May 13, 1947. S. DONIGER 2,420,469

KNIFE GAUGE

Filed Jan. 12, 1945

Fig. 1.

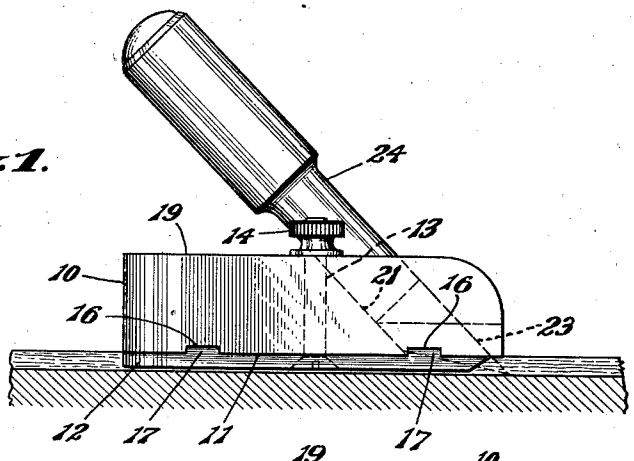


Fig. 2.

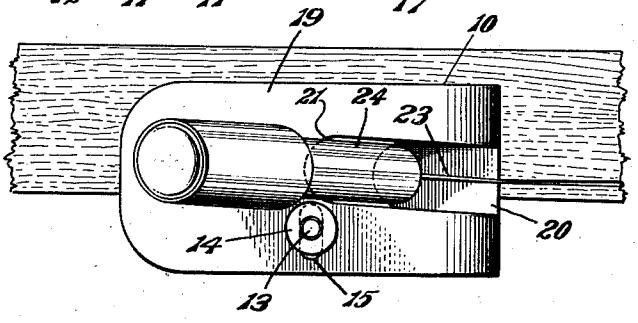


Fig. 3.

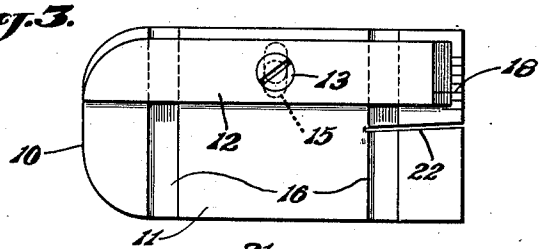


Fig. 4.

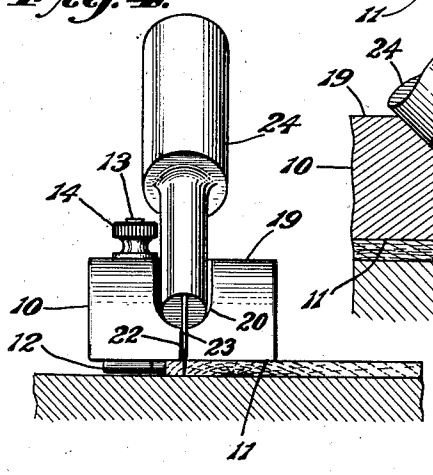
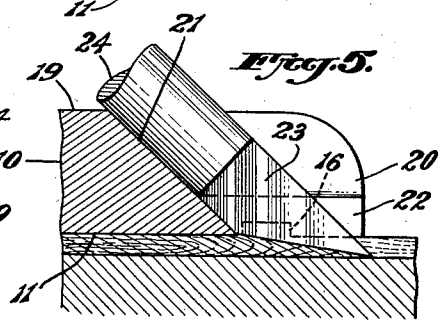


Fig. 5.



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KNIFE GAUGE

Sundel Doniger, New York, N. Y.

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6 Claims. (Cl. 30—293)

1

This invention relates to tools and more particularly to a cutting gauge for knives.

The craftsman engaged in making such structures as model airplanes from veneer or other thin material, requires narrow strips of the material which should be straight and of even width. The material is so thin that rip-sawing it is difficult, besides being wasteful, and for the home craftsman usually not within his ability to accomplish with adequate degree of perfection without a miniature power-driven bench saw. The usual method employed is to slit the material by running a knife along it several times until severed, guiding the knife with a straight-edge pressed down upon the material. An irregularity in the grain of the material or an inadvertent change of angle of the knife, however, will often cause the knife to make a crooked slit and thus obtain an uneven strip.

According to the present invention, I do away with the extraneous straight edge, and overcome, also, possibility of change of angle of the knife.

Other objects and advantages will appear as the description progresses, both by direct recitation thereof and by implication from the context.

Referring to the accompanying drawing in which like numerals of reference indicate similar parts throughout the several views;

Figure 1 is a side elevation and Figure 2 is a plan of my invention, showing the same in use;

Figure 3 is an underneath view of the gauge;

Figure 4 is an end view looking from right to left at the device as shown in Fig. 1; and

Figure 5 is a longitudinal sectional view at the plane of the knife slit and showing a knife in operative position.

