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IMPULSE-FORMING CONTACT-PIECES FOR CALLING  
DIALS FOR IMPULSE DISTRIBUTORS  
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Fig. 1

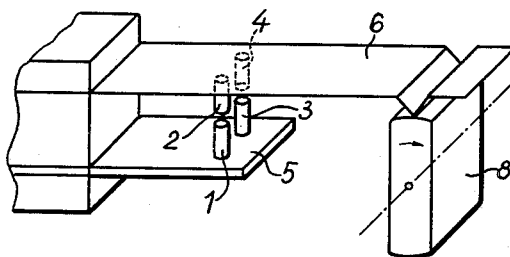
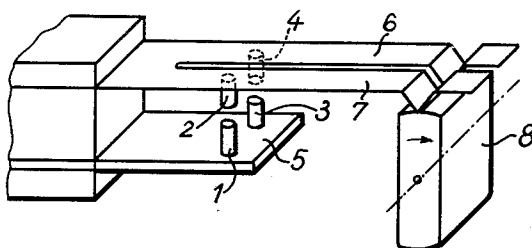


Fig. 2



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## IMPULSE-FORMING CONTACT-PIECES FOR CALLING DIALS FOR IMPULSE DISTRIBUTORS

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Claims priority, application Switzerland  
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1 Claim. (Cl. 200—146)

The calling dials in automatic telephones have for their object to transform the figures selected by the operation of the dial, through the agency of impulse-producing contacts, into a corresponding series of impulses that are transmitted through the subscriber's line to the exchange where they provide for the execution of a predetermined sequence of selecting operations. In order that these selecting operations may be suitably executed at the exchange, it is necessary to keep within a predetermined range of values the quotient of the duration of passage of the current divided by the duration of interruption.

As this quotient or impulse ratio varies with the increasing wear of the contact-pieces, it is necessary to execute such contact-pieces by means of a material capable of only slight wear, and it is, furthermore, of primary importance to keep down as far as possible the resistance of such material forming the contact-pieces, to the passage of current through such cooperating contact-pieces.

A large number of different materials adapted for use in the execution of such contact-pieces are known, which materials are highly wear-resisting. Experience has shown, however, that other materials which have a low resistance to passage, wear rapidly, while those materials that wear only to a small extent, such as tungsten, molybdenum and the like, have a comparatively large resistance to the passage of current and cannot, therefore, be used as materials for the execution of contact-pieces in the impulse-producing contacts of calling dials.

The present invention has for its object an impulse-producing contact for calling dials and impulse distributors, said contact being constituted as a multiple contact in which at least one pair of contact-pieces is made of a material having a low resistance to passage through the contact, while its wear is comparatively high, whereas at least one pair of contact-pieces is made of a material the resistance of which to the passage of current is comparatively high but wears only to a small extent, such pairs of contact-pieces wearing to a small extent serving for the making and the breaking of the circuit while the pairs of contact-pieces showing a low resistance to the passage of current provide for good operative contact.

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We have illustrated by way of example in accompanying drawings, two preferred embodiments of the object of our invention, wherein:

Fig. 1 is a perspective view of a first embodiment of the invention, while,

Fig. 2 is a similar view of a second embodiment.

In Fig. 1, the lower contact spring 5 is stationary and carries two contact-pieces 1 and 3. The upper movable contact-spring 6 is controlled by the cam 8 and carries the two other contact-pieces 2 and 4. The cooperating contact-pieces, 1 and 2 on one hand, and 3 and 4, on the other, form two pairs of contact-pieces of which one is made of a material that is but little liable to wear while the other pair of contact-pieces has, on the contrary, a low resistance to the passage of current.

According to the modification illustrated in Fig. 2, the upper contact spring is slit longitudinally, whereby the contact-pieces 2 and 4 that are carried respectively by each of the half springs 6 and 7 thus formed, cannot act on each other and the contact pressures in the two pairs of contact-pieces may be adjusted independently of each other.

What we claim is:

A cam-actuated impulse producer, chiefly for call dials and impulse distributors, comprising a stationary blade, two contact-pieces carried by said blade and made respectively of a material having a higher resistance to wear and a higher electrical resistance and of a material having a lesser resistance to wear and a lesser electrical resistance, two independent spring blades rigidly held at one end to extend in side by side relationship in a plane parallel with the first mentioned blade and including bent outer sections, a contact-piece carried by each of the independent springs in register with the corresponding contact-piece on the first mentioned blade and the material forming which is the same as that of the said corresponding contact-piece on the first-mentioned blade and a rotary cam adapted to engage in quick succession the outer sections of the two independent blades to provide for the successive closing of the switches formed by the corresponding contact-pieces made of the first and of the second material respectively and for their opening in the opposite sequence.

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