

June 10, 1941.

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2,245,068

CUBE TAP

Filed July 6, 1938

Fig. 1

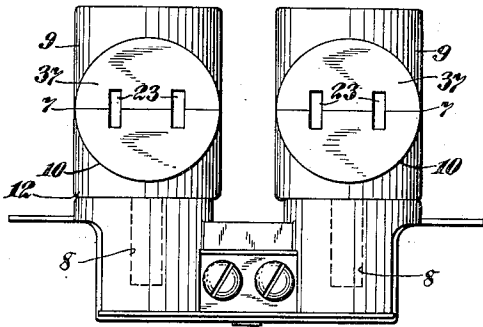


Fig. 2

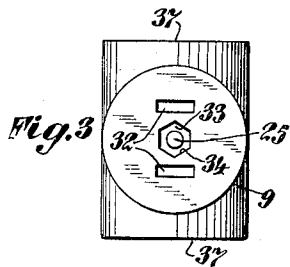
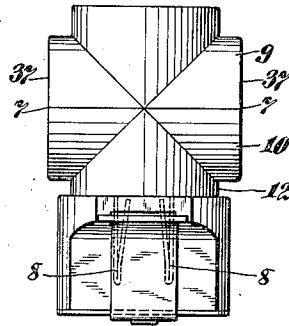


Fig. 5

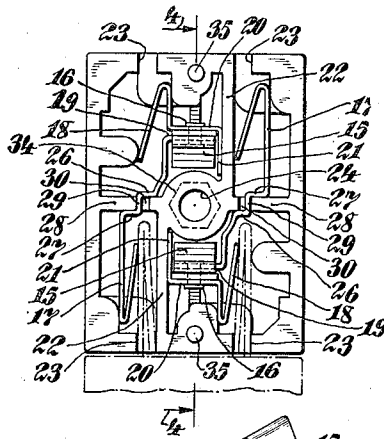


Fig. 4

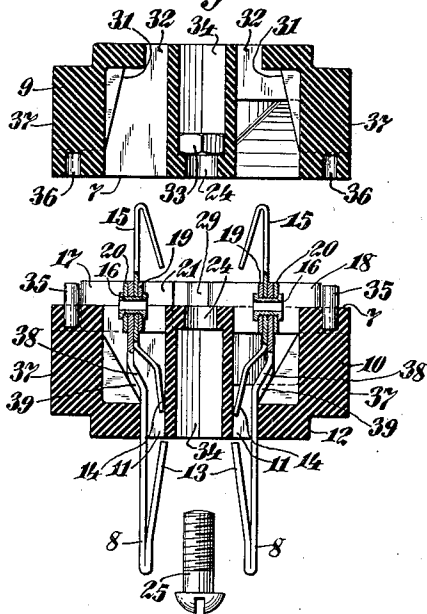
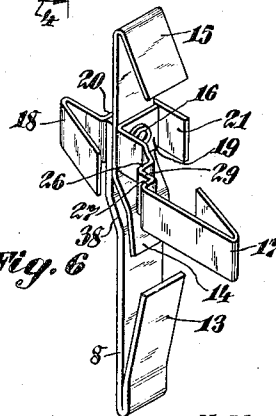


Fig. 6



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2,245,068

CUBE TAP

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Application July 6, 1938, Serial No. 217,693

2 Claims. (Cl. 173—334)

The invention herein disclosed relates to cube taps.

Objects of the invention are to provide a multiple plug of the type indicated, which will have the several outlets faced so that all may be used even when two of the plugs are mounted in side-by-side relation in a double service outlet; to arrange the parts so that the blades will project through a solid continuous wall of the plug body and be held separated in insulated relation by a solid integral portion of the plug body and generally to improve the electrical and structural characteristics of such devices.

The objects mentioned and other desirable objects are attained in this invention by novel features of construction, combinations and relations of parts as hereinafter described, illustrated in the accompanying drawing and broadly covered in the claims.

The drawing forming part of the following specification illustrates one of the practical commercial embodiments of the invention. The structure however may be modified and changed as regards this particular disclosure, all within the true intent and broad scope of the invention.

Fig. 1 is a side view illustrating two of the plugs as mounted in a double plug receptacle.

Fig. 2 is an end view of the same.

Fig. 3 is a top plan view of one of the plugs.

Fig. 4 is an enlarged longitudinal sectional view of the two base parts in separated relation, showing the plug contacts seated in and projecting from what may be considered the integral lower half of the base.

Fig. 5 is a plan of the lower base part with the contacts seated therein.

Fig. 6 is a perspective view of one of the two similar multiple contact members.

The base of the plug differs from those of conventional form in that the plane of separation indicated at 7, extends at right angles to the projecting blades 8, thus dividing the plug body into what may be considered upper and lower base parts 9, 10, with the blades projecting down through passages 11, in the solid unitary bottom face portion 12, of the lower member.

