No. 779,532. PATENTED JAN. 10, 1905.

J. G. CRAWFORD.

CONNECTION BOARD FOR DYNAMO ELECTRIC MACHINES.

APPLICATION FILED MAY 13, 1904.

Fig. 1.

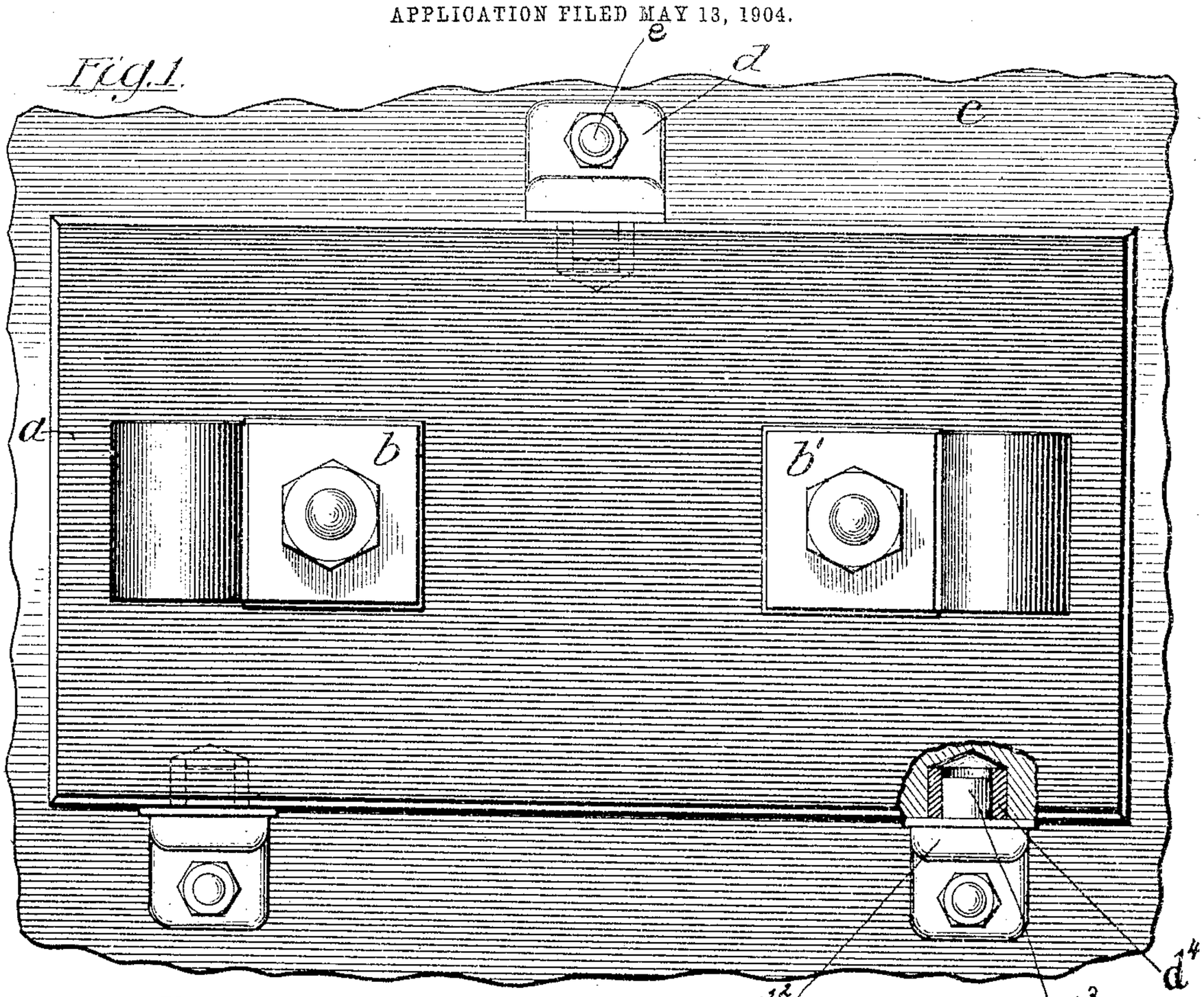


Fig. 2.

