No. 894,674. PATENTED JULY 28, 1908.

I. O. LOFSTROM.

RETAINING COMB.

APPLICATION FILED JUNE 22, 1906.

2 SHEETS—SHEET 1.

Fig. 1

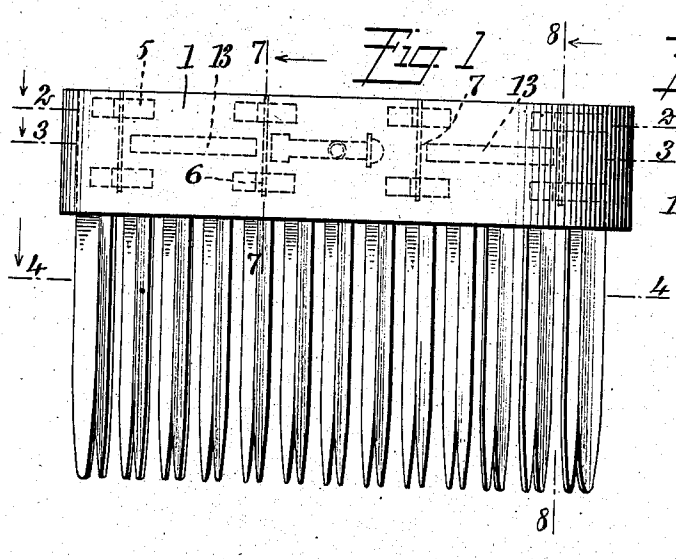


Fig. 8

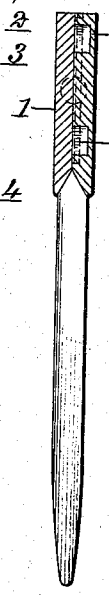


Fig. 9



Fig. 10



Fig. 2

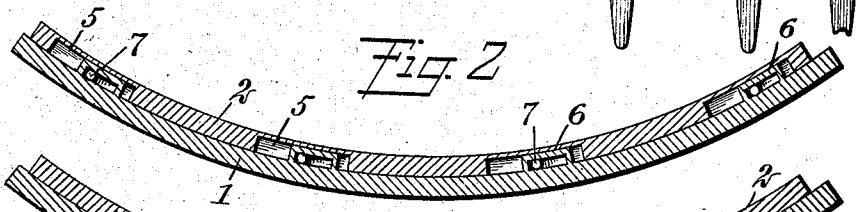


Fig. 3

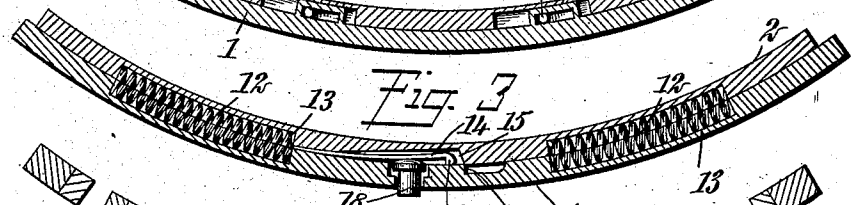


Fig. 4

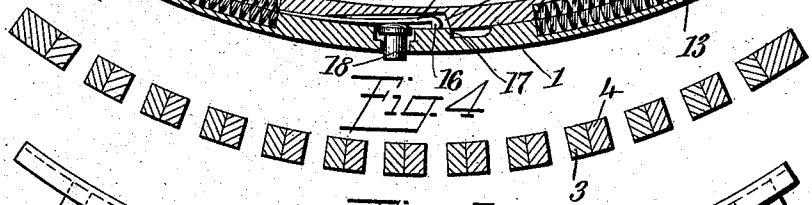


Fig. 5

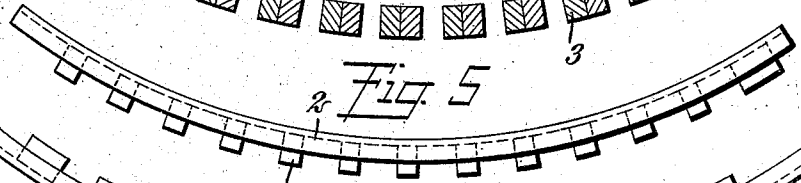


Fig. 6

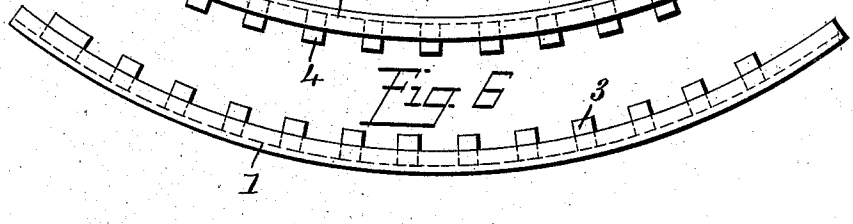
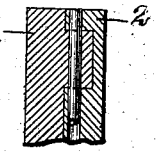


