Aug. 6, 1957 P. CHILO 2,802,098

LAMP HARP

Filed Oct. 31, 1952 2 Sheets-Sheet 1

Fig. 1

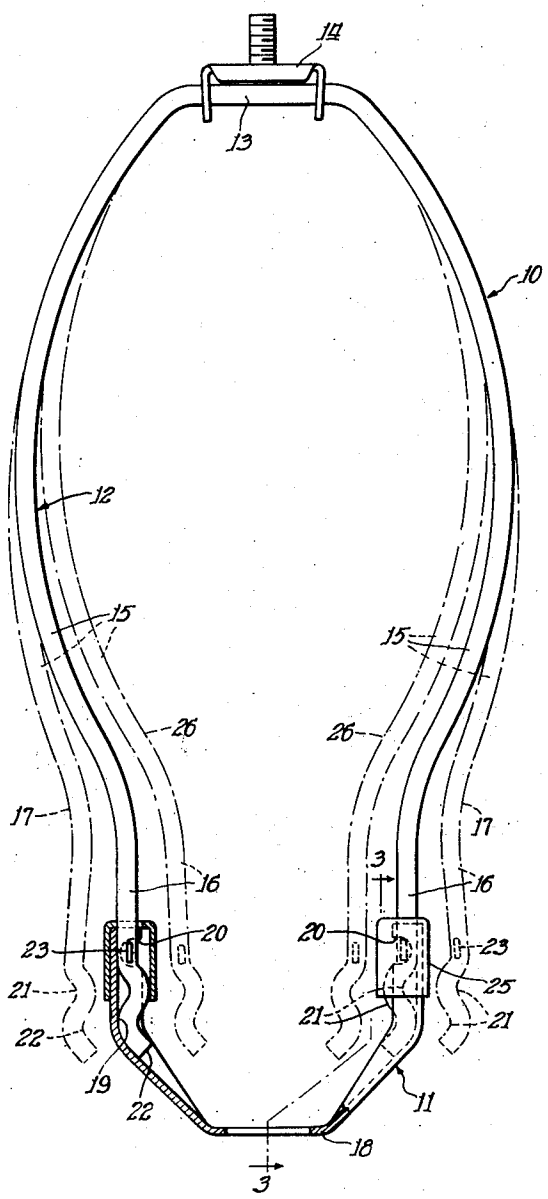


Fig. 5

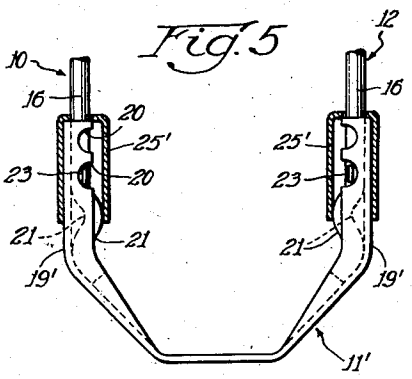


Fig. 4

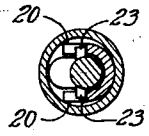


Fig. 2

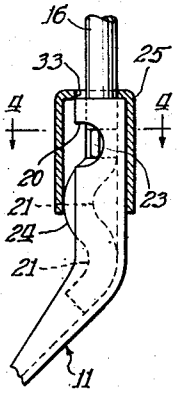
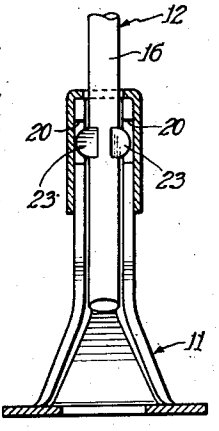


Fig. 3



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Aug. 6, 1957 P. CHILO 2,802,098

