May 24, 1955 U. J. JACQUET 2,709,056

PICTURE FRAME HANGING DEVICE

Filed June 22, 1949 2 Sheets-Sheet 1

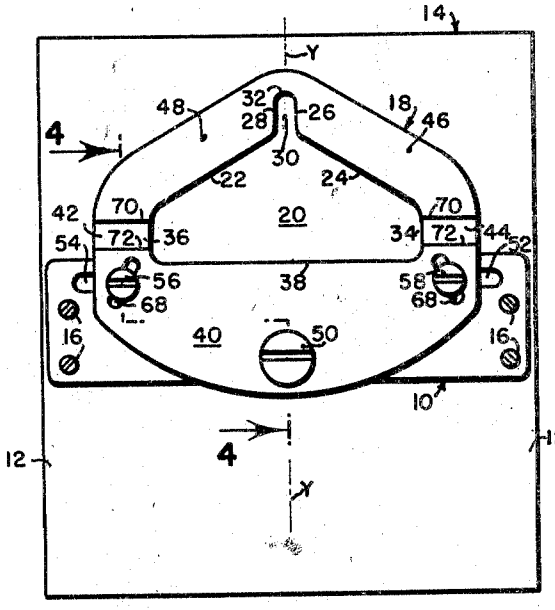


FIG. 1

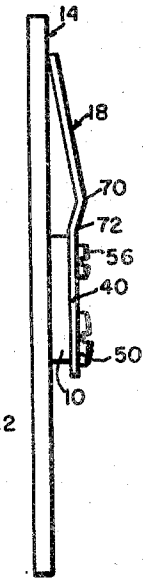


FIG. 2

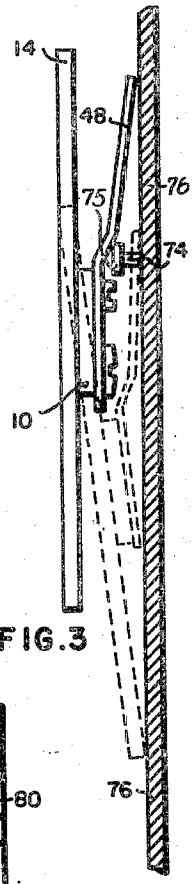


FIG. 3

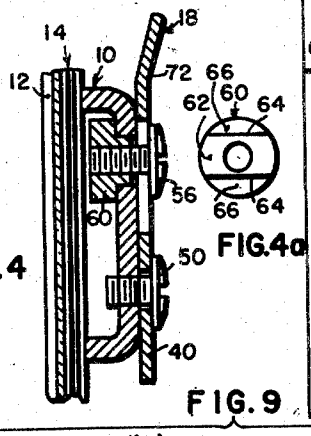


FIG. 4

FIG. 4a

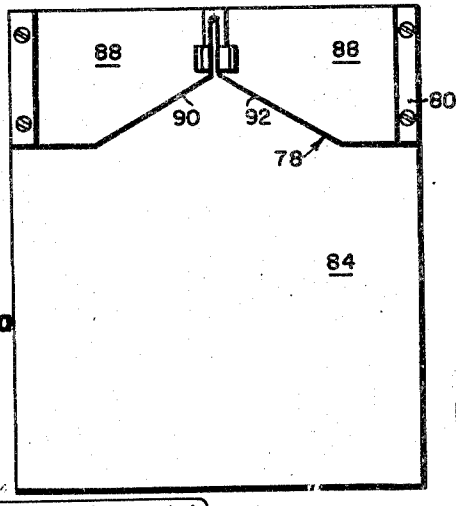
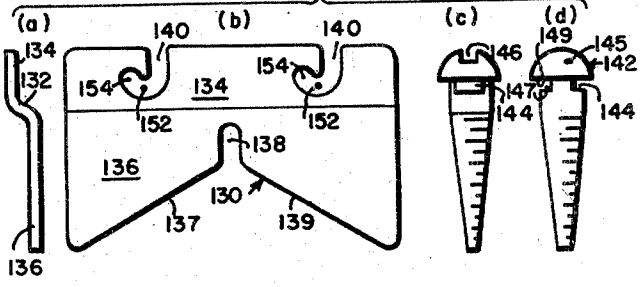


