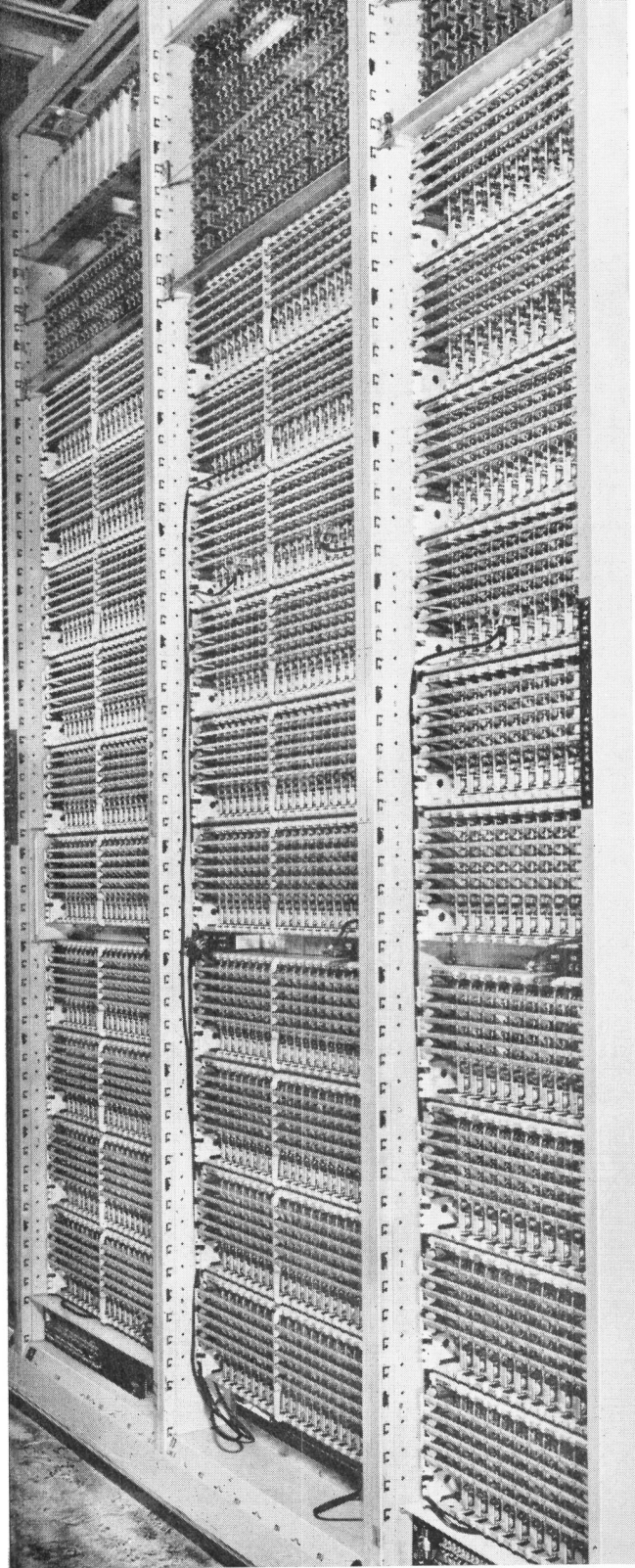
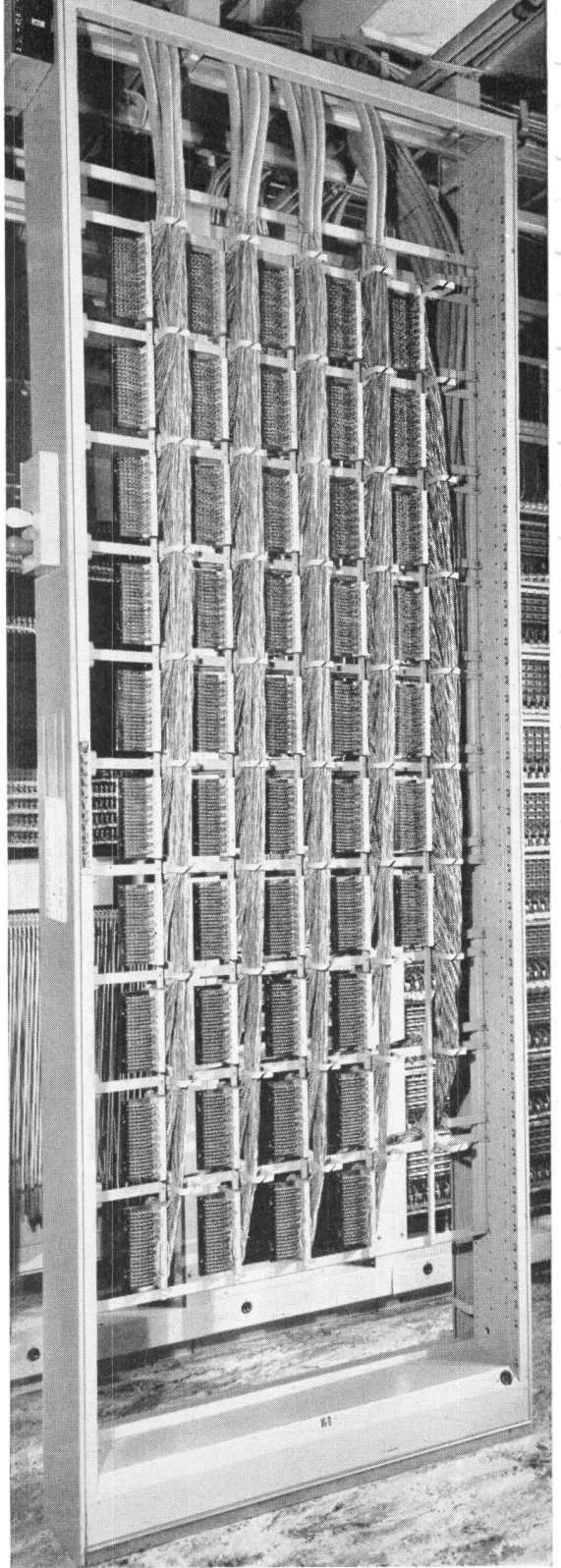


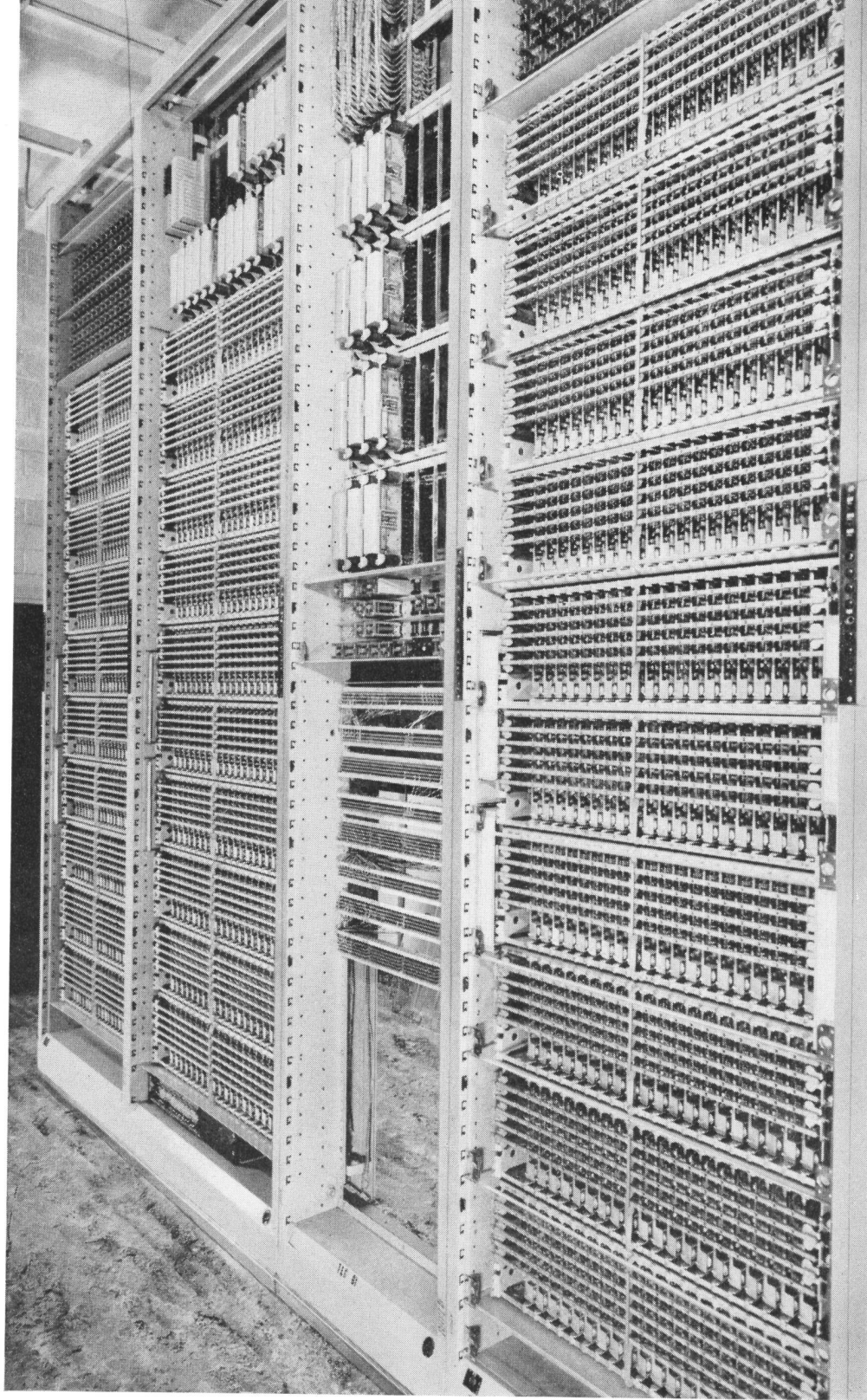
*Over-all block schematic of the No. 5 crossbar system.*



*A two-bay basic frame of a line link frame, at the