This invention relates to devices for holding plans, drawings, and the like in position on an estimating table or other work surface on which it may be desired to examine a file or sheaf of plans or drawings for estimating purposes or otherwise.

In various cities which are the centers of building activity, libraries of plans and drawings of the current building projects are maintained. As an adjunct of such libraries estimating tables are provided on which persons desiring to make estimate of the cost of construction of any project, may examine the plans or drawings and prepare their cost estimates.

Most of the building or construction projects require a considerable number of sheets of drawings, often from twenty-five to a hundred or more sheets, and it is customary to bind these sheets together along one edge.

This invention provides means for readily holding sheets of plans upon one of the tables and in going through them turns the successive sheets about the binding edge. As soon as any appreciable number of the sheets have been thus turned the weight of the turned sheets tends to drag the entire sheaf off the table thus rendering it difficult for the estimator to proceed with his work.

In accordance with the invention the support for the plans, such as an estimating table, is provided with a plan hold-down device or mechanism which is either securely attached to, or is a part of the table structure. Projecting horizontally from one end of the table and adjacent the top surface of the table there are two pins, located, one near each side of the table. A clamping member in the form of a modified channel section and of elongated shape so as to correspond in length approximately to the width of the table has in its web portion two parallel slots arranged at an acute angle lengthwise of the clamping member.

The two pins are received within these slots and the arrangement is such that by lengthwise shifting of the clamping member the coaction of the slots with the pins produces a vertical bodily or parallel movement of the clamping member. One of the flanges of the channel-shaped clamping member projects horizontally over the surface of the table top and is provided with a narrow lip which projects downwardly from such overhanging portion and, by the described vertical movement of the clamping member may be brought into clamping engagement with a sheaf of plans or the like previously placed upon the table. The lower flange of the channel-shaped clamping member is appreciably narrower than the upper and overhanging flange and serves to stiffen the channel member in the usual way.

Advantageously one of the pins is provided with a head portion to coact with the outer surface of the clamping member along the sides of the slot to prevent the clamping member from becoming disengaged from this pin. The second pin namely, the pin located adjacent the side of the table where the estimator operates is provided with a screw-threaded outer portion, and a wing nut is placed thereon. Through the interengagement of the two pins with the narrow slots (which are only enough larger than the pins to permit sliding movement) and the holding action of the wing nut, the clamping member can be held securely with its clamping lip in firm engagement with the sheaf of drawings, plans, etc.

The two pins may be secured to the table, or other support for the work surface, in several different ways. They may be provided as a part of the support or table structure itself, or they may be arranged as a part of a mounting support which may be removable applied to the table. Also other modifications of the mechanism, as well as the structure of the clamping mechanism itself will be better understood from a consideration of the accompanying drawing and the detailed description following.

The invention will be described in detail in connection with its application to an estimating table, but it will be understood that the plan hold-down mechanism or devise may be applied to any support having a work surface adapted to receive a sheaf of plans, drawings, or the like and where it is desired to turn the sheets one or more at a time about their binding edge to permit examination of the sheets individually.

In the drawings:

FIG. 1 is a perspective view of an estimating table with my improved plan hold-down device mounted thereon showing a sheaf of plans clamped in position;

FIG. 2 is a fragmentary view in front side elevation of the upper left-hand portion of the table shown in FIG. 1;

FIG. 3 is a view in end elevation, with parts broken away, looking from the left of FIG. 1 and showing only the table top and clamping mechanism;

FIG. 4 is a view similar to FIG. 3, showing the clamping member in a different position;

FIG. 5 is a view similar to FIG. 2 but with a portion of the table top broken away and shown in section, to illustrate a modification;

FIG. 6 is a view somewhat similar to FIG. 5 showing another modification; and

FIG. 7 is a view similar to FIG. 5 showing a still further modification.

Referring first to FIGS. 1-4, the estimating table 10 has an upper frame 11 supported by conventional legs and carrying a table top 12 having a flat upper surface 13. The top 12 has a projection 14 which extends beyond the end of frame 11, and, in the form of the invention shown in FIGS. 1-4, the channel-shaped clamping member which is indicated by reference numeral 15 is mounted upon the projection 14 by means of a support 16 in the form of a channel member having a web portion 17, a lower flange 18 and an upper flange 19.

