.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The hollow picking-cylinder B, with toothed lags C, having inwardly-projecting blades or flanges G and spaces D between them, in combination with the casing A and with the chamber N, having a screen, P, above the outwardly-conveying apron T, substantially as and for the purpose set forth.

2. The discharge-chamber N, with spout Q, screen P, and outwardly-conveying apron T, in combination with the automatically-operating roller R, substantially as and for the purpose set forth.

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