Feb. 5, 1952 B. CAHN 2,584,547

HAIR TWEEZER WITH AUTOMATIC TRACTION

Filed Feb. 12, 1948

FIG. 1.

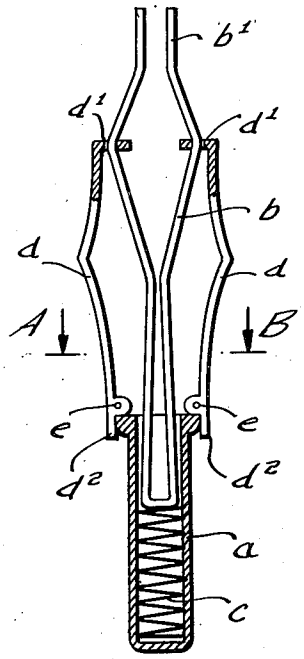
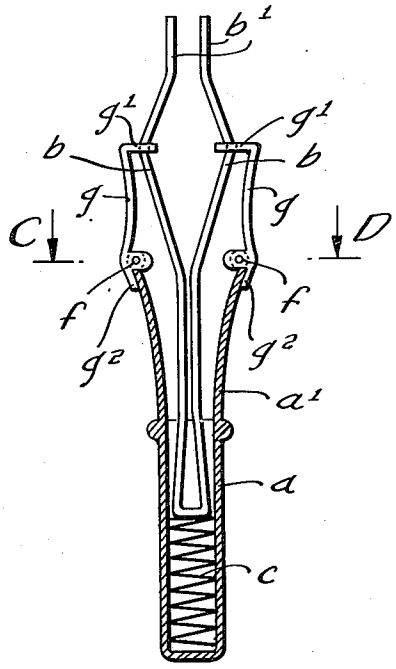


FIG. 2.



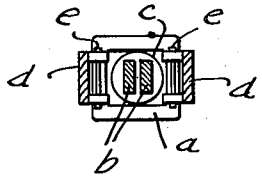


FIG. 1a.

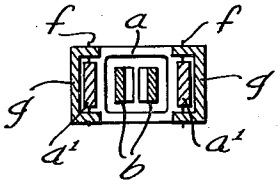


FIG. 2a.

INVENTOR.
Benjamin Cahn
BY
Mudal & Son

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HAIR TWEEZERS WITH AUTOMATIC TRACTION

Benjamin Cahn, Paris, France

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4 Claims. (Cl. 128—354)

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The present invention relates to improvements in automatic traction hair tweezers, which comprise two elastic branches whereon act lateral arms with clutches, causing the clamping and the pulling back of these branches.

The chief object of these improvements is to make the operation of the tweezers softer and more flexible. To this effect, they consist essentially in mounting, by means of articulations, the side arms with clutches acting on the elastic branches of the tweezers, so as to reduce the stress necessary for the flexure of these arms, leaving only the resistance of these elastic branches to be overcome. Besides, this arrangement, thanks to this articulated mounting, also offers the advantage of allowing a wider opening of the branches of the tweezers.

The articulation of the clutch arms may, at will, be provided either on the mounting containing the base of the elastic branches and the push spring, or on side arms, elastic or not, extending this mounting. This articulation may also be double or multiple, and may be provided at two or more points of the side arms.

The appended drawing shows, by way of example, two modes of embodiment of a hair tweezer embodying the present improvements.

Figure 1 of this drawing is a longitudinal section of one of these modes of embodiment, Figure 1^a is the horizontal section thereof, along line A—B of Figure 1.

Figure 2 is the longitudinal section of another mode of embodiment; Figure 2^a is the horizontal section thereof along line C—D of Figure 2.

In the mode of embodiment of Figures 1 and 1^a, the tweezer comprises a body or mounting *a*, wherein is engaged the end, forming a shoulder, of two elastic branches *b*, a push spring *c* being interposed between the bottom of this body and the shoulders of branches *b*.

The two clutch arms *d*, acting on the inclined parts of elastic branches *b* are articulated at *e* on the apex of mounting *a* so as to be capable of turning inwardly. During such turning the clutch arms have only to overcome the elastic resistance of branches *b* of the tweezers on which they act by their upper clutches d^1. Lower extensions d^2 of arms *d* limit adequately the opening of the latter towards the outside.

