

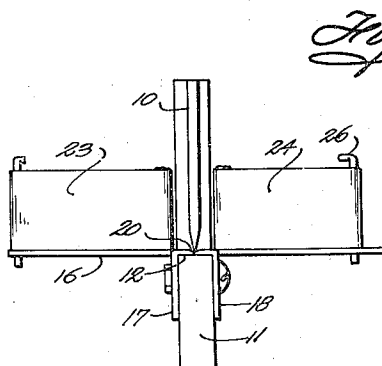
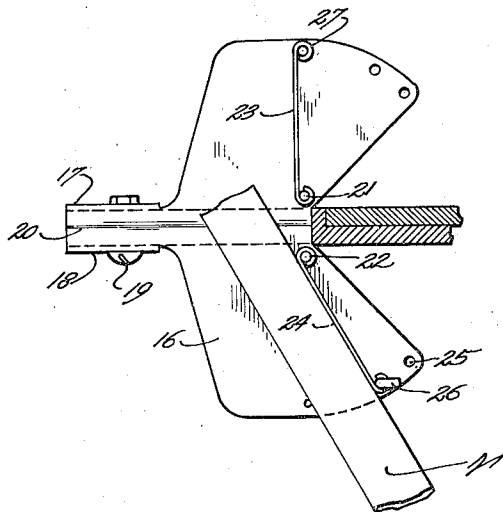
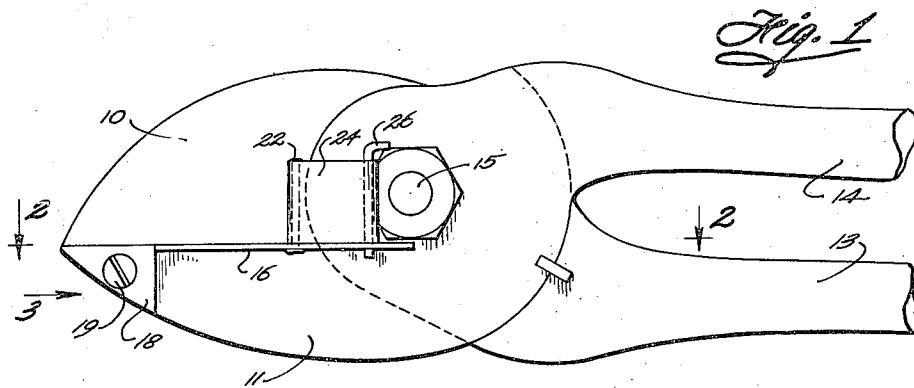
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HAND MITER

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HAND MITER

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This invention relates to a hand miter or a device wherein a shears may be employed to cut a length of material accurately on a predetermined angle with relation to its length.

An object of the invention is to provide a device that can be utilized advantageously to quickly cut material such as for example picture frame moldings so that miter joints at the corners of the frame may be easily and neatly formed.

More specifically, an object of the invention is to provide a device in the form of a hand shears in which there is a relatively sharp blade movable into direct opposition to a relatively broad flat faced dull blade, the dull blade being equipped with a platform arranged at right angles to the plane of the sharp blade and disposed on opposite sides thereof and having adjustable guide plates suitably indexed so that the material to be cut may be positioned on the platform against one or both of the guide plates and cut accurately at a predetermined angle to its length.

Another object of the invention is to provide a mitering guide means that may be readily applied to a conventional type of hand shears to convert it into a hand miter.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a partial view in side elevation of the improved hand miter;

Fig. 2 is a horizontal section taken substantially upon the line 2—2 upon Fig. 1; and

Fig. 3 is a view in front elevation of the hand miter and may be regarded as taken in the direction of the arrow 3 upon Fig. 1.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved hand miter is preferably made from a conventional type of hand shears consisting of a relatively sharp and comparatively thin blade 10 movable in opposition to a relatively thick dull blade 11 having a substantially flat surface 12 opposed to the cutting edge of the blade 10. These blades are equipped with handles 13 and 14 by which they may be operated and are pivotally connected together such as by a rivet or bolt 15.

The above-described shears is a conventional construction readily obtainable upon the open market. The device utilized to convert the

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shears of a hand miter consists of a section of sheet metal 16 forming a platform extending transversely across the top of the face 12 of the blade 11. At the forward end of this section a pair of ears 17 and 18 are bent downwardly so as to embrace the sides of the dull blade 11. These ears have apertures therein and a single hole is drilled through the blade 11 to accommodate a bolt 19 that is extended through the ears and through the drilled hole to thus attach the platform to the lower blade. The platform provided by the section 16 is preferably longitudinally grooved with a central shallow groove 20 adapted to slightly receive the cutting edge of the blade 10 so that when a section of material M is placed on the platform the sharp blade 10 will completely cut through it and pass slightly through the groove. At equi-distant points from this groove upstanding pintles 21 and 22 are secured to the platforms which serve to hingedly mount guide plates 23 and 24 so that they may swing over the platform. Adjacent the marginal edges of the platform there may be holes 25 or recesses adapted to receive the lower ends of indexing pins 26 that are vertically slidable in knuckles 27 on the outer ends of the guide plates. The holes 25 are preferably so arranged that when the indexing pins are therein the guide plates will assume positions that are either 90° to the groove 20 as in the case of the guide plate 23 as illustrated on Fig. 2, or at 120° to the groove as in the case of the guide plate 24 as illustrated in Fig. 2 or if the indexing pin is positioned in the third hole 25 the guide plates may assume positions at 135° from the groove 20.

