Sept. 20, 1960 O. M. CRAWFORD 2,952,912

FOLDING SCISSORS

Filed Sept. 12, 1958

Fig. 1.

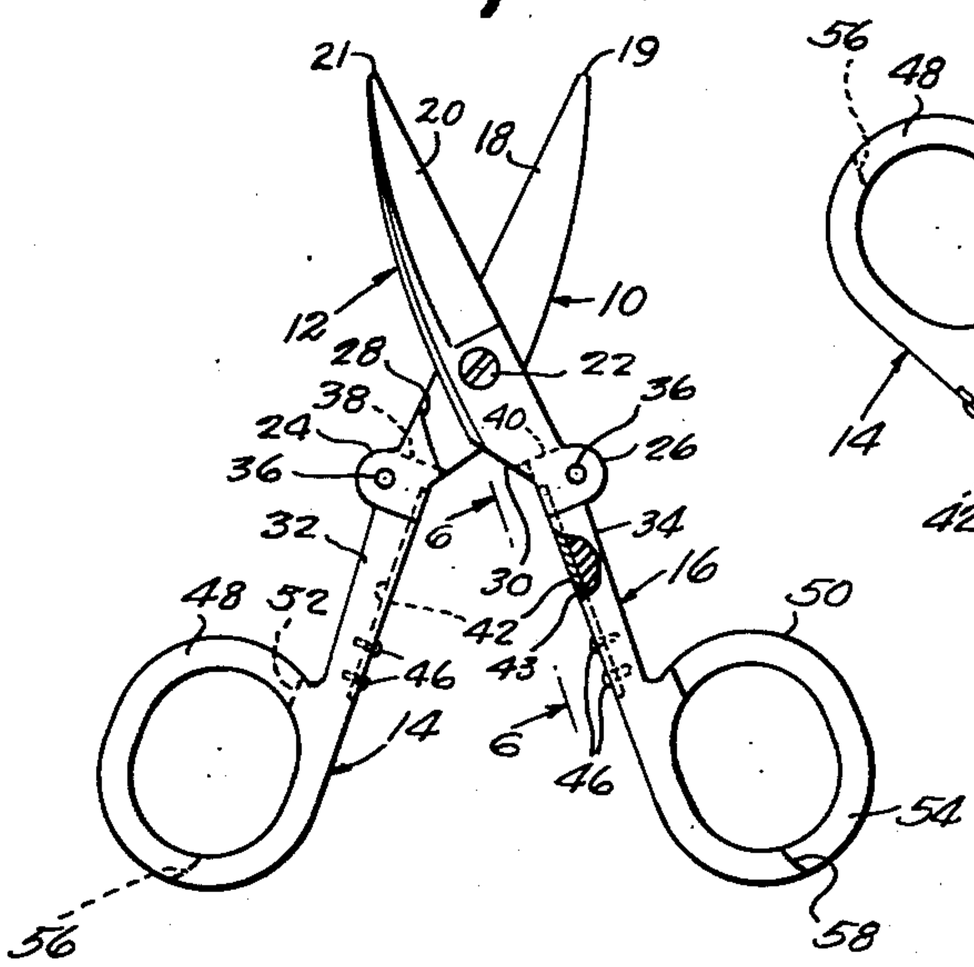



Fig. 2

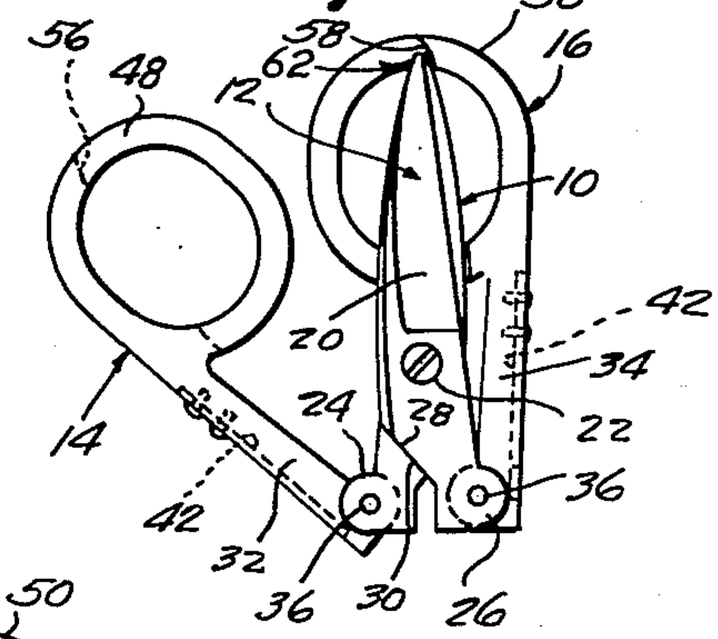



Fig. 3.