left, with a 100-line supplementary bay, at the right. Supplementary bays are also available for 200 lines. A complete frame may accommodate as many as 590 lines.*

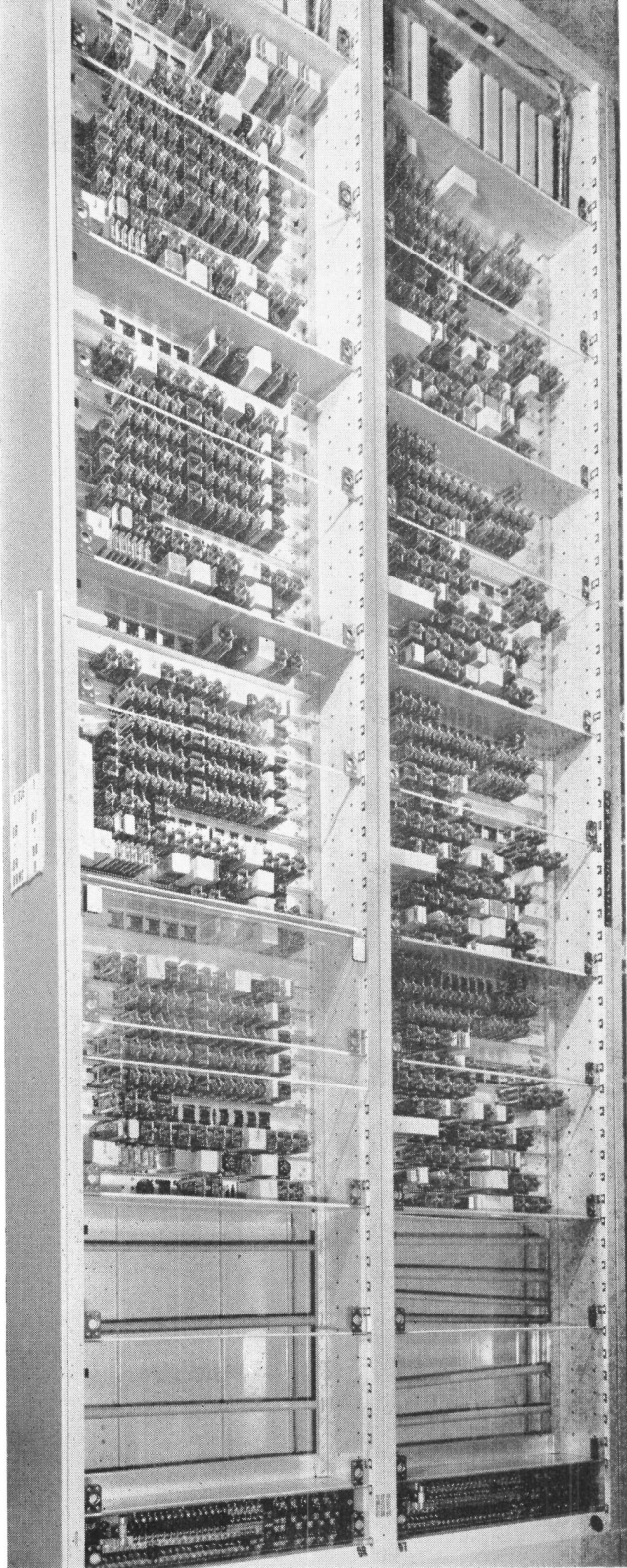


*On a single junctor grouping frame, shown