LAMP HARP

Filed Oct. 31, 1952 2 Sheets-Sheet 2

Fig. 6

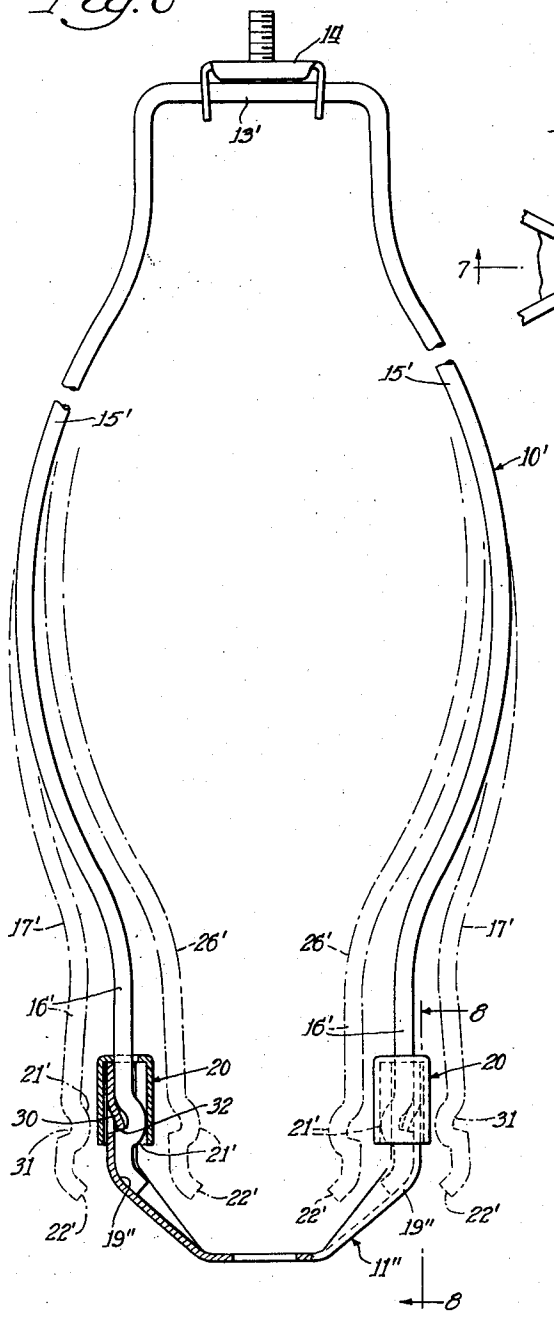


Fig. 9

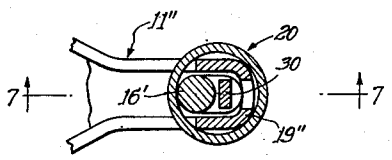


Fig. 7

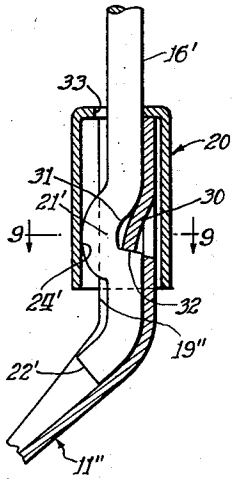
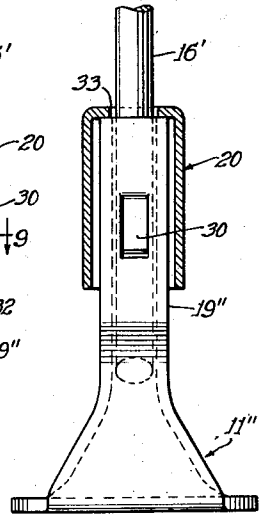


Fig. 8



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LAMP HARP

Paul Chilo, Chicago, Ill.

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7 Claims. (Cl. 240—148)

This invention relates to a lamp harp construction for a lamp shade holder in which the harp is detachably connected to a base therefor, and its principal object is to provide a rigid connection between the harp and base which is detachable and may in certain installations be vertically adjustable which is an improvement over my earlier lamp shade holder disclosed and claimed in the U. S. Patent No. 2,453,658, granted November 9, 1948.

The ordinary lamp harp and that of my aforementioned patent is usually constructed of a length of resilient wire formed with bowed branches terminating in legs or leg members with laterally extending extremities which are secured in upstanding channel-shaped side members of the base and although those of the prior art are entirely satisfactory, the manner in which they are constructed increases the cost of manufacture and therefore one of the objects of this invention is to provide an improved joint connection between the leg of the lamp harp and its respective channel-shaped side member of the base in which there is a material saving in the cost of manufacture.

Another object of the invention is to provide an improved base construction for a lamp shade holder in which the upstanding channel-shaped side members thereof may be notched for the reception of a complementally formed leg in the blanking of the base member after which it may be formed to receive the leg member.

Another object of the invention is to provide an improved harp construction in which the ends of the leg members are complementally formed to provide a detachable joint with the channel-shaped member in which the rod ends require only one operation in forming and require no sizing or trimming on the ends so that they may be assembled to their respective base member without any additional operation.

Another object is to provide U-bends adjacent the extremities of the legs which cooperate with the flanges of the channel-shaped side members of the base to prevent turning or twisting of the legs in the side members and to also provide a more rigid harp construction in all directions.

