

No. 669,084.

Patented Mar. 5, 1901.

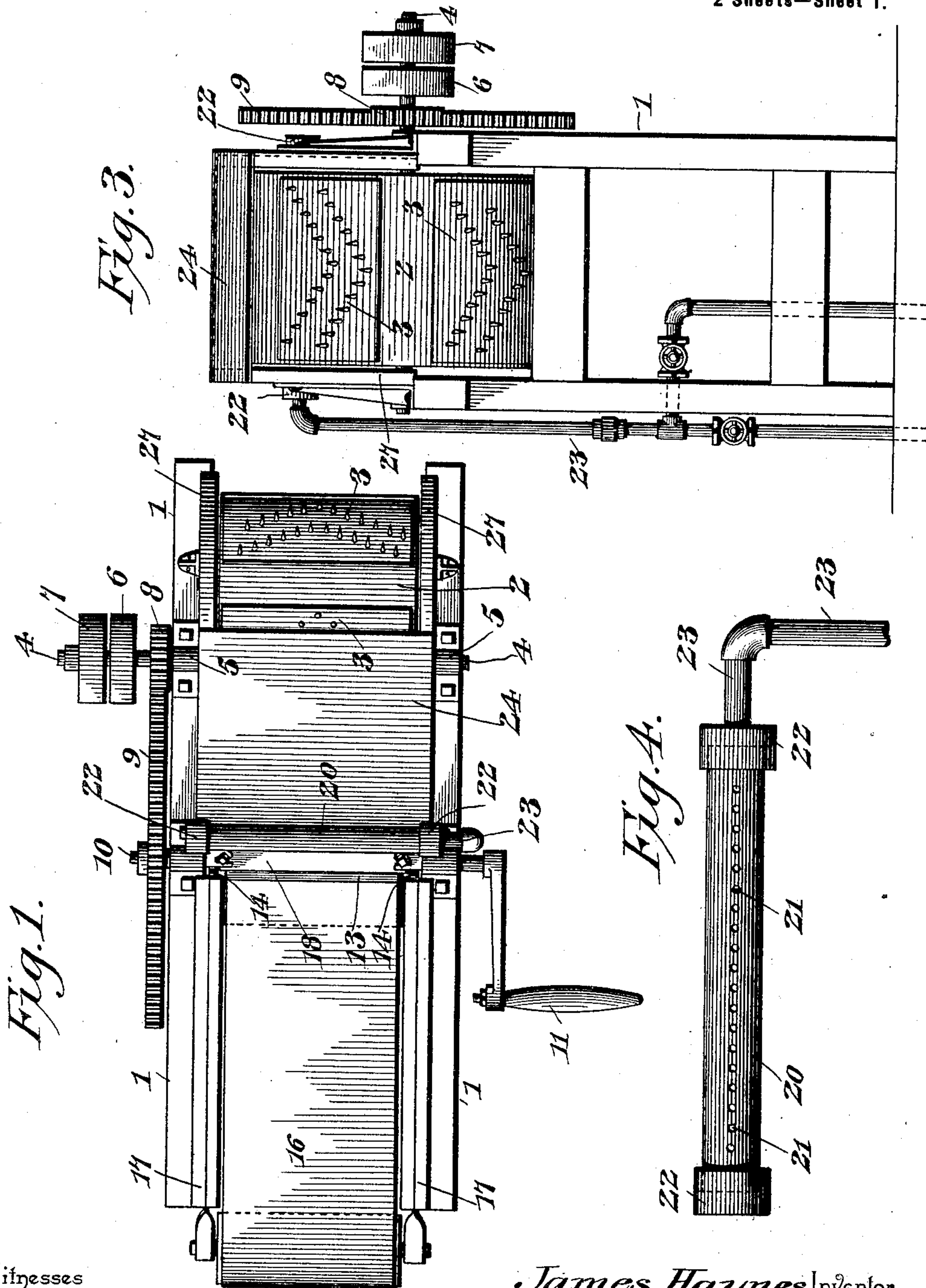
J. HAYNES.