FIG. 5

FIG. 9



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PICTURE FRAME HANGING DEVICE

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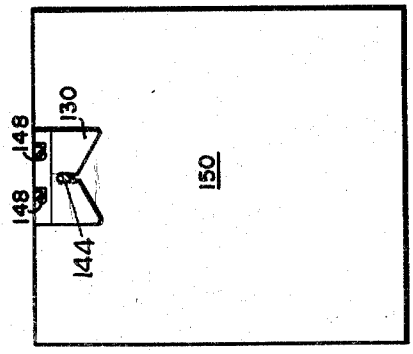


FIG. 8

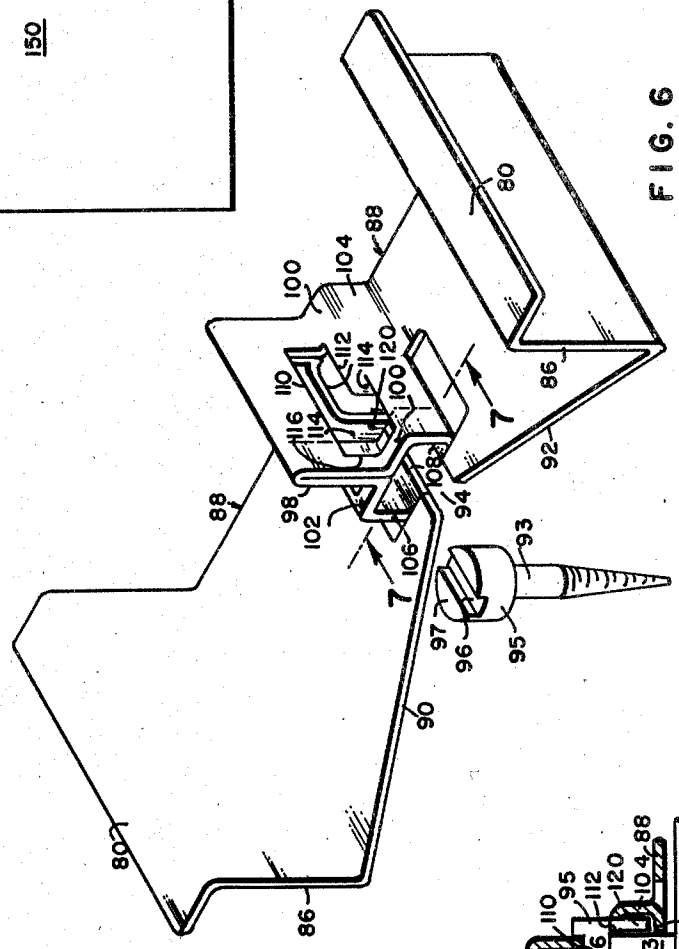


FIG. 6

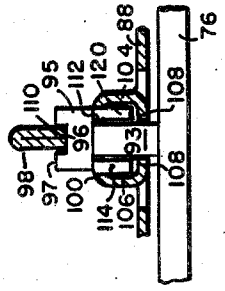


FIG. 7

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PICTURE FRAME HANGING DEVICE

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4 Claims. (Cl. 248—29)

This invention relates to frame hangers such as are used to position picture and certificate frames on walls.

It is one of the objects of my invention to provide a bracket to be fixed to the back of the picture frame before the frame is hung (on a suitable headed nail or screw fixed in the wall) which bracket is so formed that it not only engages the head to suspend the frame, but the bracket also makes it very easy to locate the bracket so that the screw head engages the bracket at the proper point to effect a balanced suspension of the frame on the wall. This is particularly useful in frame hanging where the frames are very large so that the person hanging the frame is unable either to see the nail or screw on the wall because the nail or screw is obscured by the frame while hanging takes place, nor is he able to estimate with satisfactory accuracy the relation between the nail and the bracket on the back of the frame.

It is another object of my invention to provide for hanging a picture frame so that it will hang in balance and therefore with its principal axis vertical and plumb. It is particularly true of my invention that a true center of balance is easily determined and permanently fixed.

It is another object of my invention to provide for hanging a frame in any of many possible fixed angles of inclination to the wall surface upon which it is hung. This is particularly facilitated by the construction of my invention which permits the fixation of the angle after the frame has been hung in place on the wall.

