

Sept. 2, 1958

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2,850,731

COMBINED ANTENNA AND LAMP SHADE

Filed May 28, 1953

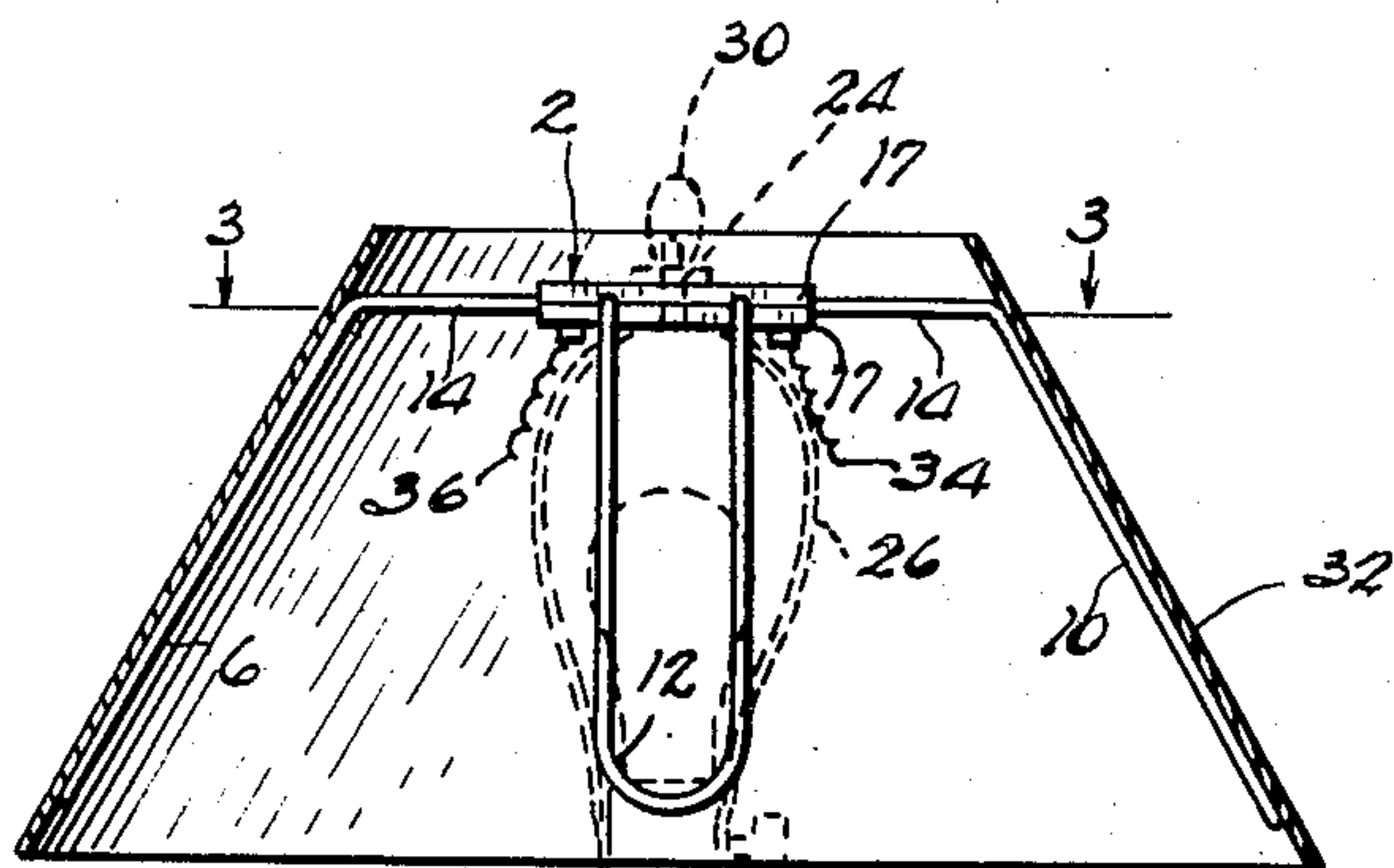


Fig. 1.

