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TUNING MEANS OF COMMUNICATION OR SIGNAL EQUIPMENT

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Fig. 1b

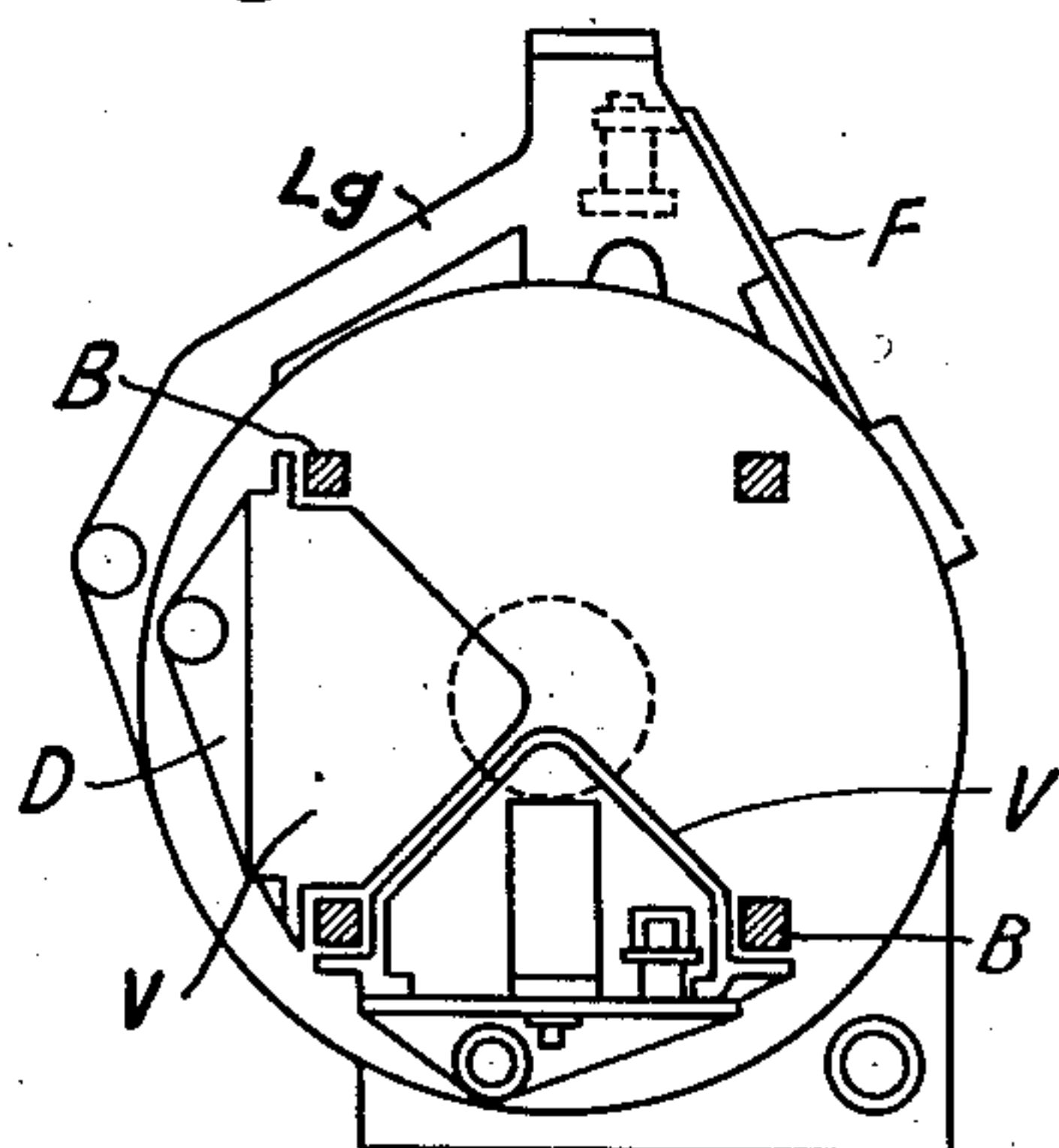


Fig. 1a

