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SLEEVE HOLDING DEVICE

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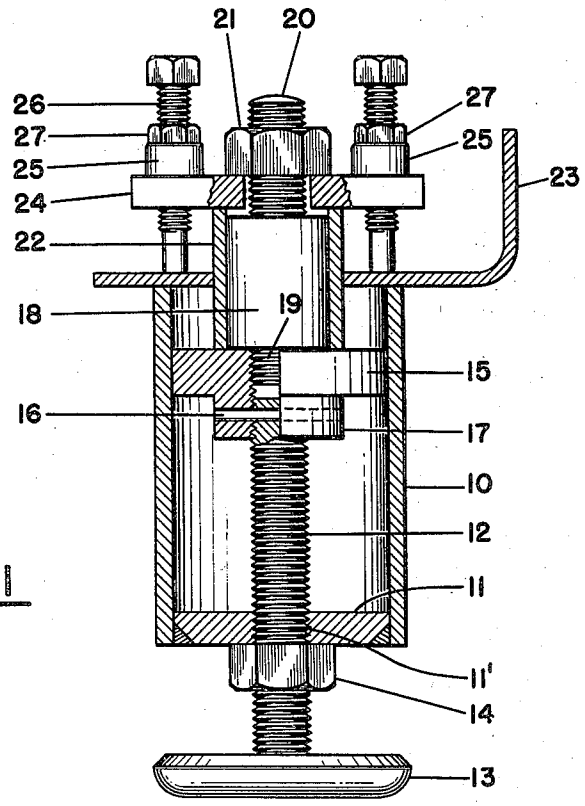


FIG. 1

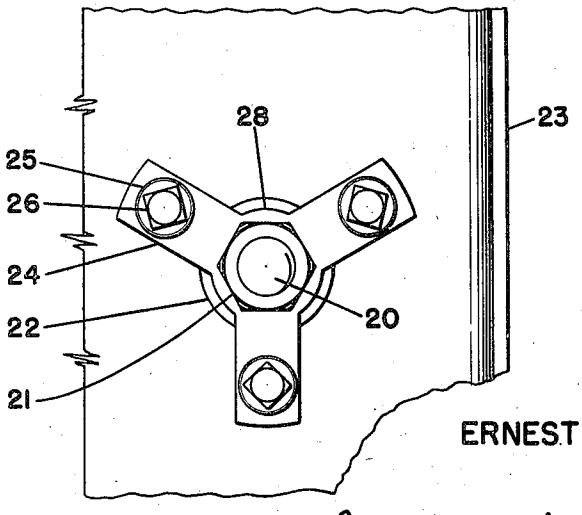


FIG. 2

Inventor

ERNEST L. CORLEY

By Ralph L. Chappell

Attorney

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SLEEVE HOLDING DEVICE

Ernest L. Corley, Charleston, S. C.

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1 Claim. (Cl. 113—99)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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This invention relates to a work holding clamp. Further it relates to a work holding clamp comprising two members which operate in opposition to each other, thereby clamping the work in position. Specifically the invention relates to a work holding clamp adapted to position a metallic sleeve in a door frame.

One object of the invention is to provide a clamp which will position a dog bearing sleeve so that the sleeve may be welded to a door frame or other structure. Another object of the invention is to provide a clamping device which after having been set for a particular size sleeve is readily operable to position in succession, a number of sleeves of the same size. A further object of the invention is to provide a work positioning clamp which is simple in operation, which is easily manufactured and is of strong and durable construction.

In the industry it has been customary to provide the dog bearing sleeve for standard size doors by the drop forging process. Such sleeves in general have positioning lugs on their exterior face so that they may readily be welded without use of a clamping device. But in ship and other construction, it frequently happens that the doors or covers to be equipped with dog and lug closing devices are not of standard dimensions and bearing sleeves are not readily available for them. In such cases it is customary to manufacture and place the bearing sleeves in position as the ship or other construction is being carried forward. In order to facilitate the placing of straight sided sleeves in such cases, the inventor has provided the clamping device herein described and claimed.

