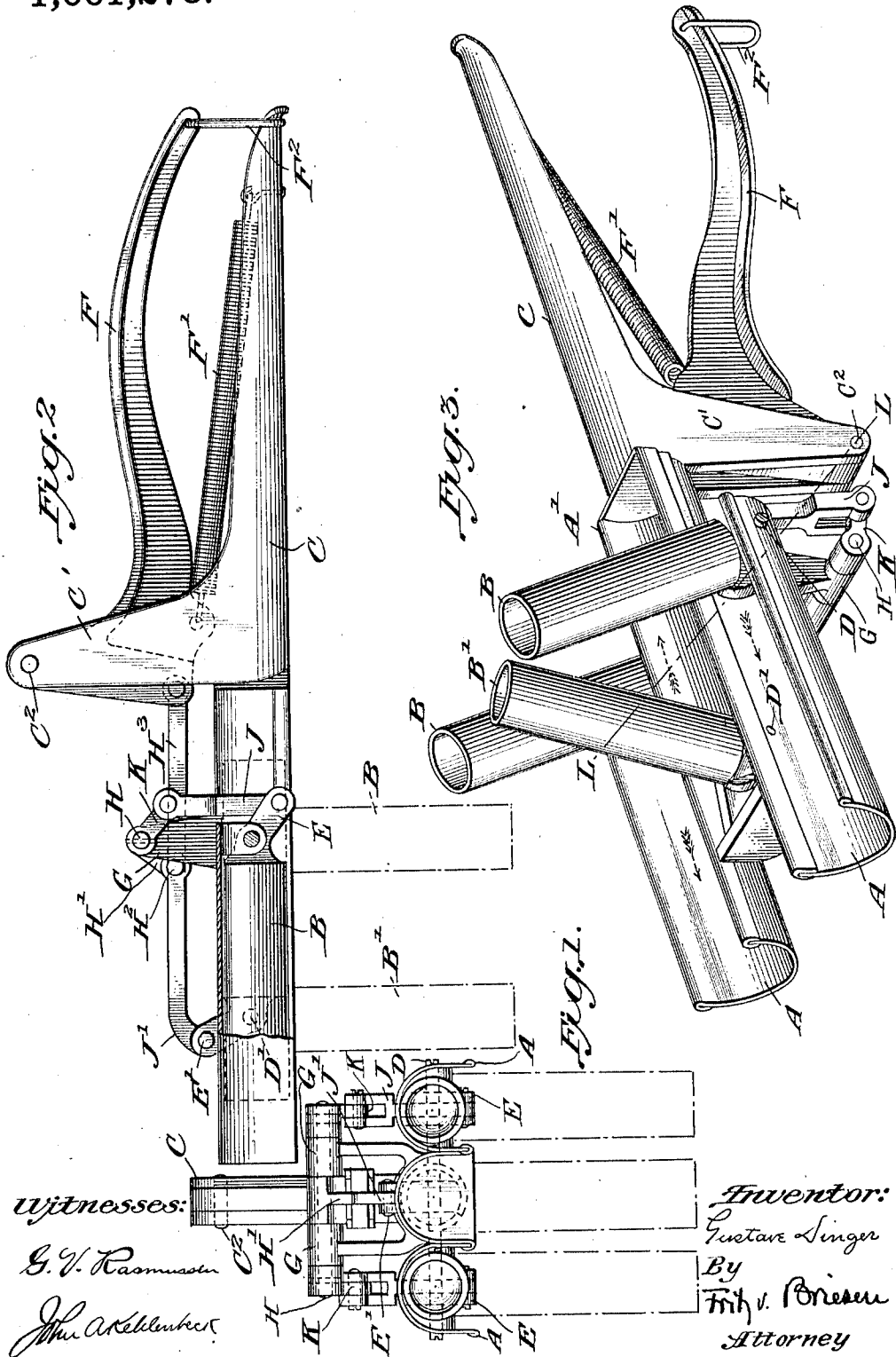


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CURLING IRON AND THE LIKE.
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CURLING-IRON AND THE LIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAVE DINGER, a subject of the Emperor of Germany, and resident of 1 Brook street, Hanover Square, London, W. C., England, have invented certain new and useful Improvements in Curling-Irons and the Like, of which the following is a specification.