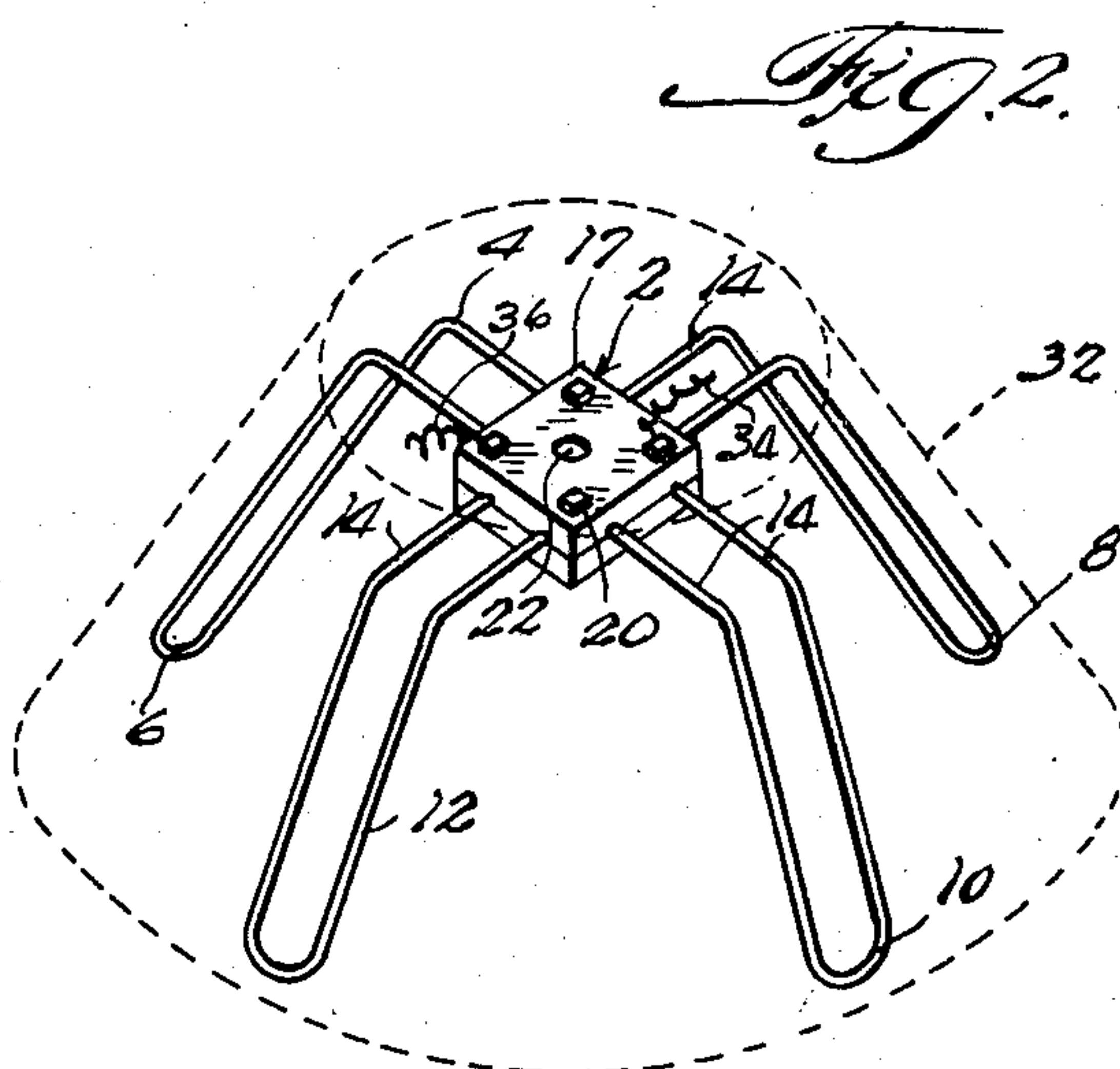


Fig. 2.