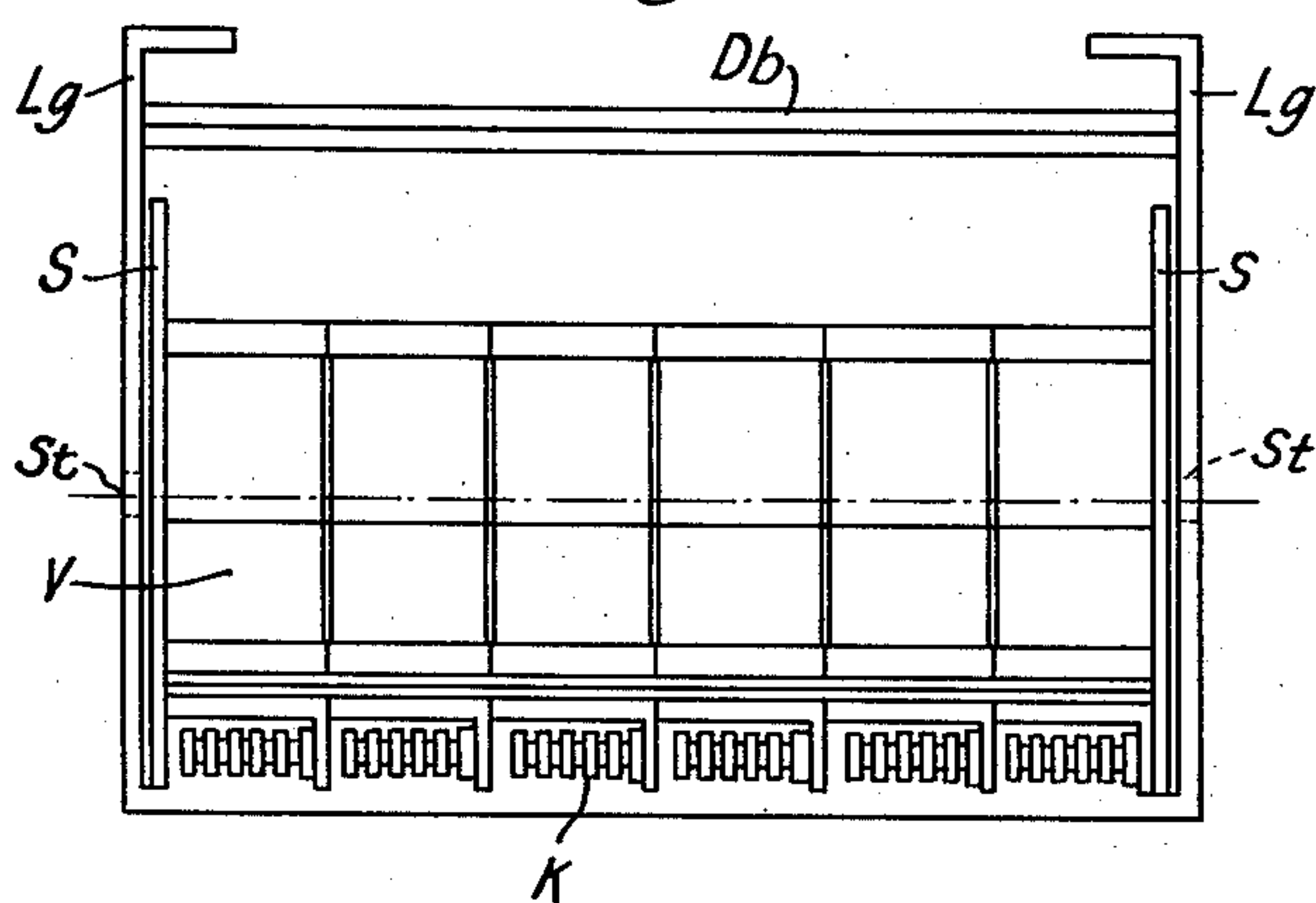


Fig. 1c

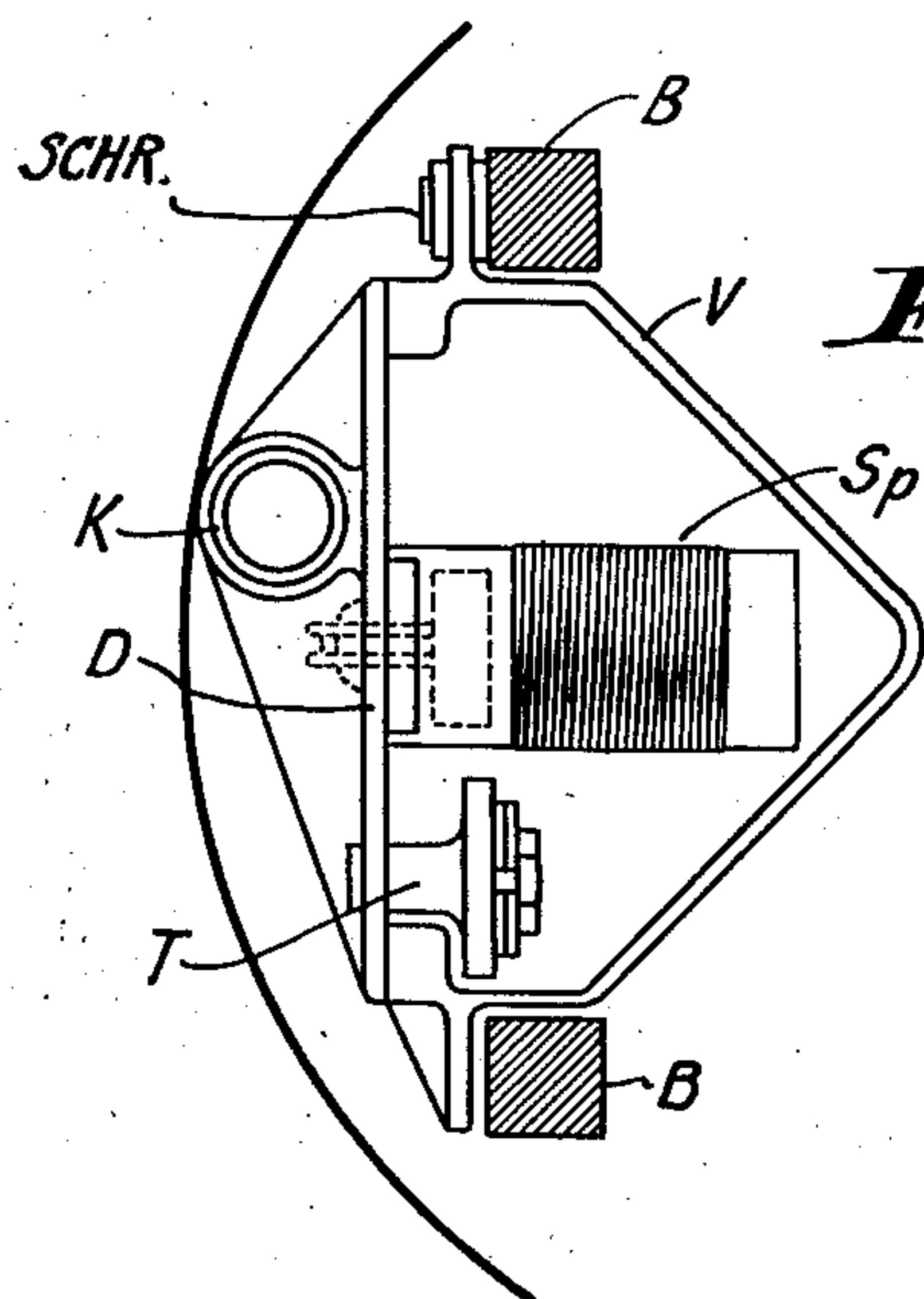
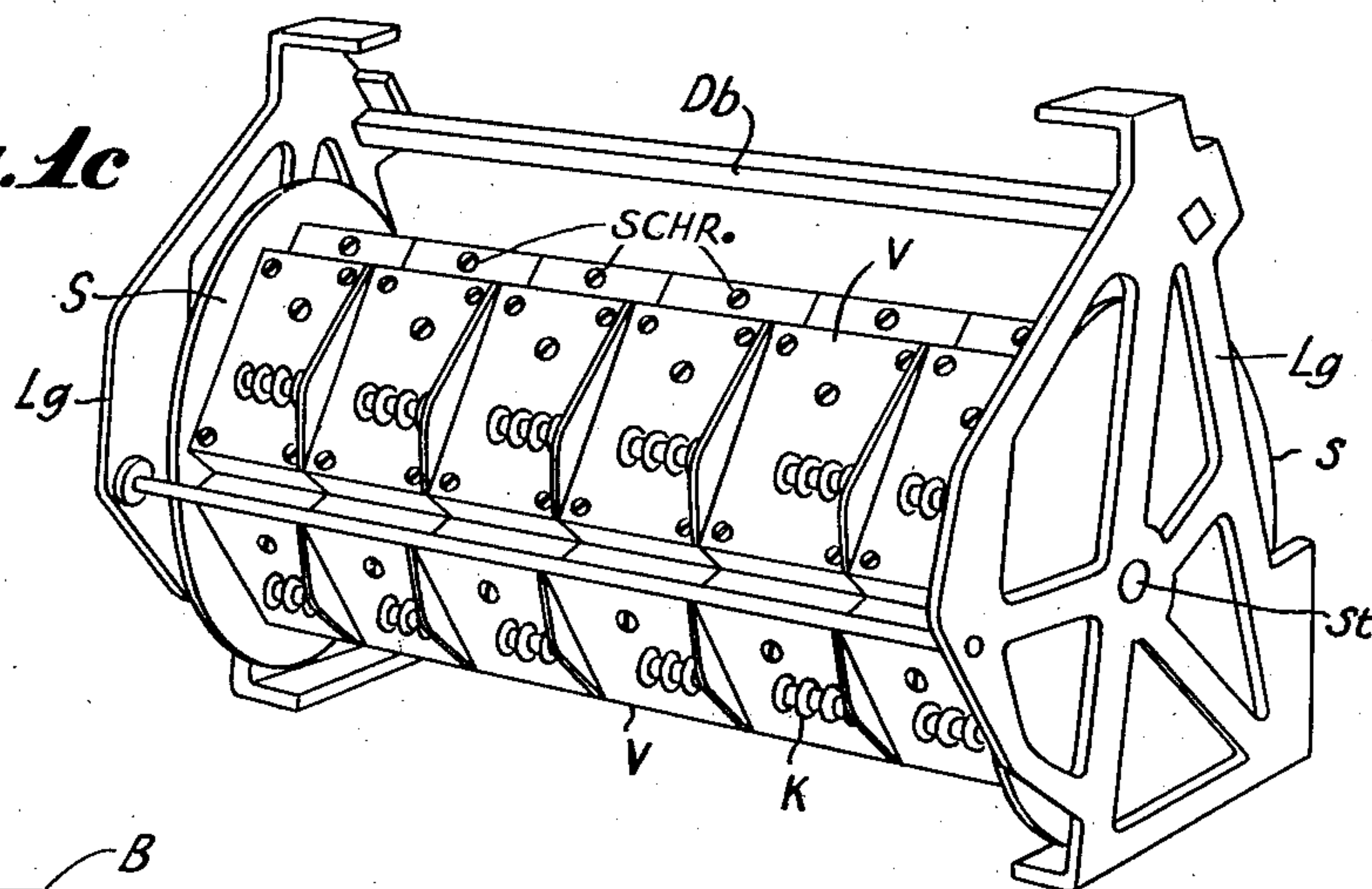


