Dec. 8, 1942. F. M. LUND 2,304,262

TRIMMING BOARD

Filed April 6, 1940 2 Sheets-Sheet 1

Fig. 1

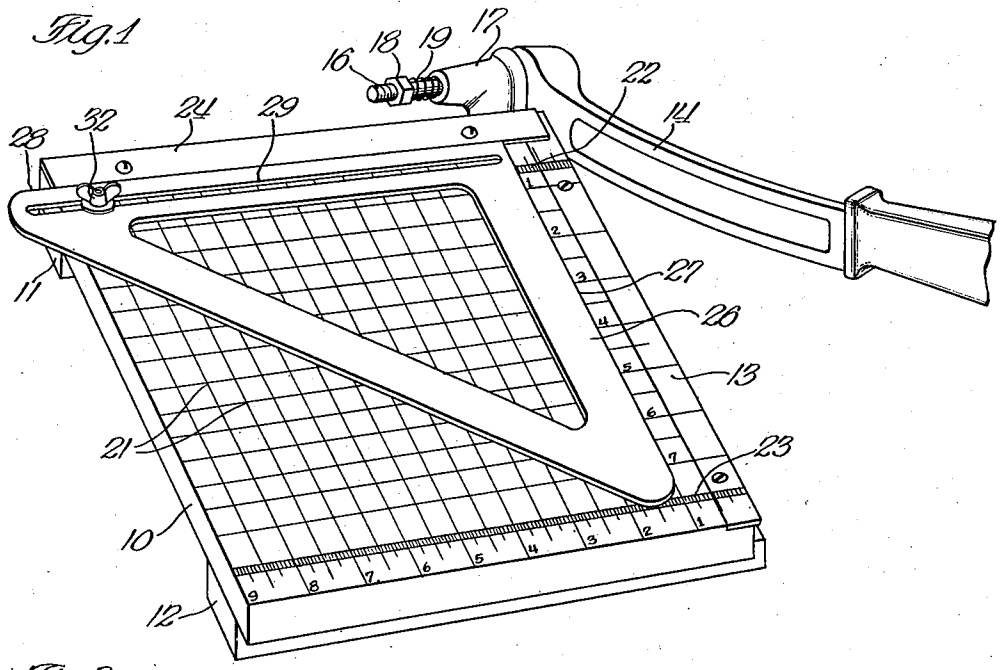


Fig. 2

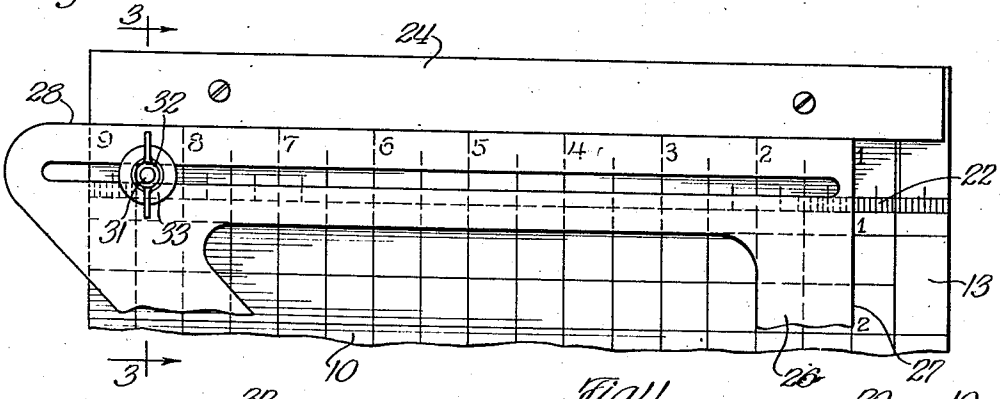


Fig. 3

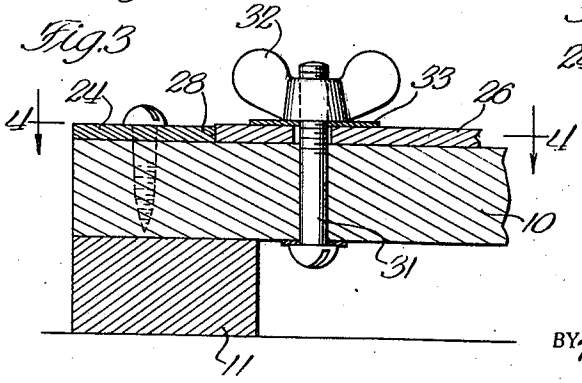
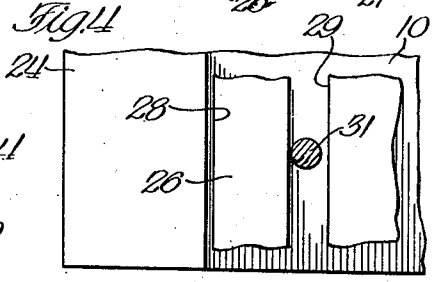


