Nov. 21, 1950 K. BERGER 2,531,023

LAMP HARP

Filed April 30, 1947

FIG. 1

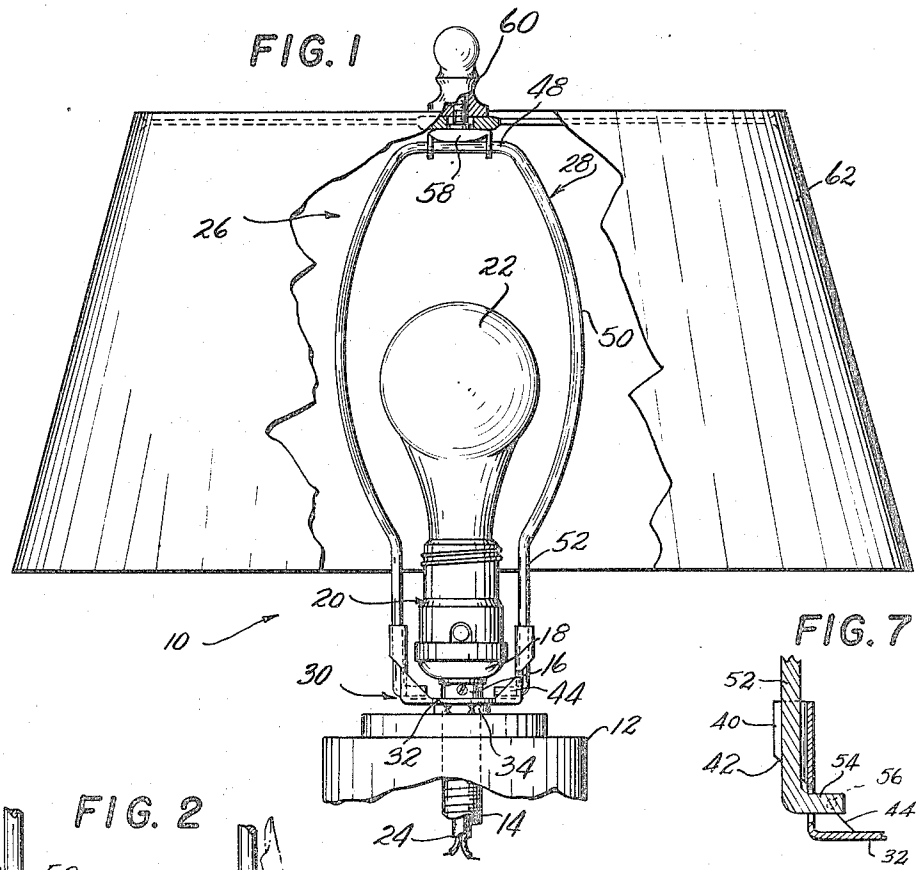


FIG. 7

FIG. 2

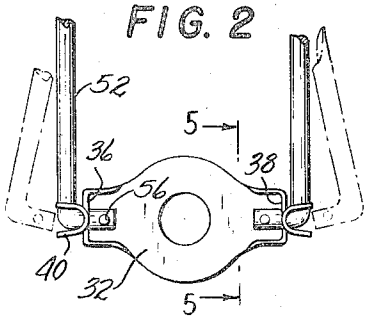


FIG. 3

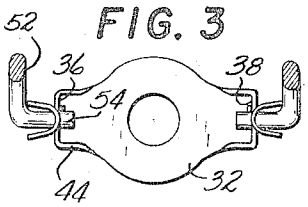
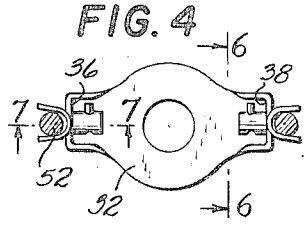


FIG. 4



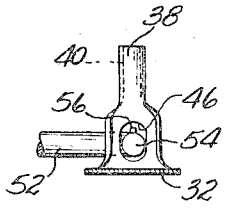


FIG. 5

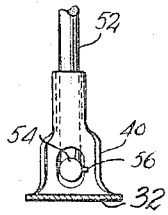


FIG. 6

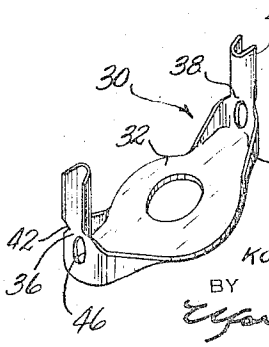


FIG. 8

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LAMP HARP

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2 Claims. (Cl. 240—148)

1

This invention relates to lamp harps.