In the present disclosure, the blades have return bent spring end portions 13, which collapse as the blades are forced down through passages 11, and then spring open (Fig. 4) over the bottom surface of the plug to prevent dislodgment of the contact members before the parts are completely assembled.

Additional resiliency to provide better electrical contact and to enable the plug to auto-

matically adapt itself to variations in different receptacles is provided in the illustration by springs 14, secured in overlying relation on the blades and bearing against side walls of the blade passages 11 (Fig. 4). These springs are shown as downward continuations of the top reversely bent spring contacts 15, which are secured to the shank portions of the blades by the tubular rivets 16.

Also secured by the same rivets are the reversely bent endwise projecting spring contacts 17, 18, having the angularly bent base portions 19, 20, caught beneath the heads of the rivets. The angled base portions 20, are shown further continued substantially at right angles to provide spring lugs 21, engaging coextensive partition walls 22, in the base sections to yieldingly support the end contacts 18, against the side thrust of plug blades entered through end openings 23.

The longer end contacts 17, are shown as offset to the side of the plug blades 8, Fig. 5, so as to extend from the shanks of the blades to which they are attached, to one side of and beyond the center passages 24, for the securing screw 25, rivet or other fastening which may be used for securing the base parts together. These offset portions are further shown as having spaced parallel bends 26, 27, lying to opposite sides of partition wall 28, and connected by the short intermediate parts 29, occupying slots 30, in said wall.

The top contact springs 15, are supported at the back by shoulders 31, Fig. 4, so that the reversely bent portions of the same may yield to the thrust of plug blades entered through the top slots 32, without actual bodily spreading of the contacts.

The nut 33 for screw 25, is shown as located in a correspondingly shaped deep seat 34, between the upper blade receiving openings 32.

The two halves of the base are shown as held non-rotatably together, wholly independently of the contacts, by dowel pins 35, located in registering openings 36, in the meeting faces of the two base parts.

By arranging the blades 8 parallel with the end faces 37, of the plug, these end faces with their plug receiving outlets will be always exposed, even when two of the plugs are mounted in the side-by-side relation shown in Figs. 1 and 2. Thus all outlets of the plug are available for use at all times.

By constructing the plug body in upper and lower halves separated longitudinally on a plane

at right angles to the plug blades, the structure is stronger since the blades are located in and project from one solid piece of insulation with a solid body of the same insulating material separating and spacing the same in proper insulated relation. Any side strain on the plug can be taken by this solid piece of insulation forming the lower half of the base. The contacts for the various outlets are all yieldable and therefore self-adjusting to the inserted blades of other plugs. These contact elements may be of lighter spring material than the plug blades to which they are fastened, as indicated. The combined blade and contact members are duplicates as can be seen in Figs. 4 and 5. The fastening for securing the base parts together extends parallel with and is located between the blades providing reinforcement in the direction of length of the blades, in line with the greatest strain to which the plug may be subjected.

The blades are shown in Fig. 4, as having angularly inclined portions 38, to offset the shank portions from the projecting blade portions and these inclined bends are shown as stiffened and reinforced by ribs 39.

What is claimed is:

1. A cube tap, comprising a two part insulating base, a fastening extending transversely across the plane of separation of the base parts for securing the same together, plug blades projecting from one of the base parts and disposed at opposite sides of and substantially parallel with said fastening, contacts secured to said blades within the base and offset angularly about opposite sides of said fastening, said base having plug blade receiving openings in line with said contacts, the contacts for each blade being three in number, having base portions secured in flat engagement over the shank of the blade and two of said contacts having spring extensions projecting in different angular relations into engagement with portions of the base for yieldingly positioning said blade and contacts.

2. A bladed cube tap, comprising a two part insulating base having two oppositely disposed substantially parallel split end faces and substantially parallel oppositely disposed unsplit inner and outer faces substantially at right angles to said split end faces, said two base parts meeting on a plane extending from one split end face to the opposite split end face, said plane substantially parallel to said unsplit inner and outer faces, the base part carrying the inner unsplit face having spaced blade passages extending substantially at right angles from the plane of separation out through said unsplit inner face and separated by an intermediate portion of the insulating material of said base part integral with said unsplit inner face, plug blades seated in said spaced passages separated by said integral intermediate insulating material and projecting from said unsplit inner face, fastening means extending between said unsplit outer and inner faces across said plane of separation, substantially parallel with the blades and through said intermediate insulating portion separating said blade passages, said base parts having plug blade receiving passages in the unsplit outer face and in the split end faces, contacts projecting from the inner ends of said blades into the blade receiving passages provided in the base part carrying the unsplit outer face and contacts projecting angularly from the blades into the blade receiving passages extending through said split end faces of the insulating base, said blades being of spring material and having return bent yielding end portions which collapse when said blades are seated in said spaced passages and then spring open over the solid intervening integral material in the unsplit inner face to lock said blades in seated relation and the contacts carried thereby in the plug receiving passages provided for the same.

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