

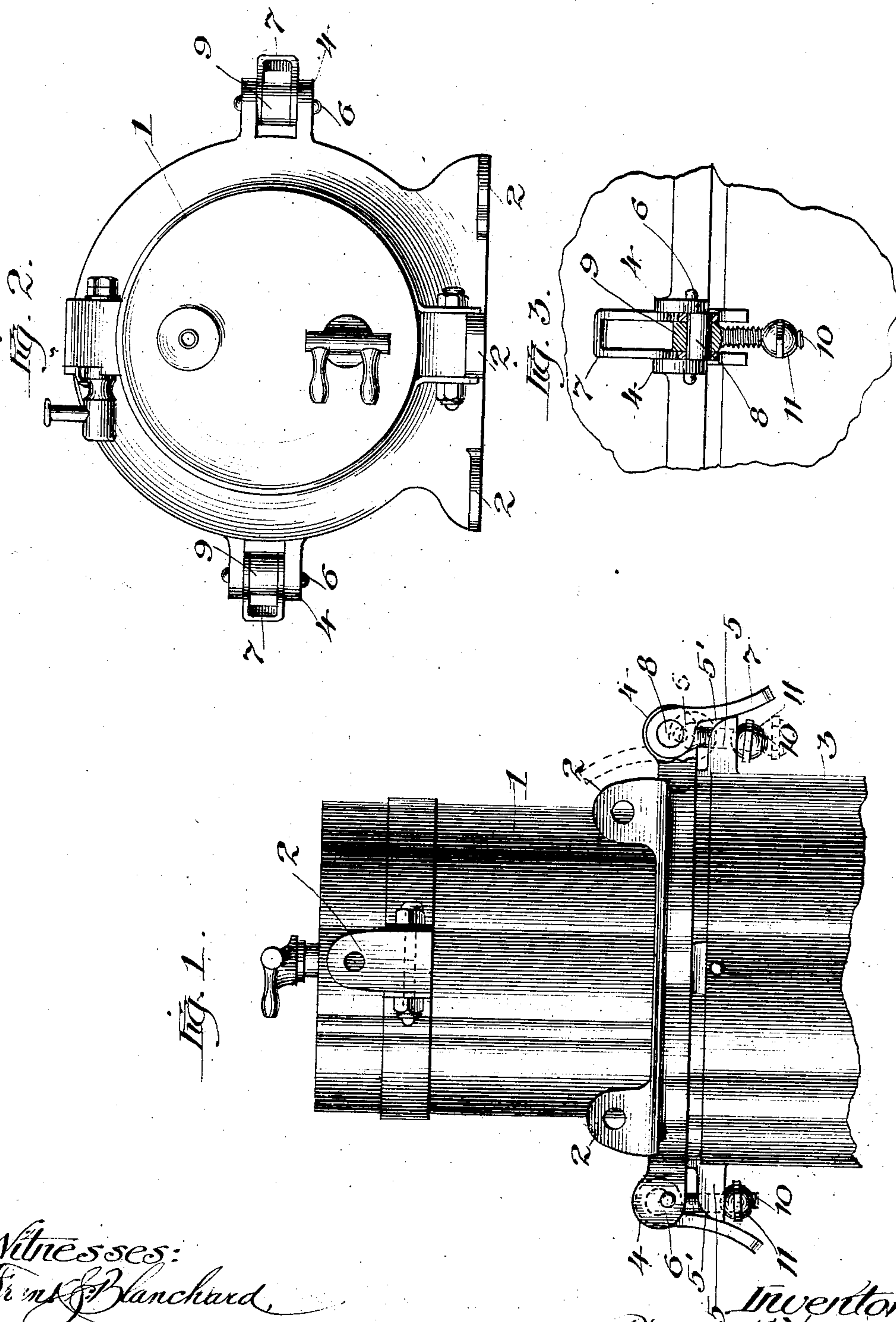
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PATENTED JULY 28, 1908.

R. H. WELLES.
FASTENING CLAMP FOR LAMPS.

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Witnesses:
 F. M. Blanchard,
 W. M. Inboden.

From Blanchard,

H. M. Luboden.

Inventor:
Richard N. Waller,
By Albert N. Graves,
Attorney.

Richard N. Welles.

Albert N. Graves,

Attorney.

UNITED STATES PATENT OFFICE.

RICHARD H. WELLES, OF KENOSHA, WISCONSIN, ASSIGNOR TO THE BADGER BRASS MFG. CO.,
OF KENOSHA, WISCONSIN, A CORPORATION OF WISCONSIN.

FASTENING-CLAMP FOR LAMPS.

No. 894,300.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RICHARD H. WELLES, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Fastening-Clamps for Lamps, of which the following is a specification.

My invention relates to fastening clamps for lamps; that is to say, to clamps adapted for uniting the members of certain two-part structures such, for example, as acetylene gas generators, and lamps of certain kinds.

Acetylene gas generators, of the type carried by automobiles, usually comprise a water tank, permanently mounted or fixed, and a lower chamber containing the carbid holder and receiving the ash or sludge; said lower chamber being detachable from the water chamber and forming a pressure joint or union therewith. The means heretofore employed for clamping the lower chamber to the upper chamber have been open to objections, among which are that they are difficult of manipulation and require that the operator support the lower chamber with one hand while adjusting the clamps or screws with the other. This operation is the more difficult owing to the fact that the upper section of the generator is usually inclosed (excepting underneath) by the hood of the lamp.

Having these difficulties in mind, my object is to provide a semi-automatic clamp which will support the lower chamber, loosely, before being tightened, thereby permitting the operator to use both hands at once and facilitating the clamping operation.