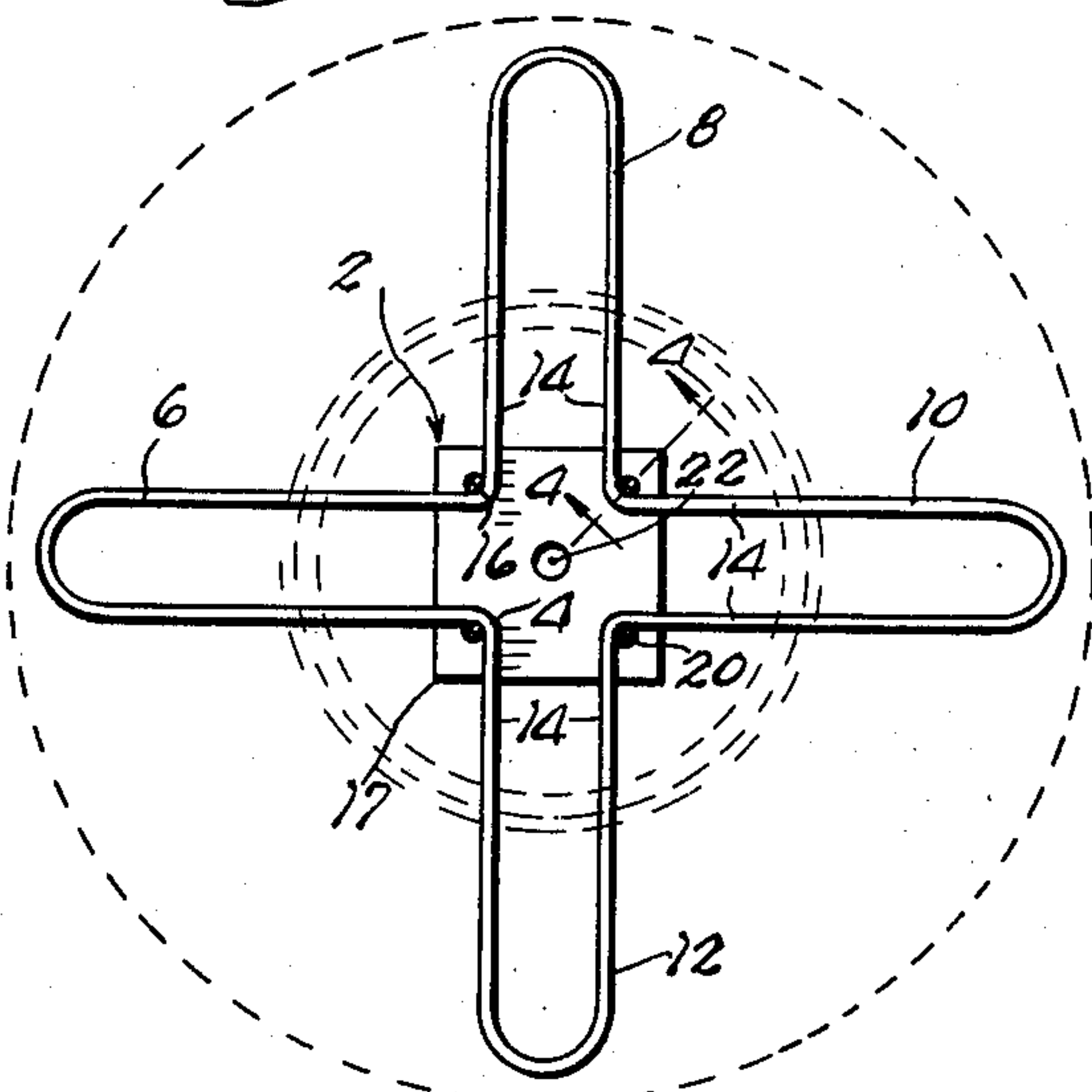


Fig. 3.