Fig. 4



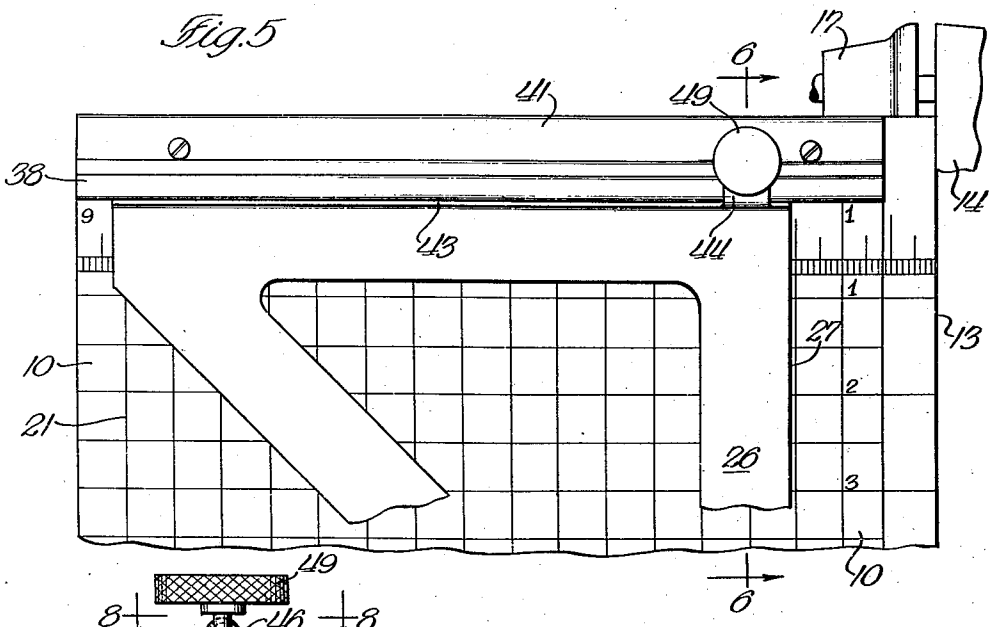
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TRIMMING BOARD

