May 8, 1956 W. AUERBACH-LEVY 2,744,346

PICTURE FRAME SECURING DEVICE

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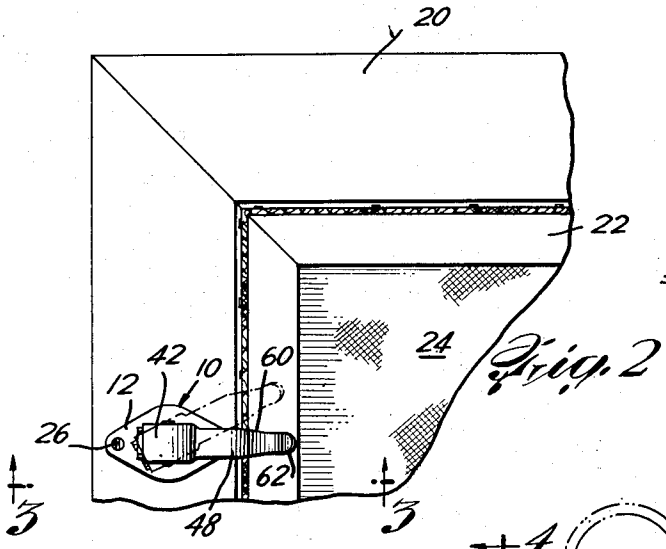