It is an object of my invention to provide a lamp harp in which the harp frame is detachably secured to the bracket so as to expedite packing of a lamp fixture, and yet in which the detachable securing means is so constructed that the harp frame cannot be accidentally removed.

It is another object of my invention to provide a take-apart lamp harp in which the harp frame and bracket are detachably secured to one another by simple and inexpensive means.

It is a further object of my invention to provide a take-apart lamp harp which is easy to manipulate but is firm and rugged when once assembled.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described and of which the scope of application will be indicated in the appended claims.

In the accompanying drawings in which is shown one of the various possible embodiments of this invention,

Fig. 1 is a fragmentary front view of an electric light fixture including my new lamp harp;

Fig. 2 is a fragmentary top view of the lamp harp as it appears when removed from the fixture and immediately subsequent to engagement of the harp frame and bracket;

Fig. 3 is a view similar to Fig. 2 but showing the harp frame as it appears when swung part way in a locking direction;

Fig. 4 is a view similar to Fig. 3 but showing the harp frame locked;

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 2;

Figs. 6 and 7 are sectional views taken substantially along the lines 6—6 and 7—7 respectively of Fig. 4, and

Fig. 8 is a perspective view of the harp bracket.

Referring now in detail to the drawings, I have there shown a lamp fixture 10 of conventional construction comprising a suitable ornamental support 12 having an opening at its upper end in which there is received a nipple 14. The top of the nipple is screwed into a tapped collar 16 in the bottom part 18 of a lamp socket 20. The power supplied to an electric light bulb 22 in the socket 20 is furnished by an electric cable 24 running through the nipple 14.

Firmly secured to the lamp fixture 10 is a take-apart lamp harp 26 whose construction is

2

the subject of this invention. Said harp consists of a frame 28 and a bracket 30.

The bracket is fabricated from a single piece of sheet metal by suitable punching, bending and drawing operations and includes a flat annular portion 32 received on the nipple 14 and clamped between the collar 16 and a lock nut 34 resting on the support 12. The bracket thus is firmly secured to the fixture so that it can be shipped therewith, the harp frame, however, being removed before shipping. The bracket also includes two upstanding arms 36, 38 disposed on opposite sides of the annular portion 32. The upper ends of said arms have outwardly extending flanges 40 running along both edges thereof so that each pair of flanges and their associated arm portion define a member of U-shaped cross-section. To enhance this effect the upper end of each arm is outwardly concave, having a radius of curvature slightly less than the average radius of wire employed for the harp frame 28. The flanges diverge slightly from one another as they extend from the arms in order to accommodate harp frames fabricated from slightly oversize wire.

Said flanges run vertically down a substantial distance from the tips of the arms, whereby to provide an appreciable supporting surface for the harp frame and the lower ends of the flanges terminate at inclined edges 42, the purpose whereof will be pointed out hereinafter. The arms are reinforced by angular pieces 44 integrally connecting the lower side edges of said arms with edge portions of the flat annulus 32. Said pieces also function to provide pockets in which parts of the harp frame, serving as locks or attaching means, are substantially concealed.

Each arm 36, 38 has an elongated opening 46 formed near its base, the longitudinal axis whereof extends vertically.

The harp frame 28 comprises a piece of metal wire or like resilient material bent into the shape of a bail, as shown in Fig. 1, so as to include a flat top portion 48, outwardly bowed segments 50, straight ends 52 and inturned fingers 54. When disengaged from the bracket the frame ends 52 are spaced apart a distance less than the distance between the bracket arms 36, 38. Each finger includes a protuberance 56, the protuberances on the two fingers optionally being in angular alignment. Except for these protuberances and the fingers 54, the frame is of conventional construction and has on its top portion a swivel fixture 58 or other suitable means

to receive a finial 60 by means of which a shade 62 is secured.

The protuberances 56 may be raised in any suitable manner, as for example as by swedging, pinching or forging, and each protuberance is located in such position adjacent a tip of the finger on which it is disposed that when the fingers are placed in the elongated openings 46 the frame 28 can be swung to a position, preferably horizontal, in which the projections extend in the same direction as the longitudinal axes of said openings. The openings are sufficiently elongated to enable the projections 56 to be freely passed therethrough.

To detachably couple the frame 28 and bracket 30, the straight ends 52 of the harp frame are spread apart to an extent such that the tips of the fingers 54 are spaced apart a distance greater than that between the arms 36, 38. This disposition of the harp parts is shown by dash-and-dot lines in Fig. 2. The fingers then are aligned with the openings 46 and the straight ends released. Now the frame is rotated into approximately a horizontal plane, until the projections 56 extend in an angular direction coinciding with the longitudinal axes of the elongated openings. As soon as this position is reached the projections will pass through the openings with a snap, allowing the ends 52 to resiliently bear against the lower portions of the arms 36, 38. Such position of the parts is shown in full lines in Fig. 2.