above, the junctors from as many as 20 line link frames are distributed to all the trunk link frames in the office.*



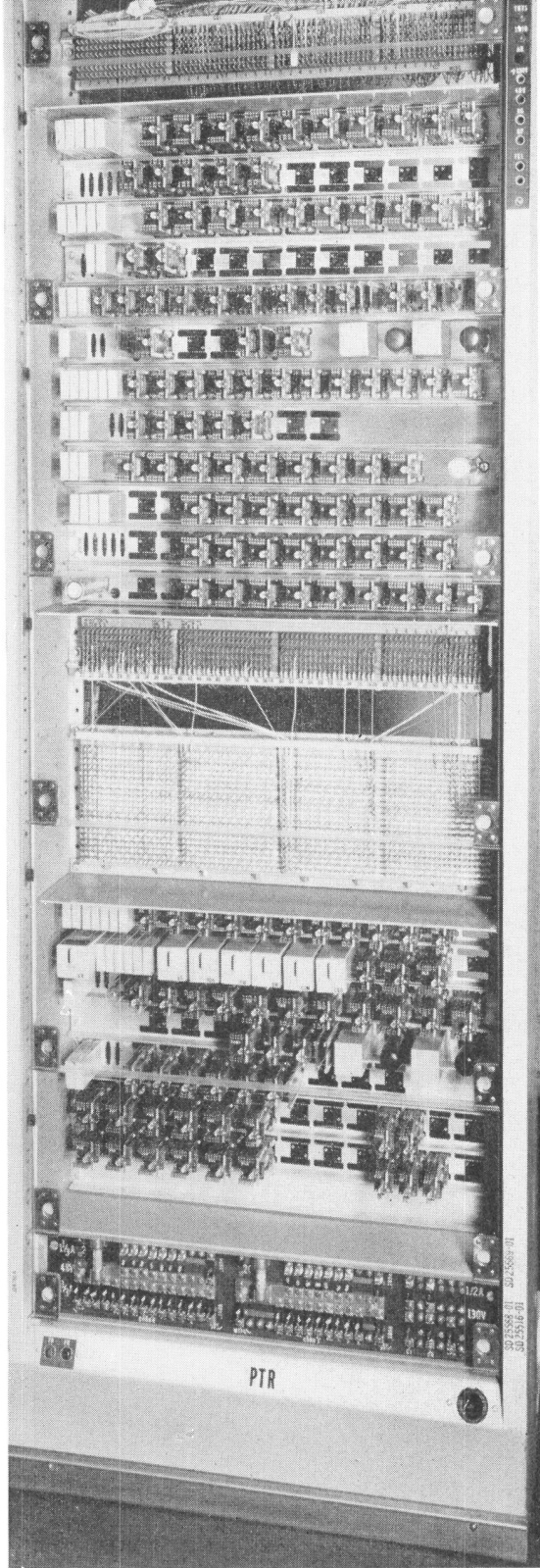
*A basic trunk link frame, at the left, comprises two bays and serves for