Feb. 10, 1942. B. PHILLIPS 2,272,580

HAIR CUTTING AND THINNING SHEARS

Filed Oct. 21, 1940

Fig. 1

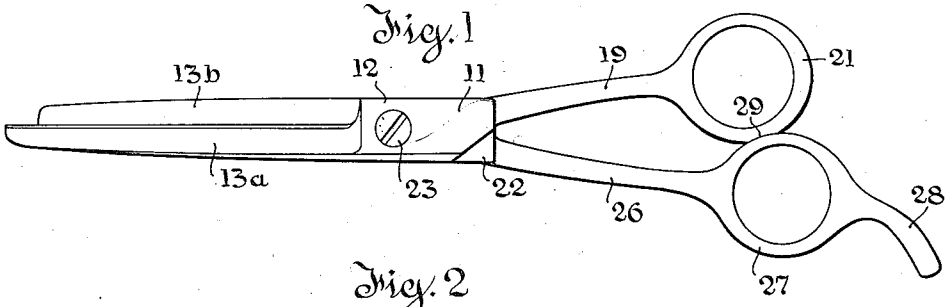


Fig. 2

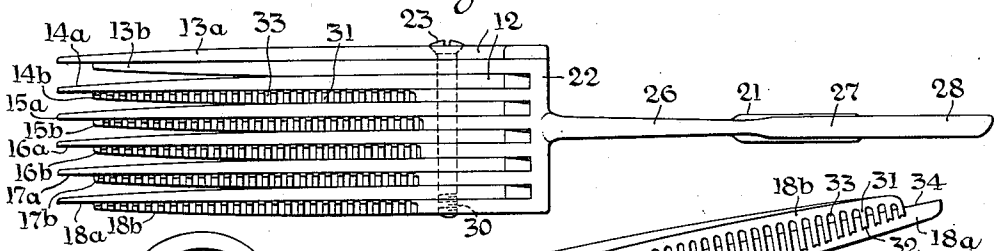


Fig. 3

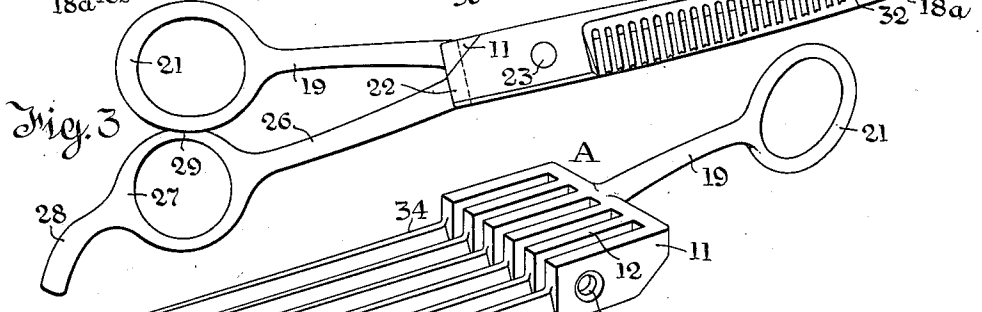


Fig. 4

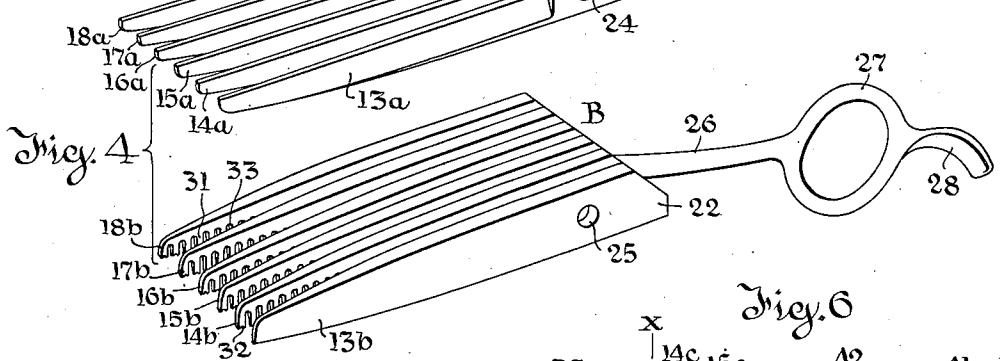


Fig. 5

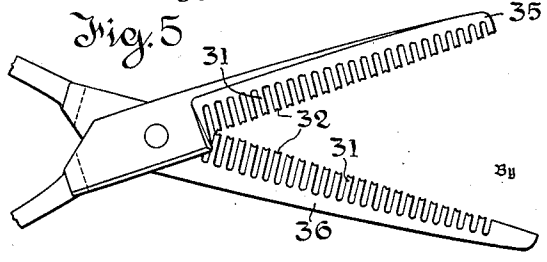
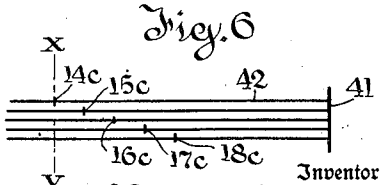


Fig. 6



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HAIR CUTTING AND THINNING SHEARS

Brooks Phillips, Savannah, Ga.

