Nov. 17, 1925. 1,561,554

F. B. LITTLE

MAGNETIC FIXTURE

Filed Sept. 2, 1921

Fig. 1.

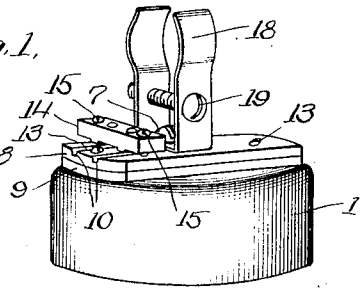


Fig. 2.

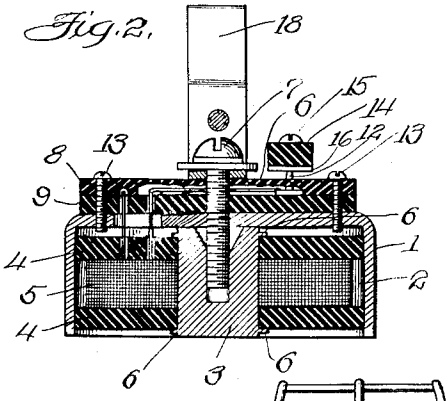


Fig. 3.

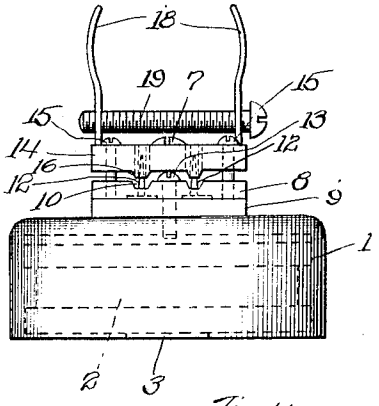


Fig. 5.

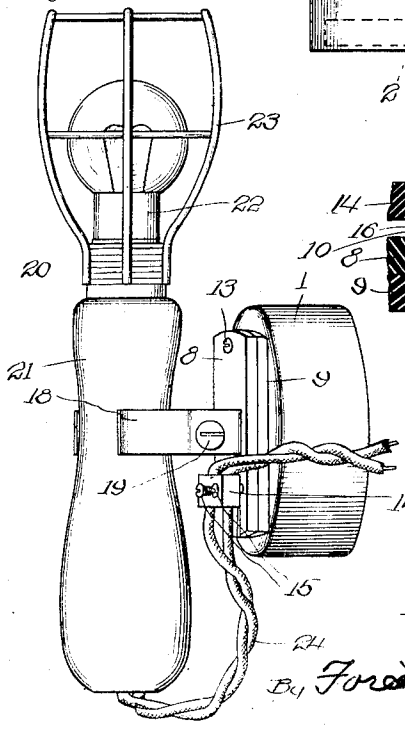
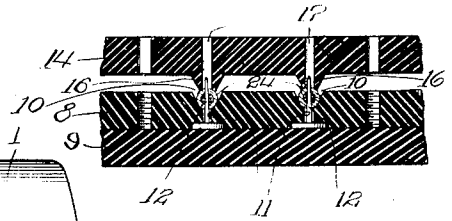


Fig. 11.



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UNITED STATES PATENT OFFICE.

FREDERICK B. LITTLE, OF CHICAGO, ILLINOIS.

MAGNETIC FIXTURE.

Application filed September 2, 1921. Serial No. 498,120.

To all whom it may concern:

Be it known that I, FREDERICK B. LITTLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Magnetic Fixtures, of which the following is a specification.

This invention relates to magnetic fixtures.

It will be explained as applied to a fixture for supporting a portable electrical appliance, such as a trouble lamp for an automobile.

One of the objects of the invention is to provide an improved fixture for portable electrical appliances.

Another object is to provide an improved magnetic support for portable electrical appliances.

Another object is to provide a fixture which is neat, compact, efficient and inexpensive.

Another object is to provide an improved fixture for a portable automobile trouble lamp.

Another object is to provide an electromagnetic fixture which may be readily tapped into the circuit of the appliance with which it is to be used.

Other objects and advantages will hereinafter appear.

An embodiment of the invention is illustrated in the accompanying drawing, wherein—

Fig. 1 is a perspective of the fixture.

Fig. 2 is an axial cross section thereof.

Fig. 3 is an elevation thereof.

Fig. 4 is an enlarged cross section through the terminal support.

Fig. 5 is a perspective of the fixture supporting a portable trouble lamp.

The fixture comprises, in general, a magnetizable base, a holder for detachably supporting a portable electrical appliance and terminals for readily tapping into the circuit of the appliance to obtain current for energizing the magnet.