Still another object of the invention is to provide a lamp harp construction in which the joint between the legs and the legs of the harp and the channel-shaped side members of the base present a better appearance.

A further object of the invention is to provide a lamp harp construction in which the leg members are adapted to be adjusted vertically with respect to the channel-shaped side members of the base.

Also another object of the invention is to provide a lamp harp construction in which the dies for the fabrication of the joint construction of the lamp harp operate better and require less attention.

In order to accomplish the various objects of the invention, I have provided an improved lamp shade holder comprising a lamp harp and a base therefor in which the joint is detachable and formed by notched sides of the

channel members to receive complementally formed lugs integrally formed on the rod ends. The rod ends are also provided with U-bends adjacent their ends for mounting in the complementally formed channel-shaped side members of the base, and the joint is latched together by a movable thimble or collar which is complementally formed to the channel-shaped member and to the end of the leg of the harp. Adjustment of the harp vertically has been provided by providing additional notches in the channel-shaped member, as desired. In another embodiment of my invention, an improved joint construction between the ends of the lamp harp and the base member therefor is provided by inwardly forming or striking a lug from the base of the channel-shaped members and complementally forming the end of the leg of the harp to engage the lug preformed from the base of the channel-shaped member of the base, and similarly forming the rod ends of the harp with U-shaped bends to be received in the complementally formed channel-shaped side members of the base.

Other objects and advantages will appear in the course of this specification, and with said objects and advantages in view, this invention consists in the several novel features hereinafter fully set forth and more particularly defined in the appended claims.

The invention is clearly illustrated in the drawings accompanying this specification in which like reference characters indicate the same or similar parts.

Fig. 1 is a side elevation, partly in section, of a lamp shade holder embodying a simple form of the present invention in an improved joint construction between the ends of the lamp harp and the mounting base therefor;

Fig. 2 is an enlarged detail front elevation of the base and a fragment of the harp and illustrating the collar, partly in section for latching the members together;

Fig. 3 is a vertical longitudinal section taken substantially along line 3—3 of Fig. 1;

Fig. 4 is a horizontally sectional view taken along line 4—4 of Fig. 2;

Fig. 5 is a front elevation of the base member of a lamp shade holder similar to that of Fig. 1, but providing for the vertical adjustment of the lamp harp with respect to the base member;

Fig. 6 is a front elevation partly in section of a lamp shade holder embodying a modified form of joint construction between the ends of the lamp harp and the base therefor;

Fig. 7 is an enlarged detail front elevation, partly in cross section, of the modified base and a fragment of the modified harp construction taken substantially along line 7—7 of Fig. 9;

Fig. 8 is a detail vertical longitudinal section taken substantially along line 8—8 of Fig. 6; and

Fig. 9 is a detail horizontal section taken on line 9—9 of Fig. 7.

Referring to the drawings, the lamp shade holder **10** comprises a base **11** and a lamp harp **12**. The lamp harp **12** is preferably formed of a length of resilient wire bent upon itself at two places adjacent the middle thereof to form a substantially horizontal cross-piece **13** upon which is secured the usual lamp shade holding member **14** in accordance with common practice and which may be fabricated as disclosed and claimed in my U. S. Patent No. 2,209,151.

From the cross-piece **13**, the two branches of the wire are bowed downwardly and outwardly as at **15**, and the two branches terminate in the legs **16** which, when the base **11** and harp **12** are assembled, extend parallel with each other. In the unassembled condition of the device, as shown in Fig. 1, the free ends of the two branches of the harp are spread apart considerably as indicated by the dot and dash lines **17**.

The base **11** is preferably formed of a metal stamping having a centrally apertured, substantially U-shaped base portion **18** terminating in two oppositely disposed upright channel or trough-like side members **19**. The channels or side members face each other and the sides or flanges of the channel are each formed with notches **20**, the notches being disposed in horizontal alignment with each other. The base **11** may be attached to a lamp socket of a lamp base in the usual manner.

