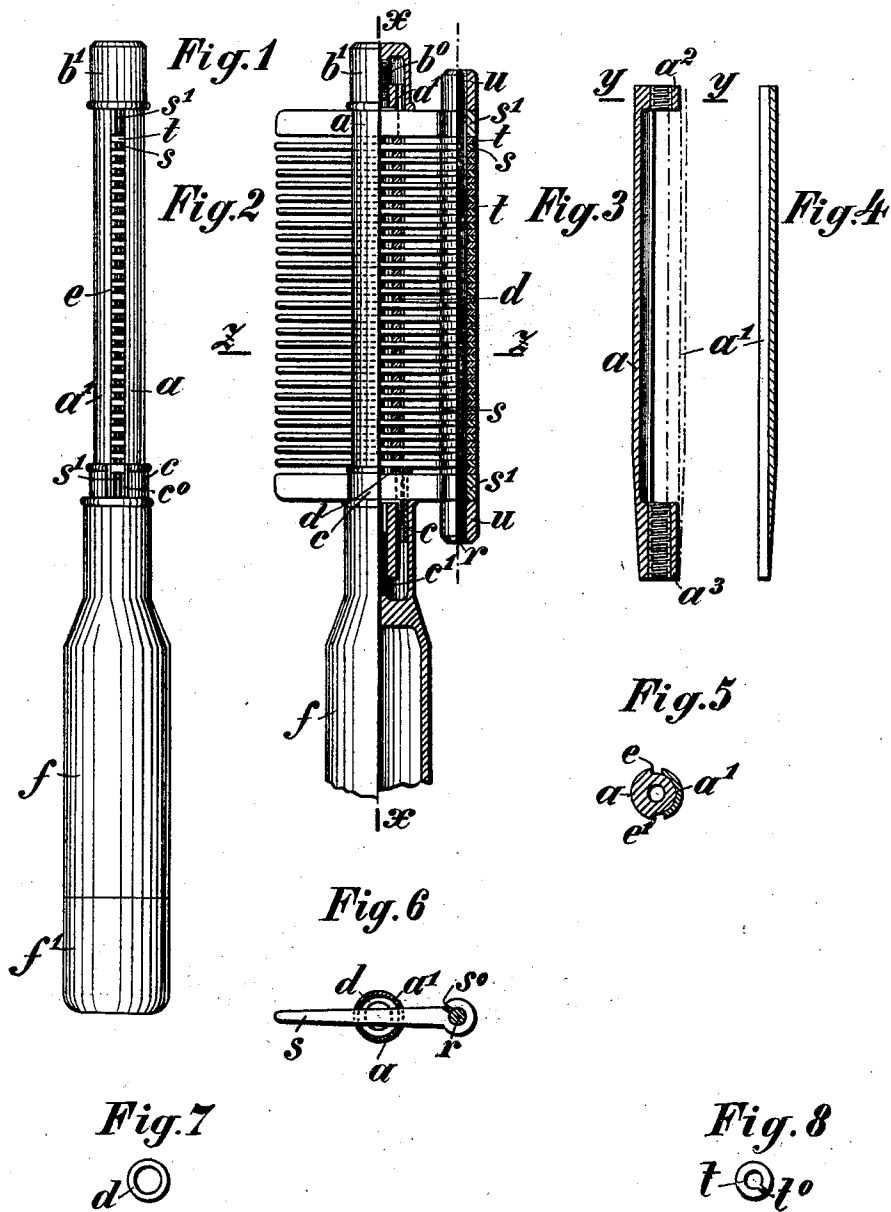


(No Model.)

A. BRUNNER.
COMB AND COMB CLEANER.

No. 513,980.

Patented Feb. 6, 1894.



Witnesses:

E. K. Rolton

E. H. Sturtevant

Inventor:

Alfred Brunner

By

Richardson
his Attorneys

UNITED STATES PATENT OFFICE.

ALFRED BRUNNER, OF FRASTANZ, AUSTRIA-HUNGARY.

COMB AND COMB-CLEANER.

SPECIFICATION forming part of Letters Patent No. 513,980, dated February 6, 1894.

Application filed April 7, 1893. Serial No. 469,407. (No model.)

To all whom it may concern:

Be it known that I, ALFRED BRUNNER, a citizen of the Republic of Switzerland, residing at Frastanz, in the Principality of Vorarlberg, Austria-Hungary, have invented a certain new and useful Hair-Comb, of which the following is a specification.

The present invention relates to a comb combined with a comb cleaner for removing the dirt from the teeth of the comb. The cleaner is movable and is connected in such a way with the comb that by catching around the teeth it prevents any sidewise motion of the same.

