June 5, 1923. 1,457,889

H. C. HINRICHS

DRAWING STAND

Filed March 24, 1920 2 Sheets-Sheet 1.

Fig. 1.

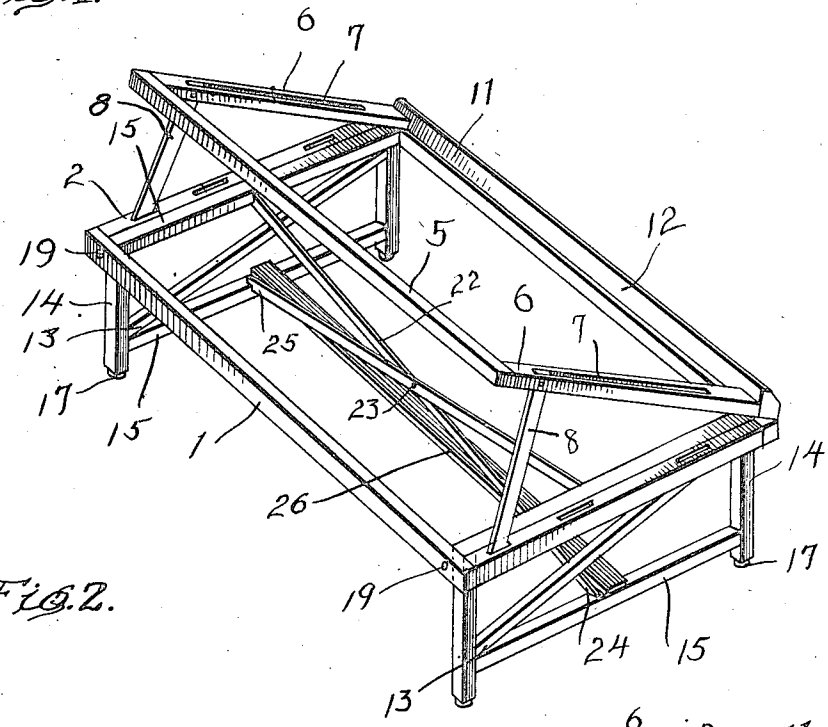
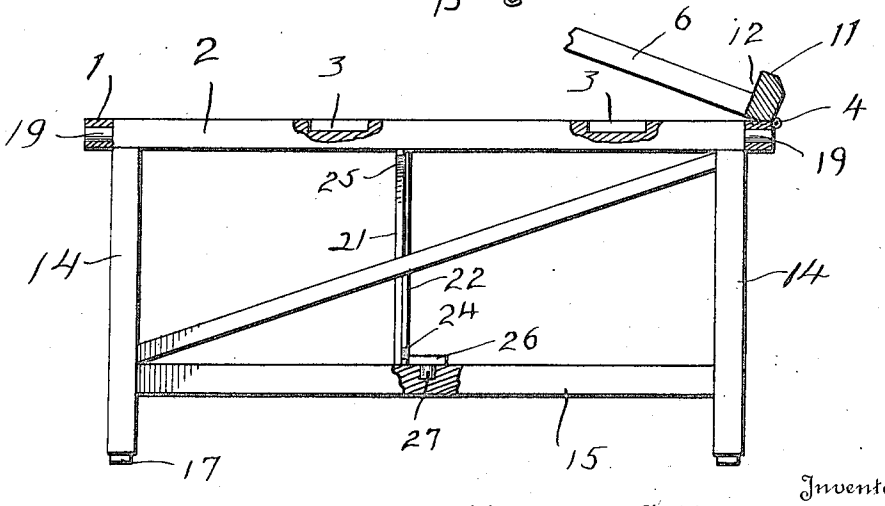


Fig. 2.



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Witnesses

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Fig. 3.