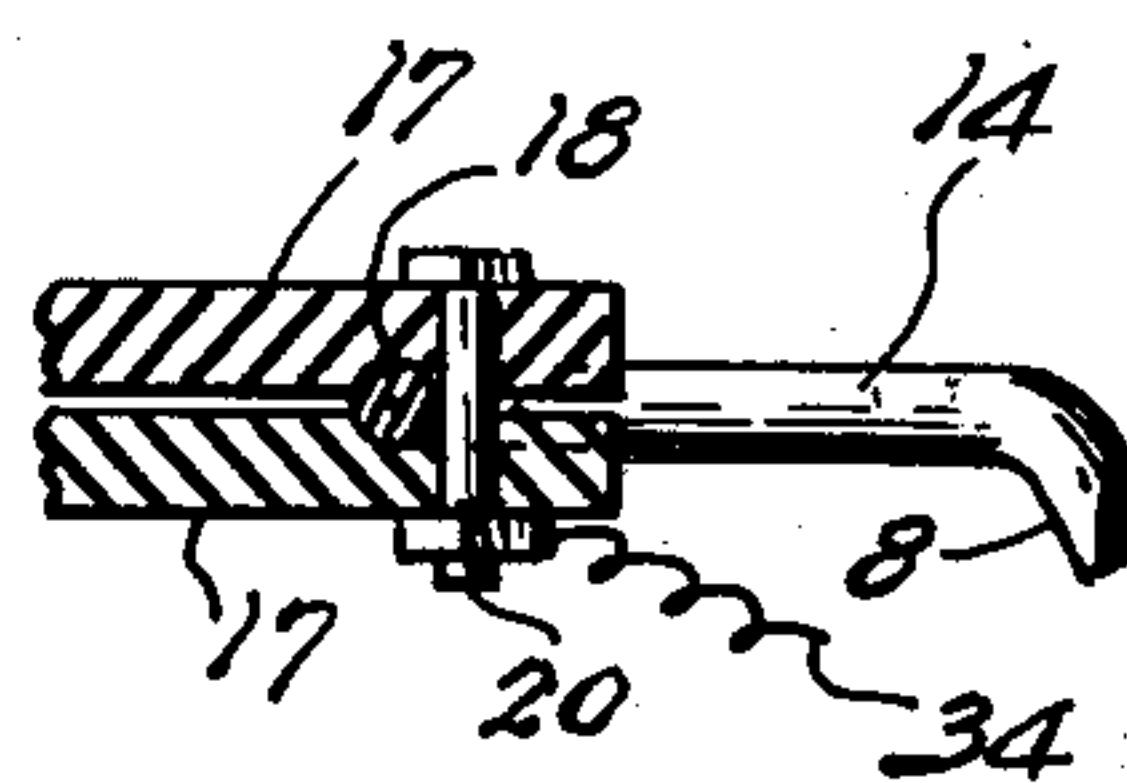


Fig. 4.

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2,850,731

## COMBINED ANTENNA AND LAMP SHADE

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Application May 28, 1953, Serial No. 358,069

3 Claims. (Cl. 343—720)

This invention relates to a combination antenna and lamp shade which may be attached to a lamp, to afford a concealed antenna for a device such as a television or radio set.

A primary object of the invention is to devise a combination antenna and lamp shade which is economical to manufacture and which affords a sturdy and sensitive antenna.

Another object of the invention is to devise an antenna which also functions as a structural support for a lamp shade, thereby affording a simple and economical structure.

Still another object of the invention is to accommodate quick removal and replacement of the shade, if desired.

A further object of the invention is to provide upwardly converging antenna subloops engaging an upwardly tapering shade sleeved over said loops and supported entirely thereby, whereby if desired the shade may be lifted from engagement with the antenna for cleaning or replacement of the shade.

A different object of the invention is to devise an antenna having a double dipole, affording support for a lamp shade.

Yet another object of the invention is to devise novel means for attaching the antenna to the lamp, said means releasably clamping and positioning segments of the antenna which interconnect its subloops.

The foregoing and other objects and advantages of the invention will become apparent from a consideration of the following specification and the accompanying drawings, wherein:

Figure 1 is a side elevational view, partly in central vertical section, of a combination lamp shade and antenna device embodying the invention;

Fig. 2 is a perspective view of the device shown in Fig. 1;

Fig. 3 is a top plan view, partly in section on the line 3—3 of Fig. 1; and

Fig. 4 is a sectional view on the line 4—4 of Fig. 3.

Describing the invention in detail, the novel device comprises a combination lamp shade support and antenna structure generally designated 2, preferably in the form of a wire loop 4 having a plurality of subloops defining legs 6, 8, 10 and 12, which depend from interconnecting wire segments 14.

The loop 4 is preferably closed as at 16 (Fig. 3) as by soldering, or in any other desired manner, and the segments 14 preferably define a plane passing above the upper ends of the legs 6, 8, 10 and 12, as best seen in Fig. 1.

The segments 14 are provided with lamp attaching means, illustrated in the form of a pair of insulator blocks 17 grooved on their adjacent sides at 18 (Fig. 4) to position the segments 14 in the pattern illustrated in Fig. 3, so that each pair of segments 14 connected to the related leg are approximately parallel; and the combination support and antenna structure 2 is of approximately

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cruciform shape, as seen in the plan view of Fig. 3. The blocks 17 are releasably clamped against the segments 14, as by bolt and nut assemblies 20, and are provided with central openings 22 for the reception of a threaded stud 24 at the upper end of a conventional harp 26 of a lamp 28. An ornamental nut 30 is threaded on the upper end of the stud 24 to secure the blocks 17 thereon, whereby the blocks afford convenient means for attaching the structure 2 to the lamp harp 26.

As best seen in Figs. 1 and 2, the legs or subloops 6, 8, 10 and 12 preferably converge upwardly toward each other and toward the plane of the segments 14 to afford a convenient and detachable support for a lamp shade 32 which tapers upwardly to seat snugly along the outer sides of the legs. Thus, if the shade 32 is to be removed for cleaning or for replacement by a shade of another color as may be desirable to complement various surrounding color combinations of chairs, walls and drapes, the shade 32 is merely lifted from the legs, and another shade (or the same shade after cleaning) may be lowered onto the legs for support thereby.

