

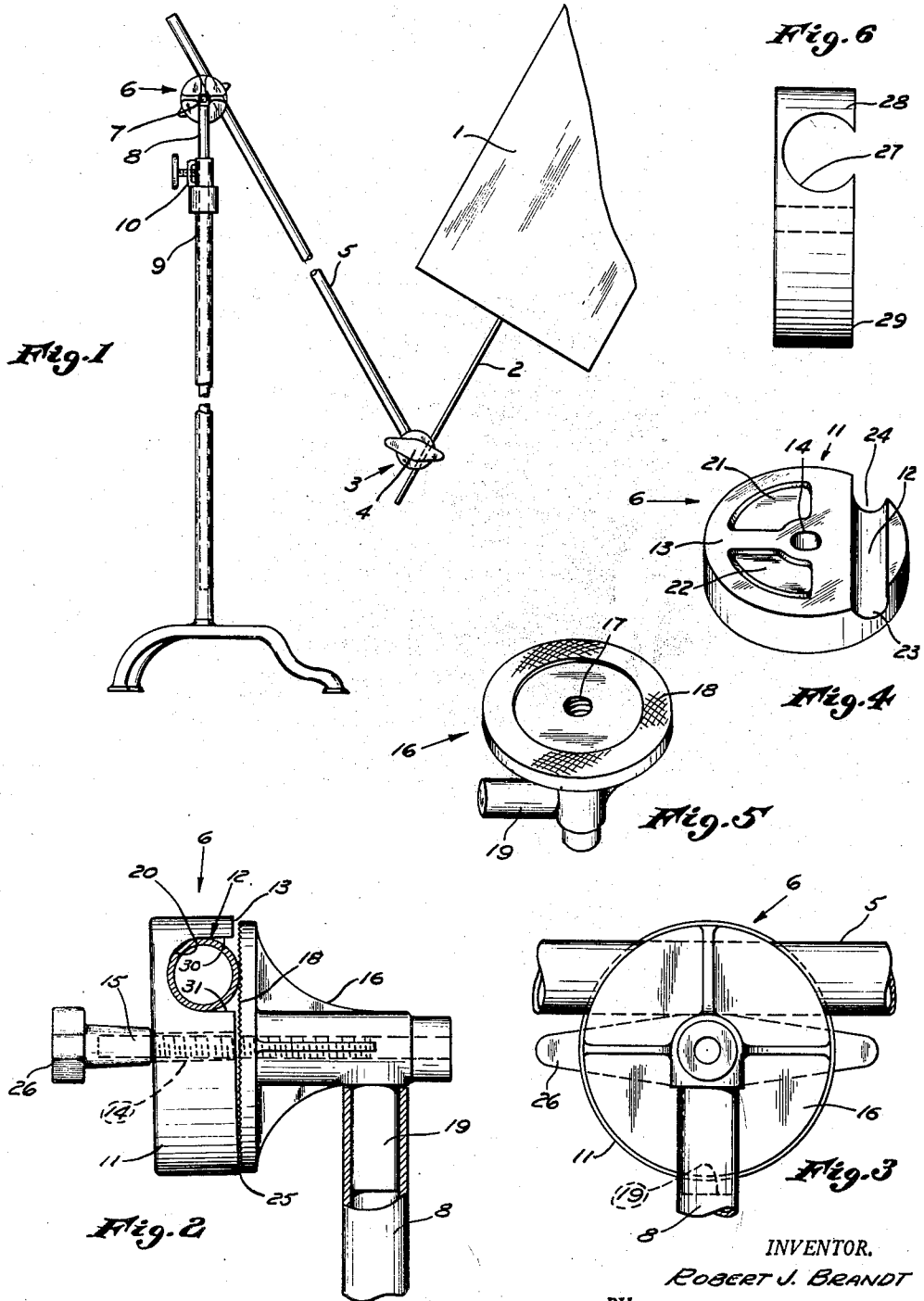
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ADJUSTABLE CLAMP FOR LIGHT SHIELDS

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## ADJUSTABLE CLAMP FOR LIGHT SHIELDS

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2 Claims. (Cl. 287-14)

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The invention relates to an adjustable clamp for light shields for spot lamps or other lamps employed for photographic purposes. In order to mask the light on a part of a set or scene being photographed, a gobo or flag in the form of a sheet of metal painted black is interposed in the path of the light. In order to readily adjust its position, the gobo or flag is mounted on a standard having universal brackets so that the flag rod or pipe can be extended or retracted and revolved about various axes. A similar type of support is employed for a cut-out or silhouette employed for casting a desired shadow effect.

The adjustable brackets heretofore employed have a number of operating parts and are of such a nature that the pipe or rod can not very readily be inserted into the bracket, and the pipe or rod is not clamped with sufficient rigidity.

An object of the present invention is to overcome the above defects and provide a clamp having clamping members each of which can be cast in one piece in green sand without the use of cores, and more particularly to cast an attaching device on one of the clamp members so it can be attached to an adjustable support. The adjustment of the support and the operation of the clamp are thus independent of each other.

Another object is to provide the clamp member which is fixed to the adjustable support, with a continuous circular rough surface and cooperating clamping member with a pipe or rod receiving groove, whereby the groove clamping member can be rotated throughout a full circle to adjust the flag in any angular position throughout a full 360°. The groove may be a comparatively large size to receive an adjustable pipe standard, the clamping members in this case being designated as a head clamp, and the groove in another casting may be made smaller to receive the rod connected to the flag or silhouette, the clamp in this case being designated a small head clamp.