This channel member 16, advantageously, is made of steel of a gauge to provide a comparatively rigid structure so that the member can be clamped firmly to the projection 14 as best shown in FIG. 2. Thus, the upper flange 19 is laid against the upper surface of the table top 12 and two or more clamping screws 20 having knurled heads 21 are screw-threaded in apertures in the lower flange 18 which is locally thickened as indicated at 22. The channel-shaped support 16 extends substantially throughout the width of table 10, as indicated in FIG. 1, and two or more clamping screws 20 are arranged in spaced relation in order to removably secure the channel member to the table top.

Clamping member 15 is also an elongated member substantially corresponding in length to the length of its support 16 and provided with two narrow parallel slots 23 and 24. These slots are disposed near the opposite ends of the clamping member at an acute angle, advantageously 45°, to the horizontal or the upper and lower sides of the clamping member. Passing through the rear slot 23 is a headed pin 25, and coacting with the forward slot there is a second pin 26 having its outer portion threaded to receive a wing nut 27. Both rear pin 25 and forward pin 26 are permanently mounted on the web portion 17 of support 16. Thus, each pin may have an enlargement at its inner end such as the enlargement 28 on the screw-threaded pin 26 which is welded as indicated at 29 to the inner surface of web 18. The pins extend...
from their respective enlargements through suitable apertures in web 17.

As shown more especially in FIG. 2 clamping member 15 has an upper flange 30 which is provided with a downwardly extending clamping lip 31 along its right edge. Flange 30 is of sufficient width to extend over the upper surface of table top 12 so as to enable lip 31 to engage a sheaf of plans or drawings such as indicated by numeral 32 for the purpose of securing it in position on the table. Clamping member 15 is also provided with a narrower flange 33 along its lower edge for stiffening purposes.

The clamping member 15 has a vertical height which is such that it can be comfortably grasped between the fingers and thumb of the hand for the purpose of adjusting the clamping action. Thus, by shifting clamping member 15 toward the rear of the table slots 23 and 24 travel along the respective pins 25 and 26 until the upper ends of the slots nearly contact the pins. In this position the clamping lip 31 will be in contact with the surface of table top 12, as indicated in FIG. 4. When the clamping member 15 is shifted lengthwise in the opposite direction the reverse action takes place and clamping lip 31 is raised above the surface table top 12, as shown in FIG. 3.

With the clamping device in this open or upper position a sheaf of plans 32 may be inserted beneath the clamping lip 31 and this lip then brought down into clamping engagement with the top of the sheaf, as shown in FIG. 5. This is the turning up tightly this clamps the inner surface of the vertical or web portion of clamping member 15 in close frictional engagement with the outer surface of the web portion 17 of the channel-shaped support 16. Such clamping action prevents shifting movement between these two parts, and the edge of the slots 23 and 24 against the respective pins 25 and 26 maintains the clamping lip 31 in clamping engagement with the sheaf 32, thus firmly holding it in position against the surface of table top 12.

As shown in the drawing, washers 34 may be placed beneath the head portion of pin 25 and also beneath wing nut 27. It will be understood that the sheets which constitute the sheaf 32 of plans or the like are secured together by any convenient binding means 35 (stitching, stapling, eyeletting, etc.) and that the lip 31 is brought into clamping engagement with the sheaf, as shown for example, in FIG. 2.

The modified form of the invention shown in FIG. 5 is intended for table tops which may be somewhat thicker than can be conveniently accommodated by the removably attached channel-shaped support 16. In place of such channel-shaped support, a support 36a in the form of an angle section is used. The lower or horizontal leg of this angle-shaped support is permanently fixed to the lower surface of the table top projection 14a by means of a series of wood-screws 37 one of which is shown in FIG. 5.

The vertical leg 38 of the angle-shaped support 16a has the two pins 25 and 26 fixed to it in the same manner as described in connection with FIG. 2. However, only the screw-threaded pin 26 with its enlargement 28 at its inner end is illustrated.

The manipulation and clamping action of the clamping member 15 is the same as described previously in connection with FIGS. 1–4.

The modified construction shown in FIG. 6 is intended for tops or other plan supports which have no horizontal projection corresponding to projections 14 and 14a. Member 39 of FIG. 6 has no such projection and, accordingly, a hollow, sheet metal tubular structure 40 is mounted on the side or edge 41 of member 39 and constitutes the support for the clamping member 15. Member 40 has upper and lower horizontal walls 42 and 43 together with an outer vertical wall 44 and a flange 45 extending downwardly from the inner edge of lower wall 43. Flange 45 is perforated to receive a series of wood-screws 46 which secure the tubular structure 40 to the edge 41 of member 39. The location of this member 40 is such that its upper wall 42 is in alignment with the work surface 47.