This invention is for improvements in or relating to devices such as curling irons or the like, for waving or curling hair or other material, and has for its object to provide a curling iron which will give a more natural wave to the hair or other material being operated upon, than has heretofore been possible.

As is well known, curling irons usually take the form of a pair of tongs hinged together, so that they can be closed upon the hair from one side for the purpose of gripping it, after which the hair is twisted around the tongs, or a wave is produced in it owing to the fact that one member of the pair of tongs presents a convex surface toward the hair, and the other member thereof a concave surface so that the hair or other material takes a corresponding shape when gripped between the tongs.

According to the present invention, a curling iron or the like is constructed with two or more pairs of hinged or pivoted tongs arranged side by side with the pivots arranged alternately on opposite sides of an imaginary line, and with the free ends of the pivoted members extending in opposite directions from the pivots when the tongs are closed so that said tongs will close upon a tress of hair or strip of other material from opposite sides.

As an example of one construction, three pairs of tongs are employed, two of which have the pivots arranged in substantial alinement on one side of said imaginary line, and a middle pair having the pivot located on the opposite side of said line, each pair of tongs comprising one trough-like or concavely-recessed member and one rod-like or convex member arranged to fit therein, two of said convex members extending in the same direction from their pivots while the middle convex member extends in an opposite direction from its pivot. The material is thus gripped between cooperating concave and convex surfaces when the convex members are interposed in said re-

cessed members. It will be seen that when such arrangement is in use, since each pair of tongs in closing upon any material tends to thrust it in the direction of the axes of the tongs away from the pivots, the said material or hair is deflected by the middle pair of tongs in an opposite direction to that in which the other two pairs tend to move it, and a wave is produced by such deflection which is different from the wave or ripple ordinarily obtained by merely pressing the hair between the members of each pair. In result the said construction therefore virtually superimposes a wave of deflection upon the plain ripple produced by the rod-like and trough-like members, or in other words, in addition to waving the material in the direction of its length, also waves it transversely of its length in opposite directions.

Reference is to be had to the accompanying drawings in which—

Figure 1 is an end elevation of one form of curling iron constructed according to my invention and showing the tongs closed; Fig. 2 is a side elevation thereof, partly in section; and Fig. 3 is a perspective view of the curling iron inverted and with the tongs partly open.

The device as illustrated comprises three trough-like or concavely-recessed members A, A' rigidly secured side by side and carried by a handle or other support C. Rod-like or convex members B each have its one end pivotally mounted at D within the members A, the said pivots D being in substantial alinement, while a rod-like or convex member B' is similarly pivoted at D' within the central recessed member A', the said pivot D' being out of alinement with the pivots D. In other words, the pivots D are located on one side of an imaginary line indicated, for instance, by the dotted line L—L in Fig. 3, while the pivot D' is arranged on the opposite side of said line, the members B extending in one direction from pivots D, while the member B' extends in an opposite direction from its pivot D'. With this arrangement, the free ends of the members B, B', B will travel in opposite paths in circular directions as the said members B, B', B are swung about their pivots into and out of the recessed members A, A'. Each member B, B', B is provided at its pivoted or hinged end with a crank-like lug E, E' projecting to the other side of the

pivot from that on which the main body of the member lies.