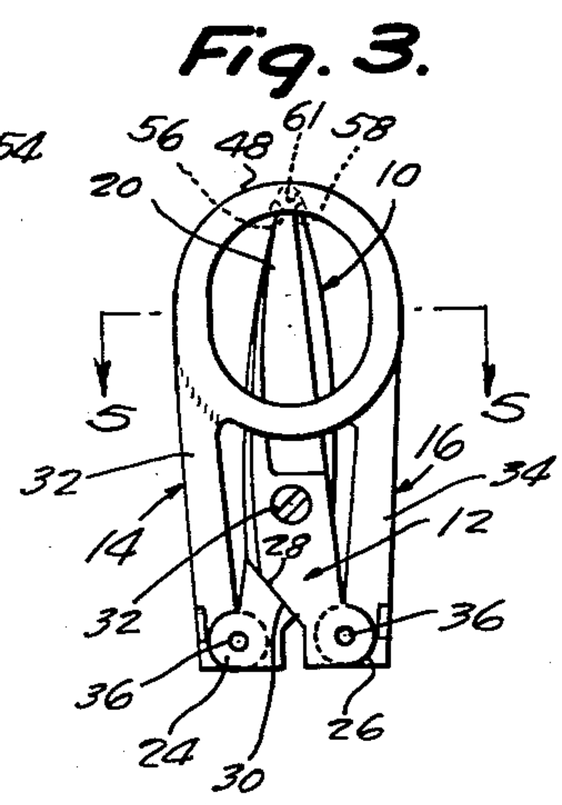



Fig. 5.

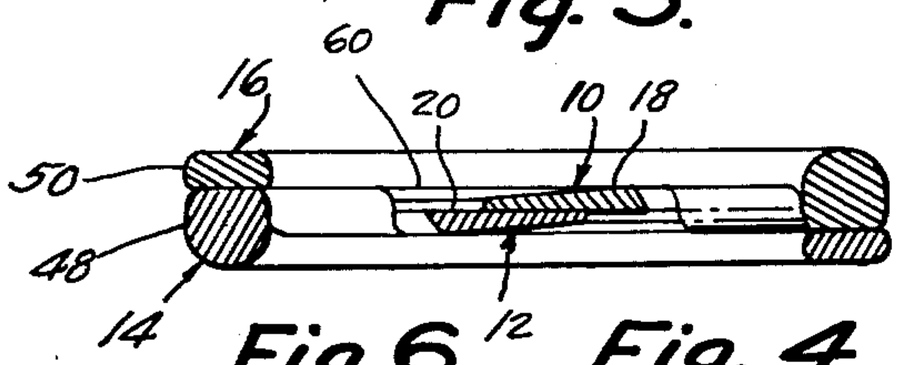



Fig. 6.

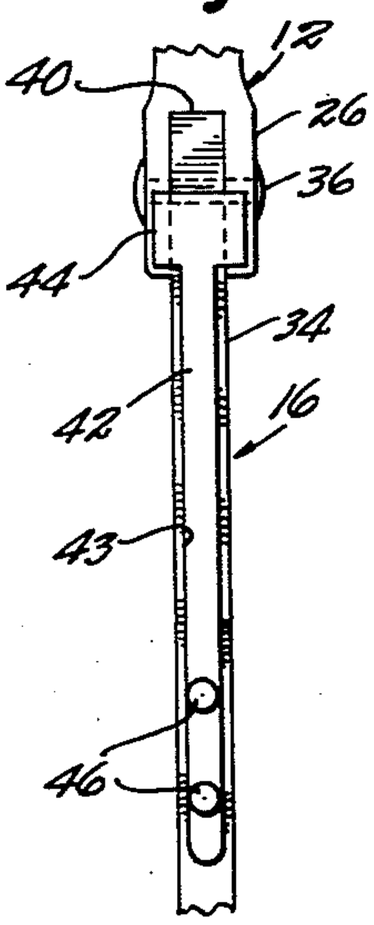
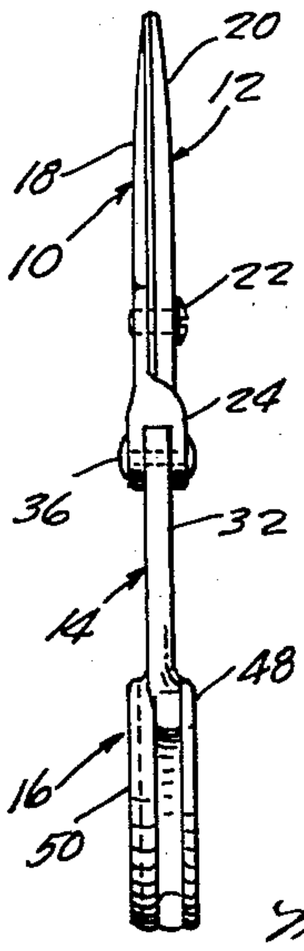



Fig. 4.