The shade 32 may be formed of any desirable material, such as parchment, paper, plastic or fabric, which has been reinforced in any manner as by coating with a stiffening material or by stays (not shown).

In this connection, although the upwardly tapering shade 32 shown in the drawing is in the form of a truncated cone, it will be readily understood that other suitable shapes may be employed, as, for example, that of a truncated pyramid.

It may also be noted that if the above-described feature of readily detaching the shade 32 from the combination support and antenna structure 2 is not desired, the shade may be integrally joined to the legs 6, 8, 10 and 12, or may be attached thereto in any desired manner, as by clamps or adhesive. In such an arrangement, the legs, if desired, may be approximately parallel in substantially vertical relationship, and the shade 32 may be cylindrical, inasmuch as the tapered form of shade and the upwardly converging legs shown in the drawing would not be necessary. Even in such an arrangement, however, the shade 32 is preferably of a contour complementary to the outer sides of the legs which preferably afford structural support for the shade throughout the length of the legs.

As illustrated in Figs. 1 and 2, antenna leads 34 and 36 are electrically connected to the structure 2 by two of the bolt and nut assemblies 20 which are electrically conductive. The lead 34 is shown as connected to a pair of the segments 14 at their inner interconnected ends between legs 8 and 10, and the lead 36 is shown as connected to the diametrically opposite pair of segments 14 at their inner interconnected ends between legs 6 and 12. However, it will be readily understood by those skilled in the art that many possible combinations of leads may be utilized, and for this purpose the loop 4 may be open at 16, if desired.

Reference to Figs. 1 and 2 clearly discloses another important feature of the invention, namely, the fact that legs 8 and 12 constitute a dipole, and legs 6 and 10 constitute another dipole, so that the novel structure 2 is in the form of a double dipole, to facilitate tuning by rotating the lamp 28 on its vertical longitudinal axis. Because of this novel, double dipole arrangement, very slight rotational movement of the lamp 28 is required to tune the set (not shown) to which the antenna structure 2 is connected by the leads 34 and 36.

Thus it will be understood that the invention comprises a novel arrangement wherein the antenna affords structural support for the lampshade, and preferably comprises a double dipole to afford sensitivity of tuning. Also, the insulating blocks provide a novel connection between



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the antenna and the supporting lamp, and afford convenient means for attaching leads to the antenna. The invention also comprises a novel antenna loop characterized by a plurality of subloops which not only provide a double dipole, but also accommodate a simple and sturdy structural support for the shade, which may be removably or permanently attached to the subloops, as heretofore described.

While the present invention has been explained and described with reference to explicitly contemplated structural features, it will be understood nevertheless that numerous changes and modifications are susceptible of being incorporated without departure from its essential spirit or scope. Accordingly, it is not intended to be limited to the particulars of the accompanying illustration nor the language employed in the foregoing description, except as indicated in the hereinafter appended claims.

What is claimed as new and desired to be secured by Letters Patent of the United States is as follows:

1. An antenna and lamp shade assembly comprising a single loop of antenna wire and a plurality of upwardly converging subloops defining legs interconnected by segments of said wire defining a plane above said legs, a pair of matching insulator blocks having electrically conductive means contacting said segments and clamping said blocks against said segments to form a support structure for an associated lamp; a central threaded opening in said block and a lamp shade sleeved over said legs and supported thereby, the antenna and lamp shade assembly being secured to said lamp by a nut threaded in the central opening of said blocks.

2. A combination lamp shade and antenna device comprising an antenna characterized by a loop of wire with four depending subloops defining a double dipole, said loops being electrically interconnected by segments of

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said wire, the segments associated with each loop being approximately parallel whereby said antenna is substantially cruciform in shape as shown in the top plan view, a pair of matching insulator blocks having electrically conductive means contacting said segments and clamping said blocks against said segments to form a support structure for an associated lamp, a central threaded opening in said blocks and a lamp shade sleeved over said legs and supported thereby, the antenna and lamp shade assembly being secured to said lamp by securing means threaded in the central opening of said blocks.

3. An antenna of the class described comprising a single continuous closed loop of antenna wire having a plurality of elongated subloops arranged in the form of a double dipole, said subloops being electrically interconnected by segments of said wire defining a plane passing above said subloops, the segments associated with each subloop being approximately parallel, whereby said antenna is substantially cruciform in shape as seen in top plan view, a pair of matching insulator blocks grooved at their adjacent sides to maintain said segments in their parallel position and means for releasably clamping said blocks against said segments, said clamping means providing connections for associated leads.

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