P. G. MacGREGOR.

CONTACT OILER.

APPLICATION FILED DEC. 13, 1912. RENEWED MAR. 28, 1914.

1,115,848.

Patented Nov. 3, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

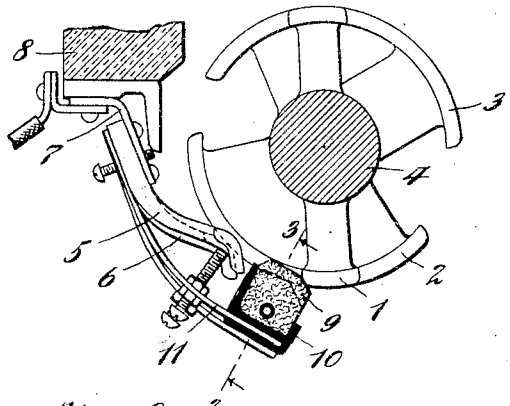


Fig. 2.

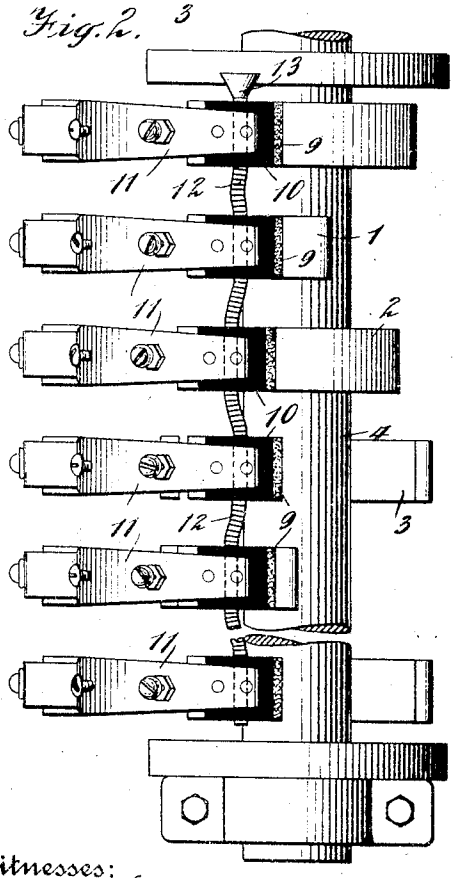


Fig. 3.

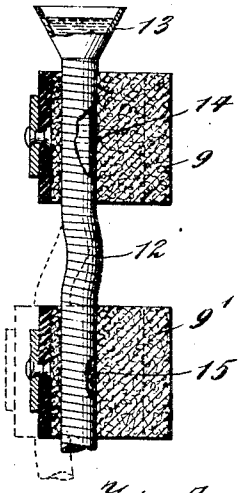
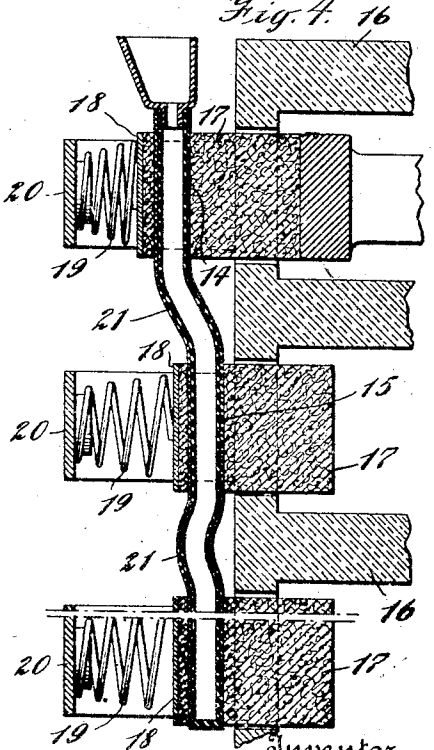