If it is desired to cut the end of a stick of material M at 90° to its length either or both of the guide plates may be positioned in positions 90° to the groove. The shears is then manually operated causing the sharp blade 10 to cut there-through. On the other hand if it is desired to cut the end of the material at 120° to its length one of the guide plates such as the guide plate 24 is positioned as shown and the shears operated. If it is desired to cut the material with its end at 45° to its length the guide plate is positioned so that its indexing pin 26 is in the third or last hole and the shears operated while the material is pressed against the platform and against the guide plate as thus positioned. By having two opposed guide plates each of which is swingable about its pintle material such as picture frame molding can be easily and quickly cut with opposed angles of adjacent sections that can be properly assembled to form a neat corner.

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From the above-described construction it will be appreciated that the improved hand miter is of relatively simple and highly durable construction and that the shears employed may conform to a conventional shears readily obtainable on the open market.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A device of the class described comprising a hand shears having a sharpened cutting blade movable toward the face of a relatively dull blade, said dull blade having an opening therethrough, a platform having a relatively narrow approximately rectangular base portion adapted to lie on the upper surface of said dull blade, said base portion having a longitudinal crease in one face thereof adapted to cooperate with the sharpened blade of the shears, a pair of wings extending at right angles from the opposite longer sides of said base portion near one end thereof and straddling said dull blade, said wings being provided with openings in line with the opening in said dull blade, means fitting through said wings and dull blade to clamp said platform to said dull blade, a second pair of wings extending from the opposite longer sides of said base portion near the opposite end thereof and back of said first named wings, said second named wings lying approximately in the plane of said base portion, a pair of pintles positioned opposite one another and connected to said second named wings adjacent said base portion, guide plates around said pintles and swingable over said platform, each of said second named wings being provided with a plurality of indexing openings spaced arcuately of its pintle, other pintles around which other parts of said guide plates encircle, enabling said plates to be pivoted around said oppositely positioned pintles and affixed in different positions.

2. A device of the class described comprising a hand shears having a sharpened cutting blade movable toward the face of a relatively dull blade, a platform having an elongated base portion adapted to lie on the upper surface of said dull blade and having a longitudinal crease in one face thereof adapted to cooperate with the sharpened blade of the shears, a pair of wings extending from said base portion near one end thereof to straddle said dull blade, said wings and dull blade being constructed so that said wings can be securely fastened to said dull blade, a second pair of wings extending from said base portion near the other end thereof and lying approximately in the plane of said base portion, a pair of pintles positioned opposite one another and connected to said second named wings adjacent said base portion, guide plates around said pintles and swingable over said platform, each of said second named wings being provided with a plurality of indexing openings spaced arcuately of its pintle, other pintles around which other parts of said guide plates encircle enabling said plates to be pivoted around said oppositely positioned pintles and affixed in different positions.

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3. A platform member adapted to be attached to the lower dull blade of a shears to convert said shears into a hand miter, comprising a relatively narrow approximately rectangular base portion having a longitudinal crease in one face thereof adapted to cooperate with the sharpened blade of a shears, a pair of wings extending at right angles in approximate parallel relation with respect to one another from the opposite longer sides of said base portion near one end thereof, said wings having in line openings therein, a second pair of wings extending from the opposite longer sides of said base portion near the opposite end thereof and back of said first named wings, said second named wings lying approximately in the plane of said base portion, a pair of pintles positioned opposite one another and connected to said second named wings adjacent said opposite end of said base portion, guide plates around said pintles and swingable over said platform, each of said second named wings being provided with a plurality of indexing openings spaced arcuately of its pintle, other pintles around which other parts of said guide plates encircle, enabling said plates to be pivoted around said oppositely positioned pintles and affixed in different positions, said openings in said first named wings allowing said platform to be attached to the dull blade of a shears.

4. A platform member adapted to be attached to the lower dull blade of a shears to convert said shears into a hand miter, comprising an elongated base portion having a longitudinal crease in one face thereof adapting said base portion to cooperate with the sharpened blade of the shears, a pair of wings extending from said base portion in spaced relation near one end thereof in a direction opposite the creased face of said base, a second pair of wings extending from said base portion near the other end thereof and lying approximately in the plane of said base portion, a pair of pintles positioned opposite one another and connected to said second named wings adjacent said base portion, guide plates around said pintles and swingable over said platform, each of said second named wings being provided with a plurality of indexing openings spaced arcuately of its pintle, other pintles around which other parts of said guide plates encircle enabling said plates to be pivoted around said oppositely positioned pintles and affixed in different positions, said first named wings being so constructed as to be adapted to be attached to the lower dull blade of the shears.

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