April 28, 1925.

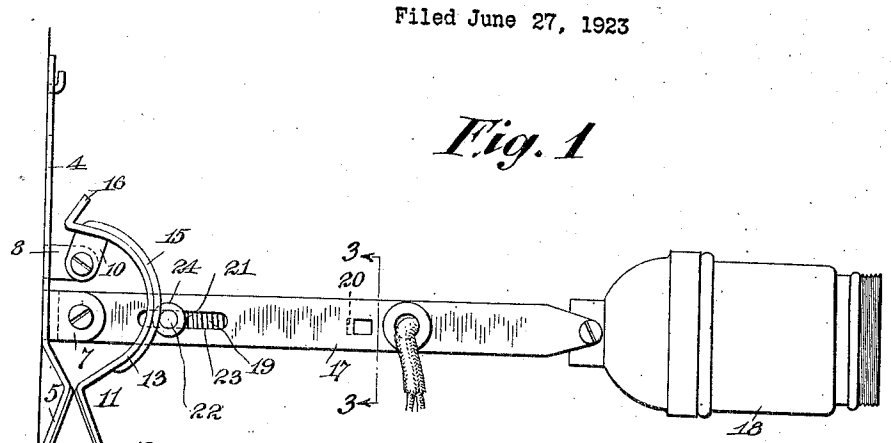
1,535,658

E. A. ERMOLD

PORTABLE ELECTRIC LIGHT FIXTURE

Filed June 27, 1923

Fig. 1



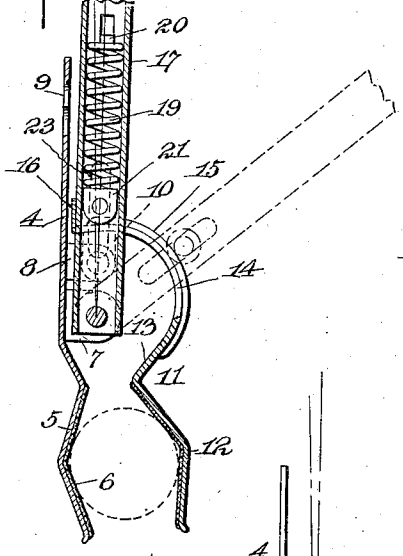


Fig. 2

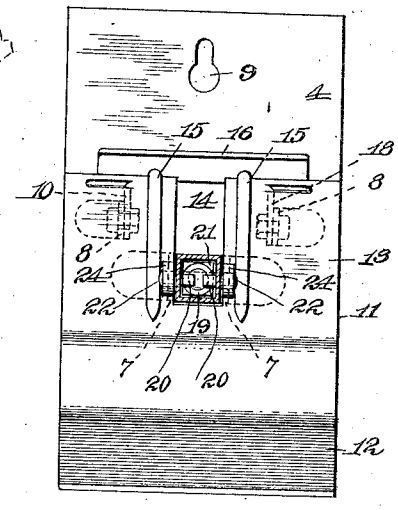


Fig. 3

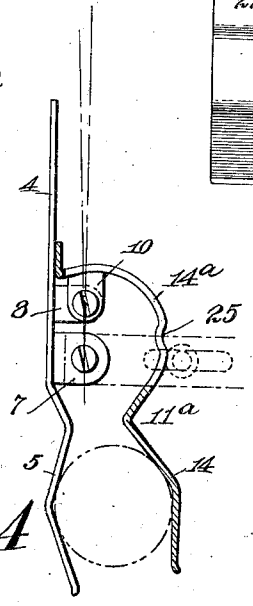


Fig. 4

Elmer A. Ermold INVENTOR.

BY

Dyer & Taylor

ATTORNEYS.

Patented Apr. 28, 1925. 1,535,658

UNITED STATES PATENT OFFICE.

ELMER A. ERMOLD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WIRT COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

PORTABLE ELECTRIC-LIGHT FIXTURE.

Application filed June 27, 1923. Serial No. 647,986.

To all whom it may concern:

Be it known that I, ELMER A. ERMOLD, a citizen of the United States, and a resident of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Portable Electric-Light Fixture, of which the following is a specification.