Referring to Figs. 1, 2, 3 and 4, the improved detachable and latching joint construction between the ends of the lamp harp and the complementally formed channel-shaped members which receive these ends when mounted upon the base of the lamp shade holder will be described in detail. Adjacent the free ends of the legs **16**, the wire thereof is formed into the undulating U-shaped bends **21** as shown in Figs. 1 and 2. The free end of each leg of the lamp harp is also complementally shaped to the bottom of the channel-shaped portions **19** of the base **11**, as best illustrated in the enlarged view of Fig. 2, and the ends of the lamp harp extend inwardly toward each other, as shown. The terminal ends **22** need only be sheared as the rods forming the lamp harp are cut to length in fabrication and need not have any additional operation thereon as is necessary in the construction of the aforementioned U. S. Patent 2,453,658, with perhaps the exception of removing the usual burrs. As the bends **21** are formed, laterally extending lugs **23** are struck from the metal of the legs **16** contiguous to the beginning of the upper U-shaped bend **21**, as illustrated in Figs. 1, 2 and 3. One face of the lug **23** is substantially tangentially formed with the rod surface, as illustrated in Figs. 2, 3 and 4. The lugs **23** are also complementally formed to the notches **20** to be detachably mounted therein, and it is therefore noted that the upper U-shaped bend **21** extends inwardly from the face of the channel portions **19**, as at **24**, Figs. 1 and 4.

Slidably mounted on the two branches of the harp are collars or thimbles **25** which are placed upon the lamp harp prior to the forming of the ends of the legs **16** and each collar is formed with an apertured end wall to permit this assembly, as shown in Figs. 1, 2, and 3. The collars surround the legs and the upper channeled ends **19** of the side members of the base, and the skirts of the collars when assembled as shown in Figs. 1, 2 and 3 prevent the legs **16** from being disconnected from their base as the skirts of the collars engage the upper U-bends **21**, as at **24**, to frictionally latch the legs of the lamp harp to the base.

In assembling the lamp harp with the base, a person grasps the two branches of the harp and presses the legs toward each other sufficiently to permit the terminal ends of the legs **16** to be inserted in the channels **19** of the base with the lugs **23** in alignment with the notches **20** in the channel-shaped members **19** as shown in the dotted lines **26**, and the person then releases his grasp on the harp permitting the inherent resiliency of the wire to spring the free ends of the harp with the lugs **23** being mounted in the notches **20**. The collars **25** are then slid down the legs and over the upper-channeled ends of the side members of the base effectively preventing the end extremities from being disconnected from the channel-shaped members **19**. Because of the inherent resiliency of the wire of the harp, and as the channels **19** are complementally formed to the U-shaped bends **21**, the U-shaped bends engage the complementally formed channel-shaped members **19** preventing any tortional or twisting action of the legs in the channel. Although it is preferred to provide the collars **25** for frictionally latching the lamp harp to the base, the resiliency of the harp and the complementally formed latch means formed by the legs **23** and the notches **20** retain the lamp harp in its assembled position. The collars **25**, although further frictionally latching the lamp harp to the base, additionally serve to improve the appearance of the joint connection and yet provide a quick detachable means for detaching the lamp harp from the base. This quick detachable provision also permits this lamp harp to be provided, depending upon the shade or lamp bulb used, in different sizes and shapes, and therefore this provision reduces inventory in the manufacture of lamp shade holders and also simplifies the manufacture thereof by requiring a minimum number of parts to fabricate these different sizes of lamp shade holders. By making the harp and base detachable from each other, space is also saved in storing and shipping the device.

Fig. 5 illustrates a lamp shade holder in which the lamp harp **10** may be adjusted vertically with respect to the base **11**. In order to provide this adjustment, a plurality of vertically spaced notches **20** are provided in each channel-shaped upright **19'** to detachably receive the lugs **23** of the legs **16** of the harp. The terminal ends of the legs **16** of the lamp harp are constructed as previously described, and the only additional change necessary is to provide a longer collar **25'** to latch the lamp harp when assembled in the lower position of the lamp harp to provide adjustment of the lamp harp for different heights and as required for certain forms of shades without the necessity of providing extensions assembled on the lamp shade holding member **14**, as is well understood in the art. The assembly and disassembly of the lamp harp to the base **11'** is similar to that previously described in the embodiment of Fig. 1 and need not be further described. Although the embodiment of Fig. 5 has been illustrated only with two adjustments, it is obvious that as many adjustments as is desired may be provided. The only change being necessary is to provide a thimble of sufficient length that the thimble will latch the lamp harp to the base in its lowest adjusted position.

