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ADJUSTABLE STANCHION

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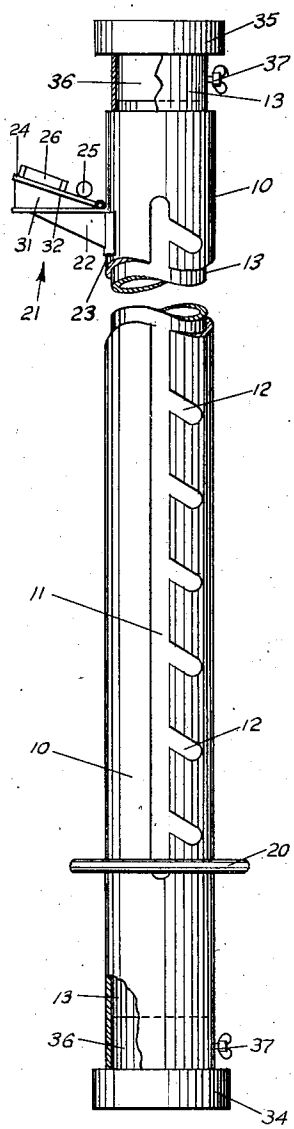


Fig. 1

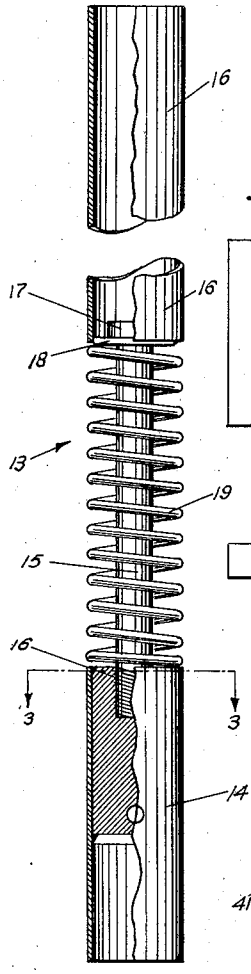


Fig. 2

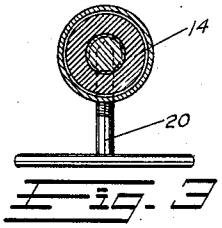


Fig. 3

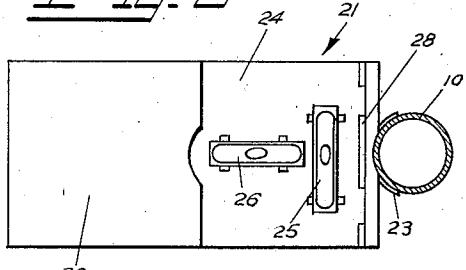


Fig. 4

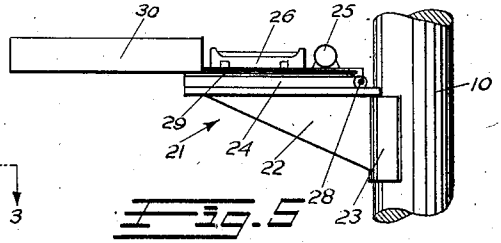


Fig. 5

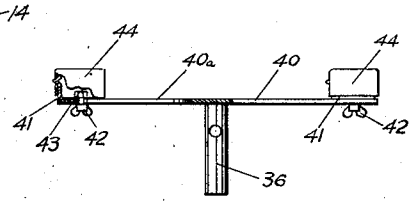


Fig. 6

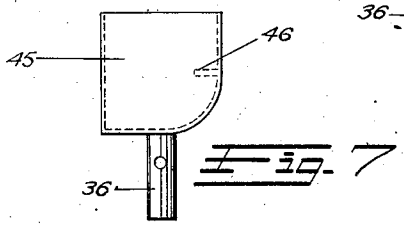


Fig. 7

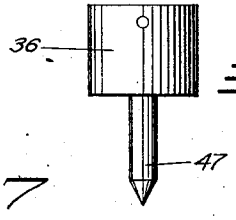


Fig. 8

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ADJUSTABLE STANCHION

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7 Claims. (Cl. 248—354)

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This invention relates to an adjustable support or stanchion for temporary holding jobs.

One instance in which this support is particularly useful is in ship construction for temporarily holding fittings, such as berthing sockets, batten sockets, electric light receptacles, switch boxes, overhead wireway brackets, coamings, etc., in place while they are being welded or otherwise permanently secured. In large ships, as for example aircraft carriers, there are thousands of such fittings to be installed, and use of the device of this invention enables an invaluable saving to be made in time and labor.

An object of this invention is to provide an adjustable support for temporarily holding fittings until they are permanently secured.

Another object is to provide an adjustable support for temporarily holding, levelling and aligning fittings until they are permanently secured.