In the variant of Figures 2 and 2^a, the arms *g*, acting by their clutches g^1 on elastic branches *b* of the tweezers, are articulated at *f* on arms a^1 which continue mounting *a* and which, at will may be elastic or rigid. The opening of arms *g* towards the outside is limited by lower extensions g^2 of said arms.

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It is obvious that, if deemed useful, the clutch arms *d* (Figure 1) or *g* (Figure 2) could be divided into two, three or more elements connected to one another by articulations.

It will be realized that, by means of the articulation mounting of the clutch arms either on the mounting proper or on extensions arms thereof, or on multiple elements of said arms, the effort necessary to produce the clamping or squeezing action of the tweezers is reduced to the only effort necessary for overcoming the elastic resistance of the arms of the tweezers which makes the operation of the latter more flexible and softer. Further, this articulation mounting makes it possible also to increase the possibility of opening the branches of the tweezers, by providing, to this effect, lower extensions a^2 (Figure 1) or g^2 (Figure 2) which limit the motion of the clutch arms.

It must be understood that the improvements indicated above are capable of any variants, especially as concerns the shape of the clutch arms and their mode of articulation.

What I claim is:

1. Tweezers comprising an elongated housing open at its front end, a gripper consisting of a resilient strip bent to form longitudinally extending branches connected at their rear ends by a bridge, said gripper being freely slidable into and out of the housing through the open front end thereof and projecting forwardly therefrom and in spaced relation to front ends of its branches being bent to form ramps having forwardly diverging rear portions and forwardly converging front portions connected with the said rear portions by flat portions merging into the front and rear portions, there being straight terminals for the branches extending forwardly from the ramps in spaced parallel relation to each other and constituting jaws for gripping hairs between them, a spring in the rear portion of said housing engaging the bridge and urging said gripper forwardly, and arms outside said housing extending forwardly therefrom and having rear ends pivoted to the front end of the housing at opposite sides thereof from the gripper, said arms extending longitudinally of said grippers and at their front ends being bent towards each other and formed with recesses through which said branches slidably pass.

2. Tweezers comprising a hollow body defining a handle having therein a socket open at its front

end and unobstructed throughout its length, a gripper having resilient longitudinally extending branches connected at their rear ends, said gripper being slidable longitudinally in said socket and being freely insertable and removable through the open front end of the socket, a spring in said socket urging the gripper outwardly, the resilient branches of said gripper being normally spaced from each other and having portions converging forwardly and terminating in parallel portions constituting jaws, and arms pivoted at opposite sides of the open front end of said body and extending forwardly therefrom and at their front ends being formed with fingers extending inwardly towards each other and bearing against the converging portions of the branches and serving to force the branches towards each other to a gripping position and then shift the gripper rearwardly in a pulling motion by cam action between the fingers and the forwardly converging portions of the branches when the arms are pressed towards each other.

3. Tweezers comprising a hollow body defining a socket open at its front end and unobstructed throughout its length, a gripper slidable longitudinally in said socket and readily removable therefrom through its open front end, a spring urging said gripper outwardly, said gripper having yieldable branches normally transversely spaced from each other and having jaws and forwardly converging portions disposed rearwardly of the jaws, arms pivoted to said body and extending forwardly therefrom at opposite sides of the gripper and provided with fingers abutting outer side faces of the converging portions of the branches and serving to force the branches towards each other and hold the jaws in a gripping position and then act upon the converging portions and slide the gripper rearwardly in a pulling motion when the arms are pressed towards each other, and extensions at rear ends of said arms engaging said body and limiting movement of the arms away from each other.

4. Tweezers comprising a hollow body open at its front end and defining a socket unobstructed throughout its length, arms pivoted at rear ends to opposite sides of the open front end of said body and extending forwardly therefrom and at their front ends extending towards each other, a gripper between said arms slidable longitudinally into and out of the socket through the open end thereof and readily removable through the open front end, said gripper having yieldable branches normally spaced transversely from each other and having jaws at their front ends and rearwardly of the jaws having sloping portions converging forwardly, and a spring in said socket urging said gripper outwardly, the front ends of said arms bearing against the sloping portions of said branches and thereby serving to force the jaws together and then slide the gripper rearwardly in a pulling direction when the arms are pressed towards each other and also swing to limit normal outward movement of the gripper.

BENJAMIN CAHN.

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