Referring to Figs. 6 through 9, there is illustrated another embodiment of my invention and primed reference characters will denote the same or similar parts as previously described. In this embodiment, the detachable joint between the lamp harp on the base is similarly constructed as that of Fig. 1 wherein as the latching of the harp to the base in this embodiment was provided by the complementally formed latching means formed by the lugs **23** of the harp and the notches **20** on the base in this embodiment, the latching means of the embodiment to be described is provided by notching the base of the channel-shaped members **19''** to provide a lug **30** and complementally forming terminal ends of the legs **16'** with a substantially U-shaped notch **31** to have the side thereof abut the lug **30** at its free end as at **32** in Fig. 7 to provide a latch which will prevent the lamp harp from being pulled from the channel-shaped members **19'**. Although it is preferred to construct the U-shaped notch **31**, as shown, it may be formed by a punch and die which will form a definite U-shaped notch in which the opposite sides are relatively parallel and not formed as shown in Fig. 7. The die for forming the free ends of the lamp harp are complementally formed to the shape of the end as illustrated in Fig. 7 and provide a simple means for fabricating a latch for detachably securing the lamp harp to the lamp base **11''**. In this embodiment the lamp harp **10'** is of different shape inasmuch as it is for a lamp shade holder in which the lamp shade used therewith is larger.

However, in the assembly and disassembly of the harp and the base by anyone, the procedure is substantially identical with that of Fig. 1, the only difference being that the terminal ends of the leg **16'** are placed in the channel-shaped side members **19''**, with the notch **31** in alignment with the lug **30** of the base **11''**, Fig. 6, as shown in the dotted lines **26'**. The person then releases his grasp on the harp permitting the inherent resiliency of the wire to spring the terminal ends **22'** into position as shown in the solid lines of Fig. 6. The collars **20** are then slid down upon the legs and over the upper channeled ends of the side members, thereby effectively

preventing the end extremities of the lamp harp from being disconnected from the side members of the base **11**. Because of the inherent resiliency of the wire of the harp, and as the U-bends **21'** are offset with respect to the axis of the legs and also as the U-bends engage the sides of the channeled side members **19''** adjacent their free edges, any tortional or twisting action of the legs in the channels is prevented. A frictional latch is formed by the collar **20** with the U-bend **21'** as at **24'** and is similar to the frictional latch provided as illustrated in the embodiment of Fig. 2.

It is also possible to provide additional vertical adjustment of the lamp harp **10'** with respect to its complementally formed base **11'** by providing, additionally, vertically spaced lugs **30** in the channel-shaped side members **19''** corresponding in position to the notches **20** of the embodiment of Fig. 5. However, when as constructed, the additional lugs **30** required are formed from the base of the channel-shaped members **19''**, as illustrated in Figs. 7, 8 and 9.

Although it is preferred to provide the opening **33** in the thimbles only slightly larger than the wire size of the rod material forming the lamp harp so that the thimbles may be readily moved along the bowed extensions of the lamp harp latched in position on the base, it may be desirable to make the opening **33** slightly larger, as illustrated in Figs. 2 and 7 so that in the latched position of the collars, the collars appear in a vertical position, as shown, rather than perhaps slightly tilted in order to improve the appearance of the lamp shade holder. However, it is within the scope of the invention, that any suitable size opening shall be used. Although it is preferred to construct the lamp harp from wire or rods which have a circular cross-section, other suitable shapes may be used.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence, I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. In a lamp shade holder, a U-shaped base having two oppositely disposed upright angular side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, each channel-shaped side member having a plurality of vertically spaced notches in the flanges of the upright side members and the notches being aligned, a lamp harp having resiliently biased legs, the legs thereof adapted to be confined in the channels of the side members and complementally formed to engage the notches thereof and bearing against the inner faces of the flanges of the side members, the aforesaid legs having the free ends thereof formed with a U-shaped bend and being complementally formed to the angular channel-shaped side members and lying in the same plane with the ends of the legs extending downwardly, and collars adapted to surround the channel-shaped upright portions of the side members and to operatively engage the legs of the harp and the U-shaped bends of said legs, whereby accidental disconnection between the harp and base is prevented upon adjustment of the lamp harp in any of the vertically spaced notches in the flanges of the side members.

2. In a lamp shade holder, a U-shaped base having two oppositely disposed upright channel-shaped side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, latching means formed on the upright side members and said latching means

being aligned, a lamp harp having resiliently biased legs, the free ends of the legs formed with a U-shaped bend with the terminal ends of the legs extending inwardly, and the legs thereof adapted to be confined in the channels of the side members and comprising complementally formed latching means contiguous to their free ends to the latching means formed in the upright side members, said latching means complementally formed on the upright side members and the legs comprising complementally formed lugs and notches, whereby biasing of the resiliently biased legs of the harp permit the harp to be attached and detached to the U-shaped base by the engaging and disengaging of the complementally formed latching means of the legs and the upright side members, and collars adapted to surround the channel-shaped upright portions of the side members and to operatively engage the legs of the harp and the U-shaped bends of said legs.

