Aug. 17, 1926. 1,596,314

W. H. SCHNEIDER

CHRISTMAS TREE ORNAMENT, ORNAMENT FABRIC, AND THE LIKE

Original Filed March 14, 1925 2 Sheets-Sheet 1

Fig. 1.

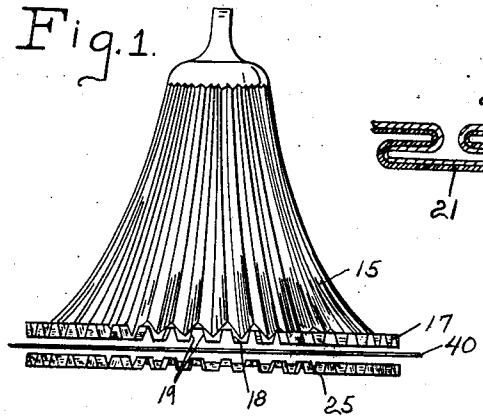


Fig. 2.

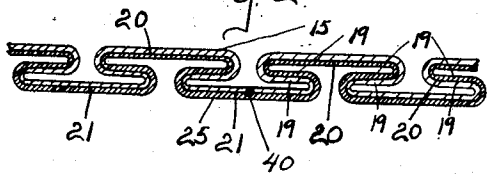


Fig. 3.

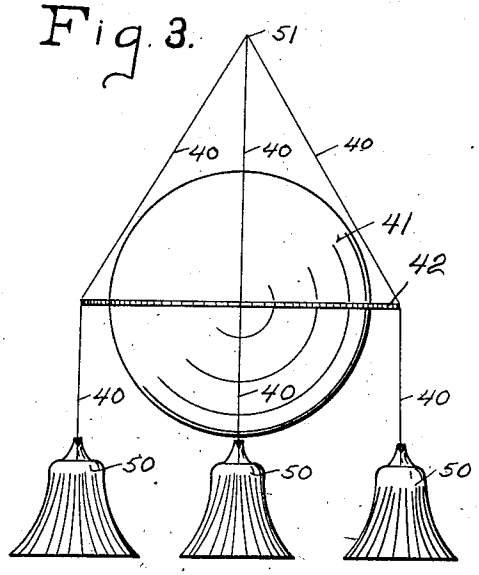


Fig. 4.

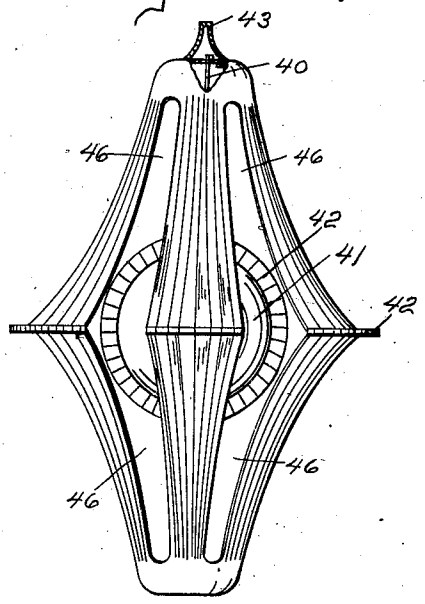
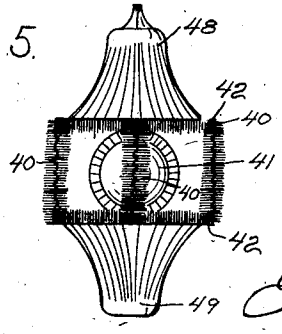


Fig. 5.



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Fig. 6.

