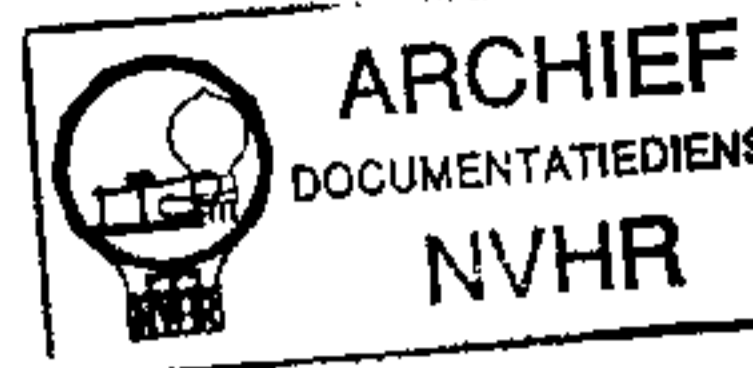


Ned. Ver. v. Historie



CLIMAX

ALL MAINS
THREE

A Reasonably Priced A.C. Mains Set with Built-in Moving-coil Loud Speaker.

NO matter how excellent a receiver may be from the point of view of range and selectivity, it has little chance of attracting the attention it deserves unless it can also show the less technical but more obvious virtues of a dignified and pleasing appearance, reasonable price, and, most important of all, good quality of reproduction from the local station. Most people appreciate the ability to explore the ether, from time to time, for interesting foreign programmes, but the fact remains that, for the greater part of its working life, a set is tuned to the B.B.C. transmissions.

In the Climax Model 33A, the built-in Rola moving-coil loud speaker, working in conjunction with a power pentode output valve, is an adequate guarantee of natural and well-balanced quality with ample reserve of volume. The cabinet is designed on the modern lines of simplicity and good proportion, with the minimum of ornamentation, and the general appearance may be judged from the illustration in the title of this article. The photograph, however, does not convey an adequate idea of the highly polished finish of the walnut, nor of the unusual compactness of the set as a whole. This must surely be one of the smallest self-contained three-valve mains sets so far produced, for it measures only 16in. in height, 12½in. in width, and 9in. in depth, and is unusually light in weight in spite of the fact that an energised moving coil is included. Incidentally, the recesses provided in the panelled sides of the cabinet enable the set to be carried from room to room with the greatest ease, a facility of which full use can be made, since good reception from the local station is possible with the mains aerial provided.

Many will consider that the very reasonable price of fifteen guineas is fully justified by the merits

already mentioned, but to these must be added the possibility of receiving—even under the most adverse conditions as regards proximity to the local station—a minimum of ten or fifteen foreign stations at good loud speaker strength. The circuit includes a high-frequency stage using one of the latest metallised screen-grid valves, and the sensitivity, and to a certain extent the selectivity, can be varied by means of a separate control to give just the right performance for any given set of conditions. Thus, when working the set at a distance of five miles from Brookmans Park it was possible to reduce the band occupied by each of the local transmitters to ten or fifteen metres, though the corresponding reduction of range did not favour the reception of foreign stations in the intervening clear space. As the tuning control was advanced above 356 metres, however, the range could be progressively

increased until, above about 450 metres, unrestricted use could be made of the full range of the set. In these circumstances eleven medium-wave foreign stations were received in the space of a few minutes. Subsequently a test was made in North London, at a distance of twelve miles from Brookmans Park, and it was there found possible to tune in Hilversum (298 metres) clear of either station. Incidentally, this station was well received in the mornings during the period of the test.

The long-wave performance is quite equal to that on short waves in the matter of range, and seven stations other than Daventry were tuned in without any difficulty. If anything, the control of selectivity is slightly better than on short waves, and, with the switch at minimum, Königswusterhausen could be tuned in clear of Daventry and Radio Paris, though these stations began to encroach as the volume was increased. At maximum volume, however,

SPECIFICATION.