The base has a cup shaped outer shell or casing 1 of suitable magnetic material such as steel or iron. Within and supported by this shell is a magnet spool 2.

Spool 2 comprises a central magnetic core 3 and two insulating non-magnetic heads 4. Fiber may be used for these heads. An energizing winding 5 is wound about core 3 between heads 4. The heads are held in place upon core 3 by indenting or upsetting portions of the core to form small projecting spurs 6 against which the heads abut.

The inner end of core 3 is drilled and internally threaded for an assembling screw 7. The back wall of shell 1 has openings therethrough for the passage of screw 7 and the leads to the magnet winding.

Superposed insulating blocks 8 and 9, of suitable material such as fiber, are supported upon the top of shell 1. Block 8 has a pair of tapering sided grooves 10 in its top surface and in the bottom of each groove is a hole 11 which is countersunk at its lower end. A sharp pointed terminal 12 extends upwardly through each hole 11. These terminals may be ordinary tacks, the heads of which lie in the countersunk lower ends of holes 11. The terminals are long enough to extend a short distance above the bottoms of grooves 10.

The leads to the magnet winding are soldered to the enlarged lower ends of terminals 12. Block 9 may be grooved in its upper surface to accommodate these leads. A pair of screws 13, passing through blocks 8 and 9 and threading into the top of shell 1, serve to hold the blocks to the shell and clamp the terminals in position with the points thereof extending slightly above the bottoms of grooves 10.

A small fiber cleat 14 is secured to block 8 by screws 15. Cleat 14 has its under surface provided with a pair of small ridges or tongues 16 which register with grooves 10 in block 8. A hole 17 in each tongue lies above the point of the corresponding terminal 12.

A U shaped clip 18, which serves as an appliance holder is secured upon the top of block 8 by screw 7. The adjustment of the clip prongs may be varied by a screw 19. Screw 7 therefore holds the clip, shell and spool together.

Clip 18 serves to detachably support a portable electrical appliance such as the portable automobile trouble lamp 20. Such lamps are well known and usually have a suitable handle 21 carrying a lamp socket 22 and a lamp guard 23. The lamp is fed through conductors 24 of an extension cord which passes through handle 21.

To use the device the insulation covered conducting leads of the extension cord of the portable appliances are inserted under cleat 14 in grooves 10 and screws 15 are tightened. The cleat forces the leads down upon

the points of terminals 12 which penetrate the insulation and make contact with the conductors therein, as shown in Fig. 4. The circuit to the appliance is thus tapped and the magnet winding is connected therein in parallel with the appliance.

The handle of the appliance is inserted in clip 18 and, because of the attraction of the energized magnet, may be held in position on any magnetic substance.

When it is desired to use the lamp without the magnetic fixture the handle can be removed from the holder and the conducting leads released from cleat 14.

The small sharp points of the terminals, although they penetrate the cord and contact with the stranded conductors therein, do not materially affect the insulation so that the appliance with which the fixture is used is not injured. The insulation is readily pierced so that it is unnecessary to remove or cut any part of the same and connection may be quickly made by the use of a screw driver only.

Although the fixture has been explained as applied to a trouble lamp it may be employed with many other electrical appliances, such for example, as plugs, receptacles, sockets, soldering irons, etc.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A magnetic structure for supporting an electric hand lamp comprising a magnetic shell; a magnetizing coil therein; a hand lamp having a handle; a clip on the shell to clasp and hold the handle; a duplex cord wire for connecting the lamp to a source of current supply; sharp pointed terminals for the magnetizing coil mounted on said shell and adapted to pierce the insulation of the duplex wire for connecting said coil and lamp in parallel circuit and a clamp member having hollow projections overlying said pointed terminals.

2. The combination with a magnetic fixture of a detachable appliance therefore, said appliance being adapted to receive current through an extension cord, a magentizing base for said fixture, a spring clip for clamping and holding said appliance, and pointed terminals on said base adapted to engage and hold the extension cord and pierce the insulation thereof to make electrical contact with the enclosed wires for supplying the base with magnetizing current.

3. A magnetic fixture for holding a portable electrical appliance which receives current through an extension cord, comprising an outer shell, an inner core spaced from the shell, an energizing winding located between the core and shell, a holder mounted on the shell and adapted to detachably support the appliance, terminals mounted on the shell and connected to the winding, and means for clamping the cord to the shell and causing the terminals to electrically engage the same to connect the winding in circuit with the appliance.

In testimony whereof I hereunto subscribe my name.

FREDERICK B. LITTLE.