

Nov. 24, 1931.

E. R. McCUTCHEN

1,833,295

PORTABLE DISTRIBUTION BLOCK

Filed April 29, 1929

2 Sheets-Sheet 1

Fig. 1.

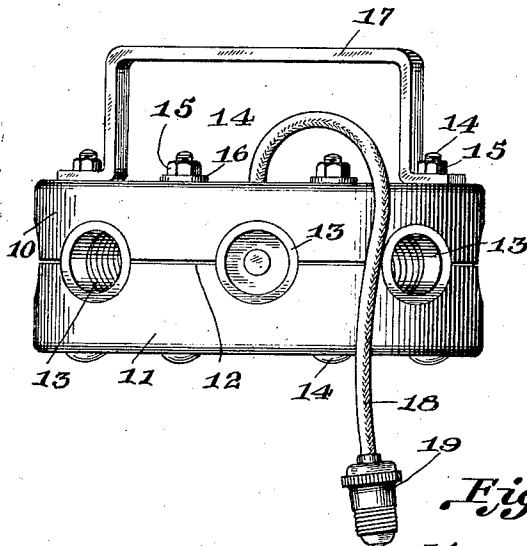


Fig. 2.

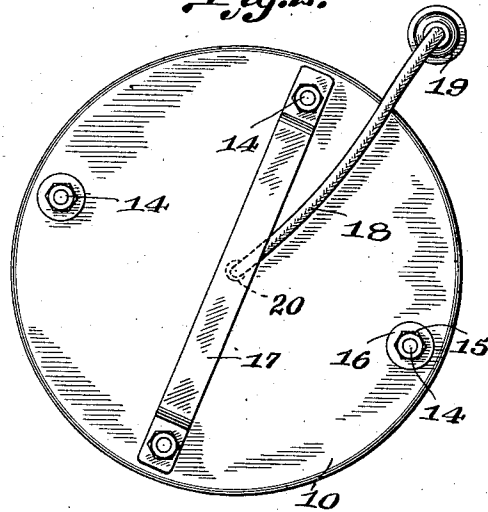
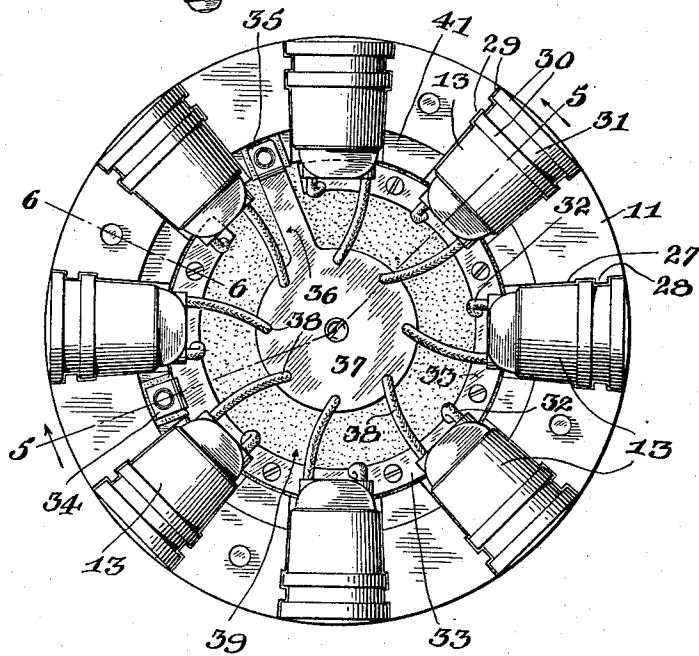


Fig. 3.



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Fig. 4.