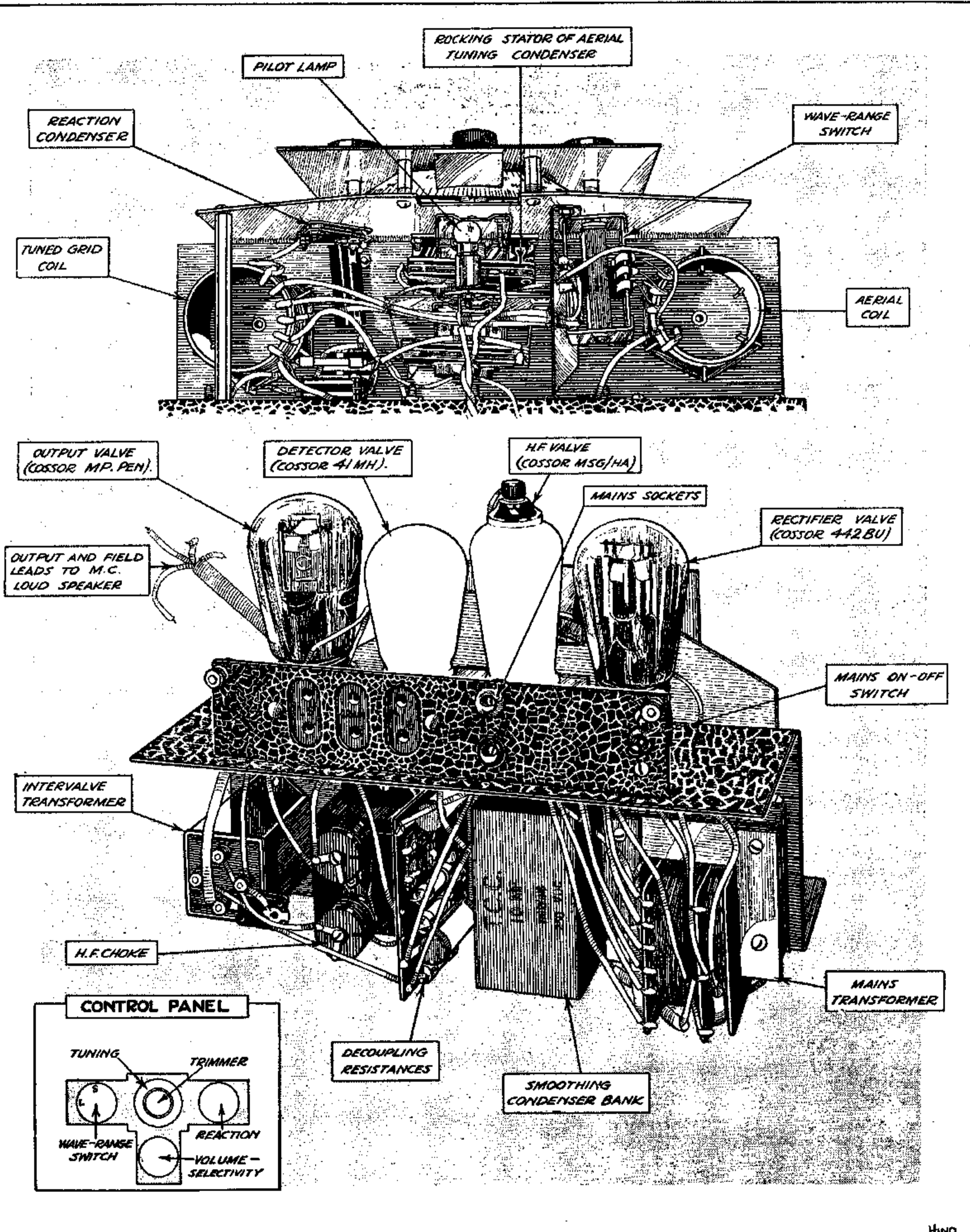
CIRCUIT: Three stages with indirectly-heated valves. (1) Screen grid H.F. (2) Power grid detector. (3) Power pentode output valve. Full-wave valve rectifier.

CONTROLS: (1) Single-dial tuning (with trimmer). (2) Reaction. (3) "Volume-Selectivity." (4) Wave-range switch.

GENERAL: Moving-coil loud speaker standard. Overall dimensions of cabinet, 16in. × 12½in. × 9in.

PRICE: 15 guineas.

MAKERS: Climax Radio Electric, Ltd., Haverstock Works, Parkhill Road, Hampstead, London, N.W.3.



Constructional details of chassis and layout of controls in the Chimax Model 33A receiver.

Climax All Mains Thrice.—

no mutual interference was experienced when fully tuned in to either station.

