July 15, 1941. W. F. STAHL 2,249,057

COIL BOBBIN

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Fig. 1.

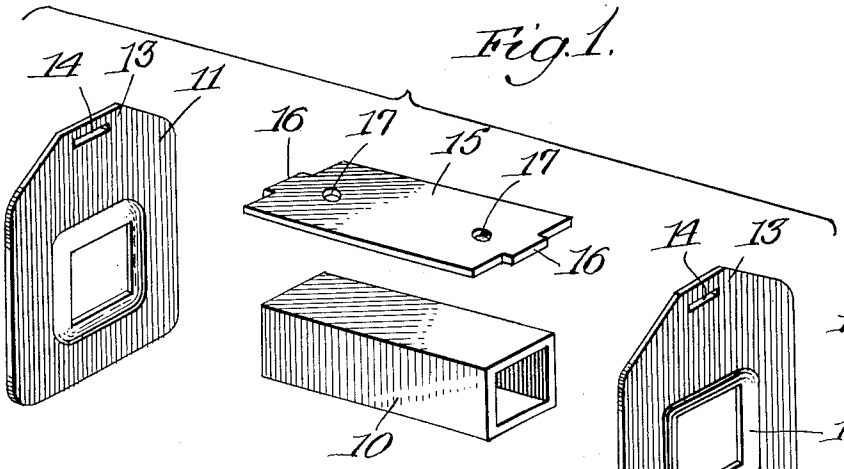
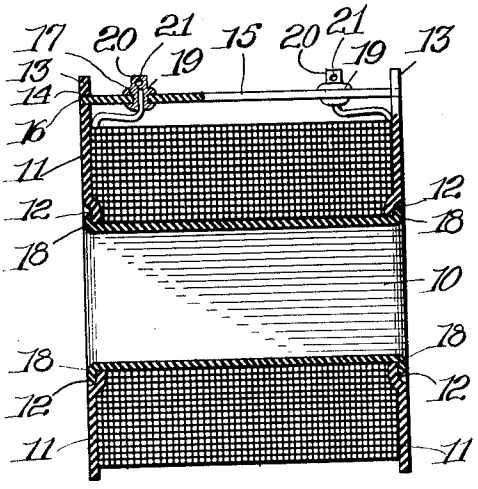
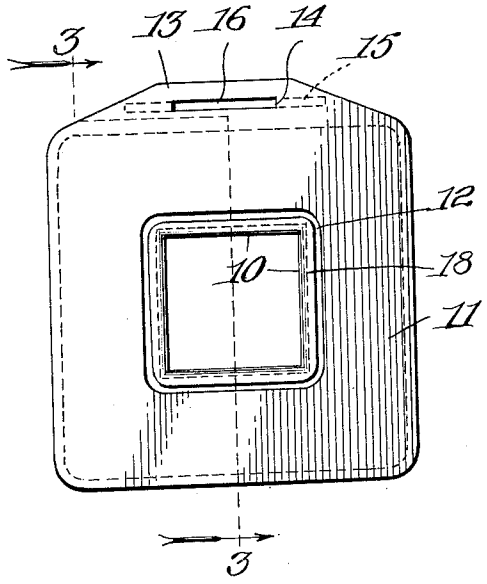


Fig. 2.

Fig. 3.





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COIL BOBBIN

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3 Claims. (Cl. 175—21)

This invention relates to a coil bobbin, spool, or the like.

An object of the invention is to provide a new form of bobbin of improved construction and in which the ends of the coil are supported in position away from the main body of the coil and for ready attachment of electrical connections thereto. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated, in a preferred embodiment, by the accompanying drawing, in which—

Figure 1 is a perspective view of the component parts of the bobbin improved in accordance with my invention; Fig. 2, an end view of the same; and Fig. 3, a section taken as indicated at line 3 of Fig. 2 and showing the coil and the attachment of the ends thereof to the terminal pieces.

In the illustration given, a core 10 is provided, which is preferably formed of paper laminations. The flanges 11 are identical in structure, each having an inwardly recessed central portion 12 about the opening receiving the core 10. The upper portion of the flange 11 is provided with an extension 13 and with a slot 14 in the upper portion of the extension. A bridge 15 comprising a die cut fiber piece or a piece of other material is equipped with reduced ends 16 adapted to be received in the slots 14 of the end flanges 11. The bridge 15 is also provided with spaced apertures 17.

When the parts are assembled, as shown in Figs. 2 and 3, the core member 10 has its ends 18 swaged outwardly within the recess 12 of each flange 11. By this means, the end flanges 11 are securely locked against outward movement. Preferably, the core and flanges are coated with a varnish or lacquer, waterproofing the same and tending also to hold the parts in assembled relation. The winding extends about the core, but terminates below the bridge 15. The bridge 15 is equipped with rivets 19 extending through the openings 17 and each provided with an upwardly-extending attachment lug 20 provided with an opening 21. An electrical connection can be made readily with the attachment opening 21.

Operation

In operation, the assembly of the parts can be readily, inexpensively and securely made. The core 10 is brought within the openings of the flanges and the ends swaged to lock the flanges thereon. Next, the coil is wound about the core, as illustrated in Fig. 3. After the winding is completed, the bridge member 15, to which the rivets 19 have previously been secured, is placed in position, as shown in Fig. 3, the flange ends 11 permitting the spreading thereof to insert the ends 16 of the bridge. Upon releasing the flanges, they spring into the position shown in Fig. 3 in which the bridge is securely held in position. The ends of the coil are soldered or otherwise secured to the rivet members 19, as illustrated.

In addition to supporting the coil terminals in a position to which ready attachment can be made, the structure shown prevents unwinding of the coils. Should the bridge 15 even become dislodged, the coil ends coming from opposite sides of the spool by reason of their engagement with the rivets of the bridge member 15, prevent unwinding.

The structure is extremely simple, inexpensive, and yet affording for the first time a sturdy support for the coil terminals when wound upon a core of the type described.

While in the foregoing specification, I have set forth certain steps and certain details of structure as desirable, it will be understood that such steps and details may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. In a coil bobbin of the class set forth, a core equipped with end flanges, windings about said core, said flanges having extensions beyond said windings provided with aligned slots, an insulating strip having reduced ends extending through said slots, and terminal posts secured to said insulation strip, the ends of the windings being secured to said terminal posts.

2. A coil bobbin of the class set forth, comprising a core equipped with end flanges, a coil wound about said core, said flanges having laterally-extending portions provided with aligned slots, a fiber strip having reduced ends extending through said slots, and rivets extending through said fiber strip and equipped with connection posts, each end of said coil being secured to one of said rivets.

3. A coil bobbin of the class set forth, comprising a core, flanges received over said core, the ends of said core being swaged to lock said flanges therein, a coil about said core and having two free ends, said flanges being springy in character and having aligned slots, a bridge member having reduced ends adapted to be received within said slots when said flanges are spread apart, and rivets secured to said bridge member and each providing a connection post, each end of said coil being secured to one of said rivets.

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