June 24, 1924. 1,498,539

P. D. CALLAHAN

DETACHABLE LIGHTING FIXTURE

Filed Nov. 21, 1921

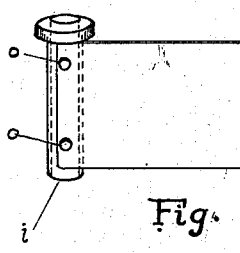


Fig. 5.

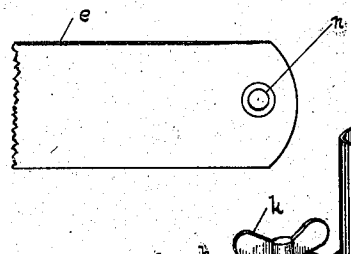


Fig. 1.

Fig. 7.



Fig 9

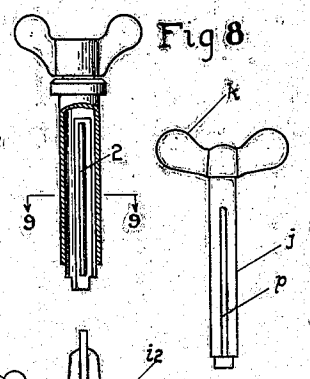


Fig 8

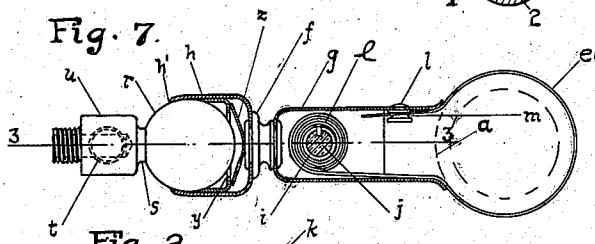


Fig. 2.

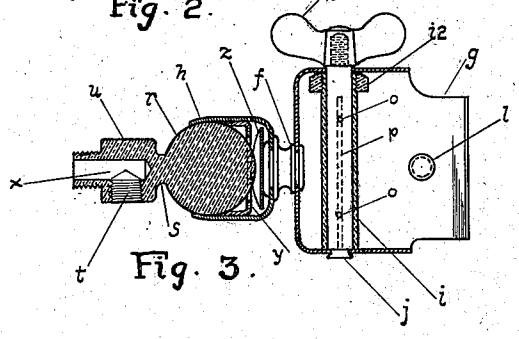


Fig. 3.

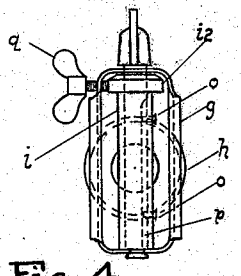


Fig. 4.

Fig. 6.

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UNITED STATES PATENT OFFICE.

PERCY D. CALLAHAN, OF DECATUR, ILLINOIS, ASSIGNOR TO THE FARIES MANUFACTURING CO., OF DECATUR, ILLINOIS, A CORPORATION OF ILLINOIS.

DETACHABLE LIGHTING FIXTURE.

Application filed November 21, 1921. Serial No. 516,560.

To all whom it may concern:

Be it known that I, PERCY D. CALLAHAN, a citizen of the United States, residing in Decatur, county of Macon, State of Illinois, have invented a certain new and useful Improvement in a Detachable Lighting Fixture, of which the following is a specification.

My invention relates to that class of devices which are designed to be attached to articles of furniture and is arranged so that it can be attached or detached quickly and conveniently and without the use of any tools of any kind, thereby permitting it to be moved from one piece of furniture to another with comparative ease.

I am aware that numerous attempts have been made to produce a satisfactory detachable lighting fixture for this purpose. All of those with which I am familiar, however, are subject to one or more objections.

Almost invariably it is the case that they are constructed to clamp a certain shaped piece of furniture. As a consequence, a variation in the conformation of the piece of furniture to be clamped will not permit the clamping mechanism to get sufficient grip, due to the different configuration, hence, there is a liability of the fixture falling or else, not holding at all.

Another objectionable feature is that they almost all have the clamping part made of metal, with the result that it scratches the furniture, thus presenting a highly objectionable feature from the standpoint of the user, and hence greatly militating against the extended use of such fixtures.

My invention has for its object, to provide a device of the character described in which the clamping mechanism will be formed of such flexible material that it will adjust itself in the operation of clamping, to any configuration, and has for its further object, to provide means for rendering it impossible for the clamping operation of the device to mar the furniture, no matter how highly polished it may be.

For the purpose of illustrating, a concrete embodiment of my invention, I have shown the device attached to a round member, but it will be apparent from the hereinafter contained description that any configuration will be clamped with equal facility by my device.

My means of accomplishing the foregoing objects may be more readily understood by having reference to the accompanying drawings, which are hereunto annexed and are a part of this specification, in which:

Fig. 1 is an isometric perspective view of my improvement in position.

Fig. 2 is a horizontal sectional view showing the clamping mechanism, the lamp, reflector and connections being omitted as forming no part of my invention.

Fig. 3 is a sectional view taken on the line 3—3 in Fig. 2, part of the mechanism being shown in elevation.

Fig. 4 is a front view of the container in which the reel is mounted.

Fig. 5 is a detail view of the flexible clamping member, it being shown attached to the reel.

Fig. 6 is a detail view of the winding key.

Fig. 7 is a detail view of the inner ball socket.

