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H. O. ORMISTON & W. D. MARTIN.
 TELLTALE APPARATUS FOR RUNNING MACHINERY.
 APPLICATION FILED AUG. 10, 1907.

FIG. 1

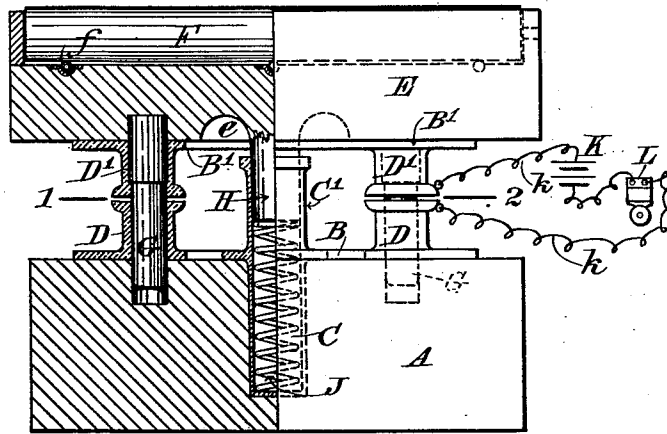


FIG. 2

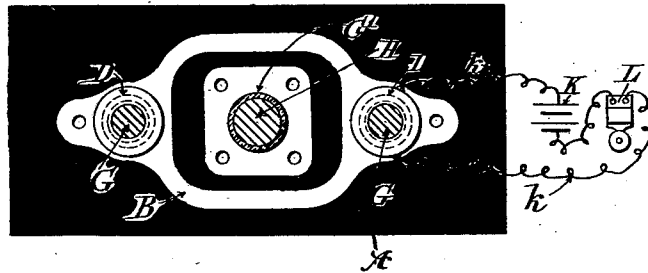
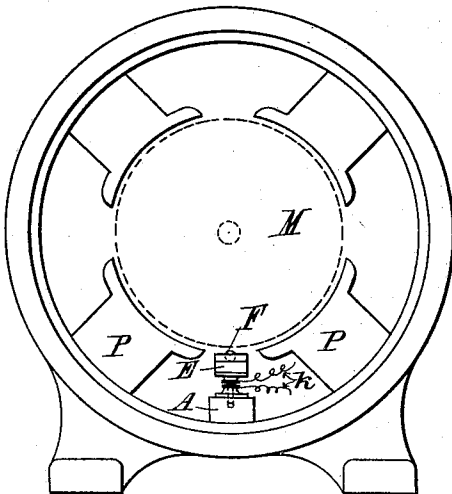


FIG. 3

WITNESSES

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HARRY ORMISTON ORMISTON, OF KOGARAH, AND WILLIAM DAVID MARTIN, OF ASHFIELD,
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TELLTALE APPARATUS FOR RUNNING MACHINERY.

No. 893,865.

Specification of Letters Patent.

Patented July 21, 1908.

Application filed August 10, 1907. Serial No. 333,069.

To all whom it may concern:

Be it known that HARRY ORMISTON ORMISTON and WILLIAM DAVID MARTIN, subjects of the King of Great Britain, and residing at Brighton, French street, Kogarah, and Mokoia, Alma street, Ashfield, respectively, both near the city of Sydney, New South Wales, Australia, have invented new and useful Improvements in Telltale Apparatus for Running Machinery, of which the following is a specification.

This invention has been devised with a view to install it on running machinery in order to warn the attendant, while the machinery is running, (among other things) when the bearings have been worn down to such an extent that there is a danger (in electric motors, for instance) of the armature coming into contact with the poles. Further, should anything happen which might cause the armature, or any part of the machinery to come in dangerous proximity with the poles in electric motors, although the bearings may not have been worn down, the attendant shall be warned of the danger of damage that is likely to ensue to the armature of the motor unless it be stopped running without unnecessary delay, in order to examine and locate the defect, if any.

The apparatus consists of two blocks of ebonite, or analogous material, one block being above the other; each block is provided with contact points, which, if brought into contact will cause an electric bell to ring or other warning sound to be made. The two blocks and the contact points will be kept apart by means of a spring. The apparatus will be installed in any suitable position, in an electric motor, preferably between two of the poles of the motor, and will be so disposed in that position that the armature, as it becomes uncentered owing to the wearing down of the bearings, shall touch the upper surface of the top block and depress it so that the contact points on the two blocks shall touch one another and thus close an electric bell circuit or cause any suitable tell-tale appliance to give audible warning of the damage that is likely to ensue, unless immediate steps are taken to remedy the defect.

In the accompanying drawings the invention is shown as it will be installed on an electric motor.

Figure 1 is a half vertical section and half

side elevation of the appliance complete.

Fig. 2 is a sectional plan of the same, the section being taken on the line 1—2 of Fig. 1. Fig. 3 is an end elevation of a motor frame showing the appliance, on a small scale, installed in position between two poles of a motor.

A is the lower ebonite block to which is screwed a light brass casting B. In the center of the block A is a well C, countersunk into the solid ebonite, the wall of which well is continued above the top level of the block A, at C', for a purpose to be afterwards indicated. Projecting upwards from the casting B are hollow contact points D, D. Vertically above the lower block A, is the upper ebonite block E, the upper surface of which is recessed to contain an ebonite roller F, which is intended to receive the impact of the armature, (or other part of running machinery), should the axial bearings be so worn down that the armature has dropped from its true position. In order to reduce the friction of the roller F in its recess, the roller or the recess may be provided with balls f in ball races.

On the underside of the upper block is a light brass casting B', similar to the casting B on the lower block A. The contact points D', D', will be vertically above the lower contact points D, D, and will be centered with them by means of the guide dowels G, G, which, preferably, project downwards from the upper block E. From the center of the upper block E, and vertically above the wall C' of the well, projects downwards a dowel pin H, which enters the projecting part C' of the well, and rests upon a helical spring J within the well. The spring J will be in compression and will raise the upper block E so that the contact points D, D' shall remain apart, as shown in the drawings. On the under side of the upper block E is an annular groove e which is adapted to receive the top end of the wall C' of the well when the block E is depressed. K is a small battery which may be placed in any convenient position; L is the bell, and k, k, are the connecting wires.

In an electric motor, the appliance is preferably located between two of the poles P, P, as shown in Fig. 3.

In an electric motor the appliance will operate as follows, reference being made particularly to Fig. 3:—When the bearings are

so worn down that the armature M is out of center, it will approach and touch the roller F, thus depressing the upper block E, causing the upper and lower contact points D, D', to touch and close the bell circuit when the bell L will ring and warn the attendant of the proximate danger of neglecting the summons.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In running machinery, a warning or tell-tale appliance consisting of a lower ebonite block with projecting metallic contact points, an upper ebonite block with projecting metallic contact points, a spring to keep the upper and lower contact points apart, and an electric bell circuit which shall be closed when the contact points on the two blocks touch, for the purpose of warning the attendant, as herein set forth.

2. In running machinery, a warning or tell-tale appliance consisting of a lower ebon-

ite block with projecting metallic contact points and a spring, an upper ebonite block with projecting metallic contact points, such block resting upon the spring on the lower block, a roller recessed into the upper face of the upper block, such roller being adapted to sustain the impact of the running part of the machinery such as the armature when brought into contact therewith, and an electric bell circuit which shall be closed and the bell caused to ring when the upper block is depressed by the armature and the contact points are thus made to touch, as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HARRY ORMISTON ORMISTON.
WILLIAM DAVID MARTIN.

Witnesses:

MANFIELD NEWTON;
ALBERT MASSEY.