HAIR PICKER ATTACHMENT.

(Application filed Nov. 5, 1898. Renewed Aug. 13, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
Jas. K. McLaughlin By his Attorneys,
D. P. McLaughlin.

James Haynes Inventor

C. A. Snow & Co.

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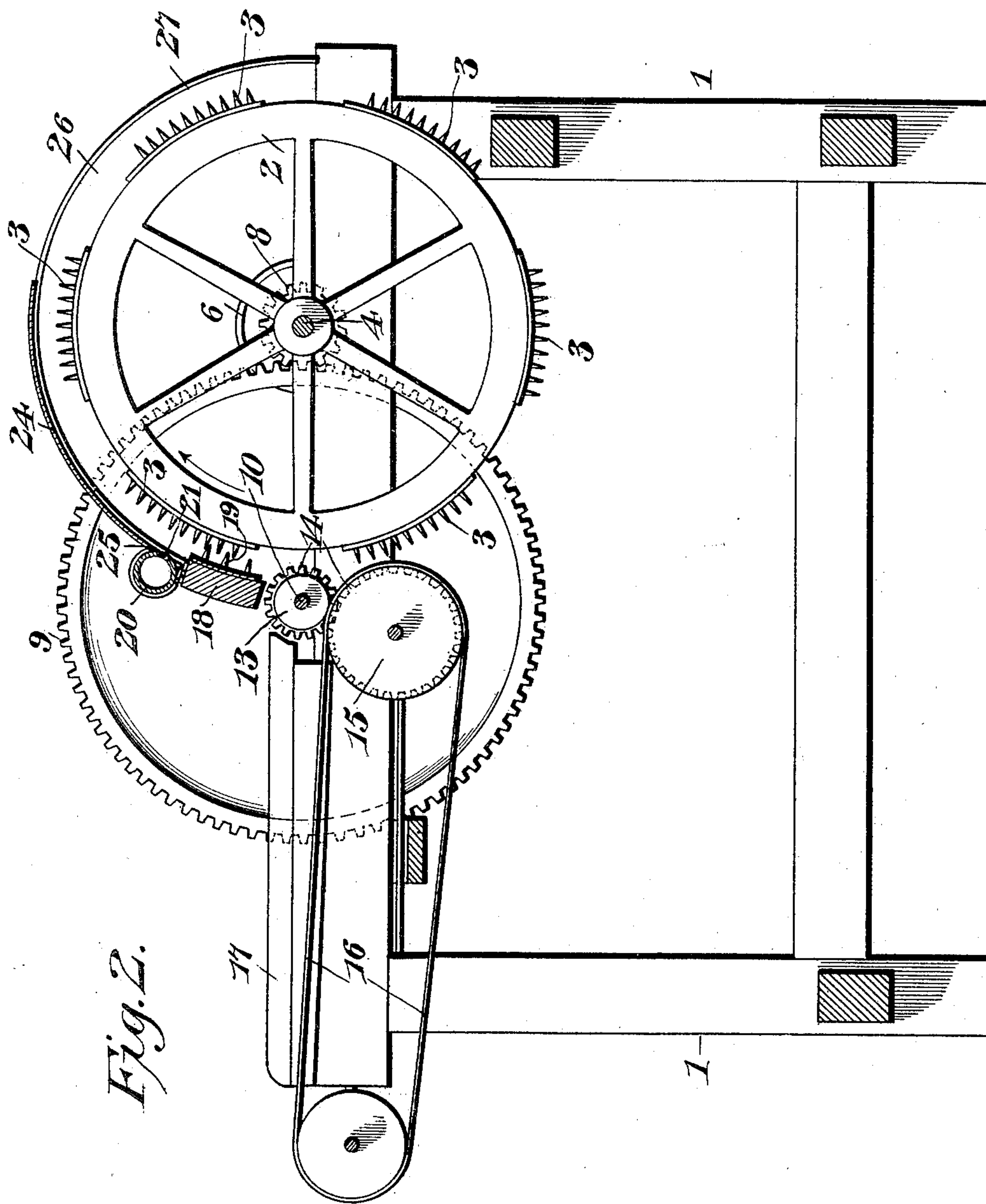


Fig. 2.

