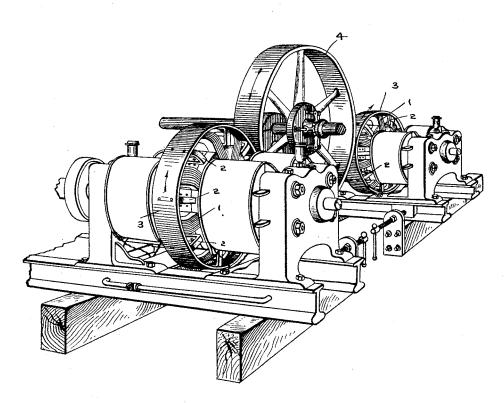
## F. L. McGAHAN. ARMATURE FOR DYNAMOS.

No. 455,971.

Patented July 14, 1891.

F16.1.



Witnesses

& B. G. huffith.

Inventor

Fred &. Mc Gahan

By his Attorney

C. P. Jacobs.

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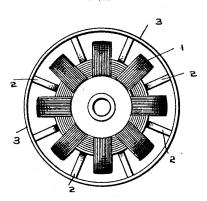
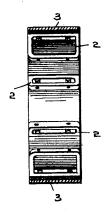


FIG. 3.



Witnesses

Inventor

Erea L. Mc Gahan,

By his Attorney.
C. D. Jacobs.

## UNITED STATES PATENT OFFICE.

FREDERICK L. McGAHAN, OF INDIANAPOLIS, INDIANA.

## ARMATURE FOR DYNAMOS.

SPECIFICATION forming part of Letters Patent No. 455,971, dated July 14,1891.

Application filed December 26, 1890. Serial No. 375,848. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK L. McGa-HAN, of Indianapolis, county of Marion, and State of Indiana, have invented certain new 5 and useful Improvements in Friction-Drives for Dynamos; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures ro refer to like parts.

My invention relates to the construction of friction-drives for dynamos, and will be understood from the following description.

In the drawings, Figure 1 is a perspective view of two dynamos with my device attached. Fig. 2 is a side elevation of an armature-ring with my friction-ring connected. Fig. 3 is a section across the diameter of the friction-rim.

23 In detail, 1 is an armature of the Brush pattern.

3 is a friction-rim concentric with the armature and riveted to brackets 2, which are secured to the body of the armature. In the 25 drawings these brackets are shown as connected by bolts to the top of the armature; but, if desired, the bracket might be extended downward and bolted or otherwise secured to the sides of the armature-body.

4 is a friction drive-pulley set between a pair of dynamos having friction - rings attached and driving them by direct contact with the outer face thereof. The dynamos are provided with the usual adjustable bases, as that either one or both seen he represent

so that either one or both can be removed from contact with the friction drive-wheel whenever desired, and also for the purpose of allowing the adjustment of the faces of

the friction-rims to the drive-wheel. The shaft on which the latter is mounted may be 40 coupled directly to the engine-shaft by a clutch or any suitable device, or may be driven by an independent pulley with belt connections to the engine or line-shaft. By this arrangement the force of the frictional contact 45 of the drive-wheel is exerted directly against the face of the friction-rims connected to the armature, and there is no loss of leverage or power as in ordinary methods, when the friction-rolls are set upon shafts at one side 50 of the armature. This means of connecting the friction-rim to the armature is especially valuable in dynamos of the Brush patterns; but it is applicable to dynamos of various other kinds.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. An armature provided with an external friction-rim concentric with the armature and supported about it by brackets set between 60 the bobbins and connected below to the armature body or ring, substantially as shown and described.

2. An armature provided with an external friction-rim concentric therewith, such fric- 65 tion-rim supported upon brackets bolted or secured to the body of the armature between the bobbins, substantially as shown and described.

In witness whereof I have hereunto set my 70 hand this 20th day of December, 1890.

FRED. L. McGAHAN.

Witnesses:

E. B. GRIFFITH, H. D. NEALY.