

## Exchange of Patents Speeds Home Television

Agreement upon an interchange of television patents and technique between Farnsworth Television Incorporated of Philadelphia and San Francisco and Fernseh, A. G., of Germany, brings home television in America a step nearer.

Already, in Germany, a Berlin station sends television programs several hours daily, equipment for a second station is ready and Dr. R. Moeller, chief research engineer for the German company,

*Above, Tuning in Television Receiving Set; Camera and Lighting Arrangements in Broadcasting Studio Are Shown Below; Right, Tube Which Projects Image upon Screen*



asserts television is a reality. By virtue of the patent agreement 100 receiving sets will be ready for showing in Germany by August, and by next January, sets will be available to the public for about \$200.

A lack of sending stations in the United States now retards development of tele-

vision here. Funds have been set aside and plans made for the erection of ten television stations in Germany. These stations will be connected with cables which are already in operation experimentally, and by wireless relay stations. The huge cost of this special cable has been put forth

as a barrier to television, but when it is considered that aside from television uses, one of these cables could carry the entire telephone traffic between San Francisco and New York, it will be seen that the cost is not such a great factor. The cable cannot be used, at present, for television and telephone simultaneously, but it can carry telephone traffic while not being used for television, and thus will be economical.

The small Farnsworth projecting receiving tube is a significant feature of the new sets. Previously the Farnsworth tube was large and the image appeared on the end of the tube. Now the tube is small and the image is projected upon a screen, set up in the cabinet.

By use of the Farnsworth multipactor—a cold cathode tube—only five tubes will be necessary for the television reception and five more for the sound reception, ten tubes in all, as against the twenty or more in television sets hitherto shown.

Not the least important development in television sending apparatus is the "tele-cine," apparatus for sending out motion pictures. The new studios will be equipped with facilities to send out both still scenes from life, and also motion pictures, thus giving both stage and screen amusement.

The multipactor is a cold cathode tube, which means that it will not be necessary for the tubes to heat, as in present tubes, in order to get reception. In fact it is the inefficiency of the present tube which causes it to heat.