Fig. 8 is a detail view of a modified form of key.

Fig. 9 is a cross-section of the same.

Similar reference numerals refer to similar parts throughout the entire description. As shown in the drawings, *a* indicates a fragmentary portion of a piece of furniture, for example a bed post. The lamp socket which is indicated by reference letter *b* is of the usual or standard design and is provided with a shade *c*, which partially encloses the lamp bulb *d*. The socket *b* is secured to a connector *u*, which has a downwardly extending portion in which is formed the passage *t*. The connector *u* is provided with a central longitudinal passage *x*, which connects with a downwardly extending passage *t*, the internal surface of this passage being threaded to accommodate an insulating bushing *v*, of the usual type.

The wires *w*, pass through the passages *t* and *x* and are connected to the socket *b* in the usual manner. The furniture *a*, is clamped by means of a flexible band *e*, which may be of cloth, or any suitable material such as thin metal, in which case it should be lined with felt, or a cloth braid to protect the furniture from being marred. If it is made of cloth, obviously it will be impossible for it to mar the furniture.

It is provided with an eyelet *n*, passing through one end which is adapted to fit over a stud *l*. A peripheral groove *m* is formed about the central portion of the stud *l*, which permits the eyelet *n* to be buttoned

or hooked thereto, when the fixture is being attached to an article of furniture. This stud is riveted into the wall of the reel container or holder *g*. The other end of the flexible strip *e*, is attached to the tubular reel *i*, by means of rivets *o—o* which pass through the wall of the reel *i*, and extend into a slot *p* formed in the winding key *j*, which is provided with a wing nut *k* for convenient manual rotation.

The container *g* carries a universal joint comprising a ball and two sockets. This joint is secured thereto by a connector *f*, which is riveted to the casing *g* at one end, its opposite end being riveted to the outer ball socket *h*. The inner socket *y*, which is machined to fit the ball member *r*, at a plane adjacent its center, is mounted within the outer socket *h*, the ball extending through an opening formed in the end of the inner socket *y*, as clearly seen in Fig. 7.

A compression spring *z* is mounted within the outer socket *h* and bears directly against the end of the connector *f*, the ends of the spring *z*, engaging the rear wall of the inner socket *y*, thus exerting its pressure against the surface of the ball. The outer socket *h* is crimped inwardly at its outer end so as to prevent the spring from pushing the ball out of the socket. It will be obvious that the tension of the spring upon the ball where it projects out of the inner socket presses it against the crimping on the outer socket thus producing sufficient friction to hold the lamp at any desired angle.

I provide means for locking the reel by means of a set screw *q*, which is provided with a wing nut for convenient manual operation. The operation of the device is as follows: The set screw *q* is loosened and the end of the flexible band *e*, is grasped and the band drawn out by unwinding it from the reel *i*, until it is sufficiently long to be passed around the article of furniture to be clamped. The eyelet *n* is then placed over the rivet or pin *l*, when by rotation of the wing nut *k*, the winding key *j* will be rotated, carrying with it, by means of the slot *p*, engaging with the rivets *o—o*, the reel *i*. This will wind up the flexible band until the piece of furniture is clamped tightly by the flexible band and this adjustment is made fixed or locked by tightening the set screw *q*. It will be apparent to a person skilled in the art, that in this manner it is possible to clamp any piece of furniture about which the flexible band *e* is passed, regardless of its configuration and that it will hold the fixture securely in position. When this is done, obviously the lamp can be moved to any desired angle by means of the ball and socket joint hereinbefore described.

It may be desirable in some cases to employ the modified form of construction for the key shown in Figs. 8 and 9, in which the key *j* is made so that it will have a ratchet action. I accomplish this by milling a groove 1 in the key in which I mount a roller 2. The result of this is that so long as the key is turned in the correct direction the roller 2 will wedge against the wall of the reel *i* and it will be locked and wind up the flexible band *e* but if reversed the roller will roll against the shoulder 3 and thus relieve the friction or wedging action so that the key will rotate freely inside of the reel.

Although I have described and illustrated a specific form and construction, it is to be understood that the said disclosure is only for the purpose of illustrating a concrete embodiment of my invention and I do not desire to be understood as limiting myself to the details of construction as illustrated and described except as such limitations may appear in the hereinafter appended claims.

Having described my invention what I regard as new and desire to secure by Letters Patent is:

1. A detachable electric lighting fixture comprising a holder, a thin metallic band adapted to encompass a portion of the furniture to be clamped, one end of said band being secured within said holder, a tubular reel within said holder, the other end of said band being fixedly attached thereto, a set screw to lock said reel to prevent its rotation, a key in said reel having a longitudinal groove therein, a roller in said groove which operates to clamp the reel when the key is turned in one direction and releases it when turned in the other.

2. A detachable electric lighting fixture comprising a holder, a thin metallic band adapted to encompass a portion of the article to be clamped, a stud secured to said holder to which one end of said band is detachably secured, a reel mounted in said holder to which the other end of said band is fixedly attached, said reel comprising a tubular member to which said band is attached, rivets which fasten said band to said tubular member, a winding key mounted in said tubular member, there being a slot formed in said winding key into which the inner ends of said rivets project, means to prevent the rotation of said reel and means to secure an electric lamp to said holder.

In testimony whereof I have signed the foregoing specification.

PERCY D. CALLAHAN.