Fig. 7



WITNESSES

E. G. Bromley

John K. Bradway

INVENTOR

Ivar O. Lofstrom

BY Munn & Co

ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 11

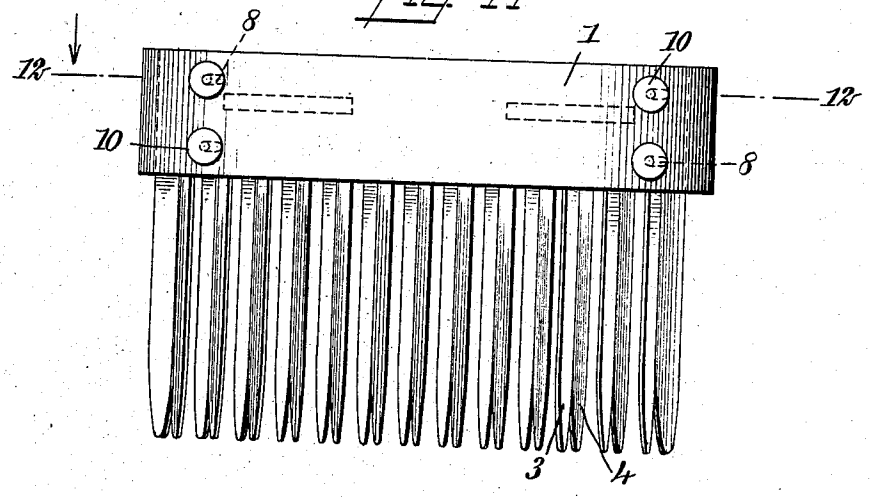


Fig. 12



Fig. 13

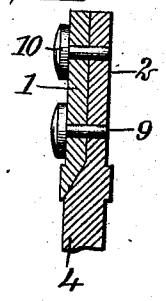


Fig. 15

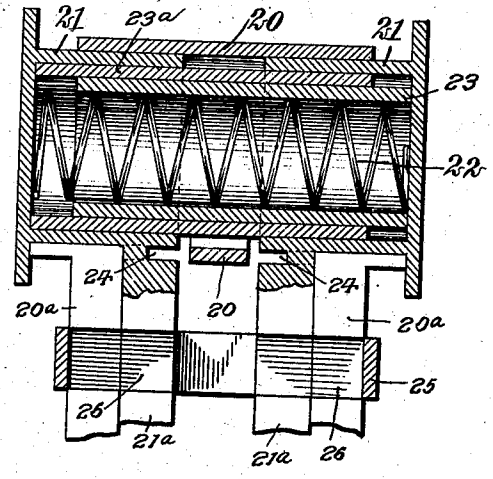
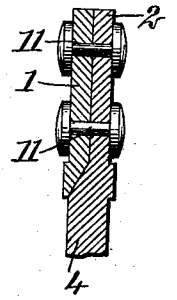


Fig. 14



WITNESSES

E. G. Bromley,

John K. Braelwood

INVENTOR

Ivar O. Lofstrom

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

IVAR OSCAR LOFSTROM, OF SELBY, CALIFORNIA.

RETAINING-COMB.

No. 894,674. Specification of Letters Patent. Patented July 28, 1908.

Application filed June 22, 1906. Serial No. 322,853.

To all whom it may concern:

Be it known that I, IVAR OSCAR LOFSTROM, a citizen of the United States, residing at Selby, in the county of Contra Costa and State of California, have invented new and useful Improvements in Retaining-Combs, of which the following is a specification.

This invention relates to an improved retaining comb, commonly known as side and back combs, for the hair, the object of the invention being to provide a device of this character which will hold the hair more firmly than combs heretofore in use.

