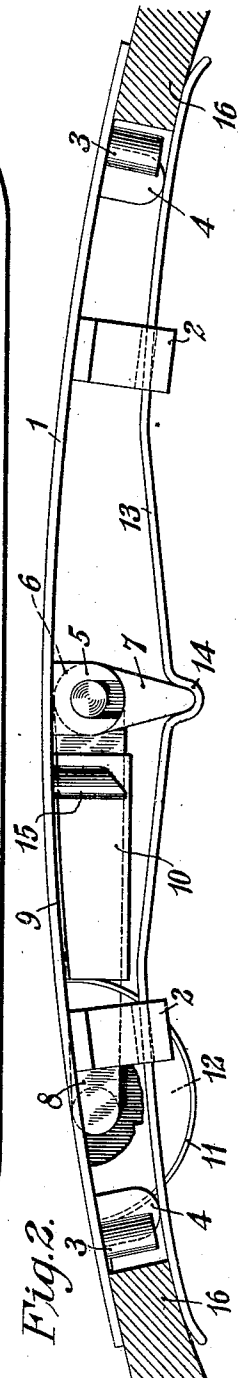
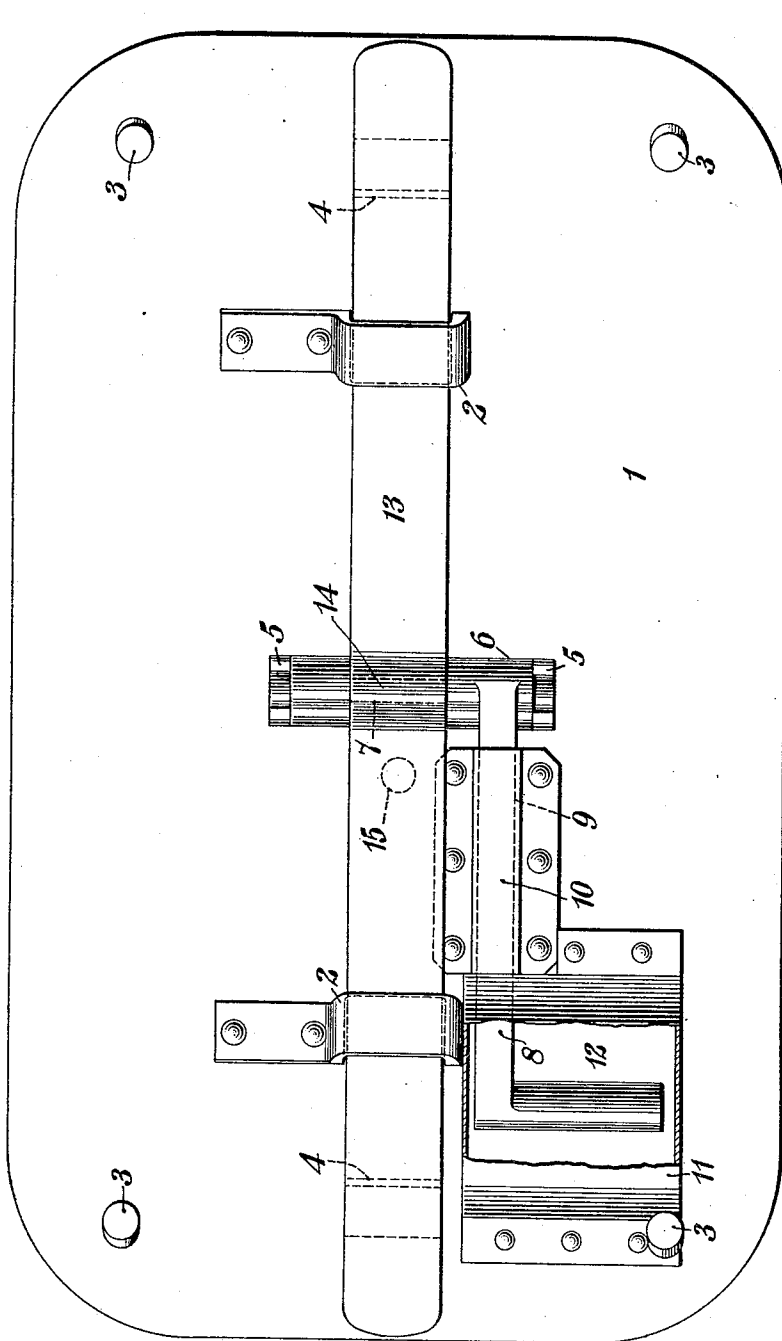


F. W. GARRETT.
COVER FASTENER.
APPLICATION FILED SEPT. 4, 1906.

956,524.

Patented May 3, 1910.



WITNESSES:

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Fig. 1.

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COVER-FASTENER.

956,524.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed September 4, 1906. Serial No. 333,130.