A further object is to provide an adjustable stanchion adapted to be used in installing fittings on a ship upon building ways.

Further objects and advantages of this invention, as well as its construction, arrangement and operation will be apparent from the following description and claims in connection with the accompanying drawing, in which

Fig. 1 is a front elevation partly broken away of the adjustable support of this invention,

Fig. 2 is a front elevation partly in section of the inner member of the support shown in Fig. 1,

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2,

Fig. 4 is a detailed plan view of the level attachment upon the support shown in Figure 1,

Fig. 5 is a detailed side view of the level attachment shown in Fig. 4,

Fig. 6 is a side view partly in section of one type of top attachment adapted to be secured to the inner member shown in Fig. 2,

Fig. 7 is a side view of another type of top attachment adapted to be secured to the inner member shown in Fig. 2, and

Fig. 8 is a side view of one type of bottom attachment adapted to be secured to the bottom of the support shown in Fig. 1.

Fig. 1 shows a sleeve 10, having a longitudinal slot 11, which is provided with notches 12 at spaced intervals. An inner member, generally designated as 13, telescopically engages the sleeve 10. The inner member 13, shown in detail in Fig. 2, comprises a base piece 14 having a connecting member 15 of smaller diameter fixedly secured thereto as at 16. The connecting member 15 telescopically engages a top member 16 and is prevented from becoming detached therefrom when extended by a head 17 which engages a washer 18 fixed to the top member 16. A coil spring 19 bearing upon the base piece 14 and the washer 18 on the top member 16 normally keeps the top member 16 and base piece 14 apart to the full limit allowed by the connecting member 15.

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The base piece 14 of the inner member 13 is provided with a lifting handle 20, shown in detail in Figure 3, which extends through the longitudinal slot 11 in the sleeve 10 and is adapted to be placed in any one of the notches 12 (Fig. 1).

A levelling attachment, generally designated as 21 (Fig. 1) is provided at a convenient height on the sleeve 10 of the support for enabling the work to be levelled or aligned simultaneously with being supported. This attachment 21, shown in detail in Figs. 4 and 5, comprises a bracket 22 attached to the sleeve 10 as at 23 and extending normally therefrom. A table 24 having a transverse level 25 and a longitudinal level 26 mounted thereon is hinged upon the bracket 22 as at 28. A groove 29 is provided at each side of the table 24 for slidably receiving a cover member 30, which is used for protecting the levels 25 and 26 when overhead work is being done. A wedge 31 (Fig. 1), having a sloping edge 32, of a declivity corresponding to the declivity of a ship upon building ways, is provided for insertion between the bracket 22 and table 24 when the stanchion is to be used upon ships on ways.

The bottom of the sleeve 10 and the top of the inner member 13 are provided with attachments 34 and 35, respectively, which are shaped to hold the fittings to be installed or are designed to rest upon the deck or bulkhead as the case may be. The bottom attachment 34 is provided with a shank 36 of suitable dimensions to enable it to be inserted within the sleeve 10, and the top attachment 35 is provided with a similar shank 36 of suitable dimensions to enable it to be inserted within the inner member 13. The attachments are secured by means of a thumbscrew 37 extending through a hole in the sleeve 10, or in the inner member 13, and engaging a threaded matching hole in the shank 36.

If a support of greater length is desired an extension member can be provided with connections adapted to fit either the bottom of the sleeve 10 or the top of the inner member 13.

A top attachment adapted to be used in installing overhead batten sockets, is shown in Fig. 6. This attachment comprises a cross member 40 secured to the shank 36, and having a spring clip 41 mounted upon each end, as by

wing screw 42 and nut 43. The cross members 40 may be slotted at each end as at 40a to allow the spring clips 41 to be adjusted as desired. The batten sockets 44 to be installed are fitted over the spring clips 41 and are securely held thereby until permanently fixed to the overhead. When the batten sockets 44 are permanently fixed, the stanchion is lowered and the spring clips snap loose.

Another top attachment, adapted to be used in installing overhead berthing hanger hooks, is shown in Fig. 7. This attachment comprises a hook receptacle 45 of a width slightly larger than the hook to be installed. A stop 46 is provided for receiving the end of the hook and for holding the hook in place.

Fig. 8 shows another type of bottom attachment which is especially adapted to prevent the stanchion from sliding and is also particularly useful in lining up jobs from center punch works on a deck or bulkhead. This attachment comprises a steel point 47 secured to the shank portion 36.

Optionally, other types of bottom and top attachments designed for the particular job at hand can be provided without departing from the principles of the invention as described and claimed herein.

