

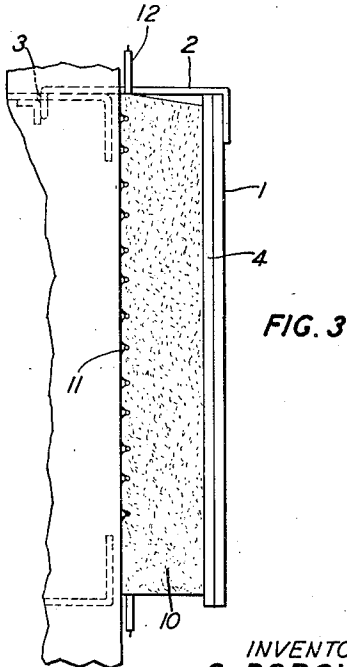
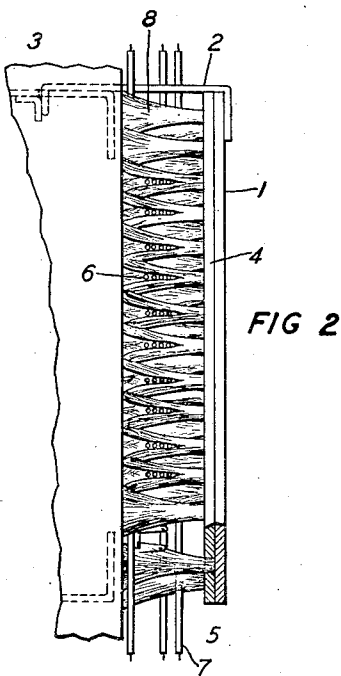
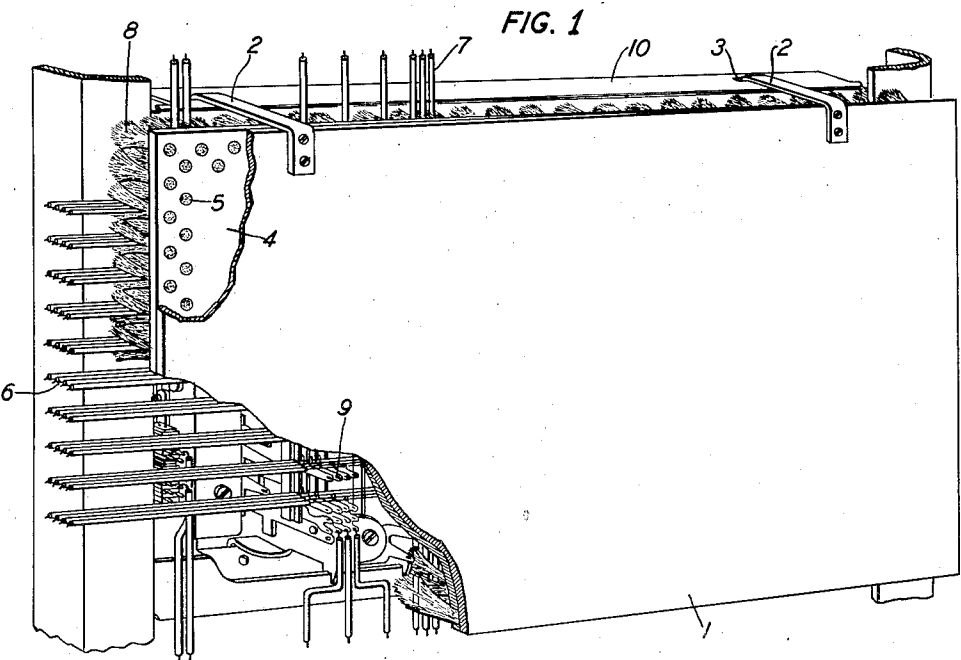
Nov. 3, 1936.

C. BORGMANN

2,059,545

DUST COVER

Filed May 24, 1935



INVENTOR
C. BORGMANN
BY
P. C. Smith

ATTORNEY

UNITED STATES PATENT OFFICE

2,059,545

DUST COVER

Charles Borgmann, Great Neck, N. Y., assignor
to Bell Telephone Laboratories, Incorporated,
New York, N. Y., a corporation of New York

Application May 24, 1935, Serial No. 23,177

3 Claims. (Cl. 179—184)

This invention relates to dust covers and more particularly to covers for electrical wiring and apparatus.