Fig. 2

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TUNING MEANS OF COMMUNICATION OR
SIGNAL EQUIPMENT

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2 Claims. (Cl. 250—40)

The present invention is concerned with the construction and arrangement of a revolver or magazine for the tuning means of receiver apparatus comprising several wave bands in which simultaneously a plurality of circuits are changed in their connections.

Revolvers or magazines heretofore known and used have various disadvantages. For instance their use is precluded in the case of small portable receivers due to the large space necessary to mount the revolvers conveniently. Also in the case where repairs or inspections are necessary it has been necessary to dismount the entire unit.

According to the present invention such drawbacks as inhere in magazines or tuning means of the kind used in the prior art are obviated by building each tuning means or assembly, comprising a plurality of circuit elements, chamber-fashion. Built into the chamber, for instance, is the coil and the aligning condenser; on the chamber which at the same time serves as a shielding cylinder are disposed also the terminals for this tuning assembly. In this manner each one of the latter is suitably electrically shielded from the others in a perfect manner.

The accommodation of the circuit elements inside the shielding chambers or cases is preferably effected in such a way that the coils and the aligning condensers are attached to the cover of the chamber, the coils and the aligning condensers being arranged interiorly of the case. Secured on the cover are the contacts which are preferably mounted upon a ceramic body. Joined with these connector contacts are the various circuit elements. Connection between the other parts of the set is insured in the usual way by the aid of spring contacts.

This form of construction of a tuning assembly has the advantage that the tuning elements belonging to any particular assembly may be taken out of the corresponding magazines easily and may be similarly replaced, without the intermediate connections having to be detached or opened. It is moreover an easy matter in this form of construction to balance or align each tuning assembly separately outside the apparatus, that is, before it is mounted therein.

