

Aug. 2, 1932.

F. H. RAUH

1,870,025

SCISSORS

Filed Nov. 3, 1928

Fig.1

Fig.3

Fig.2

Fig.4

Fig.5

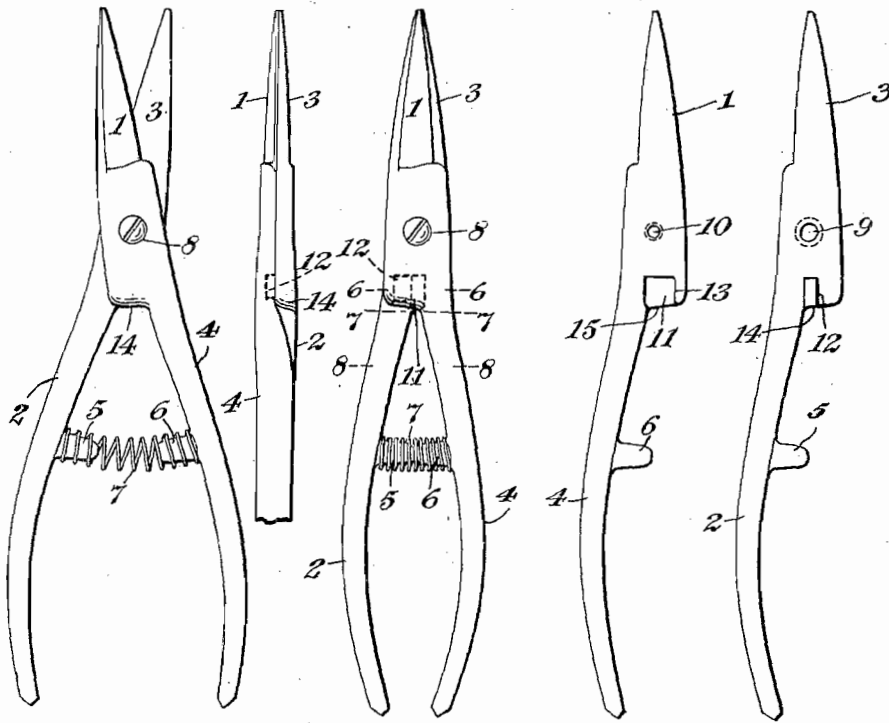
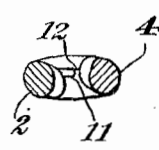
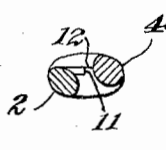
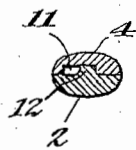


Fig.6

Fig.7

Fig.8



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SCISSORS

Application filed November 3, 1928. Serial No. 316,918.

My invention relates to the class of self-opening scissors, wherein the shanks are thrown apart by the operation of an interposed spring; and objects of my invention are to provide certain novel means for limiting the distance to which the shanks may be spread apart; and also to so form the co-acting and overlapping portions of the shanks as to avoid pinching or catching the hand of the user between them when the scissors are closed in the ordinary way in use.

The scissors of the class to which my invention is directed are used by operators in such arts as weaving and knitting, to snip and cut threads, and tape, the scissors being picked up, used and dropped again repeatedly in the course of the operator's work. When so picked up for use, both shanks of the scissors lie in the palm of the hand, while the ball of the thumb rests near the pivot connecting the two cutting members, and the index finger bears against the opposite side of the scissors; thus the central part of the index finger supports the scissors, in opposition to the ball of the thumb. Hence, when the scissors are so grasped in the hand, with the shanks thrust apart by a spring, and the fingers of the hand are contracted to close the shanks, there is a tendency for the portion of the thumb and index finger which may be contiguous to the opening between the shanks, to be caught and pinched between the shanks when they are forced together. This is also true of that portion of the palm adjacent to the joint.

The rapidity with which the operator finds it necessary to grasp and use the scissors does not permit of a careful adjustment of the scissors which might avoid such accidents. So, in my improved scissors, I have so formed them as to avoid producing openings between the shanks which are likely to catch the fingers of the operator in using the scissors as above described.