A secondary object of my invention is to provide a clamp which may be tightened by a single motion and which obviates the use of thumb-nuts.

In the case of suspended oil lamps my clamps are well adapted for uniting the oil holder to the upper portion of the lamp.

The preferred embodiment of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a broken-away elevation of an acetylene gas generator provided with a pair of clamps embodying my invention; one of the lugs being broken away to expose the clamp; Fig. 2 is a top plan view of the generator and the clamps; and Fig. 3 is a sec-

tional view of one of the clamps in open position.

1 designates the water tank or chamber of an acetylene gas generator, which tank is to be regarded as rigidly supported by means of its lugs 2. 3 indicates the lower member of the generator, containing the carbid cage. (Not shown). The joint between the said members 1 and 3 is provided with a gasket (not shown) and it is only necessary to draw up the lower chamber with sufficient tightness upon said gasket, to form a gas-tight union. I am aware that this has been done by means of pivoted screws provided with wing-nuts, and that construction I disclaim.

In carrying out my invention I provide the lower edge of the upper chamber 1 with two diametrically opposite recesses, which are most suitably formed by two pairs of outwardly projecting lugs, 4. I also provide the upper edge of the lower chamber 3, with two diametrically opposite sockets, each open at one side and preferably and as shown formed between pairs of lugs 5; thus the lower lugs 5 may be registered with the upper lugs 4.

Passing through each pair of upper lugs 4, is a pivot-pin 6, on which is mounted, between said lugs, a bifurcated cam lever comprising the lever portion 7 and a cam portion 8, said pivot pin passing eccentrically through this cam portion. Preferably the cam portion 8 is larger in diameter than the pivot pin 6. Mounted on the cam 8, somewhat loosely, is the apertured head 9 of a threaded clamping bolt or link 10, upon which is tightly mounted an adjusting nut 11.

The levers 7 are shown in Fig. 1 in closed or locked position, but may be turned up to the position shown in dotted lines in that figure. The cams 8, actuated by said levers, are so set that when the levers are in raised or open position, they permit the bolts 10 and nuts 11 to descend. If the lower chamber adheres, and fails to drop, the nuts 11 will hang clear of the lower lugs 5 as shown in Fig. 3; and if said chamber does descend it will be supported by said lugs resting upon said nuts. It will be observed that the lower lugs 5 are provided with inclined upper faces 5' and with horizontal lower faces, the purpose of which is presently made clear.

The operation of attaching the lower to the upper chamber is very simple: the bolts

10 are left hanging, and the operator moves the lower chamber up so that its lugs 5 with their inclined surfaces 5' will swing aside the nuts 11 and will pass above them, whereupon the bolts will swing inwardly and the nuts will pass beneath the lugs 5, thereby supporting the lower chamber. The operator now pulls down both levers 7, which movement draws up the bolts 10 with great force, thereby pressing the flange of the lower chamber very tightly upon the packing gasket. It will be observed that when the clamps are locked the centers of the cams 8 are outside of the vertical planes of the cam pivot centers; the object and result of which is that the very pressure created by the clamps tends to hold them in locked position, as will readily be understood. The nuts 11 may of course be adjusted to meet different conditions, such as decreasing thickness of the gasket or the greater thickness of a new gasket. They also provide means for taking up the wear (if any) upon the cam surfaces of the clamps.

The levers 7 are preferably made in skeleton form, as shown, as this form may be made by bending up a suitable strip of metal.

Various modifications will suggest themselves to one skilled in the art; and I do not limit the invention to the exact construction herein shown and described.

I claim as my invention—

1. An upper and a lower part, the lower part of which is provided with a pair of outwardly projecting lugs, in combination with a clamp comprising a cam lever pivoted upon said upper part, a clamping bolt supported by and depending from the cam portion of said lever, and a nut mounted on the free lower end of said clamping bolt and adapted to engage the said lugs, the downward oscillation of said lever operating to draw up said lower part through the medium of said lugs, said clamping bolt and said cam.

2. In combination, a two-part receptacle, separable intermediate its length and provided adjacent its meeting edges with out-

standing projections on the respective members, a clamping bolt having one of its ends movably confined and supported on one of said projections, means on the other member of said receptacle adapted for interlocking engagement with the free end of said bolt, and a cam lever operatively connected with the confined end of said clamping bolt and operable to shift the latter bodily endwise.

3. In combination, a two-part receptacle comprising upper and lower members separable intermediate the length of the receptacle and provided at opposite sides adjacent their meeting edges with outstanding projections, clamping bolts movably attached at their upper ends to said upper member and depending across the joint of separation, an enlargement on the depending end of each clamping bolt, the outstanding portions of said lower receptacle member forming open-sided sockets to admit and embrace the portions of the locking bolts immediately above the enlargements thereon, and cam levers pivotally connected with and mounted upon the upper ends of the respective clamping bolts.

4. In combination, a two-part receptacle comprising upper and lower members separable intermediate the length of the receptacle and provided at opposite sides adjacent their meeting edges with outstanding projections, clamping bolts movably attached at their upper ends to said upper member and depending across the joint of separation, a nut adjustably threaded on the depending end of each clamping bolt, the outstanding portions of said lower receptacle member forming open-sided sockets to admit and embrace the portions of the locking bolts immediately above the nuts thereof, and cam levers pivotally connected with and mounted upon the upper ends of the respective clamping bolts.

RICHARD H. WELLES

Witnesses:

ALBERT H. GRAVES,
EMILIE ROSE.