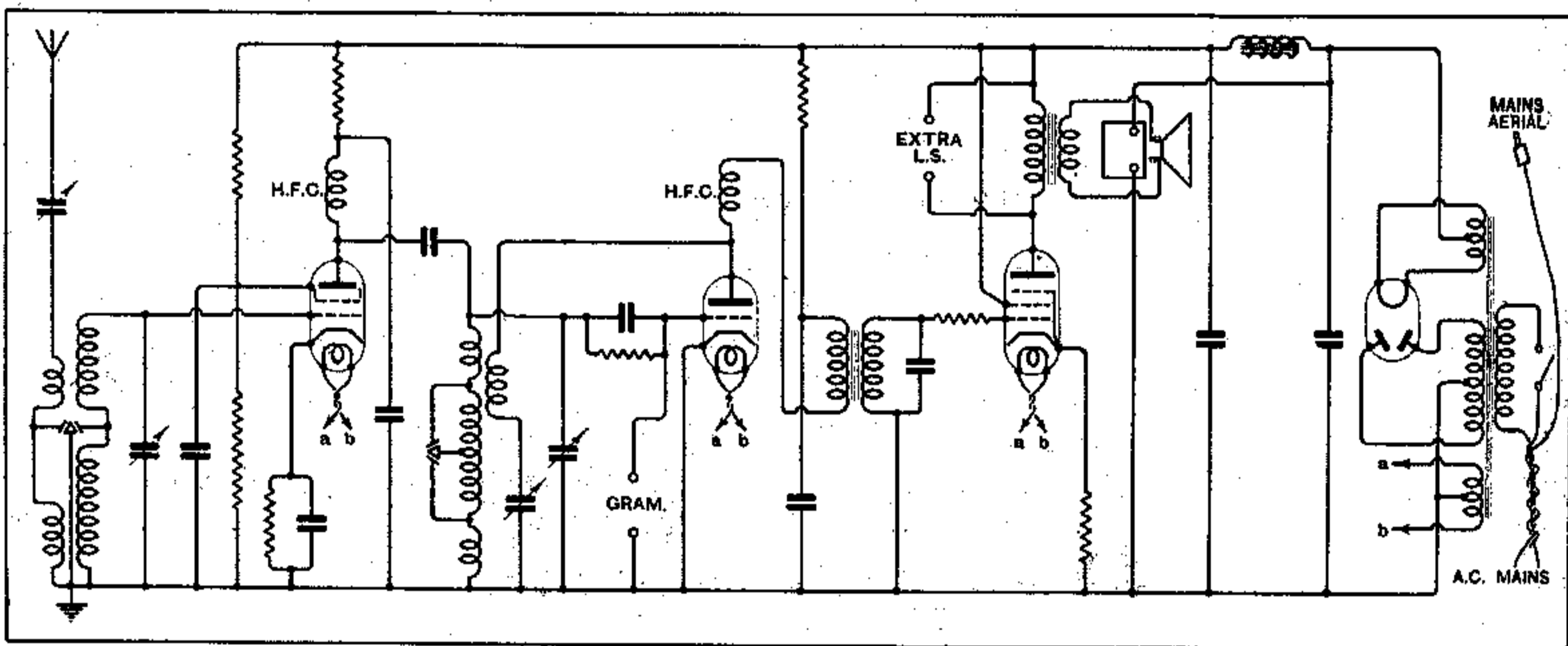
The controls are neatly arranged in a T-shaped recess. The centre control, which operates the ganged condensers, is provided with a concentric trimming knob which imparts a limited movement to the "fixed" vanes of the aerial tuning condenser. By this means accurate ganging at all parts of the dial is easily obtained. In practice very little attention need be given to this subsidiary control, for, like the reaction control, it maintains its setting over the greater part of the dial.

A push switch with alternate on and off positions is fitted in the terminal panel at the back of the set for interrupting the mains supply. The same panel carries terminal sockets for an external loud speaker, gramophone pick-up, and the usual aerial and earth terminals.

It will be observed that unusual precautions have been taken to prevent stray H.F. currents reaching the pentode. The series grid resistance and the condenser across the transformer secondary also limit the audio-frequency amplification of high notes. This is often desirable where a pentode is used in the output stage, and in the present case the compromise has been effected with good judgment. There is no suggestion of "pentode whistle," yet the reproduction of some of the special effects in the cinema organ clearly proves that high-note reproduction is not lacking. The bass is full, without being obtrusive, and mains hum can be heard only in intervals in the programme.

Mains Adjustment.

The mains transformer is suitable for supply frequencies from 40 to 100 cycles, and the primary can be easily adjusted to the mains voltage by a flexible



Complete circuit diagram of the Climax Model 33A.

The construction of the chassis is rugged, and its behaviour throughout the tests indicated that reliability may reasonably be expected.

Circuit Details.

Essentially the circuit is straightforward, but there are one or two points of interest which are not obvious in the diagram. The tuning condensers, for instance, are of the solid dielectric type. A considerable saving of space is achieved in this way, and the condensers appear to hold their settings extremely well, judging by the constancy of the wavelength settings on the illuminated tuning dial. The condenser in series with the aerial which constitutes the "Volume-Selectivity" control is actually variable in steps, and consists of five separate fixed condensers of different values controlled by a switch on the front panel. The aerial and tuned-grid circuit coils are not screened individually, but are spaced well apart and do not interact sufficiently to cause instability at any point in the tuning range.

lead and wander plug fitting into sockets in a neat terminal panel near the mains on-off switch.

There is one minor criticism: it would simplify the initial installation of the set if the valve holders could be marked to correspond with the valves to which they belong. Incidentally, the receiver is sometimes described as a "four-valve" set, but it should be remembered that this number includes the full-wave rectifier.

To sum up, the Climax Model 33A sets a new standard of value in self-contained mains receivers. Its compact portable design and the excellent quality provided by the moving-coil loud speaker make it an ideal medium for the reception of the B.B.C. programmes, while the range and selectivity are sufficient to guarantee a minimum of ten to fifteen foreign programmes at good loud speaker strength.