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

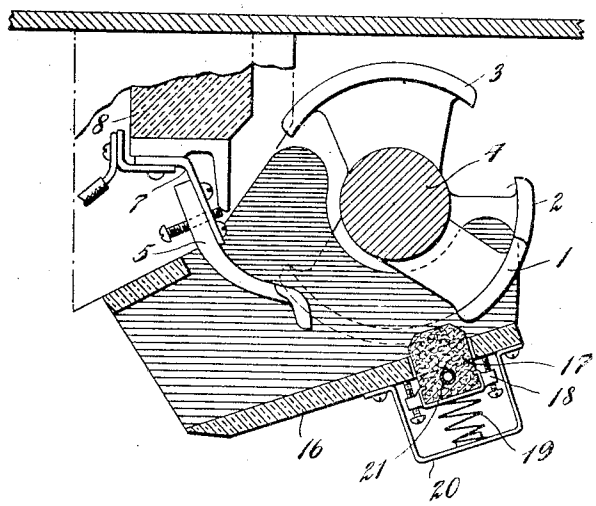
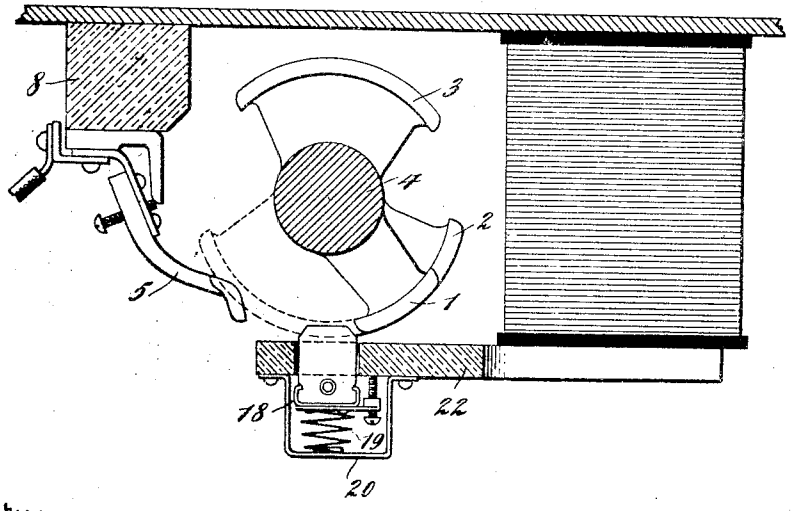


Fig. 6.



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UNITED STATES PATENT OFFICE.

PETER GRAHAM MacGREGOR, OF NEW YORK, N. Y., ASSIGNOR TO PETER G. MacGREGOR, EDWARD M. DAVIDSON, AND PETER L. WILBUR.

CONTACT-OILER.

1,115,848. Specification of Letters Patent. Patented Nov. 3, 1914.

Application filed December 13, 1912, Serial No. 736,646. Renewed March 28, 1914. Serial No. 828,066.

To all whom it may concern:

Be it known that I, PETER G. MacGREGOR, a citizen of the United States, and resident of the city, county, and State of New York, have invented certain new and useful Improvements in Contact-Oilers, of which the following is a specification.

This invention relates to a device for oiling the contact members of an electric circuit closing device.

The object of the invention is to provide a device or an attachment especially adapted for use with street car controllers for reducing the wear and friction between the contact members.

The object of the invention is to provide a simple and efficient device for the purpose specified which may be readily attached to any circuit closing device or controller of standard construction.

In the drawings like parts of the several views have been given the same reference numeral.

Figure 1 is a sectional plan view of a portion of a controller showing the oiling device attached thereto. Fig. 2 is a side elevation of a portion of Fig. 1. Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1. Fig. 4 is an enlarged sectional view showing a modification of the invention. Fig. 5 is a sectional plan view of the modification shown in Fig. 4. Fig. 6 is a sectional plan view showing another modification of the invention.

Referring to Figs. 1, 2 and 3, the contacts of the controller, such as 1, 2, and 3, are rotatively mounted upon a shaft 4 and operated in the usual manner by means of a hand crank or lever, not shown. The contact fingers 5 and 6 are carried by resilient members, such as 7, upon a suitable support 8 attached to the base of the controller. These parts may be of any standard construction for a device of this nature and no novelty is claimed for these features.

