May 24, 1955 R. L. HARTY 2,709,055

SUSPENSION DEVICE

Filed Jan. 8, 1952

Fig. 1

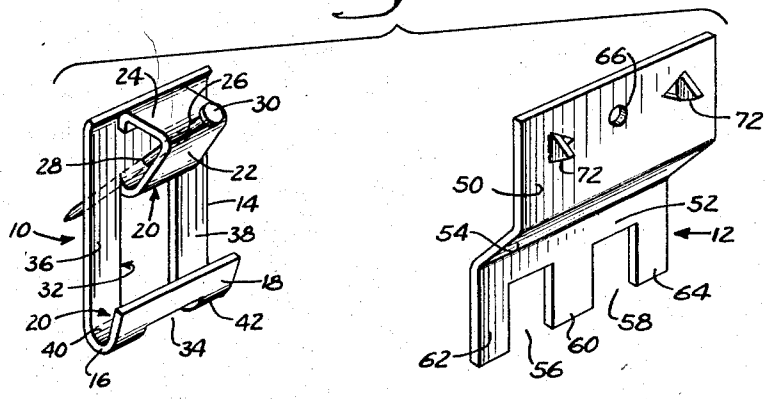


Fig. 2

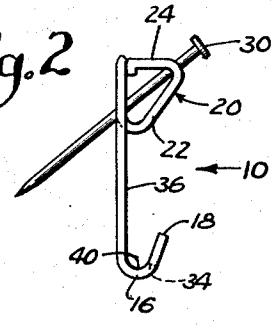


Fig. 3

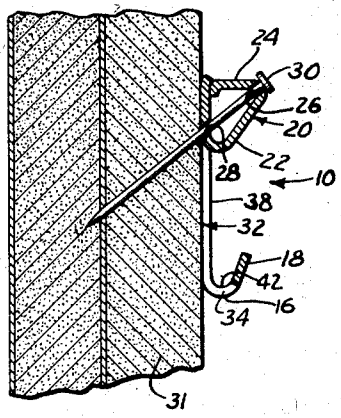
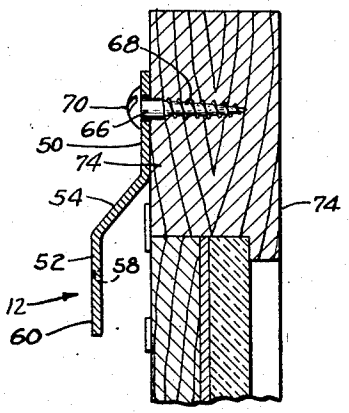


Fig. 4



INVENTOR.
Raymond L. Harty

BY
Mann, Brown and Hansmann
Attys.

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SUSPENSION DEVICE

Raymond L. Harty, Chicago, Ill.

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2 Claims. (Cl. 248—28)

The improved suspension device comprising the present invention is primarily adapted for use in suspending pictures, mirrors and the like on a wall. The invention is, however, capable of other uses and, if desired, the same may, with or without modification be employed for suspending other objects or bodies that are to be supported from a wall surface.

The present method of hanging pictures and like objects from a wall consists in attaching a wire or string at its ends to spaced points at the opposite sides of the picture frame and passing the wire or string over a hook attached to the wall. This method possesses numerous limitations, principal among which is that a picture thus hung will frequently slip to a non-horizontal position due to vibrations, jars in cleaning and other causes. Furthermore, the installation of pictures on the wall by this method is accomplished by numerous difficulties. Since it is considered desirable that the hanging means be concealed, it is necessary that the wire or string attached to the picture be made relatively short so that when passed over the supporting means on the wall the upper edge of the picture will be high enough to conceal the suspension means. Where the wire is sufficiently short as to accomplish this purpose, it is maintained so close to the back of the picture that it is difficult to reach behind the picture and apply the wire to the supporting hook.

