March 23, 1937. N. CHIRELSTEIN 2,074,957

COUPLING

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Fig:1.

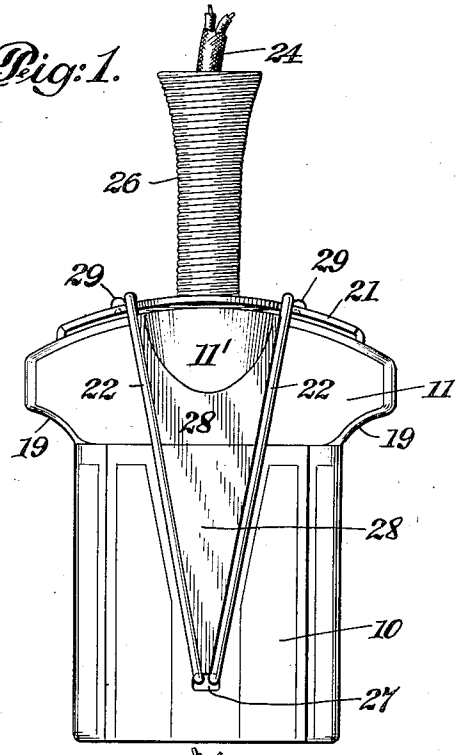


Fig:2.

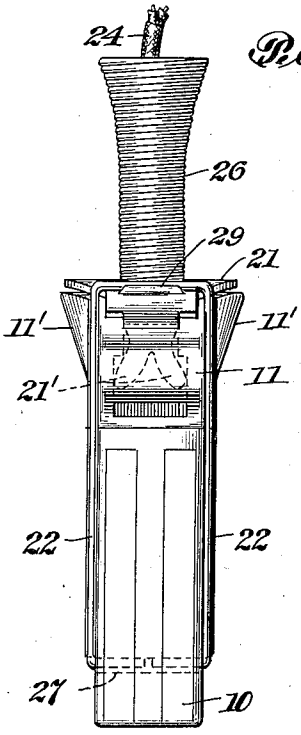


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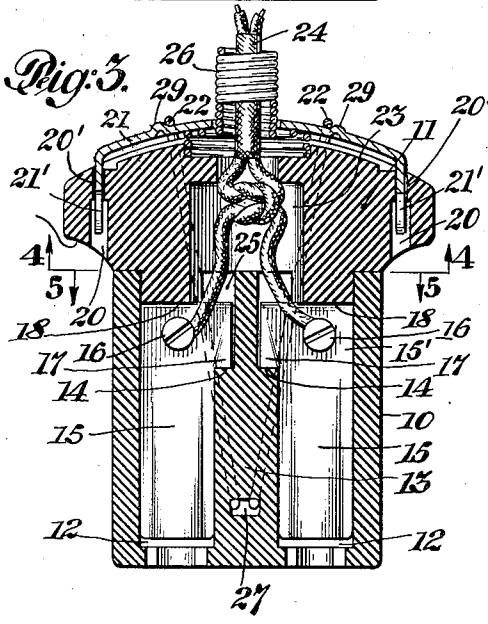


Fig:4.

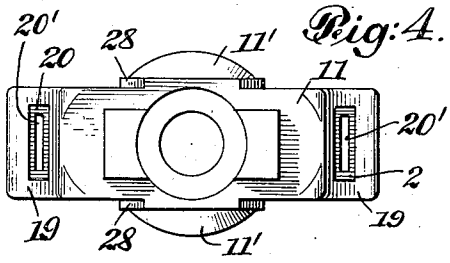
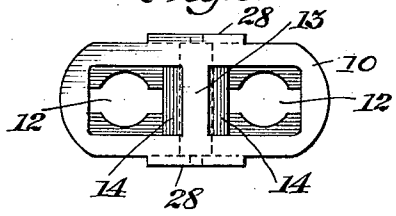


Fig:5.



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Fig: 6.

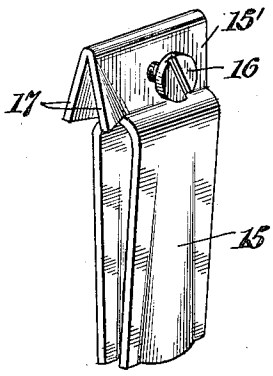


Fig: 7.