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Fig. 5



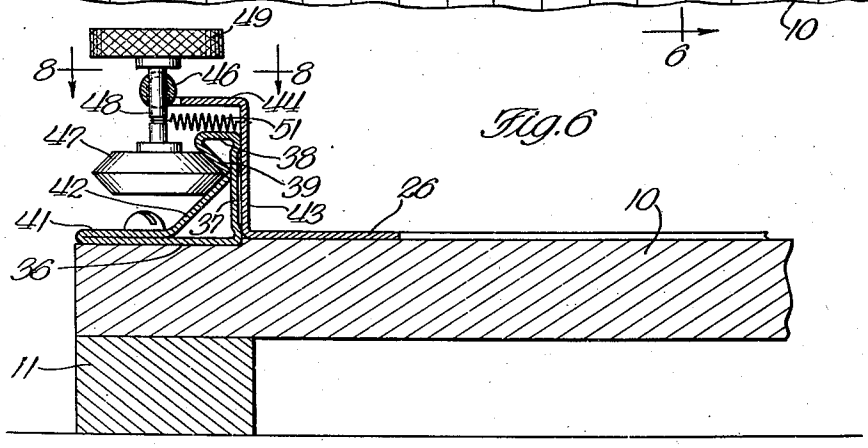


Fig. 6

Fig. 7

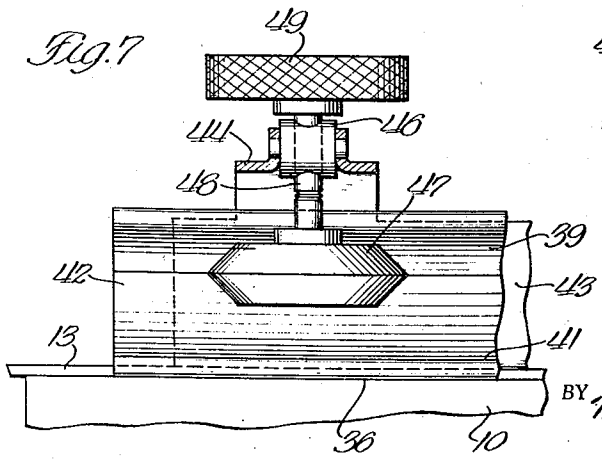
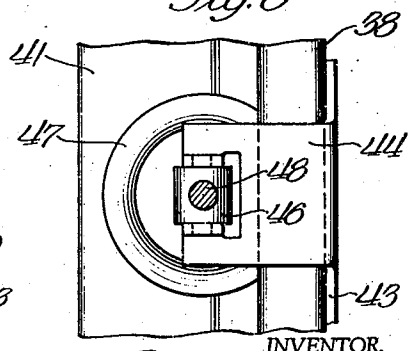


Fig. 8



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UNITED STATES PATENT OFFICE

2,304,262

TRIMMING BOARD

Frank M. Lund, Chicago, Ill., assignor of fifty per cent to Harvey M. Pushker, Chicago, Ill.

Application April 6, 1940, Serial No. 328,259

4 Claims. (Cl. 164—44)

My invention relates in general to trimming boards. It relates more in particular to a trimming board having a paper guide or abutment, which is simply and inexpensively produced, and accurate in its operation.

The principal object of my invention is the provision of an improved trimming board.

Another object is the provision of a trimming board having a paper guide and improved means for adjusting and supporting such guide.

In the drawings:

Fig. 1 is a perspective view showing one form of the invention;

Fig. 2 is an enlarged fragmentary plan view showing structural features of the guide;

Fig. 3 is an enlarged fragmentary sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary plan section taken along the line 4—4 of Fig. 3;

Fig. 5 is a fragmentary plan view showing a modification wherein mechanical adjusting means is provided for controlling the position of the paper guide;

Fig. 6 is a sectional view taken along the line 6—6 of Fig. 5;

Fig. 7 is a fragmentary elevational view looking at the left hand side of Fig. 6 and showing the structure of the adjusting mechanism; and

Fig. 8 is a fragmentary plan section taken on the line 8—8 of Fig. 6.

Referring now first to Figs. 1 to 4, inclusive, of the drawings, I show a trimming board comprising a base 10, including supporting strips 11 and 12 running transversely thereof. At one side of the base 10 is a metal insert 13 comprising a cutting edge with which a shearing knife 14 cooperates to shear paper along the edge when held upon the face of the base 10. The knife 14 carries a pin 16 journaled in a bracket 17 secured to the base 10. A nut 18 tensions a spring 19, by means of which the tension of the knife against the straight edge 13 is controlled.

The face of the board is provided with cross lines 21, a top scale 22 and a bottom scale 23, the cross lines 21 preferably being regularly spaced, a convenient arrangement being to have them exactly one-half inch apart running in each direction. A straight edge 24 is provided at the upper edge of the board at exactly right angles to the cutting edge 13, the straight edge 24 being raised from the face of the board so that paper being handled by the trimming board may be squared off by using the straight edge 24 as a guide. As a further convenience, the cross lines are numbered off in inches, as shown, starting from the straight edge 24 and running downwardly.

Mounted on the face of the board, I provide a generally triangular member 26 as a paper guide, this member having a paper engaging edge 27 and an edge 28 exactly at right angles to the edge 27, the edge 28 adapted to engage against the straight edge 24 whereby to cause the paper engaging edge 27 to lie exactly parallel with the cutting edge 13. For mounting the guide 26, I utilize a slot 29 running parallel to the edge 28, through which slot a bolt 31 carried by the base member extends. A wing nut 32 is threaded on the upper extending end of the bolt 31, and a washer 33 is placed under the wing nut to provide a relatively large area of contact with the guide member 26. By suitably shaping the wing nut 32, the washer 33 may be eliminated, but I prefer to use the washer to avoid direct rubbing action between the face of the guide member 26 and the bottom of the wing nut.