Fig. 2

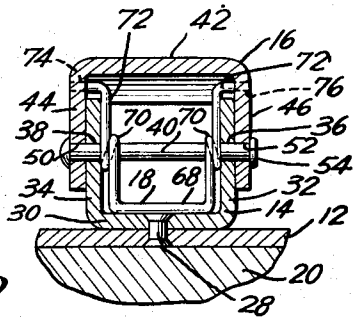


Fig. 4

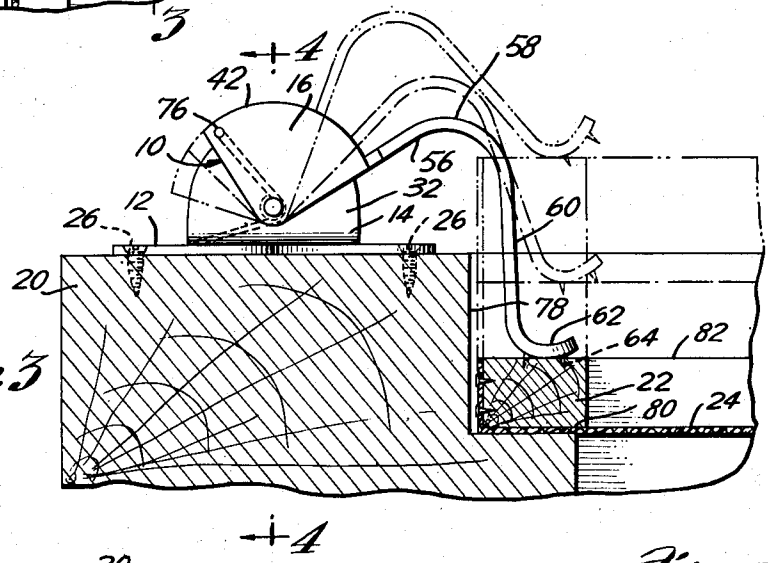


Fig. 3

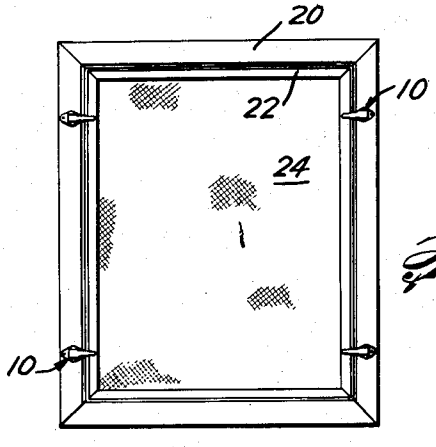


Fig. 1

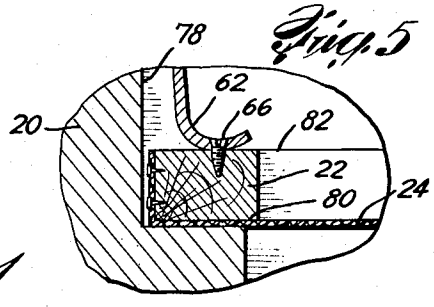


Fig. 5

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Fig. 6

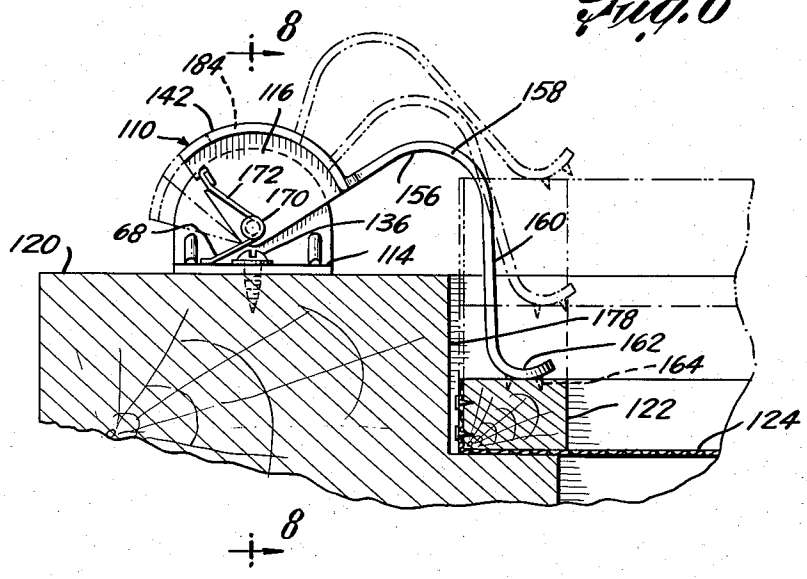


Fig. 7

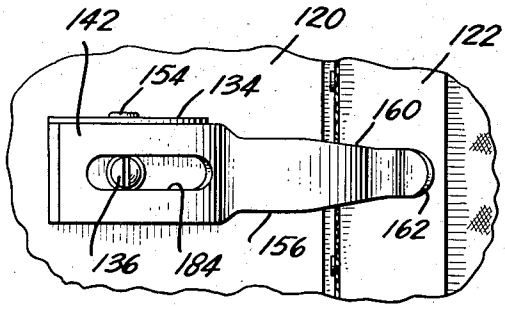
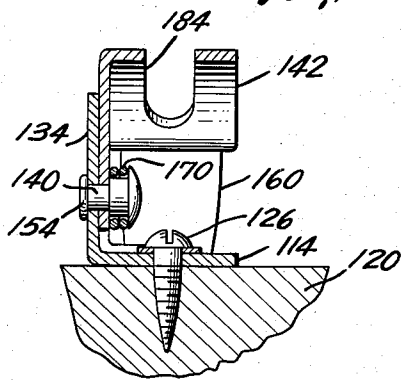


Fig. 8



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United States Patent Office

2,744,346

Patented May 8, 1956

2,744,346

PICTURE FRAME SECURING DEVICE

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Application June 24, 1952, Serial No. 295,370

4 Claims. (Cl. 40—156)

This invention relates generally to picture frame securing devices, and more particularly to a type which is adapted to detachably secure a canvas-stretching frame element with attached canvas member to an outer decorative frame element.

In the past there have been many such devices, all of which have suffered from various disadvantages. Several among them require the use of special tools for easy operation. Others offer no provision for accommodating more than a single size of stretching frame, while still others which may accommodate a variety of sizes cut the canvas member upon engaging the stretching frame. For the most part they have been of a relatively flimsy construction that is easily damaged with any degree of rough handling.

It is, therefore, among the principal objects of the present invention to provide a picture frame securing device in which the above mentioned disadvantages have been avoided.

Another object of the invention herein lies in the provision of a device of the class described in which no special tools of any type are required when using the device, and which may be conveniently employed by those possessing only ordinary skill.

Another object of the present invention herein lies in the provision of a device which may accommodate a number of stretcher frame elements of varying thicknesses without damage to said stretcher frame elements or the canvas members secured thereon.

Still another object of the invention herein lies in the provision of a device of the class described in which the structure thereof may be of a strength sufficient to withstand all but the roughest usage.

A further object of the invention lies in the provision of a device of the class described in which the cost of fabrication may be of a relatively low order, with corresponding wide sale and distribution.

A feature of the device lies in the fact that the principal parts thereof may be readily formed from sheet metal stampings, expensive castings being unnecessary.

Another feature of the device lies in the fact that it is pivotally mounted for movement in two perpendicular planes, thereby offering a maximum of convenience for manipulation by the user.

These objects and features, as well as other incidental objects and advantages will become more fully apparent during the course of the following disclosure and be pointed out in the appended claims.

In the drawing similar reference characters have been employed to designate corresponding parts throughout the several views.

Figure 1 is a rear view in elevation of a picture frame embodying the invention.

Figure 2 is an enlarged fragmentary view in elevation corresponding to the upper left hand portion of Figure 1.

Figure 3 is a horizontal fragmentary sectional view as seen from the plane 3—3 on Figure 2.

