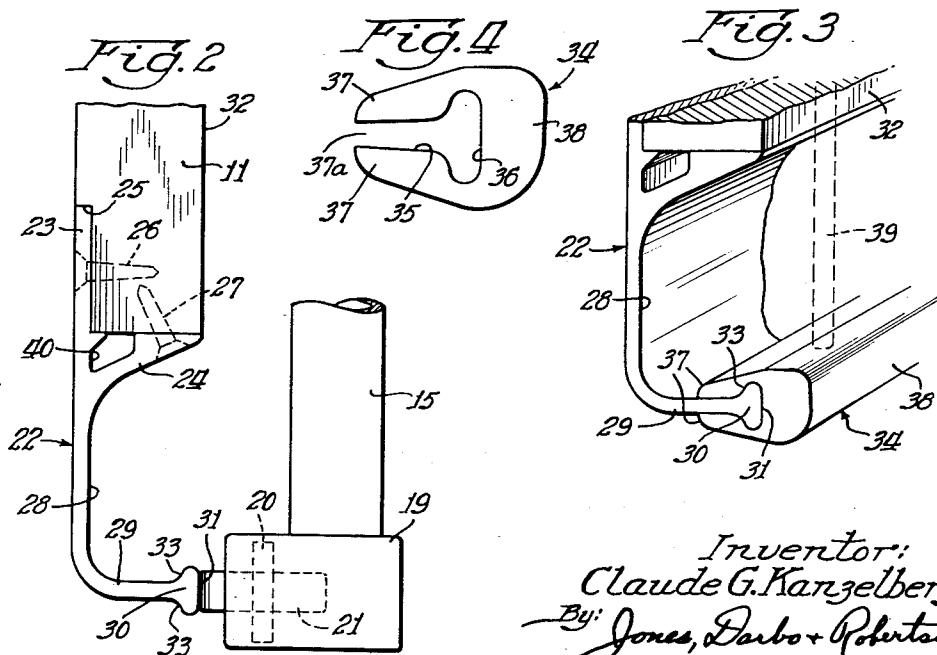
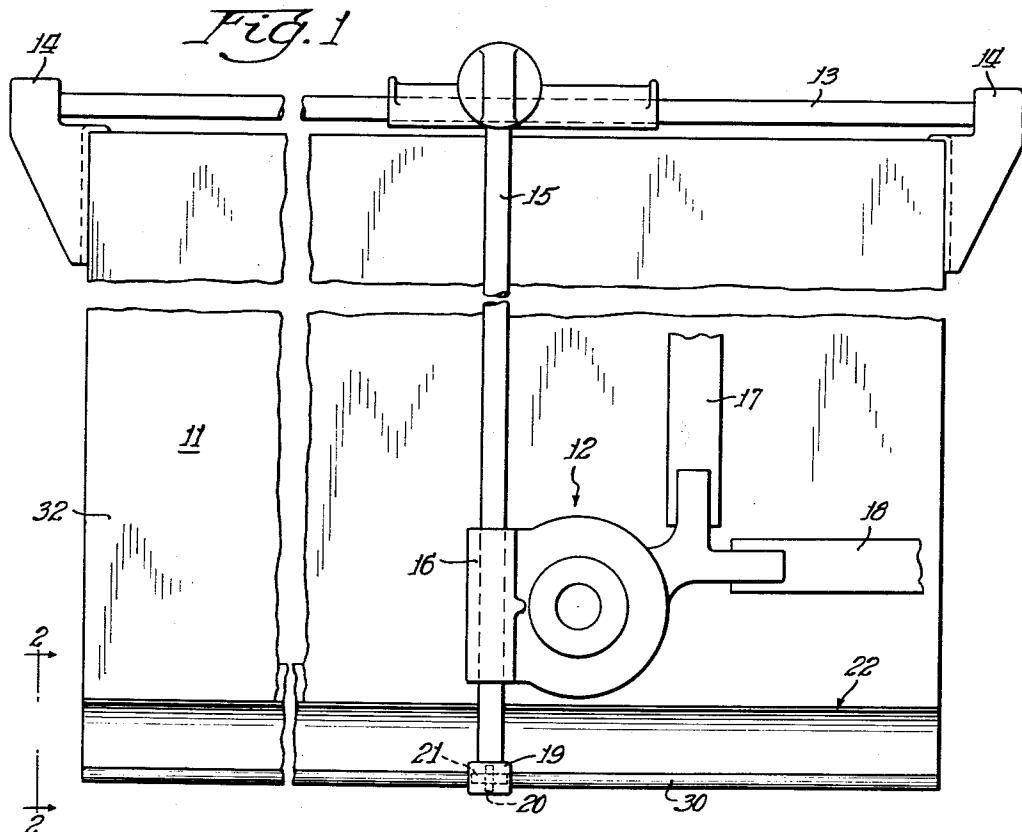