The invention relates to portable electric light fixtures, and has for its objects to produce a device which may be quickly attached in position to a variety of objects, which is adjustable whereby the lamp carried thereby may be adjusted to many positions, in which the lamp is firmly held in the desired position, in which the fixture may be attached to objects of varying sizes, which is capable of folding whereby the same will occupy a minimum of space for packing and shipping, which will be cheap and light of construction, and which will not easily get out of order.

These and further objects will more fully appear in the following specification and accompanying drawings considered together or separately.

The invention is illustrated in the accompanying drawings, in which like parts in all of the several figures are designated by corresponding characters of reference, and in which

Fig. 1 is a side elevation of the device illustrated as applied to a vertical surface, such as a wall.

Fig. 2 is a longitudinal section of a portion of the device showing same as clamped to a cylindrical element, such for example, as a bed post or rail, the lamp carrying arm being shown in various positions.

Fig. 3 is a section on the line 3—3 of Fig. 1 and

Fig. 4 is a detail view of a modification.

In the drawings 4 designates a base plate preferably of rectangular form being bent upward near one end thereof, then downward and then upward to form angular jaw-member 5, the said jaw-member having a lining 6 of felt, cloth or the like. The downwardly bent portion of the jaw-member is on the same plane as that of the body of the plate 4 whereby said plate may stand flat on a horizontal surface.

Struck upward from the base 4 are alined ears 7, and a second pair of alined lugs 8 are also struck up from the base. Near the end of the base opposite the jaw 5 is a keyhole slot 9 by means of which the device, as a whole, may be hung over a pin or hook, as shown in Fig. 1.

Hingedly mounted on the lugs 8, by means of struck down lugs 10, is an element 11 having one end formed to a lined jaw-member 12 in opposed relation to the jaw-member 5. The opposite end of the element 11 is of segmental form as shown at 13, and is provided with a peripheral slot 14, and with a strengthening rib 15 on each side of the slot. The extremity of the element 11 is bent outward to form a heel 16.

Extending through the slot 14, and pivoted between the ears 7 is a hollow arm 17, to the outer end of which is pivoted a lamp socket 18 of any desired form, and a flexible cord carrying the wiring for the socket enters an opening in the arm, and the wires are secured to the socket as usual. The end of the cord is secured to a plug (not shown).

Carried within the arm 17 is a coil spring 19, one end of which abuts against a pair of struck down fingers 20. The opposite end of the spring bears against a sliding plug 21 carried within the arm. The plug is provided with a pair of trunnions 22 each extending through a slot 23 in the arm, and the end of each trunnion carries a roller 24. The rollers bear upon the curved surface 13 at the edges of the slot 14.

As will be seen the curve of the surface 13 is struck from a point other than the pivotal point of the arm, and the said surface is, therefore, eccentric to the pivotal point whereby, when the arm is moved from the position perpendicular to the base plate 4, as shown in Fig. 1, the surface 13 will form a cam on which the rollers 24 run and the spring will be compressed during the upward travel of the arm, tending to hold the jaws in the closed position. The spring is relatively strong and is always under compression, and when the jaws are clamped to an object the expansion tendency of the spring will cause the rollers to tightly engage the cam surface, and the arm will be retained in any position between the extremes of movement.

When the arm and jaws are in the position illustrated in Fig. 1, the device may be hung on a vertical surface as shown, or

it may be used as a stand on a horizontal surface, the element 4 acting as a base. The arm is more or less, rigidly held perpendicular to the base by its engagement with the end wall of the slot 4 and by reason of the fact that the rollers 24 are below the crest of the cam, and the spring must be compressed before the arm can be moved from its engagement with the end wall of the slot, and the strength of the spring will be sufficient to prevent accidental dislodgement of the arm.

When it is desired to open the jaws, the arm 7 is swung upward from the position shown in Fig. 1. During the first part of this movement, the engagement of the rollers with the cam surfaces being below the pivotal point of the jaw 11, the rollers will move outward against the spring 19 and the movable jaw will remain in the closed position until the arm engages the heel 16. The continued movement of the arm will, by its engagement with the heel, open the jaws to the fullest extent.

When the arm reaches the position shown in full lines in Fig. 2, the jaw 11 will have turned on its pivot and the rollers will be below the crest of the cam whereby the arm will be retained in position.