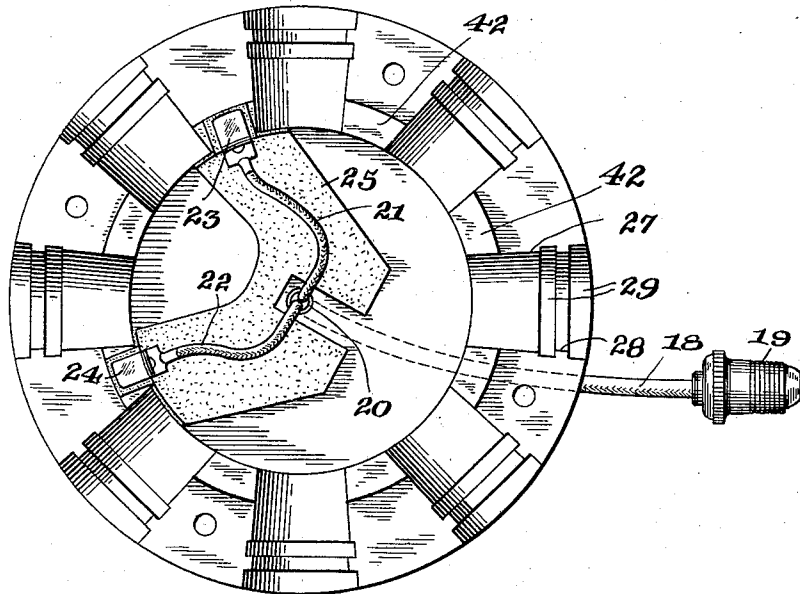


Fig. 5.

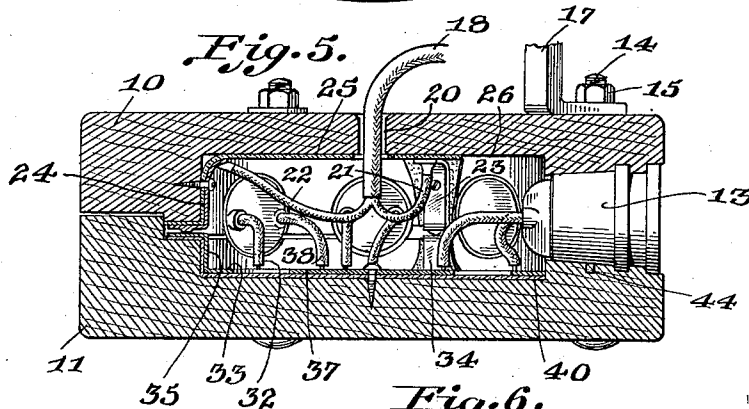
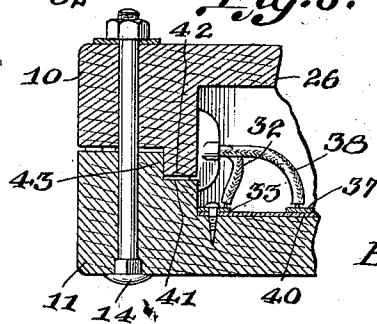


Fig. 6.



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UNITED STATES PATENT OFFICE

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PORTABLE DISTRIBUTION BLOCK

Application filed April 29, 1929. Serial No. 358,981.

The present invention relates to improvements in portable distribution block, and has for an object to provide an improved block capable of being carried about in the factory, or other place, by a workman, and having a number of electric sockets all coupled to a source of current, and adapted to receive a number of lamps, tools, and the like.

Another object of the invention is to provide a compact, light and readily transportable distribution block, in which the sockets are exposed for ready connection and removal of the lamps, tools, and the like, and in which the interior parts are readily accessible.

A further object of the invention is to provide an improved distribution block, in which a great amount of wire may be saved.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claim appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is an edge view of an improved portable distribution block constructed according to the present invention,

Figure 2 is a top plan view of the same,

Figure 3 is an enlarged plan view of the interior block section,

Figure 4 is a similar view of the block upper section,

Figure 5 is a cross section taken on the line 5-5 in Figure 3, and

Figure 6 is a fragmentary cross section taken on the line 6-6 also in Figure 3.

Referring more particularly to the drawings, the device consists preferably of two block sections 10 and 11 of any desired form, for instance, of the cylindrical form shown.

The block sections are divided circumferentially on the line 12 and have numerous sockets 13 arranged radially of the block and being open through the periphery of the block for the purpose of receiving lamps or plugs for various tools and instruments. The two sections of the block are secured together by appropriate fastening means such,

for instance, as the bolts 14, the nuts 15, and the washers 16 located beneath the nuts. The bolts or other fastening means provided for the purpose may also serve to secure the handle 17 in place. Current from an outside source is brought into the block through a lead 18 which is permanently connected with the block and which carries a screw or other plug 19 for tapping into an outlet socket in the building.

As shown in Figure 4, the cable 18 enters the top section through a central perforation 20, and the leads 21 and 22 of the cable are divided on the inside of the block and extend to contact plates 23 and 24. The leads and the contact plates are placed upon a mat of insulating material 25. This insulating material 25 is placed against the bottom of a recess 26 made in the upper block section 10, while the contacts 23 and 24 are placed upon parts of the block that are raised above the base of the recess.