Additionally, particularly where heavy pictures are concerned, a short wire applies a tremendous strain at its ends to the nails or other fastening devices by means of which it is attached to the picture frame, thus resulting in splitting of the wood of which the frame is made and sometimes resulting in dropping of the picture. One decided disadvantage that is attendant upon this method of hanging pictures is the difficulty of estimating the length of wire which is required to maintain the picture at a predetermined elevation. Due to the fact that pictures are invariably hung at close range, difficulty is always experienced in adjusting the picture to a true horizontal level and it is necessary to survey the picture at a distance and make one or more readjustments before the desired horizontal effect is achieved. Such a difficulty is of course particularly annoying if the picture is hung at a great height where it is necessary to stand upon a stepladder or other support in order to hang the picture.

Yet another difficulty accompanying this method of hanging pictures arises from the fact that certain inferior makes of picture wire have a tendency to stretch as time elapses, thus lowering the elevation of the pictures to a noticeable extent and frequently causing the suspension means to appear, with a consequence that the picture must be taken down and the suspension wire readjusted.

Another method that is sometimes employed in hanging picture and mirror frames consists in the provision of one or more metal loop devices which are attached to the frames at strategic points and which, when so attached, are designed for registry with the head of a

nail or other supporting means on the wall. These devices occupy positions of such close proximity to the plane of the picture frame that it is quite difficult to align them with their counterpart elements on the wall. Where the frame-attached device or devices consist of metal loops hinged to the picture frame, as they frequently do, it is very difficult to maintain them in an outstanding position where they may be hooked over the wall suspension means. Frequently such metal loops will tilt to a pendulous position and, when this occurs, it is necessary to again orient them for a succeeding attempt to hang the picture.

The present invention is designed to overcome the above noted limitations that are attendant upon such picture hanging methods and apparatus, and toward this end it contemplates the provision of a pair of cooperating supporting devices, one designed for attachment to the wall and the other designed for attachment to the picture frame and which, when thus attached and assembled in operative relationship, will automatically fix the frame in a horizontal position at the desired level against ordinary conditions of displacement.

The provision of a suspension device which will accomplish the above mentioned aim being the principal object of the invention, a further object is to provide a suspension device which will permit removal of the picture frame for cleaning or other purposes and rehanging thereof at a definite fixed level by unskilled hands. By such an arrangement the improved picture hanging device of the present invention will be further valuable in such places as a hotel, where pictures are frequently changed from room to room to satisfy the varying esthetic tastes of the guests, or for purposes of replacement. Additionally, in art galleries where pictures frequently undergo a change of location, the present picture suspension device will be found useful.

It is another object of the invention to provide a mirror or picture frame suspension device of this character in which the picture attachment device and the wall attachment device may each be formed of a light sheet metal stamping with the minimum of deformation thus materially contributing to the low cost of manufacture. A similar and related object is to provide such a suspension device in which both parts thereof are of one-piece construction.

Another object of the invention is to provide a suspension device of this sort in which the element secured to the picture frame may be secured in proper position by a single screw, yet which when secured in position will not tilt about the securing axis.

Still another object of the invention is to provide a two-piece suspension device in which the cooperating parts thereof are interchangeable when a number of the wall-attached parts are installed at different locations and a number of the picture-frame-attached parts are installed on different picture frames, thus enabling interchanging and substitution of pictures at various predetermined locations.

It is also an object of the invention to provide a suspension device for picture frames and the like including a wall attachment of novel construction which is so fashioned that the securing device employed in connection therewith will be driven into the supporting wall at a downward inclination so as to materially increase the weight carrying capacity of the device.

The provision of a suspension device for picture frames which is extremely simple in its construction; one which is possessed of no moving parts and which, consequently, is unlikely to get out of order; one which is rugged and durable and which, therefore, is possessed of long life; and one which otherwise is well adapted to perform the service required of it, are further desiderata that have

been borne in mind in the production and development of the present invention.

In the accompanying single sheet of drawings forming a part of this specification, one embodiment of the invention has been shown for illustrative purposes.

