Aug. 1, 1950 O. TSCHUMI 2,517,259

ARRANGEMENT FOR CALL CONTROL IN TWO-WAY SYSTEMS WITH SELECTOR INSTALLATION

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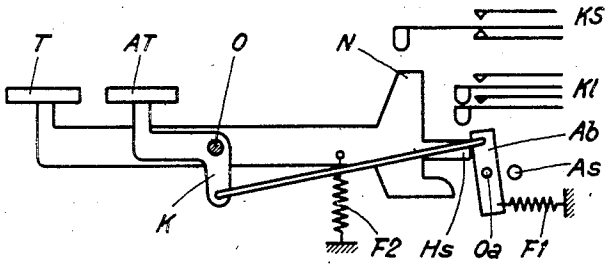


Fig. 1.

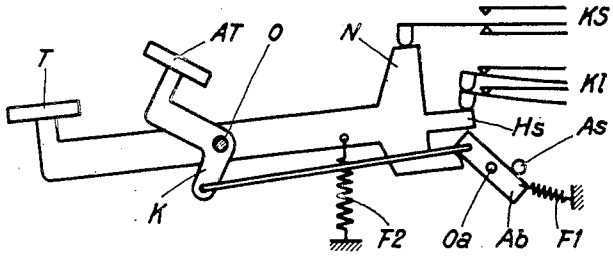


Fig. 2.

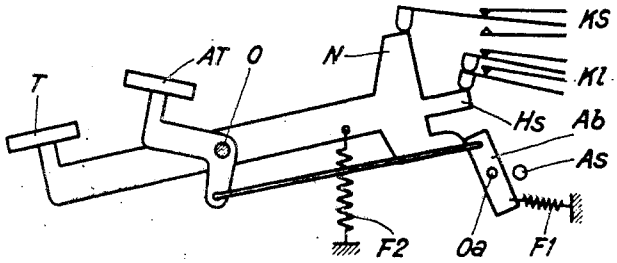


Fig. 3.

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ARRANGEMENT FOR CALL CONTROL IN TWO-WAY SYSTEMS WITH SELECTOR INSTALLATION

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In Switzerland December 31, 1943

2 Claims. (Cl. 179—1)

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The invention relates to arrangements for call control in two-way systems with selector installation. In two-way systems of this kind, besides the real selector means, a switch means for changing-over the speaking direction must be provided. This accumulation of switch devices in a subscriber's station renders the service difficult and the whole subscriber's device complicated.

In the arrangement according to the invention a simplification is obtained in that the two switch means are united in a single means carrying out both operations. It is characterised in that the selector means serves simultaneously for controlling the speaking direction.

Usually, a key arrangement is chosen wherein a main key (in opposition to a release key) can, by depressing, be brought into two different positions, one of these latter being a holding position. In this latter, line contacts corresponding to the key are operated, while in the other direction the control contacts carry out the change-over of the speaking direction.

The accompanying drawing illustrates, by way of example, one embodiment of the object of invention in which the single selector means is formed as a key.

Figs. 1 to 3 show schematically the different positions of a switch means formed as a key operating both as selector and as change-over switch for the speaking direction.

T is a key forming the universal switch means, Hs is a holding pin, and N a key-nose. Ab is a lock bar, As a stop pin, F1 and F2 draw springs, O the pivot of the key T and Oa that of the lock bar Ab. AT designates the release key connected by means of the bent lever K, rotatable about O, with the lock bar Ab over a rod. Ks is the control contact for controlling the speaking direction and Kl the line contact for establishing a connection with the line in question.

Fig. 1 shows the rest position. The position of the contact Ks corresponds to a certain operating condition, for instance to "listening." The line contacts Kl are open, no connection is established with the line in question. If, as is shown in Fig. 2, the key is depressed and thereby brought into holding position, the lock bar Ab falls under the holding pin Hs where it is held owing to the traction of the spring F1. This has as a consequence that, the operating condition of the control contacts Ks remaining the same ("listening"), the line contacts Kl are closed. If the speaking direction is now to be changed, that is if, in this example, the operating condition "speaking" is to be established, the key T is further depressed.

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This position of the key T, which is represented in Fig. 3, is however, not a holding position, but the key T, under the influence of the spring F2 has a tendency to take again the first position. A short-period operation of the key beyond the former position is, therefore, equal to a similar short-period operation of the control contact Ks which is moved by the nose N. This short-period operation corresponds exactly to the impulse necessary for changing the speaking direction (see for instance application Serial No. 535,297, now Patent No. 2,460,475, granted February 1, 1949). From the aforesaid it may be seen that by a complete short-period depression of the selector means it is possible to change the speaking direction at will.

If the connection with the line in question is to be interrupted and the key to be returned into initial position, any suitable mechanical means is to be operated annulling the locking effect of the spring F1 and of the locking bar Ab. In the example illustrated this means consists of the release key AT, the depression of which is transmitted to the lock bar Ab over the bent lever K, putting the lock bar Ab out of reach of the holding pin Hs and thereby allowing the key T, under the influence of the return spring F2, again to reach the outgoing position of Fig. 1.

A contact Ks suffices for an entire selector key set in that it can be mechanically connected with all the keys.

In this way uniting the two switch means in a single one and thereby a simplification of the device is obtained.

What I claim is:

1. In an arrangement of the character described, first and second sets of contacts, a key normally occupying an inoperative position with respect to both sets of contacts, means whereby said key is moved into a position to render the first set of contacts operative, means whereby said key is effective in a third position to main-

tain said first contacts operative and to operate the second set of contacts, means for holding said key in the first mentioned position, whereby said key is freely movable into and out of the third mentioned position.

2. An arrangement as claimed in claim 1 provided with means for releasing said holding means.

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