Oct. 10, 1961

C. G. KANZELBERGER 3,003,243  
COMBINED PENCIL TROUGH, INSTRUMENT GUARD AND DRAFTING  
MACHINE TRACK FOR DRAWING BOARD  
Filed Feb. 6, 1958



Inventor:  
Claude G. Kanzelberger  
By: Jones, Darbo + Robertson  
Attn:

# United States Patent Office

3,003,243  
Patented Oct. 10, 1961

1

3,003,243

## COMBINED PENCIL TROUGH, INSTRUMENT GUARD AND DRAFTING MACHINE TRACK FOR DRAWING BOARD

Claude G. Kanzelberger, Two Rivers, Wis., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin

Filed Feb. 6, 1958, Ser. No. 713,729

3 Claims. (Cl. 33—76)

This invention relates to combined pencil trough, instrument guard and drafting machine track for drawing boards and aims to provide an arrangement for the purposes mentioned that expedites the work of the draftsman while conserving his time and energy.

An important objective of the invention is the provision of integrated means for preventing pencils, erasers, or other instruments from sliding off the board, when the board is used at a high angle, for example, while at the same time facilitating the use of a drafting machine on the board, substantially throughout the area thereof, by accommodating without interference the wheel of the drafting machine extraneously of the board and serving at the same time as a conventional so-called pencil trough.

The foregoing, and other objects and advantages, will be apparent from the following description, taken together with the accompanying drawing, showing an illustrative embodiment of the invention, and in which drawings:

FIGURE 1 is a plan view, broken away to save space, of a drawing board with the invention applied thereto and shown adapted for use with a conventional drafting machine;

FIGURE 2 is an enlarged fragmentary end view taken on the line 2—2 of FIG. 1;

FIGURE 3 is a perspective view showing adaptation of the invention as an instrument guard when the drafting machine is not used; and

FIGURE 4 is an end view of the removable molding shown in FIG. 3, when the latter is removed.

Referring in detail to the illustrative construction shown in the drawings, the numeral 11 indicates a drawing board with which is shown associated, in this instance, a drafting machine 12 that comprises the usual rear rail 13 retained on the board by brackets 14. A traversing device 15 is adapted to move from left to right and vice versa on the rail 13 and carries a slideable sleeve 16 with which are suitably connected the right angularly related blades 17 and 18. The traverse 15 has the usual foot 19 that mounts, on a pintle 20, the rotatable anti-friction roller 21.

Attached to the lower or proximate edge of the drafting board 11 is the pencil trough 22 extending along the said edge of the board and secured thereto by bracket-like flanges 23 and 24. The flange 23 is shown rabbeted or set into the under surface of the board as at 25 and has screws 26 passed therethrough into the board. The flange 24 abuts the contiguous edge of the board and is screwed thereto as by screws 27.

The pencil trough 22, which may be conveniently formed of extruded aluminum, provides the usual trough formation 28 for pencils, erasers, and the like, and, in accordance with the present invention, the free wall 29 of the trough is formed with an integral terminal bead or head formation 30 extending longitudinally along the trough. In the present embodiment, the bead formation 30 constitutes a transversely enlarged outer portion of the free wall 29 of T-shape and having a flat outer face 31 that provides a track for the roller 21 of the drafting machine traverse foot 19. The face of the track 31 upon which the roller 21 rides is desirably co-planar with the upper or working surface 32 of the drawing board 11,

2

thus constituting, in effect, an extension of the drawing board surface 32 for purposes of supporting the drafting machine 12 in suitable relation to the drawing board. Since the track 31 is extraneous of the board itself, the blades 17 and 18 may be used relatively close to the lower edge of the board. The T-shape cross-section of head 30 is desirably of curvilinear contour at each side as at 33 for a purpose next described.

Further in accordance with the present invention, 10 removably associated with the pencil trough bead 30, when the drafting machine 12 is not used, is a continuous molding 34 (FIGS. 3 and 4) advantageously molded of suitable rubber or plastic material having the desired resilience and pliability so that it may be deformed to the 15 extent necessary to be engaged and tightly interlocked with the T-shaped head 30 of the pencil trough. To facilitate such interengagement and interlocking, the molding 34 as best shown in FIG. 4 is formed to provide a moulding mounting member as a part of the moulding 20 and comprising a continuous T-shape groove 35 having the transverse head cavity 36 and the open leg 37a formed between the lips 37. The lips 37 preferably taper inwardly toward their ends opposite the T-head so as to enhance the gripping action with the wall 29 of the pencil 25 trough. Similarities in contour in cross-section between the groove 35 and the outer end of the pencil trough, such as the curvilinear lines 33, enhance the close fit of the molding onto the trough bead.