It is another object of my invention to provide for hanging a frame on a wall so that its edges remain horizontal and vertical even though the wall be often shaken. It is common to observe that frames are easily shaken out of plumb by street traffic or light earth disturbances. This invention avoids this annoying displacement by simple means.

It is a further object of this invention to provide a frame hanging fixture of the kind above referred to which is adaptable for frames having full wooden backs or for frames having only paper or fabric backs.

It is another object of this invention to provide a hanging bracket assembly for attachment to a frame which bracket assembly can be so adjusted while hanging the frame that the frame will hang from a point of balance.

It is another object of this invention to provide a frame bracket so that a frame hanging by said bracket from a nail or screw on the wall, will be held in plumb on the wall due to the engagement of the nail or screw with the bracket.

It is still another object of this invention to provide so that a frame hanging bracket engages a supporting screw in such a way that the screw is driven in or out of a wall by using the bracket and frame as a wrench or screw driver handle.

It is a still further object of this invention to provide a frame hanging bracket construction which, while providing the principal advantages above recited, is also of simple construction and requires no tools, other than its own parts, for its installation on wall and frame.

Other objects and advantages of my invention will become apparent in the following specification, wherein reference is made to the accompanying drawing, in which:

Fig. 1 is a rear view of a frame showing one embodiment of the invention attached thereto;

Fig. 2 is a view from the left side of Fig. 1;

Fig. 3 is a view illustrating the hanging of the Fig. 1 modification;

Fig. 4 is a partial section at 4—4 in Fig. 1;

Fig. 4*a* is a plan view of a detail;

Fig. 5 is a back view of a frame illustrating a second modification;

Fig. 6 is an isometric view illustrating the structural detail and manner of use of the second modification;

Fig. 7 is a partial section at plane 7—7 of Fig. 6;

Fig. 8 is a back view of a frame showing a third modification of the invention; and

Fig. 9 illustrates the details of the hanging fixture of the third modification; Figs. 9*a* and 9*b* showing edge and back views of the bracket plate; Fig. 9*c* showing the hanging screw; and Fig. 9*d* showing the hanging screw as seen from the right or left of Fig. 9*c*.

The modification of the invention shown in Figs. 1, 2, 3, and 4 comprises a channel member 10 for securement to the wooden side edges 12 of a frame 14, by suitable screws 16. A bracket 18 formed of stiff but bendable sheet metal is cut out to provide a large window 20 therethrough having two sides 22 and 24 of the window convergent at an obtuse angle, the sides being of about equal length and equally inclined to a center line Y—Y. Near convergence the sides 22 and 24 terminate and join two parallel edges 26 and 28 of a notch 30 the top of which is closed by a curved edge 32. The other ends of sides 22 and 24 terminate upon joining two parallel vertical sides 34 and 36 the lower ends of which are joined by a horizontal edge 38. The bracket 18 provides a frame for window 20 having a base 40, two upright arms 42 and 44, and two inclined and joined arms 46 and 48. The bracket 18 is secured by its base 40 to the channel member 10 by a screw having a large head 50 so that upon tightening the screw against base 40 the bracket 18 is frictionally held against rotation about the screw. The hole in base 40 through which screw 50 passes is preferably a slot elongated in the direction of edge 38 so that the position of the bracket 18 may be shifted right or left to position the centerline Y—Y approximately in coincidence with the vertical axis of the frame. The bracket 10 is further provided with two more horizontal slots 52 and 54 thru which the set screws 56 and 58 pass. The set screws 56 and 58 are threaded into sliding nuts 60, having a boss 62 provided with parallel sides 64, slidably and not rotatably received in slots 52 and 54, and having shoulders 66 abutting the bottom of channel 10.

The base 40 further provides arcuate slots 68 overlying slots 52 and 54 and approximately centered on the screw 50. The bracket 18 is bent on horizontal parallel lines 70 and 72 to provide an initial bias thereof to the Fig. 2 position for packing purposes.