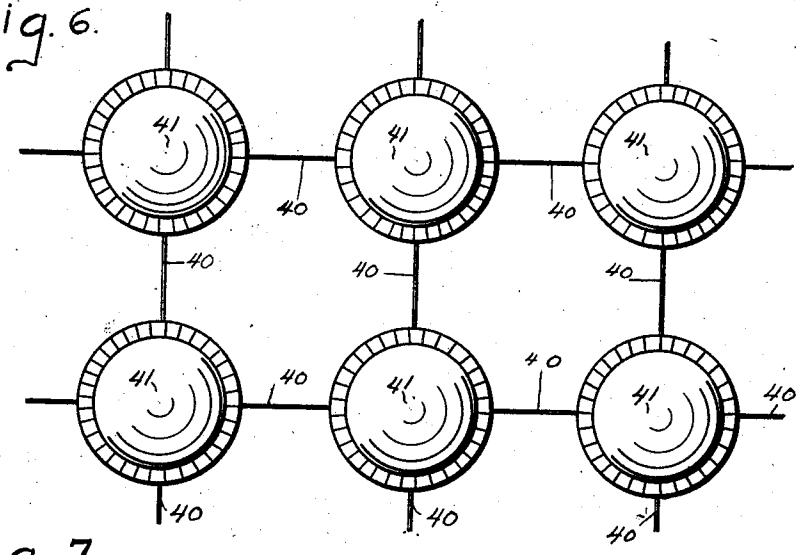


Fig. 7.

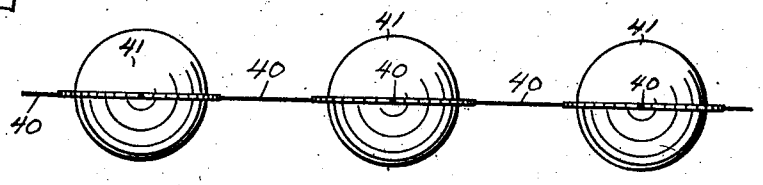
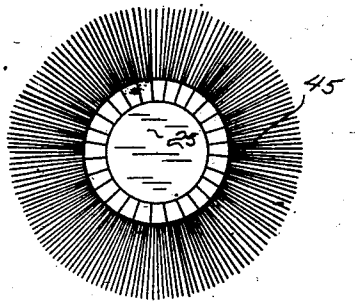


Fig. 8.



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UNITED STATES PATENT OFFICE.

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CHRISTMAS-TREE ORNAMENT, ORNAMENTAL FABRIC, AND THE LIKE.

Original application filed March 14, 1925, Serial No. 15,483. Divided and this application filed September 8, 1925. Serial No. 55,191.

This invention relates to improvements in Christmas tree ornaments, ornamental fabrics and the like.

It is one of the primary objects of this invention to provide a novel and improved means for uniting flexible strands with the annular margins of other objects in outwardly projecting relation thereto. The present invention contemplates the formation of convolutions in the annular marginal flange of a given body, the interposition in such convolutions of strands of string or tinsel or the like, and the subsequent flattening of the convolutions to retain such strands therein. This application is a division of an application filed by me on or about March 14th, 1925 Serial No. 15,483 and, as disclosed therein, it is possible to unite a plurality of hollow or disc-like bodies to each other by the formation of circumferentially extending convolutions in complementary portions of their margins, the nesting of such convolutions and their subsequent flattening to effect an interlocking engagement between the bodies. In accordance with the present invention, strands of tinsel or string or bristles or wire may be interposed in such convolutions and will be there retained whether or not the convolutions function additionally to secure a plurality of bodies together.

It is a further object of this invention to employ the principle above described in the production of a novel and ornamental fabric, the connecting strands of which are positioned with reference to each other by means of bodies mounted thereon and formed with convolutions to engage and retain adjacent portions of such strands.

In the drawings:

Figure 1 represents in side elevation the several parts of a novel and improved Christmas tree ornament as assembled preparatory to their permanent interconnection.

Figure 2 is a detail view on a greatly enlarged scale showing in section the character of joint or union produced in accordance with this invention.

Figure 3 is a side elevation of a further type of ornament embodying this invention.

Figure 4 is a side elevation of an improved Christmas tree ornament embodying this invention.