When it is desired to attach the fixture to a bar or rod, such for example, as a bed post, the jaws are passed over the bar or rod whereby the latter will be between the jaws. The arm is then moved toward the position shown in Fig. 1. When the rollers pass a line drawn between the pivotal centers of the arm and the movable jaw the spring will force the jaws together and securely clamp the bar or rod between them. The presence of the bar between the jaws will prevent them from assuming the position shown in Fig. 1, the cam surface will be more eccentric to the pivot of the arm, and the engagement of the rollers with the cam will retain the arm in any desired position within the limits of its movement.

For packing and shipping, the device will be in the position shown in full lines in Fig. 2. The device will thus be in much more compact form than in prior devices of the same character in which the element corresponding to the arm 17 is rigidly secured to one or the other of the jaw members.

Because of the pivoted arm, the device of applicant may have a base of comparatively large area, to promote stability, without appreciably increasing the bulk of the device when packed.

In the modification illustrated in Fig. 4 the slot 14^a in the jaw element 11^a is somewhat longer than the slot 14 thus giving a greater range of movement to the arm. At one point each cam surface is provided with notch 25 in such a position that when the arm 17 is perpendicular to the base plate and with the jaws closed, the rollers will engage the notches and maintain the arm in position.

The strength of the spring is such, and the engagement of the rollers relatively to the pivotal point of the jaw 11, are such that considerable power must be applied to the ends of the jaws to force the same apart, but when using the comparatively long arm as a lever the jaws may be easily opened, and when gripping an object the strength of the spring and the leverage exerted by reason of the position of the rollers relatively to the pivotal point of the movable jaw, cause the jaws to forcibly grip any body which may be between them.

In accordance with the provisions of the patent statutes, I have described the principle of my invention together with the apparatus which I now consider to represent the best embodiment thereof, but it is desired to have it understood that the apparatus shown is merely illustrative and that the invention may be carried out in other ways.

The invention having been described, what is claimed and desired to be secured by Letters Patent is:—

1. A device of the character described, comprising a base, a tubular arm pivoted to the base and adapted to carry a lamp, a plate carried by the base, and elastic means carried within the arm and engaging the plate for retaining the arm in approximately parallel relation relatively to the base.

2. A device of the character described, comprising a base, a tubular arm pivoted to the base and adapted to carry a lamp, a plate pivoted to the base, there being a slot in the plate, said arm extending through the slot, and elastic means carried within the arm and having a rolling contact with the pivoted plate at both sides of the slot.

3. A device of the character described, comprising a base plate, one end of the plate the base plate, an arm adapted to carry a lamp pivoted to the base plate and extending through the pivoted plate, means carried by the arm and engaging the pivoted plate whereby pivotal movement of the arm will cause pivotal movement of the pivoted plate relatively to the base plate and to the arm.

4. A device of the character described, comprising a base plate, a plate pivoted to the base plate, a tubular arm pivoted to the base plate and extending through the pivoted plate, there being a cam surface on the pivoted plate, and a spring pressed roller carried by the arm and engaging the cam, the said spring being located within the arm.

5. A device of the character described, comprising a base plate, a plate pivoted to being fashioned to form a jaw-element, a member pivoted to the plate, one end of said member being fashioned to form a jaw-element, said member having a cam surface, a

tubular arm pivoted to the base plate, there being a longitudinal slot in the cam, said arm extending through the slot, a pair of spring pressed rollers carried by the arm and each adapted to roll on the cam at one side of the slot, a stop carried by the member and adapted to be engaged by the arm to move the member on its pivot.

6. A device of the character described, comprising a base plate, one end of the plate being fashioned to form a jaw-element, a member pivoted to the plate, one end of said member being fashioned to form a jaw-element, said member having a cam surface, a tubular arm pivoted to the base plate, there being a longitudinal slot in the cam, said arm extending through the slot, a pair of spring pressed rollers carried by the arm and each adapted to roll on the cam at one side of the slot, a stop carried by the member and adapted to be engaged by the arm to move the member on its pivot, said stop engaging the base plate to limit the movement of the member.

This specification signed and witnessed this 21st day of June, 1923.

ELMER A. ERMOLD.

Witnesses:

J. C. KAELBER,

MARY BOOCOCK.