In order to have a clearer conception of one embodiment of the invention, reference is made to the drawings in which:

Figure 1 is a vertical, sectional view through the device, partly in section and partly in elevation.

Figure 2 is a plan view of the same in elevation.

In Figure 1 the clamping device is shown positioning a dog bearing sleeve in a door frame. In this figure, 10 represents a sleeve which is provided with an end plate 11. The latter is attached to sleeve 11 by any conventional means such as welding. Plate 11 is provided with a threaded hole 11' at its center in which threaded bolt 12 fits. Bolt 12 is provided with an operating handwheel 13 and lock-nut 14 which locks the bolt in position. Upon the other end of bolt 12 is attached plate 15 by means of pin 16 which extends through boss 17 and bolt 12. A cylindrical spin-

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dle 18 is provided with threaded stud 19 which fits into plate 15 at the center thereof. From the other end of spindle 18 extends threaded stud 20, which is provided with nut 21. Stud 20 extends freely through tripod plate 24 which is provided with three threaded bosses 25. Into these bosses fit bolts 26. Bolts 26 are provided with lock-nuts 27 which hold them in adjusted position. Tripod plate 24 is cut away as shown at 28 in Figure 2. Bearing sleeve 22 is positioned on spindle 18, is centered thereby and held in position in door frame 23 by means of this clamping device.

In operation, bearing sleeve 22 is placed on spindle 18. Bolt 12 is then adjusted so that when sleeve 10 is brought up against the face of door frame 23, sleeve 22 will be positioned approximately on its transverse median line. Lock nut 14 is then turned to fix bolt 12 in this position. Nut 21 is removed from stud 20 and plate 24 is placed around stud 20 and is brought into contact with the end of bearing sleeve 22. In order to do this, it may be necessary to "back off" bolts 26. Then lock-nut 21 is turned on stud 20 until it firmly presses plate 24 against the end of sleeve 22. Bolts 26 are now turned until they press against door frame 23 and are locked in position by lock-nuts 27. Sleeve 22 is now tack-welded to door frame 23 in the cut-out areas of plate 24. The clamp has now been adjusted so that it may readily fit several sleeves of the same dimensions. All that is necessary to do is to "back off" nut 21 from stud 20, remove the assembly from welded sleeve 22, place another sleeve on spindle 18 and position it in the next hole by placing the tripod plate over stud 20 and turning lock-nut 21 firmly against plate 24 after the sleeve has been so positioned.

While the embodiment of the clamping device shown herein has been drawn to a clamp intended for placing cylindrical, dog bearing sleeves in position, it is obvious that the device could be used for positioning other shaped elements in position for welding and it is not desired to be limited to a clamp for merely placing cylindrical door sleeves for welding. Such modifications are within the scope of this present invention and are included therein.

This invention may be made or used by or for the Government of the United States for governmental purposes without the payment to me of any royalties thereon or therefor.

What I claim is:

An adjustable clamping device adapted to hold a cylindrical sleeve in position for welding in an

opening in a metal plate comprising a cylindrical body adapted to abut said metal plate, an end plate secured in said cylindrical body, a bolt threadedly engaged with said end plate, a movable plate for supporting said sleeve secured to the end of said bolt and slideably engaged in said cylindrical body and adapted to be adjustably positioned thereby relative to said metal plate, a dismountable spindle adapted to fit within said sleeve threadedly engaged in said movable plate, a projection coaxially secured and extending from said spindle, a closing plate loosely mounted on said projection, means for adjustably positioning said closing plate with respect to said metal plate, and means mounted on said projection for

securing said closing plate relative to said metal plate and said movable plate, whereby said sleeve is securely supported on said spindle and between said movable plate and said closing plate.

ERNEST L. CORLEY.

REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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