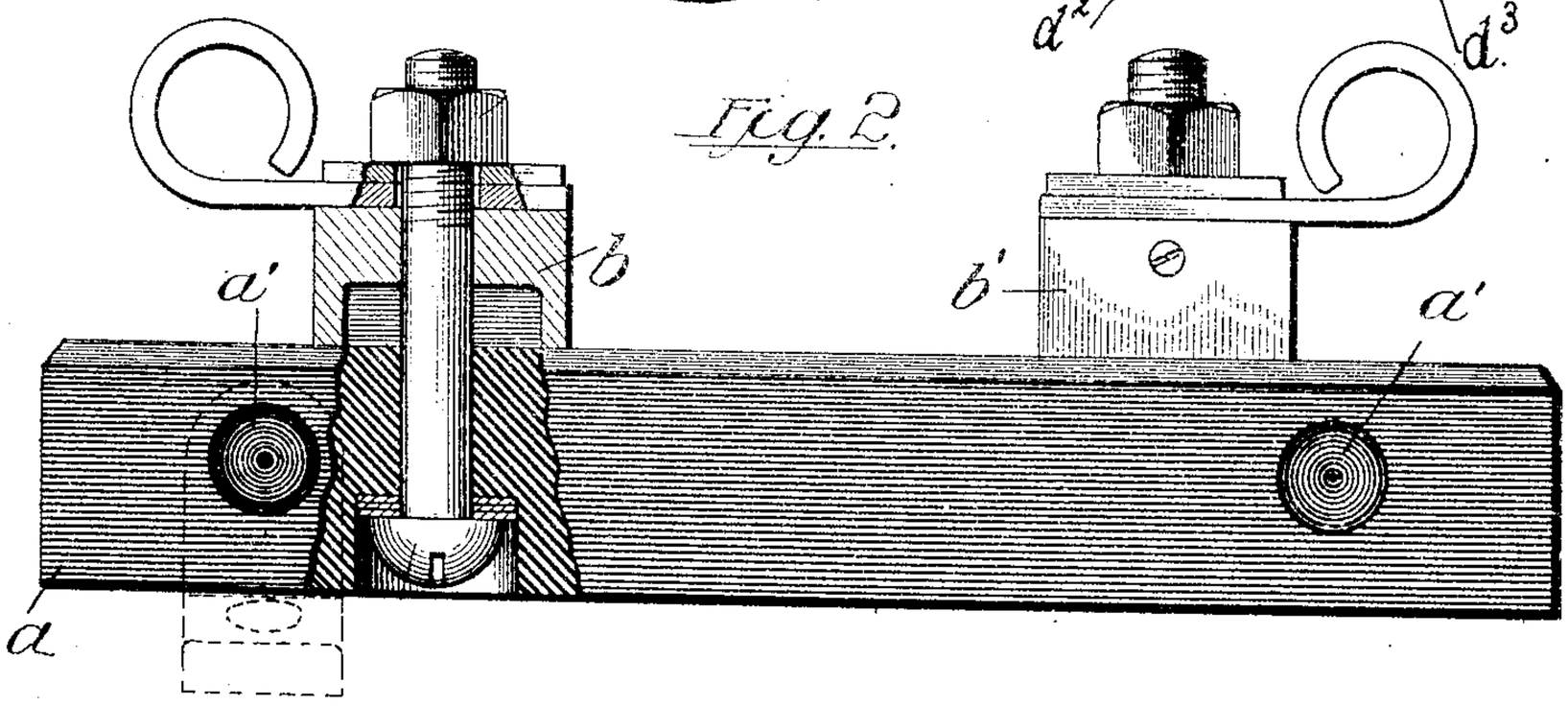
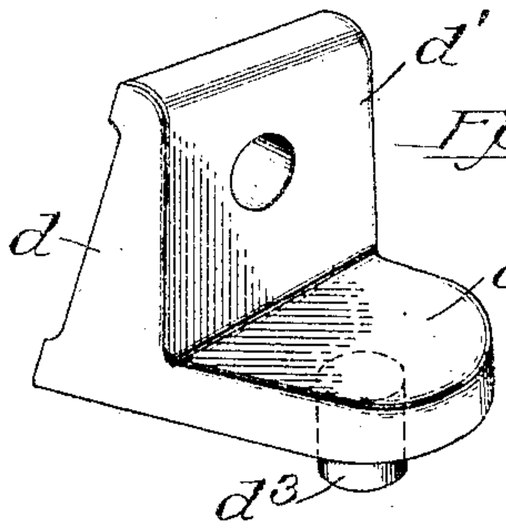


Fig. 3.



Witnesses:

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No. 779,532. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

JOHN G. CRAWFORD, OF LAGRANGE, ILLINOIS, ASSIGNOR TO WESTERN ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CONNECTION-BOARD FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 779,532, dated January 10, 1905.