Figure 5 is a side elevation of a different type of ornament.

Figure 6 is a fragmentary view in plan of a novel fabric embodying this invention.

Figure 7 is a side elevation of the fabric structure shown in Figure 6.

Figure 8 is a view in plan of a novel ornament or medallion made in accordance with this invention.

Like parts are identified by the same reference characters throughout the several views.

Any two bodies having corresponding marginal flanges may be interconnected in accordance with the method more particularly disclosed in the above identified parent application and claimed in a companion divisional case. Furthermore, providing there is one body having convolutions in its periphery, any other device having a tongue or flexible strand or the like receivable in such convolution may be joined to the said body by compressing the convolutions about said tongue or strand.

In Figure 1 there is illustrated a bell 15 preferably formed in the usual manner from sheet metal, preferably aluminum, tin, or copper foil, or some other highly pliable and relatively non-resilient substance, such as paper, fiber or the like. It will be noted that the bell 15 is formed with radially extending flanges 17. The same dies which form the flutings in the body of the bell are preferably constructed to form convolutions 18 in its margin. These convolutions lie in general in a common plane to which the vertical axis of the bell is normal. The vertical sides 19 of the convolutions are preferably substantially parallel. The more nearly parallel these side portions 19 can be made, the more uniform will be the resulting joint in the completed device.

A disc 25 is shown in Figure 1 to be provided with marginal convolutions complementary to those of the bell so that the two sets of convolutions may be nested together. Additional bodies or elements having convoluted margins may also be nested with the bell and the disc.

After the convoluted margins of the several parts are in nested relation they are subjected to pressure in a direction tending to flatten the convolutions which thereupon appear as shown in Figure 2. In practice the entire periphery of the bodies so joined will not be as regular as the illustration in Figure 2, although there will usually be parts of the periphery in which the flattening will occur to produce dovetailed or interlocked portions of practically perfect regularity. As is clearly shown in Figure 2, the side walls 19 of the two articles 15 and 25 have collapsed. Thereby the abutting upper surfaces 20 of adjacent convolutions are brought into close proximity and so likewise, are the under surfaces 21 of each convolution brought into close proximity with the corresponding surfaces of convolutions upon either side thereof. Due to the great pressure with which this operation is preferably performed, and due to the inelasticity of the preferred materials for the articles thus joined, the result is a very rigid joint inherently re-enforced along radial lines and having great tensile strength due to the multiplicity of points at which the two articles are interlocked.

Whenever convolutions of the above indicated type are flattened and particularly wherever two bodies are joined by flattened convolutions, it is possible to employ the flattened convolutions to engage and retain a strand of cord, wire, bristles, or tinsel. Irrespective of their specific character, such strands will be designated herein by reference character 40.

In Figure 3 I have illustrated a sphere 41 constructed by joining two hemispheres by interlocking convolutions which result in the production of a radial flange 42. These convolutions are used to clampingly retain pairs of strands 40 which pass through them at right angles in two or more directions. At each point where a pair of strands issue from the flange 42 of the sphere, one of the strands has been turned downwardly and used to support a small bell 50, while the other strand has been turned upwardly or brought to a common point 51 where the ends are knotted and may be used to support the entire ornament.

Figure 4 shows two bells similar to that shown in Figure 1, and skeletonized by cutting away their side portion at 46. These bells are joined by a radial flange 42 formed in the manner already described by compressing the nested convolutions into dovetailed relation. A staple 43 serves to support the device in a pendant position from a Christmas tree or the like. Within the bells is a sphere 41 formed in the manner already described and having a radial flange 42 in clamping relation upon a strand 40 which extends axially through the united bells and is fastened to their respective ends as is shown at the top of Figure 4. The openings 46 in the hollow articles formed by the union of the bells render sphere 41 visible and if fine wire or thread is used for the strand 40 it will have sufficient torsional resilience to permit the sphere 41 to rotate within the bells when a draft of air is directed upon the flange 42 projecting at one side thereof.