In the accompanying drawings, Figure 1 is a front view of the comb; Fig. 2 is a section on the line 2—2 of Fig. 1; Figs. 3 and 4 are sections on the lines 3—3 and 4—4 respectively of Fig. 1; Figs. 5 and 6 are plan views of the two parts of the comb detached; Fig. 7 is a section on the line 7—7 of Fig. 1; Fig. 8 is a section on the line 8—8 of Fig. 1; Figs. 9 and 10 are views similar to Fig. 8, showing the two parts of the comb detached; Fig. 11 is a front view of a comb of modified form; Fig. 12 is a partial cross-section on the line 12—12 of Fig. 11; Fig. 13 is a transverse section of the form shown in Figs. 11 and 12 with parts broken away; Fig. 14 is a view similar to Fig. 13, showing details of further modified form; and Fig. 15 is an enlarged broken section of a further modified form of the comb.

Referring to the drawing, 1, 2, represent upper and lower plates, which are suitably curved, as is common with this class of combs, to conform to the shape of the head, and which carry integral therewith two series of teeth, 3, 4. Said plates 1, 2, slide upon each other, and may be secured together in various ways.

In Figs. 1 and 2, the plate 2 is shown as provided with recesses 5, and in said recesses slide loops 6, formed integral with the plate 1. Through said loops pass pins 7 which are driven downwards from the top of the plate 2, and thus serve to hold said plates together.

In the modification shown in Figs. 11, 12, and 13, the plate 1 is formed with slots 8 and through said slots pass stems 9 having heads 10 and screwed or otherwise secured to the other plate 2.

In the modification shown in Fig. 14, rivets 11 are used instead of bolts.

The stems 9 are slidably arranged in the slots 8 of the plate 1 and are rigid with the plate 2, being screwed or otherwise fastened thereto so that the plates are held contiguous but relatively slidable.

In Fig. 14 a modification is shown in which the stems have heads at both ends and constitute rivets, the heads engaging opposite sides of the contiguous plates. The arrangement of the stem is similar to the arrangement shown in the previous figure, the construction being such that the plate 1 can slide on the plate 2, the stems being slidably arranged within the slots 8.

The teeth of the two series form pairs, one tooth of the pair, attached to one plate, being preferably rounded or convex on the side next the other tooth of the pair, and said other tooth being correspondingly concave, the object being to provide a firm grip of the hair between the teeth. However, the adjacent sides of the teeth may be flat, and the teeth may be either straight or wavy. The teeth of one series are normally pressed against the teeth of the other series by means of springs 12, which may be of any desired form, but in the present instance are shown as coiled springs, lying in cylindrical pockets 13, formed half in each of the plates 1, 2, which are suitably stamped to form such pockets.

A locking device, which will retain the teeth of the two series apart from each other until the comb is placed in the hair, may or may not be used, as desired. Such locking device is shown in Fig. 3, in which a flat spring 14 lies in a recess 15 in one of the plates and has one end secured thereto, the other end being formed into a hook 16 which engages a shoulder 17 formed in the inner side of the other plate, said hook 16 being released from said shoulder by pressing inwards a small button or stud 18, the inner end of which then presses against said flat spring and releases the locking device.

An important feature of this invention consists in the form of union of the teeth to the plates. It is very necessary to retain sufficient strength in the teeth, and at the same time to avoid undue thickness and clumsiness in the plates. To accomplish this result, in the first place each tooth is made of a thickness nearly equal to the combined thicknesses of the plates. But, more important still, the lower edges of the plates, from which the teeth extend, are made beveled, and the upper ends of the teeth are correspondingly beveled, so that the bevels of

the teeth extending from each of the plates fit closely against the beveled lower edge of the other plate. By this arrangement the cross-sectional area of the union of each tooth with its plate is the same as that of the tooth itself, so that, notwithstanding that the plate is made little more than half the thickness of the tooth, the strength of the union of the tooth to the plate is not on that account materially diminished.

In Fig. 15 is shown a modification of the comb in which two pairs only, of teeth are used. This form of the device has a cylindrical slideway 20 open at the ends and carrying near the ends, teeth 20^a preferably formed integral with the slideway. Adjacent to the teeth 20^a the slideway 20 has slots 24 for a purpose which will appear hereinafter. Cylindrical slides 21 are arranged movably within the slideway 20 and each has a rigid tooth 21^a extending therefrom and arranged in one of the slots 24 of the slideway. Tubular members 23 and 23^a telescoping one within the other, are arranged within the cylindrical slides 21. A spring 22 is located within the member 23 and engages the closed ends of the slides 21, normally forcing them apart. The spring positions the slides so that the teeth 21^a normally lie adjacent to the teeth 20^a. By forcing the slides 21 inward against the tension of the spring 22 the teeth 21^a are displaced and move within the slots 24 away from the respective teeth 20^a. A band 25 embraces the pairs of teeth and is arranged in grooves 26 of the teeth. The band acts as a guide for the teeth.