Witnesses

James K. McCathran
J. P. Hollenback

By *his* Attorneys,

James Haynes, Inventor

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JAMES HAYNES, OF CLIFTON HEIGHTS, PENNSYLVANIA.

HAIR-PICKER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 669,084, dated March 5, 1901

Application filed November 5, 1898. Renewed August 13, 1900. Serial No. 26,746. (No model.)

To all whom it may concern:

Be it known that I, JAMES HAYNES, a citizen of the United States, residing at Clifton Heights, in the county of Delaware and State of Pennsylvania, have invented a new and useful Hair-Picker Attachment, of which the following is a specification.

This invention relates to hair-picking machines; and it has for its object to provide an improved steam-appliance attachment for machines of this character to insure the thorough renovation of the hair.

To this end the invention primarily contemplates a novel arrangement of a steam-jet pipe disposed in such a position as to provide for saturating the hair directly adjacent to the point where the same is being picked or broken up, thereby insuring a thorough renovation of the hair and the destruction of any disease germs which might possibly be present therein.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a top plan view of a hair-picking machine equipped with the improved steam appliance contemplated by the present invention. Fig. 2 is a longitudinal sectional view of the construction shown in Fig. 1. Fig. 3 is an end view of the same. Fig. 4 is an enlarged detail elevation of the steam-jet pipe and the supply-pipe connection therewith.

Referring to the accompanying drawings, the numeral 1 designates the upright stand or frame of a hair-picking machine, within which is mounted the picker-cylinder 2. The picker-cylinder 2 is of the usual construction and is provided with the peripheral sets of picking-teeth 3 and is carried by the cylinder-shaft 4, journaled in suitable bearings 5, fitted to opposite top sides of the stand or frame 1 and carrying on one end thereof the fast and loose pulleys 6 and 7, respectively, adapted to receive a belt when it is desired to operate the machine by power, and adjacent to the pulleys 6 and 7 the cylinder-shaft 4 also has fitted thereon a pinion 8, meshing

with a spur-gear 9 on one extremity of the upper transverse roller-shaft 10, which carries at its opposite end the crank-handle 11. The crank-handle 11 is brought into play when it is desired to operate the machine by hand, motion being communicated from the spur-gear 9 to the pinion 8; but when the machine is operated by power motion is communicated from the pinion to the spur-gear, as will be readily understood by those familiar with the use of hair-pickers of the type shown in the drawings of this application.

The upper transverse roller-shaft 10 is arranged transversely of the machine stand or frame 1 at one side of the picker-cylinder 3 and is journaled in suitable bearings at opposite sides of the stand or frame. The said shaft has mounted thereon the upper holding-roller 13 for the hair, which is arranged above and has a suitable gear connection 14 with the lower holding-roller 15, which roller also provides for communicating motion to the feed belt or apron 16. This travels through the usual feed box or trough 17, formed at one end of the stand or frame and into which the material to be picked is introduced, said feed-belt 16 acting in the capacity of a conveyer to carry the material between the holding-rollers 13 and 15, where it may be readily caught up by the teeth on the picker-cylinder.

Immediately above the upper holding-roller 13 is arranged the transverse comb-head 18. This comb-head is held stationary by means of suitable supports and is provided at its inner side with a plurality of stationary picking-teeth 19, which project inward toward the periphery of the picker-cylinder 2 and cooperate with the teeth 3 of said cylinder, it being understood that as the picker-cylinder rotates the hair is caught up by the teeth thereof and carried through the teeth 19 of the stationary comb-head, thereby causing the hair to be thoroughly broken up in the usual way.