According to another feature of this invention the chamber-like or encased tuning assemblies are so designed that they are radially removable from their magazines. For this purpose the chambers are made sector-shaped so that the constituent chambers may be built into the magazines so as to be positioned radially and

also axially in immediate contiguity. The various chambers are bounded in axial direction by only two disks at both ends of the magazine.

Each chamber, for the purpose of inspection or repair of one of the circuit elements such as a coil, an aligning condenser, or the like, is readily removable from the magazine, after loosening one or more screws. In this way, all dead and unused space between the various coil chambers, or between the various circuits, is practically completely avoided. More particularly speaking, dead spaces in axial direction such as were characteristic of magazines of the old type are avoided. For instance, in the case of an assembly comprising six circuits and four wave-bands it has been feasible by the invention here disclosed to reduce the length of the magazine by more than one-third as compared with the previous forms of construction.

In this arrangement there is realized the additional advantage that the contact springs which according to prior practice were mounted on the base plate separately from the magazine, are now secured directly upon the supporting frame of the magazine; hence, when replacing the entire magazine no special adjusting of the contact springs is needed seeing that these springs form one construction unit with the magazine itself. In other words, the whole work of aligning and adjusting the magazine may be effected prior to the fitting thereof in the set.

Figures 1a, 1b and 1c show an exemplified embodiment of a magazine according to the invention, the figures showing a magazine for sets used in wireless signalling and communication work.

Fig. 2 shows one of the chambers including the circuit elements pertaining to the tuning assembly.

Reference will now be had to Fig. 1c of the drawing wherein there is shown a revolving magazine comprising two end disks S connected together by means of spacing rods B. Four rods are shown in the particular embodiment illustrated. A plurality of sets of tuning assemblies V are mounted on the spacing rods B of the revolving magazine by means of the screws SCHR. The disks S are journaled on end pieces Lg of a suitable framework which provides a support for the revolving magazine, it being noted that the two end pieces Lg of the framework are connected together by cross bars Db only one of which is shown. The end pieces Lg are constructed so as to provide suitable bearings St for the disks S of the revolving magazine. The tun-

ing assembly is shown in more detail in Fig. 2 of the drawing from which it will be seen that the casing V has substantially the form of a circular segment. Secured on the inside face of cover D of the casing V are coils Sp and an aligning condenser T. Each tuning assembly is shielded by its casing V. On the outside of the cover D of each casing V are mounted by suitable insulating means, preferable ceramic supports, the contacts K which are connected to the elements within the casing such as the coils Sp and the condenser T of any unit. It can be seen from a study of Fig. 2 that any one of the tuning assemblies may be removed from the revolving magazine by simply unscrewing at the most two screws SCHR. Suitable means are provided (not shown in the drawing) for rotating the magazine as a whole to any position with respect to the supporting framework Lg. In order to be able to connect any one of the tuning assemblies to the remaining part of the circuit of radio signalling apparatus there are provided a plurality of wiping contacts F' (see Fig. 1b) mounted on a cross piece Db in such a way that wiping contact is made with the corresponding contacts K of the tuning assemblies when the revolving magazine is rotated to any position where contacts K of any set of tuning assemblies come under the wiping contacts F'. It can be seen, therefore, that rotating the revolving magazine to any one of the four sets of tuning assemblies connects the set of tuning assemblies to the signalling circuit.

It can be readily appreciated from the above that a great advantage of applicant's arrangement is that by simply loosening only two screws

SCHR the entire tuning assembly is readily removable in radial direction, without the necessity of dissolving any electrical connection.

What I claim is:

1. In a device of the kind described, a frame, a cylindrical framework rotatably mounted on said frame, wedge shaped shielding containers adapted to be individually radially inserted within the framework and attached thereto for rotation therewith, each of said containers having mounted therein an inductance coil and a trimmer condenser, each of said coils and condensers being completely shielded by their respective containers, a set of external contact pieces mounted on the outside of each of said containers and connected to the respective coil within the container for providing means to connect the inductance coil to external circuits, contact brushes mounted on the frame in alignment with the said contact pieces and arranged so as to sequentially contact each set of contact pieces as the framework is rotated to thereby provide for selective connection of any of said inductance coils to said brushes.

2. An arrangement as described in claim 1 characterized by that a plurality of said containers are mounted within the cylindrical framework and positioned in radial and axial contiguity and by that a plurality of sets of brushes are arranged and mounted on the frame so that simultaneous contact is provided between all of the contact pieces mounted on the containers arranged in axial contiguity.

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