When the frame of Figs. 1, 2, 3 and 4 is to be hung, the elements being assembled as in Figs. 1 and 2, a suitable screw 74 is inserted in a wall 76. The arms 46 and 48 are bent away from the frame. The screws 56 and 58 are loosened. The frame is now placed so that window 20 registers with the screw 74 somewhere opposite it as illustrated in Fig. 3. Since the window 20 has an area of the order of hundreds of times greater than that of the head of screw 74, such registration is practically effortless. The bracket is now pushed against the wall 76 and the frame 14 is lowered. This causes one of guide edges 22 or 24 to engage the shank of the screw 74 with the head 75 passing through the window 20 and engaging the forward face of the arm adjacent the edge to hold the frame on the

shank. The frame is allowed to drop until the shank **74** enters notch **30**, the head **75** being larger than notch **30** and being between the frame **14** and bracket **18** at this time. The dotted line position of Fig. 3 is now attained. The frame is now adjusted by rotating it about screw **50** and when properly adjusted for plumb, the frame and bracket are lifted free of screw **74** while screw **50** holds bracket **18** in adjusted position on channel **10**. Screws **56** and **58** are now tightened. The frame is now ready for final mounting in the dotted line position of Fig. 3.

The modifications of Figs. 5, 6 and 7 provides a bracket **78** so that adjustment for plumb is obtained directly by turning the frame to the plumb position. A metal plate is die cut, bent and formed to the shape shown in Fig. 6, to provide feet **80** by which the bracket is attached to the frame **84** using suitable screws as shown. Spacing portions **86** are bent at right angles to the feet **80** and they are joined by bridging portion **88** which is, therefore spaced from the frame back. The bridging part **88** provides the guiding edges **90** and **92**—corresponding to edges **22** and **24** of Fig 1—terminating adjacent a notch **94** having a width sufficient only to receive the shank **93** of a screw having a head **95** providing a slot **96**. The distance across slot **96** is such as to allow it to receive two thicknesses of the plate snugly, as shown in Fig. 7.

The plate is centrally doubled as shown at **98** and folded outwardly from the doubled portion at right angles to provide lateral areas **100** and **102**. Parallel lateral portions **104** and **106** folded at right angles to areas **100** and **102** form confining walls joined to the main body of the bridge portions **88** by right angle bends. Portions **108** of the bridge are struck out and folded toward each other to extend the notch **94** under the screw head engaging the bar edge **110** as shown. Portions of the doubled plates at **98** are cut away to leave space for the head **95** to be received between the bar **110** and areas **100** and **102**. The lateral areas are also cut away to provide edges **112** separated sufficiently only to receive shank **93** therebetween. Portions **114** are turned down to adjoin portions **108**. The distance between the insides of walls **104** and **106** is enough to receive head **95**, and the distance between the adjacent surfaces of parts **100** and **108** is more than the height of head **95**. The distance from parts **114** to **116** is also enough to receive the diameter of head **95**.

It is, accordingly, evident that, with the screw inserted in a wall leaving shank **93** exposed a little more than the head height, the frame **84** is guided by engagement of edges **90** and **92** with the shank until shank **93** enters notch **94** and head **95** enters pocket **120** defined by parts **108**, **114** and **104**, being stopped by parts **114**. Now the frame is pushed toward the wall until the top **97** of the screw hits bar **110**. If the screw slot **96** does not receive the bar part, no further movement is permitted. However, by rotating the frame, the bar part **110** enters slot **96**, and the head **95** then slides between edges **112** and bar **110** to a position as shown in Fig. 7. It is evident therefore that the positions of the slot **96** of the screw determine the position of frame **84**, and that by turning the frame the screw is adjusted. Since the screw is normally prevented from rotation by its frictional engagement in the wall, the frame **84** is fixed against shifting due to ordinary vibration.

The inclination of the screw shank **93** to the wall determines the inclination of the frame **84** to the wall. With edges **112** and bar **110** closely fitted to the screw head, as shown in Fig. 7, the bar **110** is parallel to the bottom of slot **96** and the frame **84** takes a fixed inclination to the axis of shank **93**.

The modification of Figs. 8 and 9 is provided for small frames, and is designed as a kit of parts. A bracket **130** of stiff bendable metal plate of uniform thickness is provided with an offset bend **132** forming a foot **134**, a centering guide **136** having inclined guide edges **137** and **139**, and a parallel sided notch **138**. A pair of screw receiving notches **140** is provided. A special screw **142** having a neck **144** of rectangular section, is provided with a slot **146** of a width such as to receive the thickness of the bracket **130**. The length of neck **144** is also only slightly greater than the thickness of bracket **30**. Two other screws **148** are provided which are of conventional construction, but having slots equal in width to slots **146**.

