Feb. 19, 1946. A. D'AVANZO 2,395,255

BRACKET

Filed Oct. 17, 1944

Fig. 1.

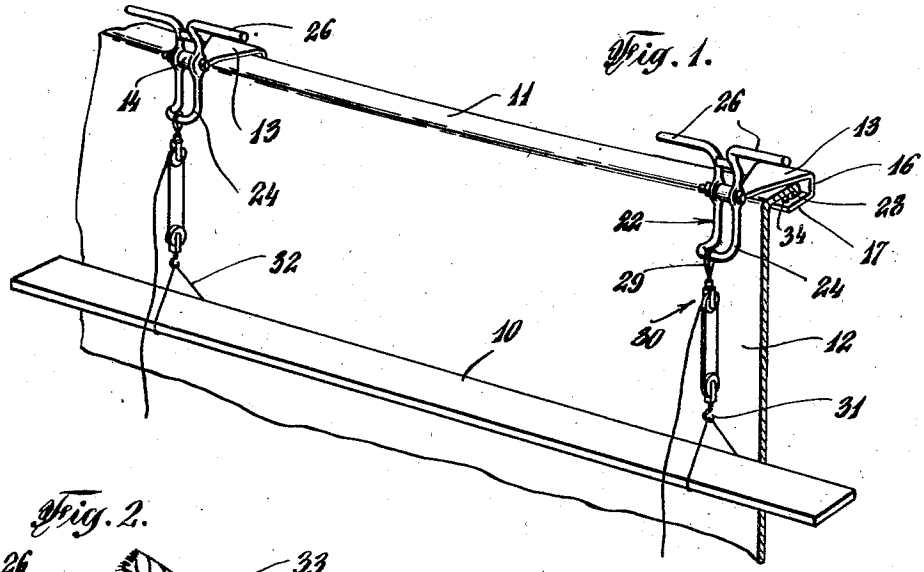


Fig. 2.

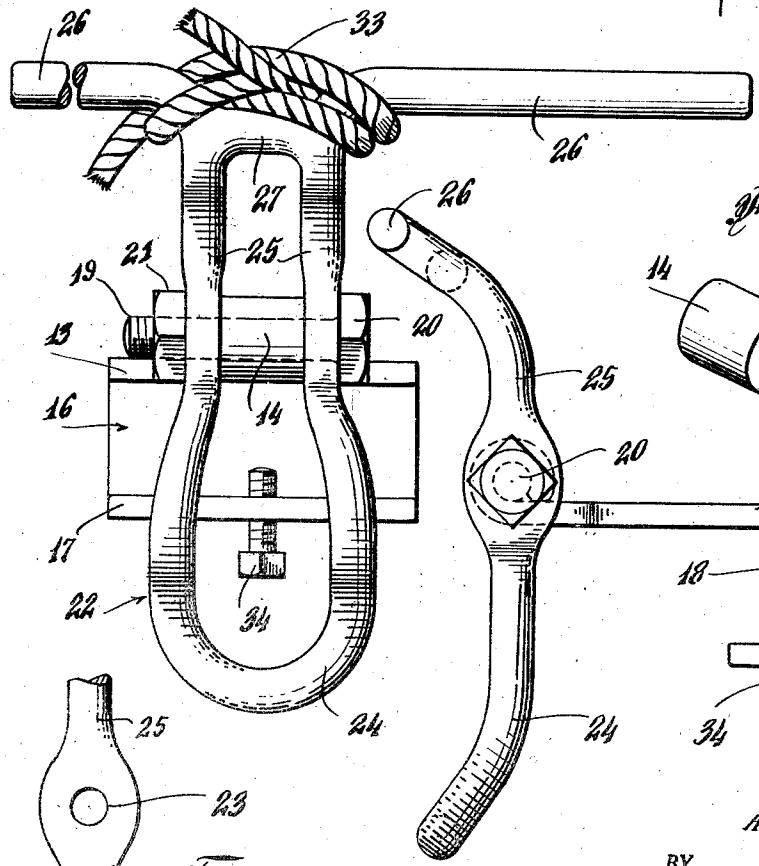


Fig. 4.