In the annexed drawings:—Figure 1, shows a front view of the comb cleaner of a mounted comb in which the downward prolongation of the cleaner forms a handle. Fig. 2, shows a side and part sectional view of the same, the handle being broken off. Fig. 3, shows a sectional view on line $x-x$, of Fig. 2, of the two part case of the comb cleaner one removable half of which is marked by the dotted lines. Fig. 4, is a sectional view of the removable case. Fig. 5, is a section of the case on line $y-y$ of Fig. 3. Fig. 6, is a section on line $z-z$ of Fig. 2. Figs. 7 and 8 are views of the holding collars for the comb and comb cleaner.

The comb consists of a pin r provided at both ends with a screw thread upon which at one end a screw nut u is screwed against a main tooth s' which is placed on the pin r from the other end and after this has been moved along to proper position a spacing collar t and an ordinary tooth s are alternately threaded on until the row of teeth is completed by a second main tooth s' at the other end. By screwing on a second nut u the teeth after having been put in the right position are fixed.

In order that if the teeth s happen to break, the pieces and the intermediate collars can be easily removed the perforated ends of the teeth and the holding collars are provided with slits s'' and t'' respectively so that it is only necessary to loosen the nuts to take out the eyes of the teeth s or the collars t by the means of a convenient instrument inserted in the slits to spread the collar apart or this may be done by hand after which the

nuts u are screwed tighter. The main teeth have no slits. The teeth are tapered slightly in their breadth only, while the sides of the teeth are parallel in order to furnish friction surfaces to the comb cleaner up to the points of the teeth.

The comb cleaner used with this comb consists of a conical double case a, a' the one half a of which is provided at both ends with two threaded sockets a^2, a^3 (Figs. 2, 3 and 5) while the other half a' serves as a cover. These two halves are held together on one side by a screw b'' the head of which b' surrounds the cases a, a' as a cap or bell would do and on the other side by a ring c provided with a slit c'' ; the latter mentioned ring surrounds the lower teeth of the comb and prevents the same from revolving when handle f is put in place. The top part of the handle f is pushed over the ring c ; said handle is provided with a screw c' , similar to the screw b'' , which is screwed into the socket part a^3 and the cases a, a' are kept together by this arrangement. Rings d serve as strippers as will be explained here below. For attaching the cleaner to a comb the two screws b'' and c' (of the handle) and the ring c are removed and the case a' is taken away. The comb is then put in the case a so that the teeth bear exactly flat upon the edges e, e' (Fig. 5). A ring d is inserted between every two teeth and then the case a' is put on and the screw b'' , the ring c and also the handle f as has already been described. The screw c' is screwed up and the upper end of handle f being located directly underneath the lower main tooth the comb is fixed in its proper position. If now the comb must be cleaned the handle f is loosened and the comb is drawn backward; all dirt will be removed from the teeth by means of the rings d , and of the edges of the cases while the cleaner itself can be taken to pieces so that it can be cleaned thoroughly. If the teeth are broken the screw b'' is loosened and also the handle f , the ring c is removed and the case a' is taken off; then the broken teeth are removed as well as a corresponding number of holding collars and of the rings d of the comb cleaner after which the comb nut is screwed tight again. The handle f is hol-

low and its end is closed by the cover f' . The same can be used as a holder for spare pieces for the comb and comb cleaner.

I claim—

5 1. In combination, the comb having the teeth with parallel lateral faces, the independently removable sheaves d between the teeth the holder for said sheaves through which the teeth pass, said sheaves being
10 adapted to reciprocate along the teeth and the clamping means on the holder for clamping the same with the sheaves to the comb teeth, substantially as described.

2. In combination, the comb comprising the
15 end teeth, s' and the intermediate teeth having parallel faces, the cleaning sheaves d arranged between the teeth, the casing comprising the part a with screw threaded ends a^2, a^3 , the part a' , the cap b' having the threaded
20 pin b^o arranged over one end of the casing to press on one end tooth s' and the handle hav-

ing the threaded stud c' and the collar c at the other end of the casing, substantially as described.

3. In combination, the comb comprising the 25 rod r the teeth thereon, the spacing collars between the teeth, the means for clamping the teeth and collars on the rod, the independently removable cleaning rings d between the teeth and the cylindrical casing 30 for holding the same comprising the section a and the removable section a' with means for clamping said casing to the comb, substantially as described.

In testimony whereof I hereunto sign my 35 name, in the presence of two subscribing witnesses, this 26th day of September, 1892.

ALFRED BRUNNER.

Witnesses:

EMIL BLUM,

AUGUST HESS.