Figure 4 is a vertical fragmentary sectional view as seen from the plane 4—4 on Figure 3.

Figure 5 is a fragmentary sectional view corresponding to the lower right hand portion of Figure 3, but showing an alternate form of the embodiment.

Figure 6 is a horizontal fragmentary sectional view, corresponding generally to Figure 3 but showing a second embodiment of the invention.

Figure 7 is a fragmentary plan view of the embodiment.

Figure 8 is an enlarged fragmentary vertical transverse sectional view as seen from the plane 8—8 on Figure 6.

The device, generally indicated by reference character 10, includes broadly a mounting element 12, a first pivotal element 14, a second pivotal element 16 and a tension spring 18. As has been suggested, the first three mentioned parts are preferably formed from sheet metal stampings in order that the cost of manufacture may be of a low order. The tension spring is formed from spring steel wire.

Referring to Figure 1 there is shown a standard assembly in general use which includes an outer or decorative frame 20 in which is detachably disposed a stretcher frame 22 upon which is mounted a canvas member 24 (see Figures 4 and 5). Mounted upon the frame 20 are a plurality of the devices 10, in this case four in number. It is to be understood of course that this number is by way of example only, since in the case of larger assemblies it may be necessary to employ a greater number, while in an assembly of very small dimensions it may be necessary to use only two.

As may be best seen on Figures 2 and 3, the mounting element 18 may be of any suitable configuration, and comprises a planar member having means for mounting upon the frame 20 such as the screws 26, and pivotal mounting means upon which the first pivotal element may be secured. This is best accomplished by means of a spread rivet 28.

The first pivotal element 14 includes a base member 30 which is pivotally connected to the mounting element 12 by the rivet 28, and a pair of normally disposed flange members 32 and 34 which as may be seen on Figures 3 and 4 are preferably integral with the base member 30 and of generally semicircular configuration. Each of the flange members 32 and 34 is provided with a circular orifice as at 36 and 38 through which may pass the pintle member 40, which provides means for pivotally mounting the second pivotal element 16.

The second pivotal element 16 includes a main or base portion 42 side flanges 44 and 46 and a tongue portion 48. As may be seen on Figure 3 the flanges 46 and 48 may be in the shape of a sector of a circle, and are provided with circular orifices 50 and 52 through which the pintle member 40 may pass. The pintle is retained in position after assembly of the device 10 by heading the extremity at 54. The main or base portion 42 is generally curvilinear in shape and is preferably integral with the tongue portion 48.

The tongue portion 48 is of S-shaped configuration as best seen on Figure 3, and includes a first substantially planar portion 56, a first curved portion 58, a second planar portion 60, and a curved frame engaging portion 62. A positive engagement with the stretching frame 22 is assured by the cleats 64, or if the installation is to be of a more permanent nature by means of the screw means 66 shown on Figure 5.

The tension spring 18, as has been suggested, is preferably formed from a single piece of spring steel wire, and serves to normally urge the second pivotal element 16 in a clockwise direction as seen on Figure 3 with respect to the first pivotal element 14. It includes a stationary portion 68, coil portions 70 disposed about the pintle member 40, and movable portions 72, through which the torque of the spring is transmitted. As may be seen on Figure 4 the termini of the spring are insertable within two small orifices 74 and 76. Although the coil portions 70 are shown as having but one convolution, it is to be understood that this is by way of example only, the number of convolutions of course depending upon the bending modulus of the wire used, and the amount of tension desired.

The operation of the device is extremely simple. As-

suming that the canvas member **24** is suitably tacked to the stretching frame **22** and is otherwise prepared for mounting, the mounting elements **12** are suitably secured to the rear surface of the frame **20** so that the tongue portions **48** are positioned in the rabbet **78**. The tongue portions are then lifted against the action of the springs **18** and rotated about an axis through the center of the rivets **28** until the frame engaging portion **62** may rest upon the surface of the frame **20**. The stretching frame **22** with attached canvas member is then placed within the rabbet **78** after which the second pivotal element is returned to its original position. As may be seen on Figure 3 the exact position of the tongue portion **48** when engaged with the stretching frame **22** will depend to a large degree upon the thickess of the latter, that is to say upon the distance between the surfaces **30** and **32**. Should it be desired to remove the frame **22** for the purpose of employing the frame **20** to display another picture it is only necessary to reverse the above described operation.

If desired, the outwardly disposed screw **26** may be replaced by a well known type of screw eye (not shown) which may provide means not only for retaining the device **10** in position on the outer frame **20**, but also permits of engagement of said device with a suitable wire by which the same may be hung.

It will of course be understood that the stretching frame **22** may be replaced by wooden panels, if the picture to be displayed has been painted thereupon.