One of the major difficulties encountered in the operation of electrical circuits and particularly of telephone circuits, is the abnormally high resistance introduced between the contacts of the switching devices. This resistance is due, principally, to the presence of foreign particles, such as dust particles, between the contacting members. To overcome this difficulty various expedients have been resorted to, chief among which may be mentioned the conventional enclosures for the front and rear parts of the apparatus involved and with respect to which the apparatus wiring is passed as a cable through a hole of the enclosure and then distributed to the various terminals of the apparatus underneath the cover.

However, there are certain kinds of apparatus, as for instance, the cross-bar switch used in certain types of telephone switching, for which the wires cannot be economically grouped into cables, brought in this form through a hole in the protecting cover and distributed to the terminals of the switch. It is more desirable, instead, to extend the wires separately to the terminals of the switch in both vertical and horizontal planes. For this reason the conventional type of cover is impractical since, in order to enclose the wiring extended to the wiring terminals of the switch, the cover must, at the same time, admit wiring at practically any or all points about its perimeter.

It is the object of the present invention to provide a cover that will not only enclose the apparatus to be protected but will also make possible the admission of wires through all of its encasing sides.

This is accomplished, according to one feature of the invention, by a cover having sides of a flexible and easily yielding substance such as bristles or sponge rubber or any other material having flexibility and resilience so that the cover may be fitted into position to cover the apparatus by being placed directly upon the vertically and horizontally projecting wires, fit the interstices between the wires and thereby protect the enclosed space against the admission of dust or other foreign substances.

The scope and purpose of my invention will be more clearly understood from the following detailed description and appended claims taken with reference to the attached drawing, in which:

Fig. 1 shows the back view, in perspective, of one form of the improved cover with the lower left-hand portion removed to show the manner in which projecting conductors are extended to the terminals of the apparatus to be protected, and a corner of the upper left part removed to show the manner in which the bristles are placed in relation to each other to form the borders of the cover;

Fig. 2 shows the end view of the cover when placed in the position detailed in Fig. 1 to enclose the apparatus; and

Fig. 3 shows the same end view of another form which the improved cover can take when the projecting wires are few in number and lie close to the frame supporting the apparatus.

Referring to Figs. 1 and 2, in which the same numerals refer to identical parts, the cover is made up of two plates, a rear plate 1 and a front plate 4, and having a configuration defined by the boundaries of the section of the apparatus frame which is to be enclosed by the cover. Both plates may be of any suitable material which will provide rigidity to the structure, and may be secured together in any suitable manner as an integral whole. To the rear plate 1, at the upper right and left edges thereof, are fastened the brackets 2 which register with slots 3 in the top plate 10 of the cabinet that encloses the front of the apparatus. The length of each of the brackets is such that, when the cover is placed in position and the edges of the cover are in contact with the apparatus frame, the back plates of said cover will lie in a plane parallel to the plane of the frame.

Along the borders of the front plate 4 a series of staggered holes 5 are bored for holding the bristle brushes 8 which, in one form of the invention, make up the contour of the cover. These bristles are fitted tightly into the holes 5, are held in place by any suitable substance, such as cement, and have a length such that when the cover is fitted into place and the groups of conductors represented by 6 and 7 pass through the interstices made by each of the groups of bristles fitted into holes 5, the conductors shall be entirely surrounded by the bristle hairs as shown in Figs. 1 and 2; the entire apparatus section being completely incased within the border of bristle brushes.

Fig. 3 illustrates the side view of another form which my invention may take where the number of projecting conductors are few and lie close to the apparatus frame, as shown, for instance,

by conductors 11 and 12. In this case, the sides of the cover 10 may be of sponge rubber or any other flexible material having sufficient elasticity to return to a normal condition when the flexing pressure, made by securing the cover into position on the back of the apparatus frame, is released.

When such a cover is placed into position, the edges of the cover do not pass through the horizontal and vertical conductors 11 and 12, as in the case where the cover has the bristle border, but will rest on the surface of the conductors, while those portions of it which come between conductors will be pressed against the sides of the frame to incase the apparatus and wiring contained within the resilient borders.

What is claimed is:

1. A dust cover for electrical apparatus comprising a back member and flexible sides adapted to imbed projecting structural members extending to said apparatus when said sides enclose said apparatus.

2. A dust cover for electrical apparatus comprising a back member having porous sides, said porous sides being adapted to imbed conductors extending to said apparatus when said sides enclose said apparatus.

3. A dust cover for electrical apparatus comprising a back member having bristle sides, said bristle sides being adapted to imbed conductors extending to said apparatus when said sides enclose said apparatus.

CHARLES BORGMANN.