It will be noted that the slot 29 is slightly wider than the bolt 31. This is for the purpose of providing for the proper engagement between the edge 28 and the straight edge 24, whereby to obtain very accurate alignment of the paper engaging edge 27 with the cutting edge 13. Those skilled in the art are aware that, from a manufacturing standpoint, the provision of a true straight edge is not a difficult operation, nor is it a difficult operation to provide edges at exactly right angles to each other, such as provided between the straight edge 24 and the cutting edge 13 on the trimming board proper and the edges 27 and 28 on the paper guide 26. It is, however, difficult to maintain the dimension between the slot 29 and the straight edge 28, the position of the bolt 31, etc., exact; some manufacturing tolerance must be provided for. To attempt to hold the paper guide always in firm engagement with the straight edge by means of the bolt 31 would involve a very difficult, if not impossible, manufacturing procedure. By leaving a clearance in the slot, however, and positioning the parts relatively closely, the paper guide 26 is easily and substantially automatically placed against the straight edge in the process of adjusting it to its proper position, and, if it is held in this position while the wing nut 32 is tightened, exact alignment will always take place.

It will be noted that the center of the triangular paper guide 26 is cut out. This provides for lightness, and a somewhat greater visibility of the face of the board while still maintaining a connection to the extreme lower end of the

portion carrying the paper engaging edge 27 whereby to hold the guide member more firmly against the face of the board. While I may employ, as the member defining a triangle, only an L construction, I prefer either a solid triangle or a triangle with its center portion cut out in the manner shown.

It will be noted further that by means of the scales provided on the face of the board, the user has a very quick check of the dimensions and positioning of the paper looking either in a transverse or longitudinal direction. To facilitate use of the board and inspection of the scales, I may employ as the material of the paper guide a suitable transparent plastic material, although other materials such as stainless steel, certain aluminum alloys, and the like, may be used to advantage.

The form of the invention shown in Figs. 5 to 8, inclusive, follows the general arrangement shown in the preceding embodiment with the exception that I provide means for mechanically adjusting the position of the paper guide. For convenience and to simplify the description therefore, those parts of the embodiment of Figs. 5 to 8 which are similar to corresponding parts in the preceding embodiment have been given the same reference characters.

In the form shown in Figs. 5 to 8, inclusive, I employ a formed straight edge or abutment member 36 secured along the upper edge of the board and having an upstanding portion 37 at exactly right angles to the cutting edge 13. The upstanding portion 37 has its top edge formed over to provide a horizontal portion 38 from which an integral angular inturned portion 39 projects. The member 38 is also formed over to provide a portion 41 from which an angular portion 42 projects. The structure as shown in Fig. 6 extends the full length of the guide or abutment member 36, and the portions 39 and 42 together define a generally right angular recessed portion running substantially entirely across the board and having a function which will be described.

The paper guide 26 in this form has its upper edge 43 formed upwardly to engage against the face of the upwardly extending portion 37 of the guide or abutment member 36. Projecting at right angles from the portion 43 is a wing portion 44 which carries a horizontal pivoted member 46. An adjusting roller 47 has its shaft 48 journaled in the member 46, and an adjusting wheel 49 is secured to the upper part of the shaft 48, as shown. A spring 51, designed to have adequate tension, holds the adjusting roller 47, which has a wedge like engaging surface, against the faces of the two angular members 39 and 42. The adjusting roller 47 is suitably formed of semi-hard rubber or like material, and the engaging face of the members against which it bears may be roughened by knurling, or in any suitable manner, to provide for a firmer engagement. I have found, however, that utilizing the construction shown, it is not essential that the surfaces engaged by the roller be roughened appreciably, adequate friction being provided for because of the angular arrangement and the suitable design of the spring.

As in the preceding embodiment, it is obvious that we are dealing entirely with straight surfaces so far as the accurate positioning of the paper guide 26 is concerned, and these surfaces are either parallel to each other or at right angles to each other, thereby requiring only such manufacturing technique as is easily carried out in an accurate manner. The cutting knife, arrangement of scales, and the like, may be the same as in the previously described embodiment.

In employing the device shown in Figs. 5 to 8, inclusive, the adjusting roller 47 may be removed entirely from engagement with the friction surfaces, and the paper guide may be moved to any position without turning the wheel or disk 49. For final adjustment, however, the wheel may be turned. The tension maintained is such that accidental shifting of the paper guide will not occur. If it is necessary that the paper guide be removed entirely, this is easily done by merely sliding it off the board. The paper may then be engaged directly against the face of the upright member 37, it being noted that this member extends somewhat below the surface of the board and there will be no possibility of thin paper slipping under it.