In the drawing Fig. 1 represents a plan view of a pair of scissors illustrating my invention, the shanks and blades being opened; Fig. 2 is a similar view, but showing the scissors closed; Fig. 3 is an edge view, taken as looking to the left on Fig. 2, the free end of

the shanks being broken away to avoid crowding the figures; Fig. 4 is an inside view of one of the scissor members; Fig. 5 is a similar view of the other of such members; Fig. 6 is a cross sectional view, taken on the line 6—6 of Fig. 2, looking up; Fig. 7 is a similar view, taken on the line 7—7 of Fig. 2, looking up; and Fig. 8 is a similar view, taken on the line 8—8, looking up.

In all the figures similar parts are designated by similar reference numerals.

A pair of cutting blades, 1, 3, are provided respectively with shanks, 2, 4; and the shanks are respectively provided with pins 5, 6, between and over which is mounted a coil spring 7 which normally throws the shanks away from each other.

A pivot pin 8 passes through openings 9 and 10 in the shanks and secures them to each other in the usual manner.

In the broadened portion of one of the shanks, as 4, I form a recess or socket 11; and on the opposed face of the shank 2 I form a lug or projection 12, which is adapted to swing to and fro in the socket 11, but to be arrested by the outside wall 13 of the socket when the shanks are spread apart, as in Fig. 1. The socket 11 is preferably open at its end toward the free end of the shank, so that ready access is afforded to it for the removal of any dirt or obstructing foreign matter which may accidentally get into it.

The shanks 2 and 4, where they approach each other adjacent to their widened portions, are not brought into direct contact, but are adjusted with a substantial opening between them when the shanks are closed. Furthermore, the shanks at this point are rounded, or approximately cylindrical in cross section so that they present no sharp angles on their opposed surfaces. The shoulders, on some of the widened portions of the shanks, as at 14, 15, are rounded, so as to avoid the creation of any sharp angle at these points.

The result of this construction is that the flesh of the fingers which, in the use of the scissors, might be pressed into the opening between the shanks, will not be caught between the shanks as they are closed, but will

be pushed out from between them, allowing the shanks to slide under and past, so that there will be no pinching or gripping of the fingers between the shanks.

5 It will be noticed also that in the construction explained there is no opportunity for any portion of the fingers of the user to be caught between the stop element 12 and the side of the socket 11. Neither can the fingers
10 be caught between the edges 14, 15 of the widened portions of the shanks, and the cooperating shanks as is the case where such widened portions of the shanks approach offset and beveled elements on the shanks, as
15 is common in certain styles of scissor construction.

In use, such a pair of scissors as I have illustrated may be seized between the fingers and palm of the hand, as above described,
20 closed, allowed to open again and be discarded without any danger of pinching the fingers or hand of the user during the operation, the scissors, when released, opening to a predetermined normal extent convenient to
25 the work in hand, and being held there against the action of the spring 7 in the most convenient position for immediate use.

I wish it to be understood that the construction which I have illustrated is to be
30 considered to be a typical, but not an exclusive, form of the embodiment of my invention, for it is obvious that modifications of details might be made, as by the use of mechanical equivalents, without departing
35 from the spirit of my invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

40 In self-opening scissors, the combination of a pair of shanks, each embodying an operating handle provided with a cutting blade at one end, a pivot connecting the shanks at a point between the cutting blades and
45 the handles, the shanks being offset and broadened behind the pivot, unbroken by any openings in their broadened, outer faces, and rounded on the exterior lines of such surfaces, one of which broadened portions is
50 provided with a rearwardly opening recess, and the other with an integral lug projecting into said recess to constitute stop-opening means, the recess being closed on all sides
55 except rearwardly in all positions of the shanks, the shanks adjacent to the offset portions being rounded in cross section and substantially separated from each other when the scissors are closed, and spring opening
60 means operating between the shanks, whereby the scissors are prevented from pinching the hand of the user.

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