

No. 613,104.

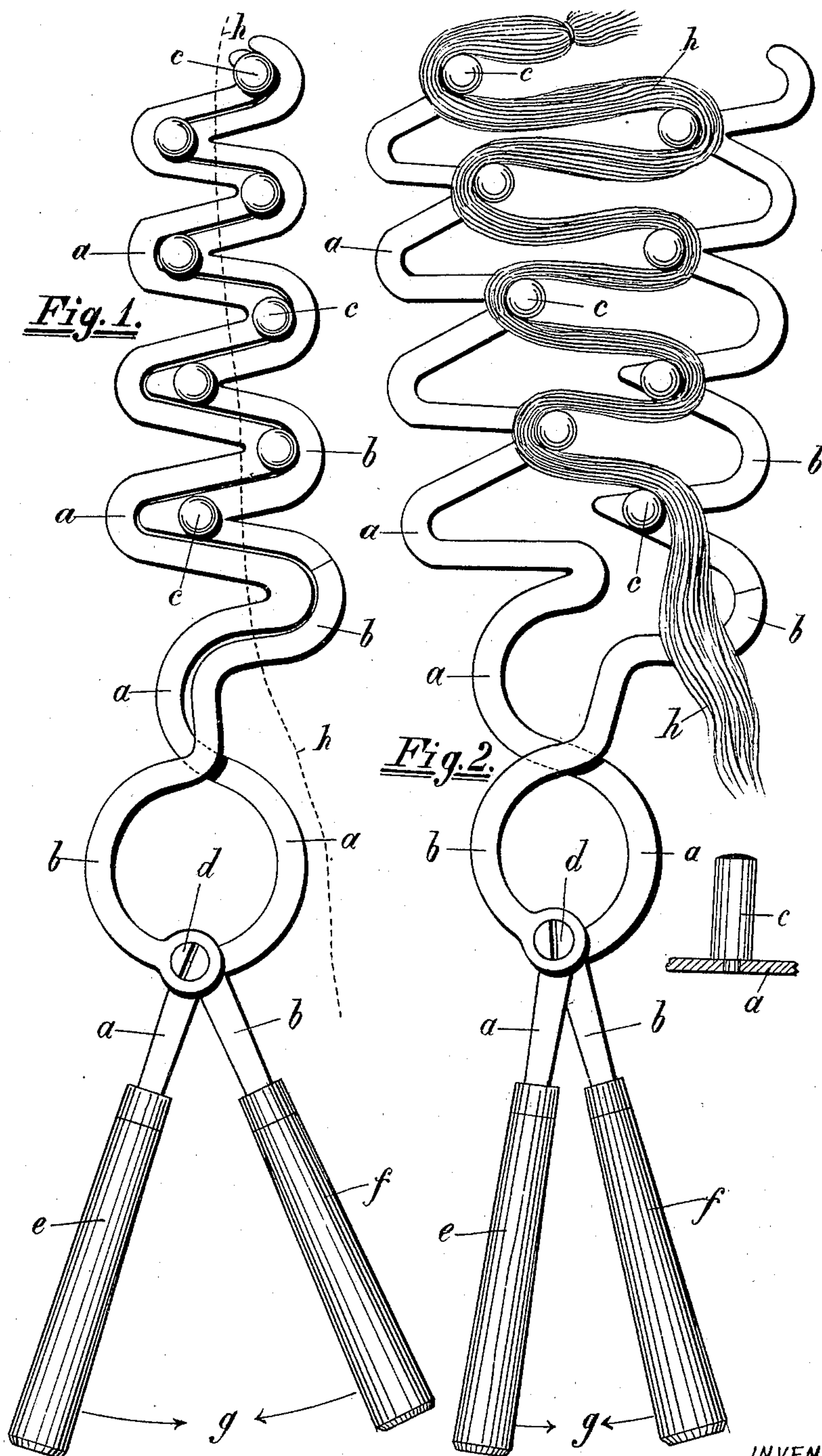
Patented Oct. 25, 1898.

F. ZIMMERMANN.

HAIR CURLER.

(Application filed Mar. 7, 1898.)

(No Model.)



WITNESSES:  
*M. H. Hutzfeldt*  
*Geo. W. Jaeschke*

INVENTOR  
*Franz Zimmermann*  
BY *Loewen Rieger*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

FRANZ ZIMMERMANN, OF BERLIN, GERMANY.

## HAIR-CURLER.

SPECIFICATION forming part of Letters Patent No. 613,104, dated October 25, 1898.

Application filed March 7, 1898. Serial No. 672,845. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ ZIMMERMANN, of 64 Klopstockstrasse, Berlin, Germany, have invented Improvements in Hair-Curlers, of which the following is a specification.

This invention relates to tongs for use while heated for crimping, waving, or curling hair.

The chief feature of the invention consists in that it allows of forming a considerable number of waves, as desired, of a desired length and depth, thereby giving an appearance of naturally wavy hair to a greater extent than is effected by existing contrivances.

In the accompanying drawings, Figure 1 illustrates the improved tongs in the closed condition—that is to say, out of use. Fig. 2 shows the tongs in the open condition with a lock of hair *h* placed in position.

As shown in the drawings, the tongs consist of two legs or members *a* and *b*, which are bent in serpentine fashion and have a common pivot *d*. At the inner facing points of the two legs there are arranged vertically to the same the heating-irons proper, *c*, which are staggered or arranged in a zigzag manner in consequence of the construction of the legs. It will be clearly seen that by means of the arrangement shown regular waves can be formed (by heating) along a very much greater length of hair than hitherto.

It may also be mentioned here that the tongs can be placed upright, and therefore allow of a considerably more varied use than other known crimping-tongs.

It will also be perceived that twisting or breaking of the hair is obviated by reason of the peculiarity of the construction. This results in preventing damage to the hair.

Further advantages of these new crimping-tongs are, as compared with other existing

devices employed for the same purpose, the following: The crimping-tongs are operated by pressing together the handles *e* and *f* at the rear, as indicated by the arrows *g* in the drawings. This allows of much easier manipulation and also requires a much smaller exertion of power. Further, no special heating apparatus is required for heating these tongs, an ordinary simple flame being sufficient to heat the whole of the crimping-irons *c* at one and the same time—that is to say, in a perfectly uniform manner—namely, by opening the tongs to such an extent as to bring the heating-irons in line with one another.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A curling-iron, consisting of pivoted members or legs having serpentine or wavy portions, and heating-irons proper arranged in zigzag or staggered position on the said serpentine or wavy portions, substantially as set forth.

2. A curling-iron, consisting of a pair of pivoted members or legs, provided with handles on one side, and with serpentine or wavy portions at the other side of the pivot, and heating-irons arranged at the points of said serpentine or wavy portions, so as to be staggered relatively to each other, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRANZ ZIMMERMANN.

Witnesses:

KARL FRANZKE,  
C. H. DAY.