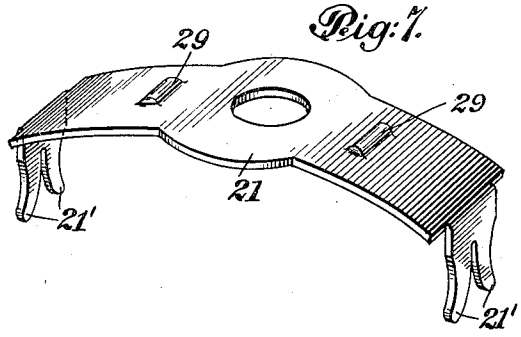


Fig: 8.

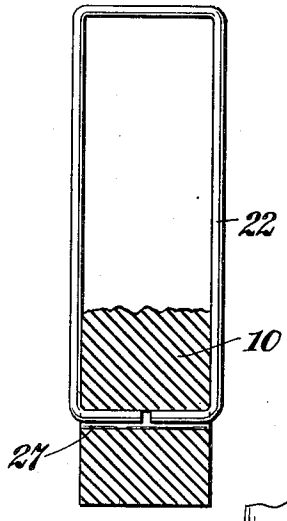


Fig: 10.

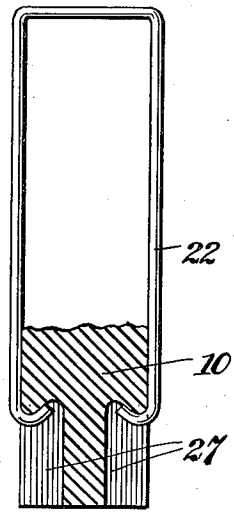
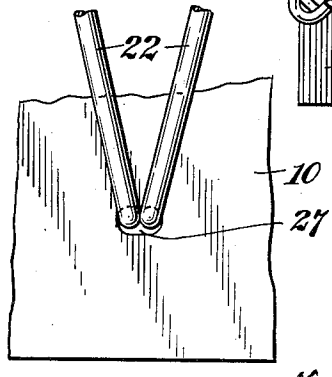


Fig: 9.



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Patented Mar. 23, 1937 2,074,957

UNITED STATES PATENT OFFICE

2,074,957

COUPLING

Nathan Chirelstein, Newark, N. J.

Application October 10, 1935, Serial No. 44,379

8 Claims. (Cl. 173—332)

My invention relates to electrical coupling constructions designed for use with heating vessels of various types.

The object of my invention is to provide a construction, the parts of which are strong and easily made at a low cost, and that may be assembled in separable relation by unskilled workers without loss of time.

Referring to the drawings which form a part of this specification:

Fig. 1 is an elevational exterior view of a coupling embodying my invention.

Fig. 2 is a side elevational view thereof.

Fig. 3 is a vertical sectional view.

Fig. 4 is an inverted plan view of the upper portion of the body or casing; (see Figure 3, at 4—4).

Fig. 5 is a plan view of the lower portion of the body; (see 5—5, Figure 3).

Fig. 6 is a perspective view of one of the coupling conductor elements comprising the terminal socket.

Fig. 7 is a perspective view of a resilient sheet metal cap element.

Fig. 8 is a view of a binding wire used to hold the parts of the body portion, cap, and interior parts together in assembled relation.

Fig. 9 is a view of a part of the two binding wires, the ends of which are bent as shown in Figure 8.

Fig. 10 is a fragmental view showing one end of two of the binding wires, inserted into recesses formed in the lower portion of the body, on opposite sides thereof.

10 indicates the lower portion of the body, and 11 the upper portion thereof, both of which are moulded of insulating material.

The lower portion is formed to provide two chambers 12—12 respectively, by means of a central partition 13, the upper part of which is reduced in width as illustrated in Fig. 3, to provide a shoulder 14 on each side thereof.

In each of said chambers is a socket member 15 formed in a single piece of thin resilient sheet metal.

The folded upper end 15' of each of said members is bent into contact and provides sufficient thickness of material to hold a thread into which is screwed a binding-screw 16.

One end of each of the closely folded portions of each socket member, is extended beyond the width of the bifurcated part forming the socket jaws, and is spread apart to form an inverted V-shaped end, as illustrated at 17 and the under side of the said extended portions rest on the shoulders 14 respectively, and are clamped in position thereon by the binding wires which hold the body portions together as shown at 18.

The upper portion of the body is of greater width than that of the lower portion, to provide extended gripping surfaces 19—19 respectively, and slots 20—20 respectively are formed therein to receive the ends 21' of the cap-piece 21, said ends being bifurcated to provide spring action by means of which the forked ends may move toward each other in passing thru the narrow portion of the slot 20' to the wider portion 20 therebelow, to hold the cap to the body portion when the binding wires are not in position above the cap, or when the top portion is removed from the lower portion.