Next the wire frame is rotated toward an erect stance. During this movement, and as the frame approaches vertical, the bottoms of the straight ends 52 engage the sloped edges 42 of the flanges 40 whereby to cam or force the straight ends apart, as illustrated in Fig. 3. Such action continues until the straight ends have been spread apart enough to pass over the flanges 40.

As the frame continues turning, the straight ends ride over the flanges 40 and reach the U-shaped portions between said flanges, whereupon said ends will snap into said U-shaped portions. This position is illustrated in Fig. 4.

In such position the harp frame is firmly held erect, the straight ends bearing against the slightly divergent flanges 40 and, possibly, against the curved base of the U-shaped portions, depending upon the diameter of the wire constituting the harp frame.

Attention is called to the fact that the distance from each projection 56 to the straight end carrying the arm on which the projection is formed should be greater than the height of the associated flange 40 in order to enable the straight ends to be cammed apart, as above described, while the frame is being turned into erect position. However, the distance from the protuberance to the straight end should not be greatly in excess of the mentioned distance, and preferably is almost exactly equal to said distance whereby, during the turning movement leading to locked engagement of the frame and bracket, the frame will have very little freedom of side to side movement.

To uncouple the frame and bracket the straight ends 52 are spread apart and, at the same time, the harp frame is rotated a sufficient distance for said ends to ride over the flanges 40. The frame then is brought down into a position in which the protuberances 56 are in angular registration with the longitudinal axes of the opening 46. Thereupon the ends of the harp frame are spread apart sufficiently to withdraw the fingers 54 and protuberances 56 from the openings 46.

It will be understood that, although the protuberances 56 are shown in the drawings as being disposed in registration, the same may be 180° apart or may be angularly disaligned by an amount equal to a disalignment of the longitudinal axis of the openings 46.

It thus wil be seen that I have provided a lamp harp which achieves the several objects of my invention and is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various possible changes might be made in the embodiment above set forth, it is to be understood that all matter herein described or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention I claim as new and desire to secure Letters Patent:

1. A take-apart lamp harp comprising a bracket including an annular portion having two upstanding portions, each of said upstanding portions having an elongated aperture adjacent the base thereof, and a bail-shaped harp frame of resilient material having straight end portions with inturned fingers of uniform cross-sectional area, each of said fingers having a projection thereon, said projections being so relatively angularly oriented that, when one projection is in line with a longitudinal axis of one of the apertures, the other projection will be in line with the longitudinal axis of the other aperture, the distance between the ends of the wire frame when detached being less than the distance between the upstanding portions of the bracket, each of said upstanding portions having outwardly extending flanges along its side edges whereby each said upstanding portion and the pair of flanges associated therewith define a U-shaped channel, said channel being so dimensioned as to snugly receive the straight ends of the harp frame, each projection being spaced inwardly from the region where its associated finger joins an end portion a distance at least equal to the depth of the U-shaped channel plus the thickness of the base of the channel whereby when said fingers extend through said apertures and the end portions of the frame engage the free edges of the flanges of the U-shaped channels, the projections are inside of the upstanding portions of the bracket.

2. A take-apart lamp harp comprising a bracket including an annular portion having two upstanding portions, each of said upstanding portions having an elongated aperture adjacent the base thereof, and a bail-shaped harp frame of resilient material having straight end portions with inturned fingers of uniform cross-sectional area, each of said fingers having a projection thereon, said projections being so relatively angularly oriented that, when one projection is in line with a longitudinal axis of one of the apertures, the other projection will be in line with the longitudinal axis of the other aperture, the distance between the ends of the wire frame when detached being less than the distance between the upstanding portions of the bracket, each of said upstanding portions having outwardly extending flanges along its side edges whereby each said upstanding portion and the pair of flanges associated therewith define a U-shaped channel, said channel being so dimensioned as to snugly receive the straight ends of the harp frame, each projection being spaced inwardly from the region where its associated finger joins an end portion a distance at least equal to the depth of the U-

shaped channel plus the thickness of the base of the channel whereby when said fingers extend through said apertures and the end portions of the frame engage the free edges of the flanges of the U-shaped channels, the projections are inside of the upstanding portions of the bracket, the lower ends of the flanges sloping inwardly and downwardly whereby to provide camming edges for spreading apart the straight ends of the harp frame when the harp frame is rotated toward vertical position with its inturned fingers disposed within said openings.

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The following references are of record in the file of this patent:

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