In Figure 5 the two bells 48 and 49 are not directly joined but their convoluted margins have been flattened to retain portions of the same strands 40 which, in this view, are illustrated as being formed of tinsel. Since the tinsel is engaged in the flange portions 42 of both of these bells it holds the bells together in spaced relation and renders visible the sphere 41 supported therein in the same manner as the sphere shown in Figure 4.

In Figures 6 and 7 I have illustrated a fragment of a novel and very decorative fabric, the strands 40 of which may comprise wire, string or tinsel and the body of which comprises spheres 41 formed by joining two hemispheres by the flattening of their nested convoluted margins in the manner above described to retain strands 40 passing therethrough at right angles. The spheres are so positioned and constructed as to hold each pair of strands at their intersection and inasmuch as the spheres, if made of aluminum foil or the like, will have light reflecting surfaces lending themselves readily to the application of color, it will be obvious that the fabric as a whole will have a pleasing and decorative appearance.

Obviously it is not necessary to use hemispheres to unite the intersecting strands since a single disc at each intersection will have its convolutions engaged with the transversely extending strands to hold them in their proper relative positions. Various other forms of bodies may also be used for this purpose, the only requisite being the formation of a convolution in the margins of each such body which may be flattened into engagement with the transversely extending strand.

Figure 8 shows a construction in which a single disc such as that shown at 25 in Figure 1 is provided with a series of radially disposed bristles or tinsel strips 45, each being laid into a convolution of the disc and the convolutions being subsequently flattened to retain frictionally the strands 45. Such a device presents a brilliant sunburst or medallion effect as is clearly shown in Figure 8 and is adapted for use as a novel type of Christmas tree ornament.

I claim:—

1. As a new article of manufacture, a device comprising a body having a convolution opening to its margin and flattened to

provide integrally opposing wall surfaces, and a strand engaged in the flattened convolution between said surfaces.

2. As a new article of manufacture, a device comprising a body formed with a plurality of substantially radial convolutions each flattened to provide integrally connected opposing wall surfaces, and outwardly extending strands secured to said body through engagement between the opposing wall surfaces of the several flattened convolutions.

3. As a new article of manufacture, a device comprising a pair of bodies having corresponding margins formed to provide nested convolutions flattened into interlocking engagement, together with an element clamped between the interlocked margins of said bodies, said element comprising a flexible strand.

4. As a new article of manufacture, a fabric comprising a plurality of intersecting strands and securing devices at the intersections of said strands each comprising a body having convoluted margins flattened into engagement with adjacent portions of said strands whereby to maintain said strands in predetermined relative positions.

5. As a new article of manufacture, a fabric comprising a plurality of intersecting flexible strands and two bodies clamped together in engagement with said strands at each of their points of intersection whereby to maintain said strands in predetermined relation.

6. As a new article of manufacture, a fabric comprising a plurality of intersecting strands and securing devices comprising bodies disposed on opposite sides of said strands at their several points of intersection and interlocked together to engage intersecting strands therebetween whereby to maintain said intersecting strands in predetermined relation.

7. As a new article of manufacture, a fabric comprising a plurality of intersecting flexible strands and two bodies clamped together in engagement with said strands at each of their points of intersection whereby to maintain said strands in predetermined relation, said bodies being of an ornamental character with light reflecting surfaces.

8. As a new article of manufacture, a fabric comprising a plurality of flexible intersecting strands and bodies respectively positioned in clamping engagement with said strands at their several points of intersection each such body comprising two parts having complementary marginal convolutions formed with interlocked convolutions.

9. As a new article of manufacture, an ornamental fabric comprising a plurality of flexible intersecting strands and ornamental bodies respectively clamping said strands at their points of intersection, said bodies comprising lustrous metal elements having complementary margins formed to provide convolutions compressed into nested interlocked relation, said strands extending through said bodies intermediate said elements.

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