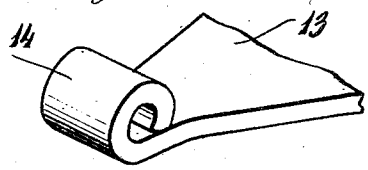


Fig. 3.

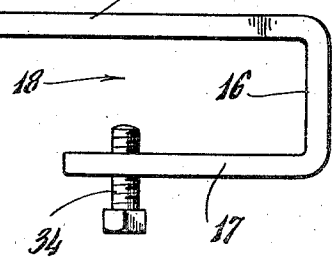


Fig. 5.

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3 Claims. (Cl. 248—226)

This invention relates to a device or bracket for suspending scaffolds and the like from the sides of ships and from other structures.

An object of the present invention is to provide a portable bracket that can easily be detached and shifted along the rail of a ship or along any similar support from one point to another as desired.

Another object is to provide a device of this kind with a member for clamping it to its support so arranged that the grip of the device on its support will be increased as the weight thereon increases.

Still another object is to provide a device of this kind with a combined pivotal clamp and rope fastening means.

Yet another object is to provide a device of this kind with a combined pivotal shackle and cleat for belaying a rope.

A further object is to provide a device of this kind with a pivotal cleat whereby the grip of the device will be increased as the pull on the cleat increases.

A specific object is to provide a bracket especially adapted for mounting on the rail of a ship's deck whereby a rope can be fastened thereto for supporting a scaffold or for any other desired purpose.

A still further object is to provide a device of this kind that is simple, compact and rugged in construction and inexpensive to manufacture.

Other objects and advantages of my invention will be apparent from the description thereof to follow taken in connection with the accompanying drawing in which—

Figure 1 is a perspective view of a part of the upper section of the side of a ship with my improved bracket in position on the rail for supporting a scaffold.

Figure 2 is a front view of the improved bracket.

Figure 3 is a side view thereof.

Figure 4 is a detail view showing the bearing portion of the supporting plate.

Figure 5 is a detail view showing the bearing portion of the shackle member.

Referring to the drawing, my improved bracket is illustrated suspending a scaffold 10 from the rail 11 on the deck of a ship 12. It will be understood of course that the improved bracket may be used on buildings or other structures wherever it is desired to holdfast a rope or the like.

The bracket comprises a substantially V-shaped flat metal plate 13 formed of stout stock. On the narrow end of the plate, an integral sleeve 14 is formed. On its opposite or wider end, the plate is formed with a downwardly extending web portion 16 joining the body of the plate with an inwardly extending flange 17 thereby providing a space 18 between the flange 17 and said body of the plate and thereby providing a hooked portion at the wider free end of the plate. The plate is preferably cast from a mold.

A heavy bolt 19 passes loosely through the sleeve 14 and projects outwardly beyond both ends thereof. The bolt has a head 20 on one end and a removable nut 21 on the other end.

Pivotally mounted on the bolt is a combined shackle and cleat member formed of rounded metal bar material and comprising a substantially U-shaped member 22 forming a shackle, the bolt passing through aligned openings 23 in the upper ends of said U-shaped member. The arms of the U-shaped member or shackle curve or bulge downwardly and outwardly from their upper ends as indicated at 24. The arms of the shackle also extend vertically upwardly above the pivot bolt forming extensions 25, which extensions terminate in oppositely laterally extending arms 26 forming a cleat. A cross-piece 27 connects the upper ends of the extensions 25. It will be seen that the bulged portion 24 of the shackle bulges inwardly to one side of the vertical plane of the axis of the pivot bolt.

In using the bracket, the outer end of the plate is hooked over the supporting surface, for instance, over the horizontal flange portion of the angle iron 11 comprising the rail of the ship so that said horizontal flange portion will be positioned in the space 18 between the body of the plate and the flange 17, with the body of the plate resting on the upper surface thereof and with the web portion 16 engaging the outer free edge of the horizontal portion of the rail and with the flange 17 engaging the downwardly extending flange or bead 28 on the bottom of said outer edge.