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# FOLDING SCISSORS

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2 Claims. (Cl. 30—255)

This invention relates to a novel and improved folding scissors.

The primary object of the invention is to provide a relatively simple, compact, and safe scissors of the character indicated, wherein the points of the blades are protectively guarded by portions of the scissors, while the scissors are folded, so as to preclude catching in and damaging the interiors of containers for the scissors, as when the scissors are being carried in a pocket or purse.

Another object is to incorporate in the scissors a spring detent means, so designed as to cause the scissors handles to automatically, yet releasably lock in the closed or collapsed positions thereof, in such a way that the locking action takes place when the handles move into positions protectively enclosing the blade tips.

Another object is to so form the handles as to cause them to interfit snugly, in a manner such as to provide a very flat, compact article in the folded positions of the scissors.

Another object of importance is to provide, in a foldable scissors of the character stated, means whereby the handles will move into a rigid relationship relative to the associated blades, when the handles are extended for use.

Another object of importance is to provide a scissors of the character stated which will be capable of manufacture at a comparatively low cost, considering the benefits to be obtained from the use thereof.

Still another object of importance is to provide a scissors as stated so designed as to prevent the blades from being accidentally opened, whenever the handles are in their collapsed, blade-enclosing positions.

Other objects will appear from the following description, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a side view scissors of the present invention, one of the handle shanks being shown partially in section, the scissors being in open and, use position;

Figure 2 is a view like Figure 1 showing the scissors collapsed or partially folded;

Figure 3 is a view like Figure 2 showing the scissors are completely folded;

Figure 4 is an edge elevational view of the scissors as seen from the left of Figure 1;

Figure 5 is an enlarged, detail sectional view taken substantially on line 5—5 of Figure 3; and

Figure 6 is an enlarged, detail, fragmentary elevation of one of the handles, as seen from line 6—6 of Figure 1.

Referring to the drawing in detail, the scissors comprising the present invention include levers **10**, **12** having loop handle sections **14** and **16**, respectively, on one end thereof.

The levers **10**, **12** have blade sections **18**, **20**, respectively, on their outer ends, and are pivoted in crossed relationship by a screw pivot pin **22**.

The inner ends of the levers **10**, **12**, that is, the ends



between the loop handles of the scissors and the pivot pin **22**, have laterally outwardly extending lugs **24**, **26** respectively, thereon which are thickened in respect to the blades **18**, **20**. This is shown to particular advantage in Figures 4 and 6. The lugs **24**, **26** are bifurcated, and define slots therebetween, and in addition, have complementary, beveled inner surfaces **28**, **30** respectively (see Figures 1 and 2). Surfaces **28**, **30** are adapted to move into contact, when the scissors are closed, as in Figures 2 and 3.

The levers **10** and **12** further comprise handle sections **14**, **16**, these include shanks **32**, **34** respectively, the inner ends of which extend into the slots of the bifurcated portions **24**, **26** respectively. The shanks are pivotally connected to the portions **24**, **26** by means of hinge pins **36**, so that the shanks may swing between use positions in which they are longitudinally aligned, approximately, with their associated blades (as in Figure 1), and collapsed positions in which the shanks extend alongside the closed blades, as in Figure 3.

The inner ends **38**, **40** of the respective shanks **32**, **34** are cut off squarely to provide abutments adapted to engage flat against the inner end walls of the slots of the bifurcated portions **24**, **26**. The end surfaces **38**, **40** abut in this manner against the slot end walls when the shanks are extended to their use positions shown in Figure 1.

Designated at **42** are elongated leaf springs, disposed in shallow recesses **43** formed in and extending longitudinally of the respective inner edge surfaces of the shanks **32**, **34**. The springs **42** have distal ends **44** that are widened so as to bear against the thickened portions **24**, **26** at both sides of the slots of said portions. The other ends of the springs are anchored fixedly to the shanks by means of rivets **46**.