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6 Claims. (Cl. 30—195)

This invention relates to shears or scissors, and particularly to shears for performing hair cutting and thinning operations simultaneously.

Hair thinning operations are common practice in hair dressing establishments for assisting in manipulation of tresses in permanent waving, curling, and the like. Before thinning shears were known, considerable skill was required in the manipulation of ordinary scissors or a razor to perform a satisfactory hair thinning operation. The invention of so-called thinning shears reduced the skill required of an operator in thinning hair, but still required careful manipulation.

The usual thinning shears require repeated manipulation for a thinning operation, that is, several cuts must be made on each tress, and then a final cutting to length of each tress by separate cutting shears. The present invention aims to reduce the manipulative skill required and to enable the operator to thin a tress and cut it to length by a single manipulation of the tool. This not only assures uniform and satisfactory thinning but substantially reduces the time requirement.

The principal object of this invention is, therefore, to provide a unitary tool capable of performing both thinning and cutting in a single step, to reduce the time requirement, and to improve the character of the work.

Other objects will appear from the description and the drawing.

In the drawing:

Figure 1 is a front face view of a pair of shears embodying the invention;

Fig. 2 is a bottom plan view;

Fig. 3 is a back face view;

Fig. 4 is a perspective view showing the two shear blade units disconnected;

Fig. 5 is a fragmentary view of a modified form of thinning shear unit; and

Fig. 6 is a diagram showing the relation of the thinning blades with respect to each other and their action as well as that of the cutting blades on a tress of hair to be thinned.

Referring to Fig. 4 of the drawing, reference characters A and B represent two blade units which are adapted to be assembled as shown in Figs. 1 to 3 to make up a composite pair of shears for performing simultaneously both cutting and thinning operations. The unit A, for example, comprises a body 11 having a plurality of spaced prongs 12 terminating in a set of evenly spaced parallel blades. As shown, blade 13a is a beveled cutting blade, and the blades 14a, 15a, etc., are beveled thinning blades. The body 11 carries centrally disposed thereon an actuating handle 19 terminating in a thumb loop 21. Similarly the body 22 of blade unit B carries a plurality of spaced blades of which 13b is a cutting blade and 14b, 15b, etc., are thinning blades. Cutting blade 13b is adapted to cooperate with cutting blade 13a when the two units A and B are assembled as shown in Fig. 2. They are held together by a pivot screw 23 which passes freely through openings 24 and 25 in the bodies of the two units A and B, respectively, and is threaded into body 22 at 30.

The body 22 carries a handle 26 terminating in a finger loop 27 which also carries the usual finger projection 28 for positioning the shears with respect to the hand of the operator. When the shears are closed as indicated in Fig. 1, the two loops 21 and 27 abut at 29 in order to prevent too extreme movement of the thinning blade elements, which might result in undesired pressure being exerted on hairs which are not to be cut, that is, hairs which enter the recesses between the teeth of the thinning blades.

As indicated, the thinning blades 14a, 15a, 16a, etc., are similar in structure to the cutting blade 13a. The cooperating thinning blades 14b, 15b, etc., are, however, of special construction as indicated in Fig. 3 and comprise a plurality of teeth 31 spaced with respect to each other and having recessed points 32 which are adapted to cooperate with the flat cutting surface of the blade 18a when the shears are closed. When the shears are closed on a tress of hair, certain hairs will pass through the openings 33 between the separate teeth 31 and will remain uncut, whereas those striking the recesses 32 will be cut when these recesses pass into cutting relation with the surface 34 of the cooperating thinning blades.

Inasmuch as the purpose of the present invention is to make it possible by a single closing of the shears to perform a progressive thinning operation extending from the end of the tress inwardly toward the scalp of the patron, the various teeth 31 of the blades 14b, 15b, etc., are staggered or offset as indicated in Fig. 2, no two sets of teeth 31 on adjacent thinning blades of the same unit being aligned. Consequently, when the shears are closed, the teeth 31 on one blade act on different sets of hairs from those acted on by corresponding teeth on another blade, so that one hair or group of hairs is not severed at a plurality of points, and it is assured that the thinning operation will be progressive from the end of the tress where it is cut by the cutting

blades, to a substantial distance inward toward the scalp of the patron.

Whereas, in the prior art a thinning operation would require several (usually four or five) successive operations with the thinning shears, the present invention attains the same result by a single operation and simultaneously cuts the tress off to the proper length. Thus in a single step the tress is properly and uniformly thinned throughout a sufficient distance, and cut off to the proper length for a satisfactory curl or wave.