Assuming that the bracket **130** is to be used to hang a small wooden frame **150**, the bracket is positioned on the wooden part of the frame, as shown in Fig. 8, and the positions **152** for screws **148** are marked. The bracket **130** is then removed and screws **148** are now screwed in, using the edge of guide **136** as a screw driver bit, and leaving the screw heads unseated so that the bracket can be slipped under the screw heads for a frictional engagement. Also the screw **142** is driven into the wall part way using the edge of guide **136** as a screw driver again. The guide **136** is then used as a wrench by engaging slot **138** with neck **144**, to obtain a substantial turning moment with little effort. The thickness of the narrowed portion of neck **144** is such as to snugly receive the notch **138** thereover.

The notches **140** are then engaged with screws **148**, receiving them in the recesses **154**. The bracket **130** is now engaged with the neck **144** of screw **142**, the guide edges **137** and **139** being employed for the purpose. When neck **144** has been received in slot **138** the head **145** of screw **142** is between guide **136** and the frame **150**, with the position of the plane of guide **136** determined by the shoulders **147** and the bottom **149** of head **145**. The screw **142** is now rotated by turning the frame to its desired plumb position. The inclination of frame **150** is adjusted by bending the guide to the desired degree at offset **132**.

I claim:

1. In combination, a frame, a fastener member having a head and a shank for securement to a wall, and mounting means on the frame for engaging the fastener member, said mounting means providing two slideway edges extending in opposite directions from the vertical centerline of the frame to near the edges of the frame with the edges inclined to each other in obtuse angle relation and convergent upwardly to the center line, said slideway edges presenting rails disposed toward the bottom of the frame and spaced from the frame, a channel member secured to the frame having a base portion for supporting the mounting means and the mounting means having a base portion; a friction device for securing the base portions of the mounting means and the channel member together for relative adjustment thereof while the frame is hung on the fastener, and means for securing the base portion of the mounting member in adjusted position on the channel member.

2. For use with a picture frame or the like and with a fastener member such as a nail having a head and a shank portion driven into a wall or the like, in combination: mounting means for permanent attachment to the picture frame and for hanging engagement with the head and shank of such fastener member, said mounting means including a fastener engaging element having two slideway edges positioned to extend in opposite directions from the vertical center line of the frame to near the edges of the frame with the slideway edges inclined to each other in obtuse-angle relation and convergent toward the centerline of the frame, said slideway edges presenting surfaces disposed at right angles to the plane of the frame, said mounting means further having a base element to be fixed to the frame, a friction device for securing the fastener engaging element on the base element so that the two elements may be relatively adjusted while the frame to which they are attached is being mounted on the fastener member by manipulation of the frame, and means for securing the fastener element in adjusted position on such frame and base member.

3. In combination, a frame, a fastener member having

a head and a parallel sided neck portion adjacent the head upon which to hang such frame; mounting means for permanent and adjustable attachment to the picture frame and for hanging engagement with the head and shank of such fastener member, said mounting means including a fastener engaging element having two slideway edges positioned to extend in opposite directions from about the middle of the frame to near the edges of the frame with the slideway edges forming a notch having parallel sides separated a distance to snugly fit the neck of the fastener member to prevent relative rotation of the engaging element and the fastener member, and means for securing the fastener engaging element on the frame so that it may be relatively adjusted on the frame while the frame and the mounting means are being hung on the fastener member by manipulating the frame and means for securing the fastener engaging element in adjusted position on such frame member.

4. For use with a picture frame or the like and with a fastener member having a head and a parallel sided shank portion driven into a wall or the like upon which to hang such frame: mounting means for fixed attachment to the

frame for hanging engagement with the head and parallel sided shank portion of such fastener member, said mounting means including a fastener engaging element having a parallel sided notch to fit the shank portion of the fastener member snugly, and means for securing the fastener engaging element on the frame so that it may be relatively adjusted on the frame while the frame and the mounting means are being hung on the fastener member by manipulating the frame, and means for securing the fastener engaging element in adjusted position on such frame.

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