In these drawings:

Fig. 1 is a perspective view of the cooperating members which constitute the improved picture frame suspension means comprising the present invention;

Fig. 2 is a side elevational view of the wall-attached element of the suspension device;

Fig. 3 is a vertical sectional view taken substantially centrally through the wall-attached element of Fig. 2 and showing the latter applied to a wall surface; and

Fig. 4 is a vertical sectional view taken substantially centrally through the picture-frame-attached element showing the same secured to the rear side of a picture frame.

In compliance with Section 4888 of the Revised Statutes, a preferred form of the invention has been shown in the drawings and will be described herein, but it should be understood that the invention is not limited to the specific disclosure made, and that the appended claims should be construed as broadly as the prior art will permit.

Referring now to the drawings in detail and in particular to Fig. 1, the improved suspension device comprising the present invention is in the form of a two-piece separable assembly including a wall attachment **10** and a frame attachment **12**, the former being adapted to be applied to a vertical wall surface and the latter being adapted to be applied to the rear face of a picture frame or similar object to be supported on the wall. The attachment **10** is designed to be permanently attached to the wall and the attachment **12** permanently applied to the frame, and the two attachments are capable of ready assembly and disassembly for picture hanging or removal purposes.

In the following description of the wall attachment **10** and of the frame attachment **12**, reference to "forward" and "rearward" directions will be made with respect to the wall surface from which the picture or other object is to be supported. Thus, any reference to a forwardly extending portion or part of the wall attachment will imply a direction extending outwardly from the wall into the room enclosure. Such a reference applied to the frame attachment **12** will imply a direction extending toward the back of the frame and away from the wall structure. Similarly, a rearward direction applied to the frame attachment **12** will imply a direction extending toward the wall surface.

The wall attachment **10** is in the form of a one-piece light sheet metal stamping including a substantially flat back or plate portion **14** designed for face-to-face contact with the wall surface and having its lower end turned forwardly as at **16** and upwardly as at **18** to provide a cradle or ledge portion.

A narrow strip **20** in the medial regions of the sheet metal attachment is struck forwardly from the plane of the metal and is curled upwardly as at **22** and inwardly as at **24** to provide a tubular attachment portion adjacent the top of the member. A pair of diametrically-opposed holes or openings **26** and **28** are formed in the curled member **20** and are so disposed relative to each other that a nail **30** or other anchoring may be driven through these holes and into a wall, such as the plaster wall designated at **31** in Fig. 3, at a rearwardly and downwardly inclined angle to enhance the weight-carrying ability of the attachment **10** as a whole. The outwardly-struck strip **20** creates a void **32** in the medial regions of the attachment which extends from a region adjacent the top of the attachment downwardly and through the central portion of the outwardly and upwardly turned lower end thereof, the void thus created at the lower end being designated at **34**. The void **32** provides a pair of parallel side portions **36** and **38** as well as generally horizontal extending ledge portions **40** and **42** on each side of the void **34**.

The attachment **12** is in the form of a sheet metal plate having a forward attachment portion **50**, a downwardly-projecting offset flange portion **52** and an intermediate inclined portion **54**. The flange portion **52** is provided with a pair of spaced notches **56** and **58** which extend upwardly from the lower edge thereof and provide therebetween a central downwardly-extending tongue **60**. Marginal tongues **62** and **64** are formed as a consequence of the slots **56** and **58**, respectively. The forward plate portion **50** is provided with a central aperture **66** therein designed for reception therethrough of a fastening device such as a screw **68**, the head **70** of which firmly abuts the plate portion **50**, as shown in Fig. 4. A pair of pointed tongues **72** may be struck forwardly from the metal of the plate **50** and are adapted to penetrate the wood or other material of a picture frame such as the frame **74** on opposite sides of the screw **68** to prevent tilting of the attachment **12** relative to the frame after the same has been applied thereto.