The operation of the shears is briefly as follows: The operator selects a tress made up of the proper number of hairs and grasps it at or near the end with one hand, at the same time bringing the shears into cutting relation with the tress by his other hand, the cutting blades **13***a* and **13***b* being disposed outwardly adjacent the hand which grasps the tress. The shears are then closed to sever all of the hairs of the tress at the point where the cutting blades **13***a* and **13***b* are located, and at the same time to cut at different points in their length the various hairs which enter the recesses **32** of the various teeth **31** on the thinning blades **14***b*, **15***b*, **16***b*, etc. With the thinning blades disposed as indicated in the drawing, this single closing of the shears will produce a uniformly thinned tress without any other operation and without any particular skill on the part of the operator. Thus all tendency to produce uneven thinning is avoided and a single set of shears performs both the thinning and cutting operations. This results in a substantial saving of time and the operation may be performed by an operator less skilled than would be required with the usual thinning shears. Furthermore, the operation performed will be more uniform than could be produced even by a skilled operator.

In Figs. 1 to 4, it is indicated that there is one pair of cutting blades and five pairs of thinning blades, but obviously the number of thinning blades may be increased or decreased as circumstances require. For practical operation it is preferred that five sets of thinning blades be employed with one set of cutting blades.

It has been indicated above that of each pair of thinning blades one is a continuous beveled blade with a flat cutting surface while the other carries a plurality of spaced teeth having recessed ends. Obviously the thinning blade elements may take various forms known in the art. For example, as indicated in Fig. 5, the two thinning blades **35** and **36** are both made up of a plurality of teeth **31** having recessed ends **32**. The form of the teeth may be varied to suit any particular operation and to assist in simplifying sharpening of the blades.

The shears illustrated include a pair of cutting blades **13***a*, **13***b*, but these may be omitted in certain instances. In other words, if the construction of the shears is precise and the teeth on the thinning blades so related that the tooth displacement or offset between corresponding teeth on blades **14***b* and **18***b* is equal to one tooth width, the hairs of a tress will all be severed at each closing so that blades **13***a*, **13***b* will be without function. This is illustrated diagrammatically in Fig. 6.

In Fig. 6, line **41** is the scalp line from which hairs **42** radiate. Points **14***c*, **15***c*, etc., indicate the points of cut of individual teeth or groups of teeth **31** of blades **14**, **15**, **16**, etc., one point of cut only being indicated for each blade and one or several hairs being indicated by a single heavy line. Since the teeth **31** of the several blades may have cutting contact with all of the hairs of the tress, the hairs extending beyond the line of cut X—Y of the cutting blades **13** may all be severed between that line and the scalp line as indicated at **14***c*, **15***c*, etc., so that the cutting blades merely serve to cut hairs already severed from the scalp. In the limiting case, therefore, the cutting blades may be omitted. As a practical matter, the cutting blades will usually be included to catch straggling hairs and thus to avoid a later trimming operation. It is desired, however, to point out the limiting case to better define the scope of the invention and to make it clear that the invention is not limited to the precise structure illustrated.

What is claimed is:

1. A hair thinning tool comprising a pair of cutting blades, each having uninterrupted cutting edges, and a plurality of pairs of thinning blades, at least one blade of each pair having a serrated edge defining cutting areas and non-cutting areas, all of said blades being arranged side by side in juxtaposition; and common mounting and actuating means for all of said blades, whereby a tress of hair may be cut and thinned by a single operation.

2. A pair of shears comprising a hair cutting unit comprising cutting blades with uninterrupted cutting edges; a hair thinning unit mounted laterally of said cutting unit and made up of at least one blade having serrated cutting faces; a common mounting means for both of said units; and a single means for actuating both said units to cut a tress of hair to proper length and to thin it simultaneously by a single operation.

3. A pair of shears comprising a first unit carrying a cutting blade having a continuous cutting edge and a plurality of thinning blades parallel to said cutting blade, said thinning blades having serrated cutting edges; a second unit carrying a cutting blade with a continuous cutting edge and a plurality of thinning blades parallel to the cutting blade; means pivotally connecting said units; and means for actuating said units to cause concurrent cutting and thinning operations when the blades of the two units are brought into cooperative cutting relation.

4. A combined hair cutting and thinning tool comprising a pair of pivotally connected blade units each having a supporting body carrying a cutting blade and a plurality of thinning blades all arranged side by side; and handle means for actuating said blade units to perform concurrently both cutting and thinning operations on a tress of hair.

5. A hair thinning tool comprising two sets of pivotally connected thinning blades arranged side by side, at least one set having spaced cutting teeth, and the teeth of one blade being offset with respect to the corresponding teeth of adjacent blades; and a common means for actuating all of said blades simultaneously.

6. A hair thinning tool comprising two sets of pivotally connected blades, each set comprising several blades and the blades of each set being parallel and certain of them being arranged to perform cutting operations at spaced points only along their length; and handle means for actuating all of said blades simultaneously.

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