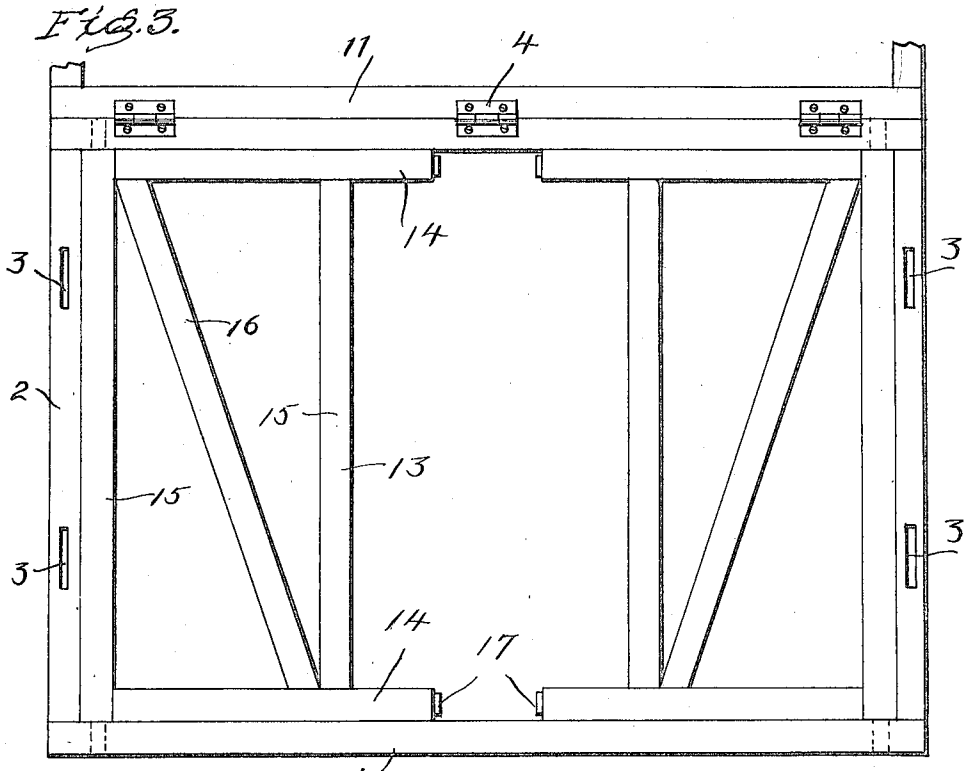


Fig. 5.

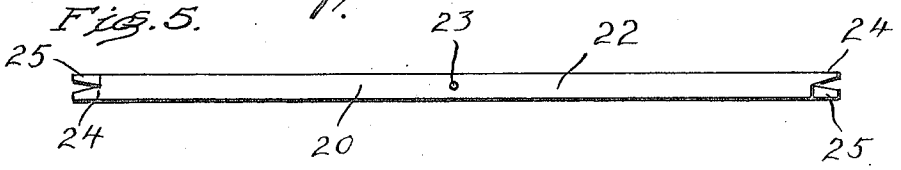
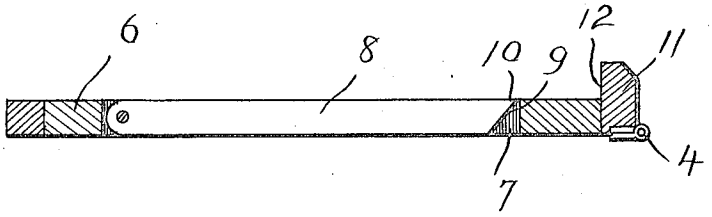


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY C. HINRICHS, OF NEW ORLEANS, LOUISIANA.

DRAWING STAND.

Application filed March 24, 1920. Serial No. 368,362.

To all whom it may concern:

Be it known that I, HENRY C. HINRICHS, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Drawing Stands, of which the following is a specification.

This invention relates to drawing stands and more particularly to a movable stand or support for the drawing board.

The primary object of the invention is to provide a folding structure of a portable character which can very easily be transported from place to place and set up upon a suitable support to provide a supporting frame for a drawing board, thereby alleviating to a material extent the lack of a standard drawing table.

A further object of the invention is to provide a supporting structure of the character referred to wherein an adjustable element is provided for supporting the drafting board at any desired angle.

With the above and other objects in view the invention consists in the details of construction, combination and arrangement of parts as will hereinafter more fully appear reference being had to the accompanying drawings wherein—

Figure 1 is a view in perspective of the invention in its set up position.

Figure 2 is a side elevation with portions broken away to disclose the manner in which the various units of the frame are joined together to provide a rigid structure,

Figure 3 is a plan view showing the legs in folded relation,

Figure 4 is a vertical longitudinal section through one of the side bars of the board supporting frame, disclosing the manner in which the strut is concealed therein, and

Figure 5 is a detailed view of the cross brace.

By way of preface it may be stated that this invention is primarily designed for the purpose of enabling drafting work to be adequately accomplished under conditions ordinarily not conducive to the best results, due mainly to the lack of a standard drawing table, as for instance when doing work at odd times in places where a standard drawing table may not always be at hand. An ordinary table is generally too low to furnish an adequate support, although it may serve as a suitable resting place or base for the stand embodied in the present invention.

This stand comprises a square, main frame 1 having the side bars 2 provided upon their upper faces with suitably formed notches 3 arranged in successive, spaced relation along each bar and penetrating a depth sufficient for the purpose in view. The front and rear strips of the frame are each provided with transverse openings adjacent their respective extremities, forming sockets for the pivot end of the leg members. Connected to frame 1 by means of hinges 4 is a drawing board supporting frame 5 which is likewise square in formation and of a size approximating that of the main frame; the side bars 6 however of the board frame being each provided with a longitudinally extending slot 7, within which is pivoted a strut 8 as illustrated in Figure 4 of the drawing. The strut 8 is preferably to be housed within the slot so as to be concealed from view, and this may, of course, be accomplished either by constructing the strut of a width narrower than the width of the slot or by having the upper and lower edges of the slot parallel with the upper and lower edges of the side strip to which it is pivoted. The free swinging end of each strut is beveled as indicated at 9 so as to rest firmly on the bottom of a notch 3 when inserted therein for purposes of maintaining the frame at an angle as illustrated in Figure 1, the points of the strut holding the strut against slipping when the angular position of the strut, with respect to the particular notch with which it is engaged, does not permit the beveled edge to rest firmly on the bottom of the recess. The hinges 4 are fastened to the frame member 11 which, it is to be noted, is of heavier material than the other units of the frame and is provided with a flat face 12 against which the drawing board would rest when disposed upon the supporting frame 5.