Application filed May 13, 1904. Serial No. 207,882.

To all whom it may concern:

Be it known that I, JOHN G. CRAWFORD, a subject of the King of Great Britain, residing at Lagrange, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Connection-Boards for Dynamo-Electric Machines, of which the following is a full, clear, concise, and exact description.

My invention relates to the mounting of connection boards or panels upon the frames of dynamo-electric machines or like metallic supports. Heretofore it has been usual to mount such a connection-board, which carries the electrical terminals of the machine, upon the machine-frame by means of screws passing through the board and into the frame. This method of holding the connection panels or boards has been found objectionable, since the frame of the machine is usually grounded and the screws which pass through the board into the frame are brought into dangerous proximity to the live electrical terminals carried by the board.

My aim has been to avoid the necessity of securing a board in place by screws passing through the board and to mount the connection-board in such a way that a safe separation may be maintained between the live electrical terminals and the grounded frame, while permitting the use of a small board; and my invention consists in the provision of connecting members fastened to the machine-frame and engaging the edges of the board.

The connecting member which I have invented comprises a base adapted to be fastened to the frame of the machine and a right-angled extension carrying a lug adapted to enter a recess in the edge of the board.

My invention will be more readily understood by reference to the accompanying drawings, wherein—

Figure 1 is a view in elevation of a connection-board, showing the same secured upon the frame of a dynamo-electric machine in accordance with my invention. Fig. 2 is a bottom view of the board, partly in section. Fig. 3 is a detail view of the connecting member of my invention.

The same letters of reference are used to designate the same parts wherever they are shown.

The connection board or panel a, which carries the electrical terminals b b' of the machine, is secured to the frame c of the machine by means of a number of connecting members d, which engage the upper and lower edges, respectively, of the board. Each connecting member comprises a base d', which is adapted to be fastened by a screw e to the frame c, and a right-angled extension or projection d^2. The extension d^2 carries a lug d^3, adapted to enter a recess a' in the edge of the board or panel a. A bushing d^4, of rubber, may be interposed between the lug d^3 and the walls of recess a' to prevent any fracture of the material of the panel.

I prefer to employ three connecting members for each board, located as shown, and to make the members as described, each with a lug adapted to enter a recess in the edge of the connecting-board; but it will be understood that the number and location of the members may be varied at will and their particular structure modified without departing from my invention, the principal requisite being that the board shall be supported by members which engage its edges instead of passing through it, as in the older types of board. It will be noted that by simply unfastening the connecting member d, which engages the upper end of the panel a, the connection-board may be easily and quickly removed.

The contour of the surfaces upon which the connection-board must be mounted is apt to vary with different types of machines, being plane in some and convex or concave in others. The connecting member may be adapted to the various surfaces by constructing it with the proper angular relation between the base portion d' and the extension or projection d^2. Thus in the particular form illustrated, which is for supporting a connection-board upon a concave surface, the portion of

the base d' which rests upon the machine forms an acute angle with the extension d^2.

Having thus described my invention, I claim—

1. The combination with a connection-board for a dynamo-electric machine, of electrical terminals carried by said board, a number of connecting members for said board secured to the frame of the machine, recesses formed in the edges of said board, and a lug carried by each member adapted to enter one of said recesses; whereby the board is securely held in place and a maximum separation is obtained between said terminals and the connecting members.

2. The combination with a connection-board for a dynamo-electric machine, of electrical terminals supported by said board, a number of connecting members for securing said board to the machine-frame, each member comprising a base secured to said frame, an extension of said base, and a lug carried by said extension adapted to enter a recess in the edge of the board; whereby the board is securely attached to the machine while the connecting members are placed at a distance from the line-terminals.

3. The combination with a connection-panel for a dynamo-electric machine, electrical terminals supported by said panel, recesses a' a' formed in opposite edges of said panel, connecting members for said panel, a base d' for each member secured to the frame of the machine, a right-angled extension d^2 of said base, and a lug d^3 carried by said extension adapted to enter one of said recesses; whereby the said electrical terminals are removed from dangerous proximity to the connecting members.

4. The combination with a connection-board, electrical terminals carried thereby, and a metallic frame upon which said board is adapted to be mounted, of metallic connecting members secured to said frame, and having portions adapted to engage the edges of said connection-board to support the same; whereby the maximum separation between said terminals and said connecting members is obtained.

In witness whereof I hereunto subscribe my name this 7th day of April, A. D. 1904.

JOHN G. CRAWFORD.

Witnesses:

F. P. McIntosh,

E. R. Skinner.