3. In a lamp shade holder, a U-shaped base having two oppositely disposed upright side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, a lamp harp having resiliently biased legs, the legs thereof having portions adapted to be confined in the channels of the side members and complementally formed to the side members and lying in the same plane with the ends of the legs extending downwardly, and the aforesaid portions of said legs undulatingly deformed at their free ends, latching means formed by the aforesaid undulatingly deformed portions of the legs, and complementally formed latching means formed in the channel-shaped side members, whereby the undulating portions of said legs are complementally formed to the channel-shaped side members for detachably latching the lamp harp to the U-shaped base, and collars adapted to surround the channel-shaped upright portions of the side members and to operatively engage the legs of the harp and the aforesaid undulatingly deformed portions of said legs.

4. As an article of manufacture, a lamp harp adapted for detachably mounting on a U-shaped base of a lamp shade holder, said U-shaped base having two oppositely disposed upright side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment and lug-shaped means formed from the base of the channel-shaped side members, said lamp harp having resiliently biased legs, the legs thereof adapted to be confined in the channels of the side members of the U-shaped base, said legs also being complementally formed to the channel-shaped side members for bearing against the inner faces of the flanges of the aforesaid side members and lying in the same plane with the ends of the legs extending downwardly, latching means comprising a U-shaped latching means formed from the legs of the lamp harp and extending substantially in the plane of the lamp harp, and complementally formed to the lug-shaped means formed from the base of the channel-shaped side members, and deformations formed on the terminal ends of the legs, one of said deformations of each of said legs forming the U-shaped latching means formed substantially at the end of each of said legs and the other of said deformations adapted to engage the base of the channel-shaped side member.

5. As an article of manufacture, a U-shaped base adapted to detachably receive the complementally formed free ends of the resiliently biased legs of a lamp harp of a lamp shade holder, said U-shaped base comprising two oppositely disposed upright side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, each of said channel-shaped side members having a lug formed inwardly within the channel-shaped side members from the base thereof and adapted to de-

tachably mount the lamp harp, and the lugs of the channel-shaped side members being complementally formed to engage the free ends of the resiliently biased legs of said lamp harp.

6. As an article of manufacture, a lamp harp adapted to be detachably mounted upon the U-shaped base of a lamp shade holder, said U-shaped base having two oppositely disposed upright side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, said lamp harp comprising resiliently biased legs, the legs thereof adapted to be confined in the channels of the aforesaid channel-shaped side members, said legs also being complementally formed to the channel-shaped side members of the U-shaped base for bearing against the inner faces of the flanges of the aforesaid side members and lying in the same plane with the ends of the legs extending downwardly, latching means formed contiguous to the ends of the legs of the lamp harp by forming a U-shaped notch with the open end of the notch complementally formed to receive a lug formed from the base of a channel-shaped side member, and said free ends of the legs being complementally formed to abut the inner face of the base of the channel-shaped side members upon the mounting of the lamp harp within the channel-shaped side members.

7. In a lamp shade holder, a U-shaped base having two oppositely disposed upright side members including flanges providing channel-shaped side members, the open sides of said channel-shaped side members facing each other with the edges of the flanges oppositely arranged and in alignment, each of said channel-shaped side members having a lug-shaped means formed inwardly within the channel-shaped members and from the bases thereof, a lamp harp having resiliently biased legs, the legs thereof

adapted to be confined in the channels of the side members and complementally formed to engage the lug-shaped means thereof and bearing against the inner faces of the flanges of the side members, the aforesaid legs having the free ends thereof formed with latching means and being complementally formed to the channel-shaped side members and lying in the same plane with the ends of the legs extending downwardly, said latching means formed contiguous to the ends of the legs of the lamp harp by forming a U-shaped notch with the open end of the notch complementally formed to receive the lug-shaped means formed from the base of the channel-shaped side member, said free ends of the legs being complementally formed to abut the inner face of the base of the channel-shaped side members upon the mounting of the lamp harp within the channel-shaped side members, and collars adapted to surround the channel-shaped upright portions of the side members and to operatively engage the legs of the lamp harp and the latching means of said legs, whereby accidental disconnection between the lamp harp and base is prevented.

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