The invention may be ornamented or otherwise fashioned to suit custom or individual taste. Moreover it is to be understood that any suitable material may be employed.

I claim:—

1. A retaining comb, comprising relatively slidable sections having teeth, the teeth of each section being separated a distance greater than the width of a tooth, a tooth of each of said sections being arranged between adjacent teeth of another of said sections means for normally holding said teeth together in pairs, means for locking said teeth in a separated position, and means for releasing said locking means.

2. A retaining comb, comprising two relatively slidable sections having teeth, the teeth of each section being offset laterally into the plane of the teeth of the other of said sections, the teeth of each section further being separated a distance greater than the width of a tooth, said teeth being alternately arranged whereby the teeth move in alinement, while the sections move side by side.

3. A retaining comb, comprising two relatively slidable plates having teeth, the teeth of each of said plates being laterally offset to lie partly under the other of said plates, said teeth of each of said plates being separated a distance substantially in excess of the width of a tooth, said teeth being alternately arranged, and means for resiliently holding said teeth together in pairs.

4. A retaining comb, comprising two correspondingly curved slidable plates having teeth, the teeth of each of said plates being of greater thickness than said plate and extending beneath the other of said plates, said teeth of each of said plates being separated a distance substantially in excess of the width of a tooth, said teeth being alternately arranged, and means for resiliently holding said teeth together in pairs.

5. A retaining comb comprising two plates moving upon each other and each having teeth, a spring for holding said teeth together in pairs, and a locking device for locking the plates against the action of said spring, substantially as described.

6. A retaining comb, comprising two relatively slidable plates having teeth separated a distance substantially in excess of the width of a tooth, and means for resiliently holding said teeth together in pairs, each plate having a beveled edge from which the teeth extend, the upper ends of the teeth where they are attached to their plate being beveled to fit against the beveled lower edge of the other of said plates.

7. A retaining comb comprising two plates moving upon each other, each having a plurality of teeth, one of said plates having a series of loops, and the other plate having a series of recesses in which said loops slide, and pins secured in the latter plate and extending through said loops, substantially as described.

8. A retaining comb comprising two relatively slidable plates having teeth, the teeth of each of said plates being offset and being arranged between adjacent teeth of the other plate, one of said plates having a recess, the other of said plates having a loop arranged in said recess, and a pin passing through said loop and secured to said first plate.

9. A retaining comb comprising two relatively slidable plates having teeth, the teeth of each of said plates being offset and being arranged between adjacent teeth of the other plate, one of said plates having a recess, the other of said plates having a loop arranged in said recess, a pin passing through said loop and secured to said first plate, and a spring arranged between said plates and normally holding the same in position such that the teeth are held together in pairs.

10. A retaining comb comprising two relatively slidable plates having teeth, the teeth of each of said plates being offset and being arranged between adjacent teeth of the other plate, one of said plates having a recess, the other of said plates having a loop arranged in

said recess, a pin passing through said loop and secured to said first plate, a spring arranged between said plates and normally holding the same in position such that the teeth are held together in pairs, locking means for holding the said plates in position such that the teeth are separated, and means for releasing said locking means.

11. A retaining comb comprising two relatively slidable plates having teeth separated a distance substantially in excess of the width of a tooth, the teeth of each of said plates being laterally offset to lie under the edge of the other of said plates, the teeth of each of said plates being of greater thickness than said plate and presenting a bevel at the point of attachment with said plate, each of said plates being beveled between said teeth to correspond with the bevel of said teeth of the opposite plate, one of said plates having a recess, the other of said plates having a loop slidably arranged within said recess, a pin secured to said first plate and passing through said loop, a spring arranged between said plates and holding the same in a normal position with the teeth arranged together in pairs, one of said plates having a catch recess, the other of said plates having a spring catch bar presenting a shoulder adapted to enter said catch recess to lock said plates in position with said teeth separated, and means for releasing said spring catch bar.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

IVAR OSCAR LOFSTROM.

Witnesses:
FRANCIS M. WRIGHT,
J. E. GRANT.