In suspending the picture frame **74** from the wall **31**, the attachment **10** is applied to the wall at the desired location in the manner shown in Fig. 3. The attachment **12** is applied to the rear face of the picture frame **74** on the vertical center line and along the upper horizontal cross piece of the frame below the upper edge thereof, as shown in Fig. 4. It is then merely necessary to insert the tongue **60** into the void **34** so that the upper horizontal edges of the slots **56** and **58** rest upon the ledge portions **40** and **42**, respectively, with the marginal tongues **62** and **64** straddling the outer side edges of these ledge portions. The forward extent of the void **34** is sufficiently restricted that there will be little, if any, fore and aft play between the two attachments **10** and **12**, and the width of the tongue **60** is but slightly less than the width of the void **34** so that there shall be little, if any, side play. Obviously, the ledge portions **40** and **42** assume the same general horizontal level as do the upper edges of the slots **56** and **58**. Thus, when the picture is applied to the wall in the manner outlined above, the same will be constrained to assume a horizontal position of stable equilibrium.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings and described in this specification, as various changes in the details of construction may be resorted to without departing from the spirit of the invention. For example, either the central tongue **60** or the flanking tongues **62** and **64** could be omitted without harm. Only insofar as the invention has particularly been pointed out in the accompanying claims is the same to be limited.

I claim:

1. A suspension device for picture frames and the like comprising in combination a sheet metal member designed for attachment to a wall surface and including a back portion adapted to be positioned in face to face contact with the wall surface and attached thereto, and a flange projecting forwardly from the bottom portion thereof having a centrally located void therein having substantially parallel side walls and providing horizontal aligned supporting ledge portions on opposite sides thereof, and a second sheet metal member designed for attachment to a picture frame or the like, including an upper forward portion adapted to be positioned in face to face contact with the rear face of the frame and attached thereto and having a rearwardly offset depending flange formed thereon adjacent its lower portion, there being a pair of spaced notches formed in said depending flange and extending upwardly from the lower edge of the latter to provide a central downwardly projecting tongue therebetween flanked by horizontal aligned support surfaces, said central tongue extending into said void and having substantially straight side walls throughout their length which are adapted to engage the side walls of the void in the forwardly extending ledge portion of the wall attachment and extending thereinto for limiting relative

side movement of said members with the support surfaces of the second member resting on said supporting ledge portions of the wall attachment member, said wall attachment member also having a void in said back portion, and an integral tongue struck from said back portion to form at least a part of said back portion void and contiguous with the upper margin of the void in said back portion, said integral tongue being bent forwardly and then rearwardly to form a tubular attachment portion, said tubular attachment portion and said back portion having obliquely aligned holes for the reception of a supporting nail.

2. A suspension device for picture frames and the like comprising in combination a sheet metal member designed for attachment to a wall surface and including a back portion adapted to be positioned in face to face contact with the wall surface and attached thereto, and a flange projecting forwardly from the bottom portion thereof having a centrally located void therein providing horizontal aligned supporting ledge portions on opposite sides thereof flanked by vertical shoulders, and a second sheet metal member designed for attachment to a picture frame or the like, including an upper forward portion adapted to be positioned in face to face contact with the rear face of the frame and attached thereto and having a rearwardly offset depending flange formed thereon adjacent its lower portion, there being a pair of spaced notches formed in said depending flange and extending upwardly from the lower edge of the latter to provide a central downwardly projecting tongue therebetween flanked by horizontal aligned support surfaces substantially coextensive in length with said ledge portions and a pair of downwardly extending marginal tongues, said central tongue extending into the void provided in the forwardly extending flange of the wall attachment member with said marginal tongues straddling said supporting ledge portions and with said support surfaces of the second member resting on said ledge portions of the wall attachment member, said downwardly extending tongues cooperating with said shoulders in said supporting ledge portions of the wall attachment member to limit relative lateral movement between the wall attachment member and said second member, said wall attachment member also having a void in said back portion, and an integral tongue struck from said back portion to form at least a part of said back portion void and contiguous with the upper margin of the void in said back portion, said integral tongue being bent forwardly and then rearwardly to form a tubular attachment portion, said tubular attachment portion and said back portion having obliquely aligned holes for the reception of a supporting nail.

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