In the specific embodiment of the invention illustrated in said drawing, reference numeral 10 designates a block-like body portion of the tool of the present disclosure, said body portion being longer than its width or height and wider than its height. Said body portion may be of any suitable material, of which metals and plastics are appropriate examples.

The underside 11 of the body 10 is devoid of protuberances, so the said body may be slid steadily upon the surface of the material to be cut with the underside 11 of the body making extensive even contact therewith. For guiding purposes, however, a cleat or guide 12 is movably attached to said underside 11, extending longitudinally thereof and preferably for the full length of the body near one side edge thereof. To retain the cleat or guide 12 in place, a screw

2

13 is shown with its head counter-sunk in the bottom of the cleat and its shank projecting upward through the cleat and body to be held by a nut 14 at the top of the body. Preferably the said cleat is adjustable laterally, and for that purpose a transverse slot 15 is provided in the body for passage and movement laterally of the screw. Furthermore, the underside 11 of the body is provided with a parallel pair of transverse grooves 16 near the front and back of the body. Said grooves as shown extend entirely across the underside 11 merely because the milling operation in mass production is more simple, but the used parts of said grooves are those in the vicinity of the cleat.

Said cleat 12 has bosses 17 thereon which fit the grooves 16 and are coextensive with the width of the cleat and consequently maintain the said cleat always parallel to the side edge of the body in any adjusted position. Suitable markings on the cleat and body, as at 18, enable the cleat to be set and clamped at a predetermined gauging position.

The topside 19 of the body, next its rear end, is provided with a deep socket 20 shown as having a rounded bottom axially parallel to the underside 11 of the body and as having a rounded forward end wall 21 axially sloping upwardly forward at approximately 45° to the axis of the rounded bottom wall of the socket. Longitudinally of the rounded bottom wall of the socket, preferably for the full length of said socket, is a slot 22 which extends through the body to the underside 11. This slot 22 is of appropriate width to permit passage of a blade 23 of a knife therethrough, the handle 24 of the knife preferably providing a longitudinal portion which can be held in firm engagement with the sloping end wall 21 of the socket.

As shown, the axis of the said socket and the direction of said slot are at an angle, preferably 2° or thereabout, to the side edge of the device and in a direction such that the heel of the knife blade will be further from the guide or cleat 12 than the toe of the blade. Thus when the device is drawn along a piece of material with the guide or cleat engaging the edge of the material and the knife blade making a cut, the twist of the blade due to the angular disposition of said slot 22, tends to ride the knife inward from the edge of the material. This tendency is opposed by the guide or cleat, and thus the cleat is kept in guiding contact with the edge of the material and a straight cut is effected. Length of the body is such that pressure exerted against the rear of the knife

substantially normal thereto in the natural use of the device, exerts a moment of force which graphically reaches the underside 11 of the body without intersecting the forward edge or face of the body. There is therefore no effective tendency to upset the body in sliding it while pushing against the knife.

I claim:

1. A tool of the character described comprising a body having an underside for engagement with the face of material to be cut, a guide on said underside for engagement with an edge of said material, and said body having a blade slot open at the top, bottom and one end of the body for a knife blade, said slot sloping from its open end longitudinally away from the guide at a predetermined fixed angle.

2. A tool of the character described comprising a body having an underside for engagement with the face of material to be cut, a guide on said underside for engagement with an edge of said material, and said body having a blade slot for a knife blade, said slot being disposed at substantially a 2° fixed angle with respect to said body and guide.

3. A tool of the character described comprising a body having an underside for engagement with the face of material to be cut, a guide on said underside for engagement with an edge of said material, and said body having a socket for a knife handle and a blade slot for the knife blade, said slot being angularly disposed with respect to said guide.

4. A tool of the character described comprising a body having an underside for engagement with the face of material to be cut, a guide on said underside for engagement with an edge of said material, and said body having a socket for a knife handle and a blade slot for the knife blade, said slot being disposed at substantially a 2° angle with respect to said guide.

5. A tool of the character described comprising a body having an underside for engagement with the face of material to be cut, a guide projecting below the plane of the said underside for engagement with an edge of said material, and said body having a socket at its upper side for reception of a knife handle therein and having a blade slot from the said underside and opening into the said socket, the forward end of said socket sloping forwardly upward for obtaining extended engagement with the knife handle with the said handle in correspondingly sloped position.

6. A tool of the character described in accordance with claim 5, wherein the slope of said forward end of the socket is substantially 45°.

SUNDEL DONIGER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
10,799	Ballard	Apr. 18, 1854