In operation, the types of attachments are chosen according to the nature of the fittings to be installed and are placed in position upon the ends of the stanchion. If the work is to be done upon a ship on building ways, the declivity wedge 31 is inserted between the level table 24 and bracket 22. This is not necessary if the ship is in drydock or otherwise resting upon a level keel, or if the stanchion is to be used in buildings or other stationary structures. The fittings to be installed are then placed in or upon the attachments, as for example the batten sockets 44 upon the spring clips 41 (Fig. 6). The stanchion is then placed in approximately the correct position and is adjusted by lifting on the handle 20 and placing it in the proper notch 12. If the fitting held by the attachment is to be levelled, or if a top fitting is to be aligned with a center punch mark on the deck, the stanchion is levelled by using the levelling attachment 21. The cover member 30 is put in place on the level attachment 21 before overhead work is done. The stanchion supports the work and holds it in place under tension of the spring 19. The fitting can then be permanently secured as by welding or other means, the supporting stanchion allowing the operator the use of both hands in completing the job. The fitting is thus easily installed in its proper position. The operator will not be subjected to burning by welding sparks or otherwise inconvenienced due to having to hold the job with one hand.

Various modifications and changes can be made in the devices described above without departing from the spirit and scope of this invention as set forth in the appended claims.

The invention described herein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment of any royalties thereon or therefor.

What is claimed is:

1. In combination, an adjustable support for temporarily holding and supporting fittings, said support having a longitudinal axis and providing an upper plane surface normal to said axis, means providing a second plane surface at a predetermined angle with the first-mentioned surface, and levelling means on said second plane surface whereby, when said axis is adjusted to bring said second surface into a horizontal position, said upper surface is at the predetermined angle with the horizontal.

2. An adjustable support for temporarily holding and levelling fittings comprising a supporting sleeve, said sleeve having a longitudinal axis and providing an upper plane surface normal to said axis, means providing a second plane surface at a predetermined angle with the first-mentioned surface, an attachment upon one end of said sleeve, levelling means on said second plane surface whereby, when said axis is adjusted to bring said second surface into a horizontal position, said upper surface is at the predetermined angle with the horizontal, an inner member telescopically engaging the other end of said sleeve and extending therefrom, an attachment upon the extended end of said inner member adapted to hold said fittings, and means for yieldably holding said inner member at any of a plurality of extended positions in relation to said sleeve.

3. An adjustable stanchion comprising a supporting sleeve having a longitudinal slot therein, a plurality of notches at spaced intervals upon said slot, an attachment upon the bottom of said supporting sleeve, an inner member telescopically engaging said supporting sleeve and having an extending top piece and a base piece spaced therefrom, a connecting member between said top piece and said base piece telescopically engaging one of said pieces, a coil spring disposed about said connecting member and arranged so as to yieldably extend said top piece from said base piece, an attachment upon the extending end of said top piece and a lifting handle secured to said base piece extending through said longitudinal slot in said sleeve and adapted to be disposed in any of said notches in said slot.

4. An adjustable stanchion comprising a supporting sleeve having a notched longitudinal slot therein, an attachment upon the bottom of said sleeve, a bracket secured to said sleeve and extending normal thereto, a hinged table mounted on said bracket, a detachable declivity wedge between said table and said bracket, a level mounted upon said table, a cover member slidably engaging said table for covering said level, an inner member telescopically engaging said sleeve and having an extending top piece and a base piece spaced therefrom, connecting member fixed to said base piece and telescopically engaging said top piece, a coil spring disposed around said connecting member and exerting a yieldable force upon said top piece and said base piece, an attachment upon said top piece, and a lifting handle secured to said base piece extending through said longitudinal slot in said sleeve and adapted to be disposed in any one of the said notches in said longitudinal slot.

5. An adjustable stanchion comprising supporting means, an inner member telescopically engaging said supporting means and having an extending top piece and a base piece spaced therefrom, a connecting member between said pieces and telescopically engaging one of said pieces, resilient means arranged to extend yieldably said top piece from said base piece, lifting means attached to said base piece and means for selectively receiving said lifting means at a plurality of positions along said supporting means.

6. An adjustable stanchion comprising supporting means, an inner member telescopically

engaging said supporting means and having an extending top piece and a base piece space therefrom, a connecting member between said pieces and telescopically engaging one of said pieces, resilient means arranged to extend yieldably said top piece from said base piece, lifting means attached to said base piece and means for selectively receiving said lifting means at a plurality of positions along said supporting means, bracket means extending normally from said supporting means, a declivity wedge on said bracket means, and means for indicating when the top of said declivity wedge is horizontal.

7. In combination means providing a first surface and adapted to be supported by a second non-horizontal surface and to be movable toward and away from a normal to the non-horizontal surface, means attached to the first mentioned means and defining a third surface parallel to the first mentioned surface, means adapted to define a fourth surface at an angle with the third surface equal to the declivity of the second surface and means for indicating when the fourth surface is level whereby a workman using said combination knows when the combination has been moved to a position such that said first surface is substantially parallel to said non-horizontal surface.

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