The present invention contemplates the application of steam to the hair directly adjacent to the point where the bunches are broken up or disintegrated by the teeth of the cylinder and the comb-head, and to secure this result there is employed a steam-

jet pipe 20. The steam-jet pipe 20 is arranged transversely of the machine directly above the stationary comb-head 18, and is provided in its inner side with a longitudinal series of steam-jet openings 21, which are disposed in a direction to provide for blowing or jetting the steam directly into the hair, where it is broken up by the teeth of the comb-head. By reason of the specific location of the steam-jet pipe 20 described the steam is forced into the hair when it is in the best possible condition for being thoroughly saturated therewith, and this application of the steam to the hair thoroughly renovates the same and exterminates any disease germs that might be present therein.

The horizontal steam-jet pipe 20 is held in a fixed position with relation to the stationary comb-head and the picker-cylinder and has applied to its opposite ends the closure-caps 22, one of which caps is fitted to one end of a live-steam-supply pipe 23, leading from a suitable generator and designed to carry steam into the jet-pipe under strong pressure, and in the practical operation of the machine the steam is fed to the jet-pipe under a pressure of about ninety pounds.

To insure the effective distribution of the steam throughout the hair and to prevent undue escape thereof, an arched hood-plate 24 is employed. This hood-plate is arranged concentric with the picker-cylinder, above the top portion thereof, and has its lower edge (indicated by the number 25) snugly fitting over one side of the jet-pipe 20, above the plane of the jet-openings 21 therein, so as to form a practically-closed joint with the jet-pipe, and thereby provide for confining the steam around the periphery of the picker-cylinder at and beyond the point where the steam is forced into the hair. The arched hood-plate 24 is sustained in an operative position by means of oppositely-located side walls 26, fitted to opposite top sides of the machine stand or frame and having curved upper edges 27 conforming to the curvature of the hood-plate.

After the steam-saturated hair is delivered from the picking-machine the same is placed in a drying-room having a temperature of about 210° Fahrenheit in order that the hair may be placed in proper condition for use.

From the foregoing it is thought that the arrangement and special advantages of the herein-described steam appliance for hair-picking machines will be readily understood by those skilled in the art without further description, and changes in the form, proportion, and the minor details of construction may be resorted to without departing from the

principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a hair-picking machine, the combination of a stationary toothed comb-head, a toothed picking-cylinder revoluble in a path contiguous to said comb-head and in a direction to carry the material upwardly from the same, means for feeding matted material into the path of the picking-cylinder and to one side of the comb-head, and a steam-jet pipe disposed at the opposite side of the comb-head from the feed mechanism and contiguous to said comb-head, said steam-pipe provided on its side next to the picking-cylinder with jet-openings arranged to directly inject steam into the loose fluffy mass of hair in its most disintegrated condition and immediately following the combined action of the comb-head and picking-cylinder thereon, substantially as and for the purposes set forth.

2. In a hair-picking machine, the combination of a toothed comb-head, a revoluble toothed picking-cylinder, a feed mechanism in a plane below said comb-head for feeding matted material into the path of the picking-cylinder, a steam-jet pipe arranged parallel to the axis of the cylinder and the comb-head and contiguous to the upper side of the latter, said pipe provided on its side next to the picking-cylinder with jet-openings arranged to inject steam directly into the loose fluffy mass of hair in its most disintegrated condition and immediately following the combined action of the comb-head and cylinder thereon, and a steam-confining hood extending partly around the cylinder and terminating at the steam-jet pipe, substantially as described.

3. In a hair-picking machine, the combination of a toothed comb-head, a feed mechanism, a steam-jet pipe provided with jet-openings, and a picking-cylinder revoluble in a direction to carry matted material from the feed mechanism, past the comb-head, and thence into the path of the jets of steam from said pipe, whereby the comb-teeth and the steam-jets act successively on the material to disintegrate the same and to effectually destroy disease germs therein, respectively, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES HAYNES.

Witnesses:

FRANK B. RHODES,
HENRY L. BROOMALL.