Feb. 25, 1936. J. S. HAYWOOD 2,032,281

SHEARS

Filed June 6, 1935

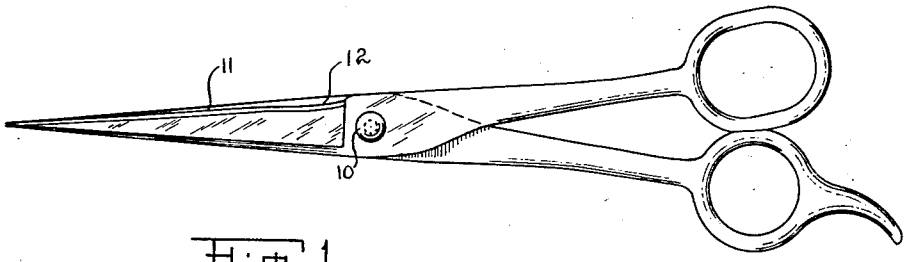


Fig. 1.



Fig. 2.

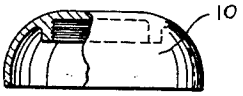


Fig. 4.

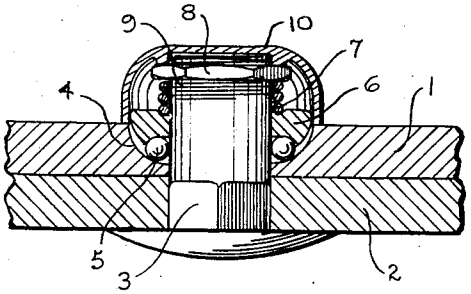


Fig. 3.

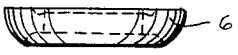


Fig. 5.

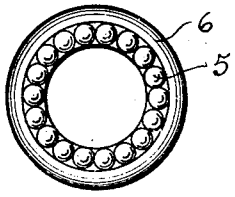


Fig. 6.

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SHEARS

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Application June 6, 1935, Serial No. 25,229

2 Claims. (Cl. 30—13)

My invention relates to shears for cutting materials either by hand or mechanical means; an object being in my device to provide for such cutting shears a means of more effectively holding a uniform pressure on the cutting blade throughout the cutting stroke and to provide with it such means as will permit such pressure to be applied with ease in the aid of ball bearings used in conjunction with a spring or other resilient pressure regulating means.

A further purpose of my invention is to provide improvements in cutting shears for the use of barbers especially wherein the cutting stroke may be equally effective throughout the cutting range of the blade, easy and comfortable to manipulate the stroke and convenient to make adjustments in the amount of pressure between the cutting edges as may be determined and adjusted by the barber from time to time.

A further purpose of my improvement in shears is to provide a cutting edge for shears on both blades wherein the contacting cutting edges at the beginning of the stroke have a greater slope in them with a gradually diminishing slope as they approach the free end so that the applied pressure of the tension spring may actually be uniform at all times.

I attain the objects of my invention in the shears described in the annexed specification, recited in the claims and illustrated in the accompanying drawing in which like reference numerals indicate like parts in the several figures.

Referring to the figures:

Figure 1 is a side view of a pair of barber shears incorporating my new improvements.

Figure 2 is a top view of one of the cutting blades showing the cutting edge in some detail with the rear end thereof sloping to a greater extent than the front.

Figure 3 is an enlarged detail of my newly improved pivoted connection between the cutting blades.

Figure 4 is an elevation of the dust-cap covering the pivoted connection in Figure 3 and showing in a cut-away a detail of the interior of the dust-cap.

Figure 5 is a side view of the ball bearing ring for holding the ball bearings in circular alignment about the stud.

Figure 6 is a bottom view of the ring shown in Figure 5 with ball bearings placed therein.

Referring now in more complete detail to the preferred construction of my invention it is my purpose to point out a simple, practical, and economical improvement in cutting shears adapted to improve not only their utility but their appearance as well and as the drawing may be referred to in this description, the merits of my invention will become more apparent until the entire novelty of my invention shall have been broadly and specifically defined in the claims which follow the description.

Blades 1 and 2 are pivotally held together by a stud 3 while blade 1 is preferably provided with a recess or circular depresion 4 for holding the ball bearings 5 and the cap 6 which holds them in place. The ball bearings 5 are for making the shears operate more easily.

Resting upon cap 6, I have provided a compression spring 7 fitting around stud 3 for the purpose of exerting a pressure down against cap 6 and ball bearings 5 with a corresponding pressure against blade 1.

Thus by means of adjustment nut 8 fitting upon threads 9 of stud 3, I am able to tighten or loosen the compression strain of spring 7 so that the cutting edges may be made to work together with whatever cutting pressure is desired from time to time.

In order to keep dust and other extraneous materials out of recess 4 to interfere with the normal operation of ball bearings 5, and in order to provide an effective lock nut for adjustment nut 8, I have provided a cap member 10 to serve both of these purposes when it is screwed on to the end of stud 3 over the top of adjustment nut 8.

Referring to Figure 2, it will be noted that I have allowed cutting edge 11 to run approximately straight for a portion of its length from the end but have provided therein a slope in the blade indicated by curve 12 in cutting edge 11 and by this means I have arranged thus to permit the cutting edges to more effectively swipe each other with a uniform pressure from the start to the finish of the cutting stroke.

It will be thus observed that in my invention I provide in the combination of features the details of construction which will make shears of any purpose incorporating my invention operate easier and more effectively and with my invention applied to barber shears the effect will be especially meritorious.

Having thus described the nature of my invention what I claim is:

1. In a pair of shears having pivoted blades and respectively integral handles, the improvement comprising a threaded stud defining the pivot means, the outer-most blade provided at its pivot point with a cupped circular recess, a plu-

rality of ball bearings rotatably registering within said recess about said stud, a compresion spring registering over said stud and a plate on the stud defining a cover for the ball bearings and a seat for the spring, an adjustment nut for retaining said spring in selected positions of tension adjustment and a dust-cap threadedly engaging said stud to provide a cover for the spring and ball bearings and to provide a lock nut means for holding said adjustment nut in said selected positions.

2. In a pair of shears having pivoted blades and respcctively integral handles, the improvement comprising a threaded stud defining the pivot means, the outer-most blade provided at its pivot point with a cupped circular recess, a plurality of ball bearings rotatably registering with said recess about said stud, a compression spring registering over said stud and a plate on the stud defining a cover for the ball bearings and a seat for the spring, an adjustment nut for retaining said spring in selected positions of tension adjustment and a dust cap threadedly engaging said stud to provide a cover for the spring and ball bearings and to provide a lock nut means for holding said adjustment nut in said selected positions, said cutting blades each provided with a cutting edge whose end nearest the pivot point of the blade is provided with a greater slope than the major portion of the cutting edge; thus to permit said co-operating cutting edges to be worked at a uniform tension throughout their length according to the spring adjustment selected for said spring.

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