The body portion 11 is also formed with outwardly extending portions 11'—11' respectively, as shown in Figures 2 and 4, to also serve as gripping surfaces and to strengthen the casing.

The upper portion 11 is formed with a chamber 23 which extends from its under side nearly to the top side thereof for the purpose of housing the wire conductors 24, the lower wall being formed with recesses at 25 to receive the upper end of the partition 13, and a circular recess is formed in its upper side to receive the enlarged coiled lower end of the wire guard 26 formed to provide a resilient spring, the upper side of which presses against the under side of the thin resilient cap 21 and transmits the pressure to the binding wires.

The ends of the binding wires 22 are bent inwardly as shown in Figures 8 and 10, and extend into recesses 27—27 respectively, formed in the lower portion 10, and their upper looped portions swing over the cap and hold the spring in a compressed condition, thus also holding the body portions and metal parts together, as will be readily understood.

In making the body portions I prefer to form outwardly extending bosses 28—28 respectively on two opposite sides of the body portion as shown, partly to protect the binding wires and also to effect an ornamental appearance.

To prevent accidental displacement of the wire loops I have formed the cap with upwardly extending shallow corrugations 29—29 respectively, over which the loops may pass in the assembling operation.

In assembling the parts, the spring portion of the wire shield is threaded thru the central opening in the cap and the cap then attached to the upper portion 11 by inserting its bifurcated ends in the slots in the top, and pressing the cap downward into its normal position.

The socket members are then placed in position in the lower portion 10 and then the two body portions are assembled and locked together by the binding wires, as will be readily understood.

The construction is strong and durable, is easy to assemble and handle.

Having thus described my invention I claim as new:

1. An electric coupling of the character described comprising a body portion formed in two half parts of plastic insulating material placed end to end and defined as the upper and lower parts, said lower part having two chambers formed by a middle partition having shoulders formed in the upper part of the sides thereof, socket members in said chambers each of which is formed with an extension on one side thereof which rests on one of said shoulders, and means comprising looped wires which extend from the lower part of the body over the upper part in swinging relation to hold the body parts together.

2. An electric coupling of the character described comprising a body portion having two chambers formed therein by a middle partition having shoulders formed in the upper part of the sides thereof, socket members in said chambers each of which is made of resilient sheet metal in a single piece and formed with an extension on one side thereof which rests on one of said shoulders, the end of said extension being formed in the shape of an inverted V to provide two points of contact with said shoulder formed on the partition.

3. A coupling of the character described comprising a body portion formed in two half parts of insulating material placed end to end and defined as the upper and lower parts, sockets located in the lower part; said upper part having a central bore extending therethru and having a recess formed in its top adjacent said bore, a thin cap extending over said recess and having a hole therein, a wire guard the lower end of which is bent to form a helical spring which rests in said recess under said cap, and means comprising looped wires for holding the cap and body portions together in assembled relation.

4. The construction defined in claim 3, together with; and means for interlocking the cap with the upper body part.

5. A coupling of the character described comprising a body portion formed in two half parts of insulating material placed end to end and defined as the upper and lower parts, said lower part having a recess in opposite sides thereof, a cap extending over the upper part, and looped binding wires having inturned ends which are located in said recesses and the loops of which extend over said cap to hold said parts together.

6. The construction defined in claim 5, together with; said upper part having a vertically extending slot formed in each end thereof and said cap having downwardly extending ends which rest in said slots.

7. A coupling of the character described comprising a body portion formed in two half parts of insulating material placed end to end and defined as the upper and lower parts, said lower part having means for holding the ends of the binding wires, a thin resilient cap extending over the upper part, the ends of which are bent at an angle to its top surface and are bifurcated, said upper part of the body being formed with extended end portions in which are formed vertically extending slots with shoulders formed on the under side thereof under which the bifurcated ends of the cap rest to hold the cap to said upper part, and binding wires having loops formed therein which rest on said cap and are attached to said lower part of the body.

8. A coupling of the character described comprising a body of insulating material formed in two half parts defined as the upper and lower parts, said lower part having a partition the upper sides of which are reduced in thickness to provide a shoulder on each side thereof, socket members resting on said shoulders the upper ends of which are positioned below the top of said partition and the upper part of the body having a recess formed in its under side into which said partition projects, thereby forming two socket chambers entirely within said lower part; said upper part having its lower end formed to fit within the lower part and abut said socket members, and means consisting of wires held in pivotal relation by the lower part and extending over the upper part for holding said body parts together in easily separable relation.

NATHAN CHIRELSTEIN.