Mounted below the main frame 1 are a pair of side supports or legs 13 which consist of spaced vertical standards 14 rigidly connected together and braced by the horizontal braces 15 and diagonal braces 16. Each standard 14 has affixed to its bottom edge a cushioning pad 17 of rubber or other suitable material which may be adapted to not only prevent the stand from scratching the surface upon which it may be supported but also to prevent any "walking" of the

frame during the process of drafting. Any suitable number of these pads may be provided as circumstances require and they may be easily provided on each leg member by affixing a short standard to the lowermost horizontal brace 15 and attaching the pad to such auxiliary standard. These supporting legs are adapted to be affixed to the opposite ends of the main frame, inwardly of the side bars 2 thereof and are pivotally associated with the frame by means of the pivot pins 19 which enter the socket openings provided in the side strips of the main frame as previously pointed out. When in supporting position the legs are held apart by the cross brace 20 which consists of two elongated strips 21 and 22 pivoted intermediate their extremities as indicated at 23. This brace is disposed between the supporting leg and expanded so that the shoulder bearing ends 24 of one strip engage the diagonally opposed horizontal braces of the two legs in the manner shown in Figures 1 and 2 of the drawing, while the shoulder bearing ends 25 of the other bar are likewise engaged with the opposite diagonal braces of the two legs. In this way, the legs are rigidly held apart and prevented from any wabbling which would tend to unsettle a stand and interfere with the drafting work. To further augment the rigidity of the structure a tie plate 26 extends transversely across the frame from one brace to another of the leg members and has provided adjacent its brace supported end a depending lug 27 which is adapted to be accommodated in an opening formed in the lowermost supporting braces 15. Both the cross brace 20 and the tie plate thus serve to reinforce the stand and to maintain it rigid.

In operation, the stand is set upon an ordinary table or other suitable base, the legs of the stand being rigidly braced by means of the tie plate and cross brace previously referred to and the drawing board is laid upon the supporting frame 5. This frame 5 may be supported horizontally upon the main frame 13 and the area below the board may be used as a suitably protected space within which to place the necessary instruments and other accessories. Moreover, the board may be held in an inclined position merely by raising the frame 5 and permitting the strut 8 to drop down into engagement with suitable notches 3, the struts being of suitable material and strength to adequately support the frame in its inclined position. After use, the stand can be readily packed away in a trunk or a suitcase merely by removing the cross brace and tie plate and folding the pivoted legs inwardly of the main frame 1 as illustrated in Figure 3 of the drawing and then releasing the strut 8 from the notches so as to permit the frame 5 to collapse upon the main frame 1. It will thus be seen that in its folded condition the stand occupies a minimum amount of space and can be readily carried about from place to place without inconvenience or discomfort.

Although the foregoing description has reference to what might be considered the preferred embodiment of the invention it is to be understood that a stand of this character may very readily be made in various sizes and the parts of the stand of such material as is most suitable or adapted for the purposes in view, such changes in regards to proportion, style and arrangement of parts being permissible as fall within the scope of the appended claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

A portable and collapsible stand for drawing boards comprising a main frame including longitudinally extending front and rear bars and transverse end bars all disposed in the same plane, the transverse end bars having spaced notches in the upper face thereof, end leg frames for the main frame, each including a transverse cross bar having trunnions formed on the terminals thereof and corner standards, the longitudinal bars of the main frame having bearing openings therein adapted to receive the trunnions of the side bars of the leg frames, the leg frames being adapted to fold within the main frame and lie flush with the upper and lower surfaces thereof, removable cross braces adapted to extend from one leg frame to the other for holding the leg frames in a set-up position, and a drawing board frame of substantially the same size as the main frame including longitudinal front and rear bars and slotted transverse end bars, means pivotally connecting the front bar of the drawing board frame with the front bar of the main frame, and pivoted struts carried by the end bars of the drawing frame and adapted to be disposed within the slots thereof and to lie flush with the upper and lower surfaces of the drawing frame, when the frame is in its collapsed position, the free terminals of the struts being adapted to fit in any one of the notches of the main frame when the drawing board is in its set-up adjusted position.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. HINRICHS.

Witnesses:
M. TASKER,
E. R. SHEPHERD, SR.