Carrying out purposes of the present invention, 30 the molding 34 has a continuous longitudinally and laterally extending coaming 38 that protrudes for a substantial distance, for example, say three-eighths of an inch, above or beyond the co-planar face 31 of the trough and 32 of the drawing board. Thus, if a pencil or other object, 35 as at 39 (FIG. 3), rolls or slides off the drawing board surface 32, it will be caught by the coaming 38 of the molding 34 and directed into the trough 28, saving the draftsman the necessity of picking it up from the floor and thereby conserving his time and energy. This coaming 40 is particularly useful when the drawing board is used at high angles, such as those approaching ninety degrees to the floor, for instance.

The molding strip 34 may be conveniently integrally 45 molded of rubber or plastic. The molding 34 is of such pliability that it may be removed from the trough bead 30 by gripping one of its lips 37 with the fingers and bending it away from the trough wall 29 sufficiently to slide over the bead 30. Installation of the molding may 50 be accomplished by the reverse action, the resilience of the molding material causing it to tightly grip the trough bead.

By providing a coaming 38 of say three-eighths inch 55 height, even if a linoleum covering, for example, is used on the drawing surface 32, of say one-eighth inch thickness, the molding coaming 38 will still provide a quarter inch extension above the drawing surface to act as an instrument guard as described.

By the present expedients, more of the lower surface 60 of the board becomes useable for drawing with the drafting machine. Also, the resilient surface of the molding provides a convenient rest for the draftsman's arms and elbows if desired.

For convenience in manufacture, the flanges 23 and 24 65 of the pencil trough are desirably separated as by a gap 40.

The invention having been described, such changes may 70 be made as fall within the scope of the appended claims without departing therefrom.

The invention having been described, what is here claimed is:

1. As an article of manufacture, in combination with

a drafting board having a top, planar drafting face and a front edge intersecting said face, a drafting instrument trough and drafting machine track for attachment to said drafting board, said article comprising: a trough extending the length of said board and having a back wall abutting said edge, a bottom extending outwardly away from said back wall, away from said board and substantially below said face, a front wall extending upwardly from said bottom, and a bead member extending along the top of said front wall, said bead member having a flat top face positioned approximately in the plane of said surface, whereby when said face is exposed it will serve as a bottom track for a drafting machine; and a continuous molding having a mounting member and a coaming, said molding being received on said bead member with said coaming extending upwardly substantially above the plane of said face to deflect drafting instruments into said trough; one of said members having a dovetail-like slot extending the length thereof and the other member defining a protuberance of corresponding shape extending the length thereof, said protuberance being received in said slot to hold said molding on said trough while permitting the molding to be removed to expose said face.

2. As an article of manufacture, in combination with a drafting board having a top, planar drafting face and a front edge intersecting said face, a drafting instrument trough and drafting machine track for attachment to said drafting board, said article comprising: an extruded metal trough extending the length of said board and having a back wall abutting said edge, a flange underlying and abutting said bottom of said board, a bottom extending outwardly away from said back wall, away from said board and substantially below said face, a front wall extending upwardly from said bottom of said trough, and a bead member extending along the top of said front wall, said bead member having a flat top face positioned approximately in the plane of said surface, whereby when said face is exposed it will serve as a bottom track for a drafting machine; means to secure said back wall and said flange to said board; and a continuous molding having a mounting member and a coaming, said molding being received on said bead member with said coaming extending upwardly substantially above the plane of said face to deflect drafting instruments into said trough; one

of said members having a dovetail-like slot extending the length thereof and the other member defining a protuberance of corresponding shape extending the length thereof, said protuberance being received in said slot to hold said molding on said trough while permitting the molding to be removed to expose said face by a longitudinal movement of the molding with respect to the trough.

3. As an article of manufacture, in combination with a drafting board having a top, planar drafting face and a front edge intersecting said face, a drafting instrument trough and drafting machine track for attachment to said drafting board, said article comprising: an extruded trough extending the length of said board and having a back wall abutting said edge, a flange underlying and abutting said bottom of said board, a bottom extending outwardly away from said back wall, away from said board and substantially below said face, a front wall extending upwardly from said bottom of said trough, and a bead extending along the top of said front wall, said bead having a flat top face positioned approximately in the plane of said surface, whereby when said face is exposed it will serve as a bottom track for a drafting machine; means to secure said back wall and said flange to said board; and a continuous molding having a mounting member and a coaming, said molding being received on said bead with said coaming extending upwardly substantially above the plane of said face to deflect drafting instruments into said trough, said mounting member having lips extending downwardly and about said bead to releasably engage said molding and said trough.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

35	308,774	Krause	Dec. 2, 1884
	694,389	Klitsche	Mar. 4, 1902
	707,165	Schlachter et al.	Aug. 19, 1902
	2,564,386	Webb	Aug. 14, 1951
40	2,673,600	Cramer	Mar. 30, 1954
	2,847,731	Hollander	Aug. 19, 1958
	2,861,386	Paulson	Nov. 25, 1958

##### FOREIGN PATENTS

45	510,529	Belgium	Apr. 30, 1952
	754,445	Great Britain	Aug. 8, 1956