The oiling device consists of a number of blocks of absorbent material, such as felt, shown at 9 and 9′, the block 9 may be partially inclosed on two sides by a strip of insulating material 10 and mounted at one end of a resilient member 11, which is attached at its opposite end to the contact finger 5. The resilient member 11 is preferably formed so that when the same is in position, the inner surface of the block 9 projects slightly beyond the path of the surface of the contact 1. The forward edge of the block 9 is beveled so that when the same is engaged by the contact 1, the absorbent block 9 will first be slightly compressed, thus forcing a portion of the oil or lubricating material with which it is saturated to the surface thereof and then as the contact is rotated the oil will be distributed over the face of the contact. It will be understood that a number of these absorbent blocks are provided and positioned over each series of contacts, as shown in Fig. 2.

For supplying oil or lubricating material to the absorbent blocks, a flexible tubular member 12 is provided. This flexible tubular member extends through the series of absorbent blocks, as shown in Fig. 2, and is provided at its upper end with a funnel shaped member 13. At the points where the flexible tubular member 12 passes through the absorbent blocks, a series of openings, such as shown at 14 and 15 in Fig. 3, are provided. These openings decrease in size from the upper to the lower end so that when the oil is poured into the receptacle 13, filling the flexible tubular member 12, the same will be supplied to and absorbed by the blocks in substantially uniform amounts. As the oil is absorbed the level of the same in the tubular member 12 falls so that the period of time during which the same is supplied to the upper block is less than that for the lower blocks. The decreasing size of the openings thus provides for a uniform supply of oil.

In the modification shown in Figs. 4 and 5 a cover 16 of insulating material is positioned over the contacts and the absorbent blocks 17 project through openings therein so as to engage the contacts of the controller in the manner just described. The absorbent blocks are mounted in a movable holder 18 and are resiliently held in position by means of a spring 19 positioned in a retaining member 20 mounted upon the cover 16. A flexible tubular member 21 supplies the oil to the absorbent blocks in the manner just described.

In the modification shown in Fig. 6, the construction is similar to that described and shown in Figs. 4 and 5, except that the cover 16 is omitted and an insulating support 22 substituted, which carries the series of absorbent blocks.

It will thus be seen that each series of contacts is provided with an independent oiling device and that the flexible tubular member provides convenient means for supplying a uniform amount of oil to the absorbent members simultaneously and at the same time permitting an independent relative movement of the blocks when the contacts of the controller are rotated.

What I claim is:

1. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each positioned to engage one of said contacts, and means for supplying oil simultaneously to said absorbent members, said means being adapted to permit an independent movement of said members.

2. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each positioned to engage one of said contacts, and means connecting said members and adapted to supply oil simultaneously thereto and to permit an independent movement thereof.

3. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members insulated from each other and each positioned to engage one of said contacts, and means for supplying oil simultaneously to said absorbent members, said means being adapted to permit an independent movement of said members.

4. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each positioned to engage one of said contacts, and flexible members connecting said members and adapted to supply oil simultaneously thereto and to permit an independent movement thereof.

5. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each positioned to engage one of said contacts, and a flexible tubular member connecting said members and adapted to supply oil simultaneously thereto and to permit an independent movement thereof.

6. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each positioned to engage one of said contacts, and a flexible tubular member extending through said absorbent members and adapted to supply oil simultaneously thereto and to permit an independent movement thereof.

7. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members mounted upon a common insulating support and positioned to engage said contacts, and means for supplying oil simultaneously to said absorbent members, said means being adapted to permit an independent movement of said members.

8. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each resiliently mounted upon a common insulating support and positioned to engage one of said contacts, and means for supplying oil to said absorbent members, said means being adapted to permit an independent movement of said members.

9. In a device of the class described, the combination with a series of movable contacts, of a series of absorbent members each resiliently mounted upon a common insulating support and positioned to engage one of said contacts, and a flexible tubular member connecting said absorbent members and adapted to supply oil simultaneously thereto and to permit an independent movement thereof.

Signed at New York city, in the county and State of New York, this 23d day of Nov., 1912.

PETER GRAHAM MacGREGOR.

Witnesses:

HYMAN SCHWARTZ,

ANDREW L. REA.