The handle or support C is provided with projecting lugs C' which serve to support a lever F pivoted therebetween at C². The central trough-like member A' carries a pair of brackets G in which a rocking spindle H is journaled. A crank H' is secured to the rocking spindle H, in any suitable manner and a crank pin H² pivotally connects this crank through the medium of links H³ and J' with the lever F and lug E' of the central member B' respectively. The rocking spindle H further carries at its two outer extremities two cranks K connected by means of links J to the lugs E of the two members B, B. A movement of the lever F about the pivot C² imparts a rocking movement to the locking spindle H through the medium of the connecting link H³, which movement is transmitted to the lugs E, E' by means of the links J, J', and thus swings the members B, B' B about their respective pivots. A spring F' is provided for the purpose of returning the lever F to its normal position in which the tongs are held open and a catch F² is provided at the end of the lever F for engagement with the handle C to maintain the tongs in a closed position when desired.

The position of the members B, B', B when swung to an open position under the action of the spring F' is indicated in Figs. 1 and 2 in dotted lines, from which it will be seen that these members are then substantially at right angles to the relatively fixed members A, A', A. Consequently, when the curling iron is in this open position the hair or other material may be readily inserted in the position also illustrated by the dotted line L—L in Fig. 3 without the necessity for threading or lacing. If the lever F is now pressed toward the handle C the members B, B', B will be swung about their pivots into the recessed members A, A', A, and will tend not only to press the hair or other material into said members, A, A', A, but also in some degree to force said hair or other material in an axial direction away from the pivots, or in other words, in the directions indicated by the dotted arrows in Fig. 3, thus producing the desired wavy effect hereinbefore mentioned, which is distinct from a plain ripple. The thrusting action in these directions is greatest when the tongs are most widely open and the hair or other material placed near the pivots thereof so that the deflecting effect is enhanced by bringing the lines in which the pivots D, D' are arranged more closely together. In the construction illustrated, the distance between these pivots is about two thirds of the length of the convex members B, B', B. The distance between the said

pivots will depend upon the result desired and upon the width of the material to be inserted.

The above construction, it is to be understood, is described by way of illustration only, as it is obvious that many modifications and changes may be made in the construction within the scope of the claims without departing from the spirit of this invention. For example, the number of tongs provided may be varied to suit different varieties of work. Further, any preferred mechanism may be employed to effect or bring about an operation of the tongs.

I claim:

1. A curling iron comprising a series of longitudinally recessed members and a series of cooperating members adapted to fit in said recessed members, the members of one series of members being pivoted on and movable relatively to the corresponding members of the other series, the pivots of adjacent members in the movable series being located on opposite sides of an imaginary transverse line and the free ends thereof being movable in opposite circular paths.

2. A curling iron or the like comprising a plurality of concavely recessed members, and cooperating convex members pivotally secured thereto and movable into and out of said recessed members, the free ends of adjacent convex members being movable in opposite circular paths, resilient means for maintaining all of said convex members out of said recesses, and means for simultaneously moving all of said convex members into said recesses against the tension of said resilient means.

3. A curling iron or the like comprising a plurality of concavely recessed members and cooperating convex members pivotally secured thereto and movable into and out of the said recessed members, the pivots of adjacent convex members being located on opposite sides of an imaginary transverse line with said adjacent convex members extending from said pivots in opposite directions when the curling iron is closed and means for operating said convex members.

4. A curling iron or the like comprising a plurality of concavely recessed members and cooperating convex members pivotally secured thereto and movable into and out of the said recessed members, the pivots of adjacent convex members being located on opposite sides of an imaginary transverse line with said adjacent convex members extending from said pivots in opposite directions, the distance between the axes of the pivots of adjacent convex members being less than the length of a convex member.

5. A curling iron comprising a support, a plurality of concavely recessed members carried thereby, cooperating convex members pivoted therein and movable into and out

of said recessed members, the pivots of said
convex members being located on opposite
sides of an imaginary transverse line with
adjacent members extending from the pivots
5 in opposite directions when the curling iron
is closed, a crank-shaft, links pivotally con-
nected with said crank-shaft and said con-
vex members, an operating handle pivotally

mounted on said support and a link pivot-
ally connected with said handle and with 10
said crank shaft.

Dated this 21st day of November 1911.

GUSTAVE DINGER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."