To all whom it may concern:

Be it known that I, FRANK W. GARRETT, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cover-Fasteners, of which the following is a specification.

My invention relates to covers for openings in casings or receptacles, and more particularly to commutator covers for dynamo-electric machines.

The object of my invention is to provide a cover which may be readily placed in position over an opening and securely locked therein and as readily released and removed, when desired.

Certain dynamo-electric machines, notably railway motors, have field magnet frames which constitute inclosing casings to protect the internal mechanism from dirt and water and objects which might otherwise destroy or injure the same. It is desirable to secure access to the commutators of such motors for the purpose of adjustment and renewal of brushes and other repairs and replacements, and in order to provide for such contingencies, the casings are usually provided with openings which are closed by means of suitable covers during normal operation. On account of the jars and jolts to which the motors are subjected when in operation, it is necessary to provide locking means for the commutator covers which will hold the same securely in position, and it is also desirable that the covers may be readily released when it becomes necessary to remove them. I have accordingly devised the cover-locking and releasing mechanism which is illustrated in the accompanying drawing, Figure 1 being an inverted or inside plan view of a cover and its locking mechanism, a portion of the cover being broken away, and Fig. 2 being a longitudinal sectional view through the cover and edge portions of the motor casing or frame.

The cover plate 1 is preferably made of such configuration as to conform generally to the contour of the commutator end of the motor frame or casing, and its inner side is provided with stirrups 2, position studs 3 and bearing lugs 4. Depending from substantially the middle portion of the cover plate are two fork-shaped lugs 5 in the bi-

furcations of which are seated the cylindrical ends of a bar 6, said bar having a downwardly projecting lug 7 and a laterally projecting crank arm 8, both of which may constitute integral parts of the bar or be rigidly fastened thereto. The cover plate is provided with a suitable opening 9 below which are located sheet metal pieces 10 and 11 which are riveted to the plate 1 and are of such shape as to form a recess or chamber 12 to receive the crank arm 8.

For the purpose of locking the cover in position, I provide a bar 13 of approximately the same length as the cover and supported between the stirrups 2 and the lugs 4. Substantially the middle portion of the strip or bar 13 is provided with a depression 14 into which the end of the projection 7 fits. In order to unlock the cover, the crank arm 8 is raised from its chamber, which movement rocks the projection 7 from right to left until it engages a stop lug 15, thus moving the strip or bar 13 in that direction until the right-hand end of the bar is free from the corresponding edge of the casing 16. The right-hand end of the cover may then be raised sufficiently to permit that end of the bar to clear the end of the casing, when the whole structure may be moved to the right and removed. When it is desired to again place the cover in position, an operation the reverse of that just described takes place and the crank arm is then lowered into the position shown in Fig. 2, which, together with the projection 7, serves to shift the bar 13 again to the right into the locking position indicated.

I claim as my invention:

1. The combination with a casing having an opening in one side the dimensions of which are less than those of the side, of a cover of such dimensions as to cover the opening and project beyond its edges, a single longitudinally adjustable locking bar of approximately the same length as the cover and supported thereby, and means for shifting the bar longitudinally to lock and unlock the cover.

2. The combination with a casing having an opening in one of its walls, of a cover having greater length than said opening, a single locking bar also of greater length than said opening and supported by the cover to project beneath the casing wall at

either one or both ends, and a crank arm for moving said locking bar longitudinally to lock and unlock the cover.

3. A commutator cover comprising a
5 plate, a single longitudinally movable locking bar supported thereby at a material distance from the inner side thereof and an actuating lever having a member in engagement with said bar, and a handle at the
10 outer side of said plate.

4. The combination with a casing having an opening, of a cover plate for said opening having dependent lugs and stirrups, a
15 single locking bar supported by said lugs and stirrups, and a lever for moving the locking bar longitudinally on its supports to insert one of its ends beneath the casing wall or to withdraw it therefrom.

5. The combination with a casing having
20 an opening, of a cover plate for said opening having position studs and supporting lugs and stirrups on its inner side, a single locking bar supported by said lugs and stirrups and a lever for moving said bar

longitudinally to insert one of its ends be- 25
neath the casing wall or to withdraw it therefrom.

6. A cover plate having a recess or chamber opening outwardly, and position studs and supporting lugs and stirrups on its in- 30
ner side, in combination with a locking bar supported by said lugs and stirrups, and a shifting lever that is normally located in said recess or chamber.

7. The combination with a cover plate 35
having stirrups and lugs on its inner side, of a locking bar supported by said lugs and stirrups and having a middle depression, and a shifting bar having a projection to engage said depression and a lever to actu- 40
ate it.

In testimony whereof, I have hereunto subscribed my name this 31st day of August, 1906.

FRANK W. GARRETT.

Witnesses:

OTTO S. SCHAIRER,
HIRAM A. TAYLOR.