Turning now to the second embodiment of the invention, in which to avoid needless repetition, certain of the parts corresponding to those of the first embodiment have been designated by the same reference characters with the additional prefix "1."

The second embodiment of the invention differs from the first embodiment, principally in the integration of the mounting element **12** and the first pivotal element **14**. Whereas in the first embodiment the elements **12** and **14** are joined by a rivet **28** permitting rotation of the element **14** with respect to the element **12**, in the second embodiment the first pivotal element **114** is secured directly to the outer frame **20** by means of a single screw **126** secured directly beneath the axis of the pintle member **140**. The flange member **32** of the first embodiment has been completely eliminated, there being present only the flange member **134**. The screw **126** may be tightened or loosened through an elongated opening **184** in the second pivotal element **116**, the equivalent pivotal motion about the axis of the rivet **28** being thereby obtained. In other respects, the operation of the second embodiment is generally similar to that of the first embodiment.

It may thus be seen that I have invented a novel and highly useful improvement in picture frame securing devices in which there is provided a means for attaching and detaching stretcher frame elements to outer frame elements with an ease and facility heretofore unobtainable. The device is simple in construction, requires no special tools for operation, and may be readily employed by those having a low degree of manual dexterity. Further, the stretching frame is positively held in position throughout a wide range of adjustable positions in which the device is capable of operation.

I wish it to be understood that I do not consider the invention limited to the exact details of structure set forth in this specification, for obvious modifications will occur to those skilled in the art to which the present invention relates.

I claim:

1. A picture frame securing device for use with an inner frame and an outer frame comprising: a first pivotal element, a second pivotal element, and mounting means; said mounting means including a surface engageable with one of said frames and threaded means for maintaining said surface in contact with said frame; said first pivotal element being arranged for pivotal motion about an axis substantially perpendicular to said surface; said second pivotal element being interconnected for relative rotation with said first pivotal element by a pintle, the axis of which is substantially parallel to said surface; said second pivotal element having a tongue engageable with the other of said frames; and resilient means interconnecting said first and second pivotal elements, serving to urge said second pivotal element to rotate about said pintle with respect to said first pivotal element whereby said tongue is brought to bear upon said other frame.

2. A picture frame securing device for use with an inner frame and an outer frame comprising: a first pivotal element, a second pivotal element, and mounting means; said mounting means including a surface engageable with one of said frames and threaded means for maintaining said surface in contact with said frame; said first pivotal element being arranged for pivotal motion about an axis substantially perpendicular to said surface; said second pivotal element being interconnected for relative rotation with said first pivotal element by a pintle, the axis of which is substantially parallel to said surface; said second pivotal element having a tongue engageable with the other of said frames; and resilient means on said pintle interconnecting said first and second pivotal elements, serving to urge said second pivotal element to rotate about said pintle with respect to said first pivotal element whereby said tongue is brought to bear upon said other frame.

3. A picture frame securing device for use with an inner frame and an outer frame comprising: a first pivotal element, a second pivotal element, and a mounting element; said mounting element including a surface engageable with one of said frames and threaded means for maintaining said surface in contact with said frame; said first pivotal element being arranged for pivotal motion upon said mounting element about an axis substantially perpendicular to said mounting element; said second pivotal element being interconnected for relative motion with said first pivotal element by a pintle, the axis of which is substantially parallel to said mounting element; said second pivotal element having a tongue engageable with the other of said frames; and resilient means interconnecting said first and second pivotal elements serving to urge said second pivotal element to rotate about said pintle, whereby said tongue is brought to bear upon said other frame.

4. A picture frame securing device for use with an inner frame and an outer frame comprising: a first pivotal element, a second pivotal element, and a mounting element; said mounting element including a surface engageable with one of said frames and threaded means for maintaining said surface in contact with said frame; said first pivotal element being arranged for pivotal motion upon said mounting element about an axis substantially perpendicular to said mounting element; said second pivotal element being interconnected for relative motion with said first pivotal element by a pintle, the axis of which is substantially parallel to said mounting element; said second pivotal element having a tongue engageable with the other of said frames; and resilient means on said pintle interconnecting said first and second pivotal elements serving to urge said second pivotal element to rotate about said pintle, whereby said tongue is brought to bear upon said other frame.

References Cited in the file of this patent

UNITED STATES PATENTS

349,631	Cutts	Sept. 21, 1886
481,117	Naegele	Aug. 16, 1892
1,059,764	Ringer	Apr. 22, 1913
1,836,161	Gates	Dec. 15, 1931
2,489,477	Brecher	Nov. 29, 1949
2,516,239	Moss	July 25, 1950
2,547,167	Nielsen	Apr. 3, 1951
2,634,527	Pletscher	Apr. 14, 1953