As in the case of the construction of FIG. 5 the screw-threaded pin 26 is mounted by means of an enlargement 28 on the inner surface of vertical wall 44, the pin extending through an aperture in this wall. Also, the second or headed pin 25 is similarly mounted, although not shown.

In the modification the two pins are applied directly to the edge of extension 14. Thus, the screw-threaded pin 26a which receives wing nut 27 is a combination wood-machine screw. It has an inner wood screw portion 48 which is screwed into the edge of projection 14, and an outer machine screw portion 49 which receives wing nut 27. The second pin, corresponding to pin 25 of FIGS. 1–4, may be an ordinary round head wood screw, with a washer such as washer 34 beneath its head.

It will be understood that the operation of the channel-shaped clamping member 15 is the same in all the figures. In FIGS. 1 to 6 the turning up of the wing nut 27 clamps the inner surface of the web portion of clamping member 15 against a metal part such as the web 17 of FIG. 2, the leg 38 of FIG. 5 or the outer side 44 of the tubular member 40 in FIG. 6. In FIG. 7, however, the inner surface of clamping member 15 is squeezed directly against the end or edge surface of projection 14 of the table top.

Although the invention has been described in connection with several modified types of mounting it will be understood that other changes may also be made, and the scope of the invention is, therefore, intended to be set forth in the appended claims.

It will be further understood that the term ‘plans’ as used throughout the specification and claims is intended to include not only prints of drawings (blue prints) but also newspapers, wall paper samples, fabric samples, or a sheaf of sheets of any flexible material intended for any purpose whatsoever.

I claim:

1. A plan hold-down device for securing a sheaf of plans to the horizontal work surface of a support for said plans, said device comprising an elongated clamping member including a vertically disposed body portion having two parallel slots therethrough arranged at an acute angle lengthwise of said clamping member and near the opposite end thereof, a mounting carrying two parallel pins projecting therefrom, means for securing said mounting to said support with said pins projecting horizontally and disposed adjacent the horizontal work surface of said support, said pins being received in said respective slots of said clamping member and the clamping member being freely slidable lengthwise on the pins and along the end of the table, said body portion having an overhanging portion projecting horizontally over said work surface and extending throughout the length of said body portion, a clamping lip depending from said overhanging portion and vertically adjustable with respect to said surface by lengthwise shifting of said clamping member, one of said pins having a head portion to retain the clamping member thereon, and a flange nut in threaded engagement with the other of said pins to hold said clamping member in adjusted position by frictional clamping action on said body portion, the two pins and manually operable nut constituting the sole connection between the clamping member and the mounting.

2. A plan hold-down device as set forth in claim 1
wherein said mounting includes means for removably attaching it to a table top member having a projection along one edge thereof.

3. A plan hold-down device as set forth in claim 2 wherein said mounting is of channel shape, the upper flange thereof being adapted to engage the top surface of the table and having clamping screws arranged in threaded apertures in its lower flange to engage the underside of said projection.

4. A plan hold-down device as set forth in claim 2 wherein said mounting is of angle shape with its lower leg horizontal and its upper leg vertical, said lower leg being secured to the underside of a table top having a projection along one edge by a series of screws passing through apertures in said lower leg and inserted in the lower surface of said projection.

5. An estimating table construction comprising a table, two pins projecting horizontally from one end of the table near each side adjacent the top surface of the table, an elongated clamping member comprising a vertically disposed body portion having two parallel slots therethrough arranged at an acute angle to the horizontal, the slots being disposed near the opposite ends of the clamping member, the pins being received in said respective slots and the clamping member being freely slidable lengthwise on the pins and along the end of the table, said body portion having an overhanging portion projecting horizontally over the surface of said table top and extending throughout the length of said body portion, a clamping lip depending from said overhanging portion and adjustable with respect to said table surface by lengthwise shifting of said clamping member, one of said pins having a head portion to retain the clamping member thereon, and a manually operable nut in threaded engagement with the other of said pins and adapted to hold said clamping member in adjusted position, the two pins and manually operable nut constituting the sole connection between the clamping member and the table.

6. A plan hold-down device as set forth in claim 1 wherein the mounting carrying two parallel pins projecting therefrom is disposed on one edge of the support for said plans, said mounting having an upper surface which is in alignment with the work surface of said support, and wherein the means for securing the mounting to said support comprises a flange extending downwardly from the inner edge of said mounting, such flange being perforated and having a plurality of screws extending through such perforations into the edge of said support.

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