Designated at **48**, **50** are handle loops integrally formed upon the outer ends of the shanks **32**, **34**. The loops **48**, **50**, for a part of their circumferences, are comparatively thick. These portions of the circumferences are the portions that are disposed extensions of the shanks **32**, **34**. The outer portions of the finger-receiving loops, however, are of a reduced thickness, defining in one face thereof recesses **52**, **54**, so that the loops may interfit snugly with each other in the manner shown in Figure 5 when the scissors are in their collapsed, Figure 3 positions.

It is important to note that the lengths of the recesses **52**, **54** has a bearing on the adaptability of the loops to protectively enclose the blades when the scissors are folded. The length of the recesses occupies a majority of the circumference of each loop, and at one end of the recesses there are walls **56**, **58** of loops **48**, **50** respectively, which walls are obliquely formed in respect to the length of the shanks and of the associated blades when the scissors are collapsed. This is shown in Figure 2, in which it will be seen that when handle section **16** is in its fully collapsed position, wall **58** closely parallels and extends beyond the tip **19** of the adjacent blade **10**. When handle section **14** is in its fully collapsed position, as in Figure 3, its wall **56** is in forwardly convergent relation to the wall **58**, with the wall **56** extending in closely spaced, parallel relation to the outer longitudinal edge of the blade **12**.

By reason of this arrangement, when the loops are collapsed, the reduced-thickness portions thereof receive between them, in a space **60** (Figure 5), the closed levers **10**, **12**. The blades extend through the space **60** at locations intermediate the ends of the levers and the pivot pin **22**. Then, at the outer ends of the loops, the walls **56**, **58** form a generally triangular recess or notch **61** (see Figure 3), that receives a pointed terminal portion **62** of

the scissors defined by the tips **19**, **21** of the closed blades.

In this way, the blades are protectively enclosed in such a manner as to insure against their penetrating any adjacent surface. The compactly folded scissors, thus, may be safely carried in one's pocket or purse.

It is important to note that the springs have a releasable locking function. When the levers are extended and spread, as in Figure 1, the free ends of the springs bear against the lugs **24**, **26**, as in Figure 6, so as to retain the levers in their extended positions. The levers cannot swing beyond their extended positions, of course, by reason of the abutting of the surfaces **38**, **40** against the inner end walls of the slots of the bifurcated lugs **24**, **26**.

When the handle sections are swung to their collapsed positions, the free ends of the springs ride along the curved outer edges of the lugs **24**, **26** until ultimately, the handle sections are in their completely collapsed positions shown in Figure 3. The spring pressure of the free ends of the springs against the lugs **24**, **26** is such as to create a frictional engagement therebetween, adapted to retain the handle sections in their collapsed positions. Retention of the handle sections in the collapsed positions is further aided by maintenance of the hinge connections between the handle sections and blades in a condition preventing undue looseness therebetween. In other words, there is, at all times, a strong frictional engagement between the side walls of the slots of the lugs, and the opposite surfaces of the handle shanks.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor changes in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A folding scissors comprising a pair of levers having blade sections and handle sections, said blade sections comprising blades and stubs on the inward ends of the blades, said stubs having laterally outwardly extending lugs thereon formed with laterally outwardly opening closed slots, said handle sections comprising elongated shanks having lateral loop handles on their outward ends and having laterally outwardly extending lugs on their inward ends engaged in said slots, pins pivoting the lugs of the shanks in the slots, said levers being crossed and pivoted together at a point intermediate said blades, the laterally inward sides of said shanks having longitudinal grooves, leaf springs within and extending along said grooves, and means fixing the outward ends of the springs in place, the inward ends being free and bearing against the adjacent sides of the blade section lugs across the slots thereof.



2. A folding scissors comprising a pair of levers having blade sections and handle sections, said blade sections comprising blades and stubs on the inward ends of the blades, said stubs having laterally outwardly extending lugs thereon formed with laterally outwardly opening closed slots, said handle sections comprising elongated shanks having lateral loop handles on their outward ends and having laterally outwardly extending lugs on their inward ends engaged in said slots, pins pivoting the lugs of the shanks in the slots, said levers being crossed and pivoted together at a point intermediate said blades, the laterally inward sides of said shanks having longitudinal grooves, leaf springs within and extending along said grooves, and means fixing the outward ends of the springs in place, the inward ends being free and bearing against the adjacent sides of the blade section lugs across the slots thereof, said slots having closed ends, the inward sides of the shanks being in stop engagement with the closed ends of said slots in the open portion of the levers, the shank lugs having peripheral edges which are spaced from the closed ends of the slots to enable the handle sections to be swung relative to the blade sections into registry with each other with the blade sections swung into registry with each other.


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