For further details of the invention reference may be made to the drawings wherein Fig. 1 is a view in elevation of both the large and small head clamps according to the present invention.

Fig. 2 is an enlarged side view in elevation of the large head clamp of Fig. 1 for clamping a pipe.

Fig. 3 is an enlarged rear view in elevation looking toward the left in Fig. 2, the pipes and standards in Figs. 2 and 3 being broken away.

Figs. 4 and 5 are perspective views of the two members which form the clamp.

Fig. 6 is a side view of a casting having a groove made by drilling and removing the face of the casting.

Referring in detail to the drawings, the flag 1 has secured thereto a rod 2 adjustably held in a small head clamp 3 having the clamp members like 11 and 16 of this invention. The flag 1 can

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be rotated around the axis of the rod 2, also rod 2 may be adjusted at various lengths in the clamp 3 and rod 2 may be angularly adjusted about an axis through the center 4 at right angles to the drawing. Clamp 3 is mounted on a pipe 5 which may be rotated around its own axis in the large head clamp 6. Also pipe 5 may be adjusted to various lengths extending from the clamp 6 and pipe 5 may be angularly adjusted about a center 7 in the plane of the drawings. Head clamp 6 is mounted on a vertical pipe 8 which can be adjusted to various heights in the standard 9 by means of a clamp 10.

The clamps 3 and 6 have a clamp member 11 according to the present invention, as shown in Fig. 4, the only difference between the two being in the size of the groove 12 which is of a proper size for the rod 2 in the one case, or for pipe 5 in the other case. The clamp member 11 has a clamp face 13 which lies in one plane and the groove 12 opens into that face at one side of bore 14 and extends from one side of the disc shaped casting to the other. Clamp member 11 has an axial bore 14 somewhat larger than the clamping bolt 15.

The cooperating clamping member 16 has a central threaded aperture 17 for the bolt 15 which has a handle 26. Clamping member 16 has an annular knurled face 18 which is a complete annulus and it overlies the groove 12 regardless of how the member 11 is rotated on the bolt 15. Clamp member 16 is also a casting and integral with it and at right angles to its axis behind face 18 is a stub 19 which fits inside of and is brazed to its supporting pipe, namely 8 in the case of the large head clamp as shown in Fig. 2, or the stub 19 is brazed in the end of pipe 5 if the device is used as a small head clamp 3.

As shown in Fig. 2, the groove 12 is semi-cylindrical at its lower portion as shown at 20, to fit the pipe 5, while its outer portion has sides indicated at 30 and 31 which flare outwardly. Also, to reduce the weight of the casting 6, hollow portions 21, 22 have outwardly flaring sides as shown in Fig. 4 whereby the member 6 may be cast in green sand, the groove 12 and the hollow portions 21, 22 permitting the draft of the mold, without the use of cores. Also the outwardly flaring sides 30 and 31 result in the groove 12 having ends 23, 24 which readily permit the insertion of the rod or pipe endwise into groove 12.

The depth of groove 12 is less than the diameter of its rod or pipe. When the rod or pipe is clamped in position, one side of the member 6 rests on the adjacent side of the face 18 as indicated at 25 in Fig. 2, while the other side of member 6 rests in the example shown, on pipe 5, member 6 being in a tilted position shown in Fig. 2. The bore 14 is large enough to permit this tilt.

According to the modification shown in Fig. 6, the groove 27 for the rod or pipe may be formed by drilling the hole 27 in the head clamp 28 at a time when the right hand side 29 of the casting extends at some distance to the right beyond that shown. The casting is then put in a lathe and the face 29 is turned down until it cuts through one side of groove 27 as shown, so that the rod or pipe will project beyond the face 29, a distance sufficient to be engaged by the other clamp member shown in Fig. 5.

Tests of the form shown in Figs. 1 to 5 have shown that the rod or pipe is very rigidly clamped in position with the clamp of this invention, and that the rod or pipe may be more readily inserted into the ends of the clamp 12 than heretofore. Also the rotating adjustment of the flags about a vertical axis and its height may be adjusted by operating clamp 10 without disturbing the clamps 3, and 6. Also either clamp 3 or 6 may be adjusted without disturbing the other clamp 6 or 3, or the clamp 10.

Various modifications may be made in the invention without departing from the spirit of the following claims.

I claim:

1. A clamp comprising a clamping member having a clamping face having a U-shaped groove extending across said face at one side thereof, said groove forming a seat for a rod or pipe and being of less depth than the diameter of the rod or pipe, a cooperating clamping member having a continuous annular rough face extending completely around said last mentioned clamping member and overlying said groove in position to grip the rod or pipe in said groove, an elongated supporting member having one end thereof integral with said last mentioned clamping member, a clamping bolt for said clamping members, said cooperating clamping member having a threaded bore for said bolt, said cooperating clamping member having a stub

behind said rough face, said stub extending substantially at a right angle to said threaded bore, said supporting member comprising a pipe fitting over said stub and secured thereto, and an independent adjustable support for said supporting member.

2. A clamp comprising a clamping member having a clamping face having a U-shaped groove extending across said face at one side thereof, said groove forming a seat for a rod or pipe and being of less depth than the diameter of the rod or pipe, a cooperating clamping member having an annular rough face extending around said last mentioned clamping member and overlying said groove in position to grip the rod or pipe in said groove, said clamping member having a central bore at one side of said groove and said cooperating clamping member having a threaded bore coaxial with said annular rough face, a clamping bolt for said bores, said cooperating clamping member having a stub behind said rough face, said stub extending substantially at a right angle to said threaded bore, and a supporting member comprising a pipe fitting over said stub and secured thereto.

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