While the device as shown in Figs. 5 to 8, inclusive, provides for mechanical adjustment of the paper guide, the arrangement is such that all of the parts are very inexpensively produced by stamping and die operations, with the exception of the member 46 and the like, for example, which is readily produced of an automatic screw machine. In other words, the costs involved in producing the board are not appreciably greater than those involved in the production of an ordinary trimming board without the adjusting features described.

It will be noted that some modifications may be made without departing from the essential novelty of the invention. In the embodiment of Figs. 5 to 8, inclusive, for example, it is not essential that the guide be triangular due to the fact that the principal support is near the paper engaging edge 27. Certain advantages, however, are secured by the triangular arrangement, and I prefer its use.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. In a trimming board, a base member having a top paper supporting surface and a cutting edge at one side thereof, a knife pivoted to the board to cooperate with said cutting edge to shear paper or the like supported on said paper supporting surface, a raised straight edge on one side of the board at right angles to said cutting edge and facing said paper supporting surface, a paper guide having two straight edges defining a right angle, one straight edge engageable against said raised straight edge and the other straight edge parallel to said cutting edge, said paper guide comprising a flat body of uniform thickness resting entirely upon said paper supporting surface, and having a slot running parallel to that edge thereof engaging against said raised straight edge, a bolt projecting upwardly from said base member and extending through said slot, and a nut threaded on said bolt and adapted to be tightened to engage against a top surface of the paper guide on opposite sides of said slot, said slot being wider than the bottom of said bolt whereby, when the nut is loosened, the paper guide may be freely moved and engaged against said raised straight edge whereby to position one edge of said paper guide in true parallel relation with said cutting edge, and whereby said nut and paper guide may be entirely removed whereby to leave the paper supporting surface entirely unobstructed.

2. In a photographic trimming board, a base member having a top paper supporting surface,

means including a cutting edge at one side thereof for cutting paper held on said surface, a straight edge abutment on one edge of said surface having a straight edge at right angles to said cutting edge and facing said paper supporting surface, a paper guide member having two sides at right angle to each other, one parallel to said cutting edge and comprising a paper engaging guide, and the other engaging against said straight edge abutment for positioning the said paper guide, and screw adjusting means effective between said paper guide and a part of said straight edge abutment for adjusting the position of said paper guide upon the said paper supporting surface, said last mentioned means comprising a friction surface on said straight edge abutment, parallel to but spaced from said straight edge, and a friction wheel carried by said paper guide.

3. In a photographic trimming board, a base member having a top paper supporting surface, means including a cutting edge at one side thereof for cutting paper held on said surface, a straight edge abutment on one edge of said surface having a straight edge at right angles to said cutting edge and facing said paper supporting surface and a friction surface parallel to but spaced from said straight edge, a paper guide member having two sides at right angle to each other, one parallel to said cutting edge and comprising a paper engaging guide, and the other engaging against said straight edge abutment for positioning the said paper guide, a friction wheel carried by said paper guide and spring means urging said friction wheel against the said friction surface, said spring means also functioning to maintain said paper guide member in contact with said straight edge abutment, whereby to keep said paper guide in alignment, rotation of said friction wheel being effective to adjust the position of said paper guide.

4. In a photographic trimming board, a base member having a top paper supporting surface, means including a cutting edge at one side thereof for cutting paper held on said surface, a straight edge abutment on one edge of said surface having a straight edge at right angles to said cutting edge and facing said paper supporting surface and a friction surface parallel to but spaced from said straight edge, a paper guide member having two sides at right angle to each other, one parallel to said cutting edge and comprising a paper engaging guide, and the other engaging against said straight edge abutment for positioning the said paper guide, a friction wheel carried by said paper guide and spring means urging said friction wheel against the said friction surface, said spring means also functioning to maintain said paper guide member in contact with said straight edge abutment, whereby to keep said paper guide in alignment, rotation of said friction wheel being effective to adjust the position of said paper guide, said friction wheel being supported to permit its movement away from the friction surface against the force of said spring whereby to permit manual positioning of said paper guide member, and rotation of said friction wheel being effective to adjust the position of said paper guide.

FRANK M. LUND.