When the plate is in this position, the combined shackle and cleat member will be vertically disposed, with the shackle extending downwardly. If it is desired to support the scaffold 10, for instance, on the outer side of a ship as shown in Figure 1, it will be necessary to use two of the improved brackets spaced apart. In this case, the upper hook 29 of a block and falls device 30 is hooked around the shackle and the lower hook 31 is hooked round the rope or chain 32 supporting the scaffold. The pulling strain caused by the weight of the scaffold and associated parts will tend to swing the lower hori-

zontal end of the shackle to a position where it is on the same vertical plane with the axis of the pivot bolt but due to the bulged portion **24** extending slightly beyond said vertical plane, said bulged out portion will engage the side of the ship and the pulling strain will be transmitted from the shackle, which acts like a lever, through the bolt to the plate thereby pulling the hooked portion of the plate toward the outside of the ship into tight engagement with the free edge of the rail thereby securely clamping the bracket to the rail. The greater the weight the more effectually will the bracket become clamped to the rail or other supporting surface.

It will be understood of course that the shackle serves as a holdfast for a rope or the like, which rope may be used for any of the many purposes needed aboard ship.

The extensions **25** and the lateral arms **26** serve as a cleat for belaying a rope **33**, such as seen in Figure 2. The rope may be used for any desired purpose. When the rope is turned round the lateral arms and a pulling strain is exerted thereon, due to the outwardly curved shape of the extensions **25**, said extensions and lateral arms will tilt outwardly around the pivot bolt and the shackle will be tilted inwardly against the ship's side thereby clamping said shackle against the side of the ship and said clamping action causes the plate to be pulled outwardly into tight engagement with the rail, thereby securely fastening the bracket in position. As in the case where the shackle is used for supporting the scaffold or the like, the greater the pulling strain on the cleat the greater the clamping action of the shackle.

For additional security in clamping the bracket to its support, such as the rail of a ship as shown in Figure 1, or any other suitable support, a screw threaded bolt **34** may be threaded into a screw threaded opening in the inwardly extending flange **17**, the inner free end of the bolt being adapted to engage the under surface of the rail or other support to aid in holding the bracket on its support. This is especially desirable when the bracket is not in use but it is desirable to maintain it in position on a support.

While I have illustrated the improved bracket in position on the rail of a ship with the plate member horizontally disposed on the rail, it will be understood that the bracket may be used on the spar deck of a ship in which case the plate will be vertically disposed with its hooked portion around a cylindrical support such as a pipe or the like, and the combined clamping shackle and cleat will be horizontally disposed.

It will also be understood that instead of making the plate member of a flat piece, the same results may be obtained by forming two diverging arm members with hooked outer ends for encircling the supporting surface.

Changes in details might be resorted to without departing from the principle of the invention, and I desire to be limited only by the state of the prior art and the appended claims.

I claim:

1. A bracket comprising a plate having a hooked portion for engaging a supporting surface, a shackle pivotally connected to said plate for fastening the end of a rope and for clamping the plate to its supporting surface and a cleat integrally formed on said shackle for belaying a rope.

2. A bracket comprising a plate having a hooked portion for engaging a supporting surface, a shackle pivotally connected to said plate for fastening the end of a rope, said shackle having a bulged out portion adapted to engage the supporting surface whereby a pulling strain on the shackle will be transmitted to the plate and a cleat integrally formed on said shackle for belaying a rope.

3. A bracket comprising a plate having a hooked portion for engaging a supporting member, and having an integrally formed sleeve, a bolt loosely mounted in said sleeve, a shackle pivotally connected to said bolt, said shackle having a bulged out portion extending beyond the plane of the axis of the bolt adapted to engage a portion of said supporting member for the bracket whereby a pulling strain on the shackle will be transmitted to the plate and a cleat integrally formed on said shackle, said cleat having a portion curving outwardly beyond the plane of the axis of the bolt whereby a pulling strain on said cleat will swing the shackle into engagement with the supporting member whereby said strain is transmitted to the plate.

ALFONSO D'AVANZO.