As shown more particularly in Figure 3, the lower section of the block carries the sockets 13 partially embodied in cylindrical recesses 27 provided with complementary grooves 28 and sockets 29 disposed annularly of the sockets and adapted to cooperate with spaced annular beads 30 on the sockets and channels 31 between the beads for the purpose of holding the sockets against axial movement. The sockets 13 are secured in the recesses 27 as by the use of adhesive or other appropriate material. One contact of each socket is connected by a lead 32 with a contact ring 33, which has a split separated end. The ring is provided with a raised contact 34, and at the split portion of the ring is a raised contact 35 connected to a strip 36 which extends out radially from a central contact plate 37 having connected therewith the other leads 38 from the sockets 13. The plate 37 is secured to the bottom of the section 11, and preferably a mat 39 of insulating material is placed on the bottom of the recess 40 in which the plate 37 is placed.

Although it is not necessary, cut away portions 41 may be provided in the base section 11 to receive projections 42 on the upper section 10. These projections 42 impinge

against the outer portions of the lower section 11 at the point indicated at 43 in Figure 6, and they thus serve to center the two block sections, which makes it easy to insert and withdraw the bolts 14.

The two sections 10 and 11 of the distribution block are preferably made of two pieces of well seasoned oak wood with the grains crossed to prevent warping. The sockets 13 are preferably of the weather-proof type. The top half of the block may be removed without disturbing the sockets. The internal recesses in the blocks provide for the wiring, as indicated in Figure 5, so that no two wires will become shorted. A small brass or other pin 44, as shown in Figure 5, projects down from each socket member 13 and enters a corresponding socket in the lower block half 11. This will prevent the socket moving when the plug is screwed thereinto. The only wire visible is the feeder cable 18 to the center of the top block. The contacts 23 and 24 of the top block, as shown in Figure 4, will come opposite and seat against the contacts 34 and 35, as shown in Figure 3. The engagement of these contacts is illustrated in Figure 5, so that the circuit is completed when the block sections are together, but is broken when the block sections are detached from one another. The distribution block can be subject to rough handling without injury. A workman may convey it by the handle 17 to the place of work, screw the plug 19 into an adjoining socket, and this will furnish current to all of the sockets 13 to the distribution block, so that as many tools and lamps may be connected as it is desired. It is particularly useful for ship work, where it will take the place of several wires running into one hold, thereby saving hundreds of feet of wire. As the sockets are set back into the block, the user may throw the block into the tool box with the remainder of the tools without exposing the sockets to injury.

There is always a limit to the number of outlets available for connecting small electric tools and lamps. The improved distribution block allows the user to connect several tools that he might be using at the same time, and to have all necessary lights, thus saving all the extra time that would be required to connect the tools one at a time. Usually ships in dry docks are "dead" and, therefore, all current must be brought from shore. By using the distribution block, the user may save hundreds of feet of wire. Wherever light wires are lying on the floor of a shop, they are naturally subject to damage through tools falling on them, and by workmen walking over them. The distribution block saves considerable money which is necessarily spent to the depreciation in value of so many wires. Considering the fact that it is usually about 200 feet from the dock to the bottom of a ship,

if there were six lights necessary, this block would save one thousand feet of wire in this instance.

An important use of the device is on construction jobs where there is a necessity for night work, such as the pouring of concrete, and emergency work. Those experienced in the art are aware that when concrete is being poured at night, it is necessary that plenty of light be available. Usually a light must be placed every few feet. Considering that concrete is being poured on the tenth floor of a building, this requires about 150 feet of wire for each light, probably making the wire run into thousands of feet. With only two distribution blocks, sixteen lights may be had from a single wire.

The distribution block will be found of great use in factories, railway shops, boiler making shops, ship yards, building construction jobs, and dry docks.

It will be obvious that many changes in the construction, combination and arrangement of parts could be made, which could be used without departing from the spirit of my invention, and I do not mean to limit the invention to such details, except as particularly pointed out in the claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

A portable distribution block comprising a pair of complementary separable sections, said sections having inner faces adapted to register with each other and an unobstructed central chamber, securing means passing through said sections adjacent their outer walls to hold said sections against lateral strains, said sections having a plurality of radially disposed registering recesses communicating with the central chamber and provided with socket retaining means, a plurality of sockets mounted in said registering recesses and engaging the said retaining means, a ring contact strip mounted in one of said sections and having connections with one side of each socket, a contact plate mounted in said section in spaced relation inwardly of said ring and having connections with the opposite side of each socket, said other section having a central opening therethrough leading to said chamber and adapted to receive a conductor cord for passage into the chamber, a pair of contact members secured in said other section for connection with the conductor cord, one of said contact members having a portion for contact with the ring contact in said first section and the other contact member having a portion to engage with the contact plate of said first section only when the sections are clamped together.

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