ABSTRACT OF THE DISCLOSURE

A scissors having blades which can be easily replaced without disassembling the scissors. Each of the blades has a bifurcated end which fits into a recess in the inner surface of the shank of the handles of the scissors. A clamping plate fits in the recess between the bifurcated arms of the blade, and screws extend through the shank of the blade and are threaded into the clamping plate to clamp the clamping plate against the bifurcated arms of the blade.

The present invention relates to a replaceable blade scissors, and more particularly to scissors having blades which can be easily removed and replaced without completely disassembling the scissors.

The handles 12 and 14 have finger receiving rings 22 and 24 respectively at one end, and shanks 26 and 28 respectively at their other end. The handle shanks 26 and 28 have flat surfaces 26a and 28a respectively which are in overlapping contacting relation. Recesses 30 and 32 are provided in the flat surfaces 26a and 28a respectively of the shanks 26 and 28. The recesses 30 and 32 extend longitudinally along the flats 26a and 28a from the free ends of the shanks 26 and 28. The shanks 26 and 28 have pivot pin holes 34 and 36 respectively therethrough at the center of the recesses 30 and 32. A nut 38 is secured in the pivot pin hole 36 in the shank 28, and a bearing ring 40 is secured in the pivot pin hole 34 in the shank 26. Shank 26 has a pair of holes 42a and 42b extending therethrough to the recess 30. The holes 42a and 42b are arranged in longitudinal alignment along the shank at opposite sides of the pivot pin hole 34. Shank 28 has a pair of holes 44a and 44b extending therethrough to the recess 32. The holes 44a and 44b are arranged in longitudinal alignment along the shank 28 at opposite sides of the pivot pin hole 36.

Rectangular clamping plates 46 and 48 are seated in the recesses 30 and 32 respectively in the shanks 26 and 28. The clamping plates 46 and 48 are of the same length as the recesses 30 and 32, but are narrower than the width of the recesses. The sides 46a and 46b of the clamping plate 46 and the side edges 48a and 48b of the clamping plate 48 are tapered inwardly toward the surface of the respective clamping plates which engages the bottom of the respective recesses 30 and 32 (see FIG. 3). Pivot pin receiving holes 50 and 52 extend through the center of the clamping plates 46 and 48 respectively. A pair of cylindrical bosses 54a and 54b project from the inner surface of the clamping plate 46 at opposite sides of the hole 50, and fit in the holes 42a and 42b respectively in the shank 26 so as to properly position the clamping plate 46 in the recess 30. The bosses 54a and 54b have threaded holes 56a and 56b respectively extending therethrough. A pair of cylindrical bosses 58a and 58b project from the inner surface of the clamping plate 48 at opposite sides of the holes 52 and fit in the holes 44a and 44b respectively in the shank 28 so as to properly position the clamping plate 48 in the recess 32. The bosses 58a and 58b have threaded holes 60a and 60b respectively extending therethrough.

Screws 62a and 62b extend through the holes 42a and 42b respectively in the shank 26 from the outer surface of the shank, and are threaded in the holes 56a and 56b respectively in the clamping plate 46 so as to secure the clamping plate 46 to the shank 26. Screws 64a and 64b extend through the holes 44a and 44b respectively in the shank 28 from the outer surface of the shank, and are threaded in the holes 60a and 60b respectively in the clamping plate 48 so as to secure the clamping plate 48 to the shank 28.

As shown in FIG. 4, the back end of the blade 18 is bifurcated to provide a pair of spaced, parallel arms 66 and 68 extending longitudinally from the back end of the blade. The arms 66 and 68 fit in the recess 30 in the shank 26 between the side edges 46a and 46b of the clamping plate 46 and the wall of the recess. As shown in FIG. 3, the inner surfaces 66a and 68a of the arms 66 and 68 are tapered to mate with the tapered side edges 46a and 46b of the clamping plate 46. Thus, when the screws 62a and 62b are tightened, the clamping plate 46 is pulled against the bottom of the recess 30 so that the side edges 46a and 46b of the clamping plate 46 engage the side edges 66a and 68a of the arms 66 and 68. This clamps the blade 18 tightly to the handle 12. Likewise, the back end of the blade 20 is bifurcated to provide a pair of spaced, parallel arms 70 and 72. The arms 70 and 72 fit in the recess 32 in the shank 28 between the
clamping plate 28 and the wall of the recess 32. The inner surfaces 70a and 72a of the arms 70 and 72 are tapered to mate with the tapered side edges 48a and 48b of the clamping plate 48. Thus, the clamping plate engages the arms 70 and 72 to secure the blade 20 to the handle 14.

The pivot pin 16 comprises a threaded shank 74 and a cylindrical head 76 on the end of the shank. The shank 74 extends through the holes 50 and 52 in the clamping plates 46 and 48, and is threaded into the nut 39. The head 76 fits in and engages the bearing ring 40. Thus, the pivot pin 16 secures the handles 12 and 14 together, but permits pivoting of one handle with respect to the other handle.

To release the blade 18 from the handle 12, the screws 62a and 62b are loosened to release the force of the clamping plate 46 against the arms 66 and 68 of the plate 18. The blade 18 can then be pulled out of the recess 30. To replace the blade 18, the arms 66 and 68 are reinserted into the recess 30 and the screws 62a and 62b tightened to pull the clamping plate 46 tightly against the arms 66 and 68. The blade 20 can be similarly released from the handle 14 by loosening the screws 64a and 64b. Thus, it can be seen that the scissors 10 of the present invention provides for the release and replacement of the blades with ease and without completely disassembling the scissors.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claims, rather than to the foregoing specification as indicating the scope of the invention.

What is being claimed is:

1. Replaceable blade scissors comprising a pair of handles having at one end flat surfaces which are in overlapping relation, a separate recess in each of said flat surfaces extending from the one end of the respective handle, a pair of blades having a pair of spaced parallel arms extending from one end thereof and fitting into a recess in a separate one of the handles, a separate clamping plate in each of said recesses engaging the arms of the blade which are in said recess, separate means extending through each of said handles and engaging the clamping plate in the recess in the

handle to releasably hold the clamping plates against the arms of the blades and secure the blades to the respective handles, and means pivotally securing the handles together.

2. Scissors in accordance with claim 1 in which each of the handles has a shank on the one end, and the flat surfaces are on the shanks.

3. Scissors in accordance with claim 2 in which the means releasably holding the clamping plates against the arms of the blades comprises separate screws extending through holes in the shanks and threaded into holes in the clamping plates.

4. Scissors in accordance with claim 3 in which the means pivotally securing the handles together comprises a pivot pin extending through the shanks and the clamping plates.

5. Scissors in accordance with claim 4 including two screws extending through holes in each of the shanks and threaded into holes in the clamping plates, the screws in each of the shanks being positioned in longitudinal alignment at opposite sides of the pivot pin.

6. Scissors in accordance with claim 5 in which each of the clamping plates has a pair of hubs projecting therefrom and fitting into the holes in the respective shank, and the screws are threaded into holes in the hubs.

7. Scissors in accordance with claim 6 in which the side edges of each of the clamping plates are tapered inwardly toward the bottom of the respective recess, the inner side edges of the arms of each blade are tapered to mate with the tapered side edges of the respective clamping plate, and the tapered side edges of the clamping plates engage the tapered side edges of the blade arms to secure the blades to the handles.

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