

attached to a baseboard made of the same material.

We have now a revolving disc suitably mounted, and this constitutes the first and most essential part of our "televisor."

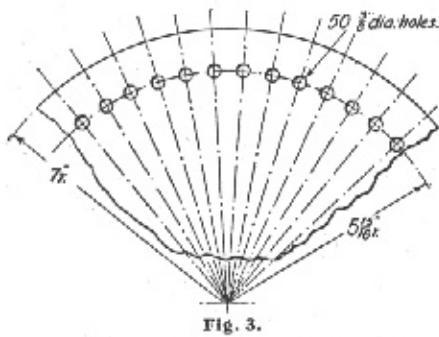


Fig. 3.

The next step is to construct our light interrupter disc. The light interrupter disc is 10 inches in diameter, and has fifty holes arranged round its circumference, the holes and spaces between being equal. Two alternative constructions of this disc are shown in Figs. 3 and 4. To make the disc the most suitable material is thin tin, but aluminium may be used, and makes a more rigid job, although it is not perhaps so easy to handle. This second disc is fitted to the shaft of a little electric motor of the same type as that used for the exploring disc, and the whole

is mounted upon another pedestal, as shown in sketches, Figs. 2 and 3. We come now to what may be considered the heart of the whole apparatus, that is the selenium cell, and this is a snag which has destroyed the hopes of many amateurs who started along the road towards television.

In another part of this journal an account appears upon "How to make a Selenium Cell." But some readers may not wish to go to this trouble, and while it is highly advisable for those who are taking up the study of television to construct their own cells, it may be preferable to buy at least one commercial cell to enable results to be achieved without delay. Experimenters may then commence to construct their own cells, having by them the standard article with which to compare results.

Suitable selenium cells may be purchased from Messrs. Watson, Hilger, Sullivan, Baird and

Tatlock, and a number of other firms. The amateur should not grudge the price of a good cell, as apart from

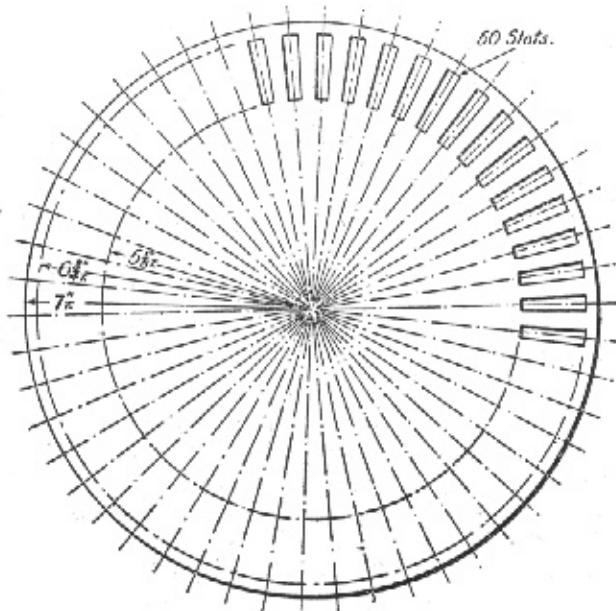


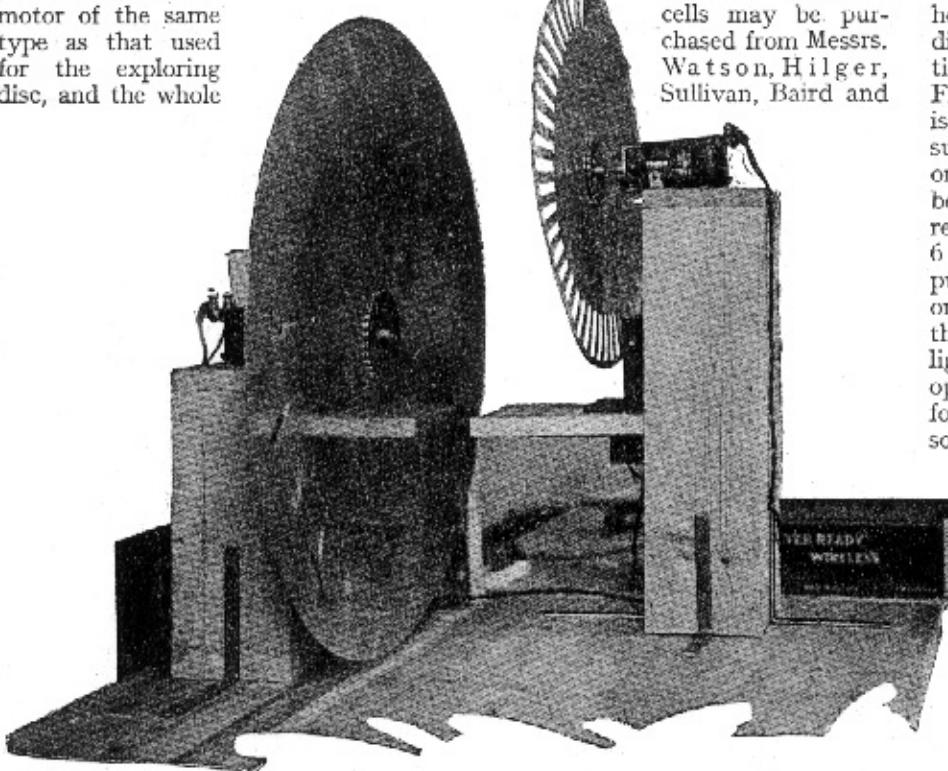
Fig. 4.

the apparatus being described at present, these cells will be of the greatest use in future experiments, the same applying to the little motors, reflectors and lamps which he will also be called upon to purchase.

The selenium cell, of whatever type he decides upon, is fixed behind the disc and in line with the perforations and slots, as shown in sketches, Figs. 2 and 5. The next item then is the lamp. A projection type lamp, such as an Osram 400 watt, is suitable, or an ordinary 100-watt lamp may be used. Behind the lamp is the reflector. This is a Mangin mirror 6 inches in diameter, and can be purchased from any kinematograph or optical suppliers. The object of this mirror is to concentrate the light of the lamp upon the cell. In operation the light from the lamp is focussed upon the holes in the disc, so that an image of the lamp filament falls upon the cell.

Now for the first test of the apparatus. The first thing to do is to find if the cell is functioning properly, and this requires a three-valve low frequency amplifier. Any good three-valve amplifier will serve the purpose.

There are on the market a number of ex-army mark 4 three-valve amplifiers which can be purchased very cheaply,



Side Elevation of Apparatus, showing Arrangement of Spirally Perforated Disc.