connecting any of 200 junctors from the line link frames to as many as 160 trunk or originating register appearances. Adjacent to the trunk link frame is a trunk link connector that associates that trunk link frame with the marker.*





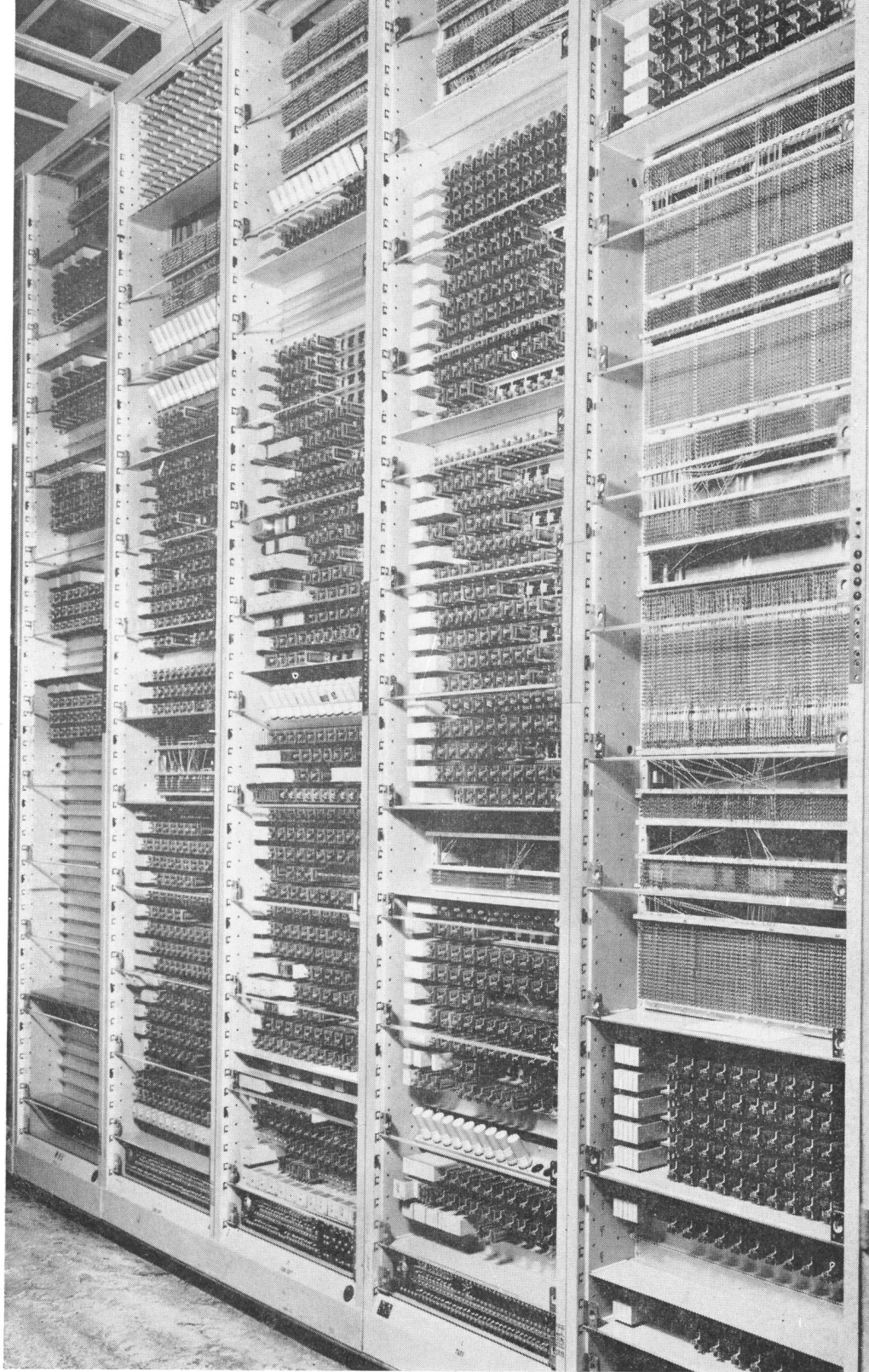
*An originating register frame comprises two bays, and has a capacity of five registers, each extending across the pair of bays. In the register frame shown above, the lower position is unequipped.*

10

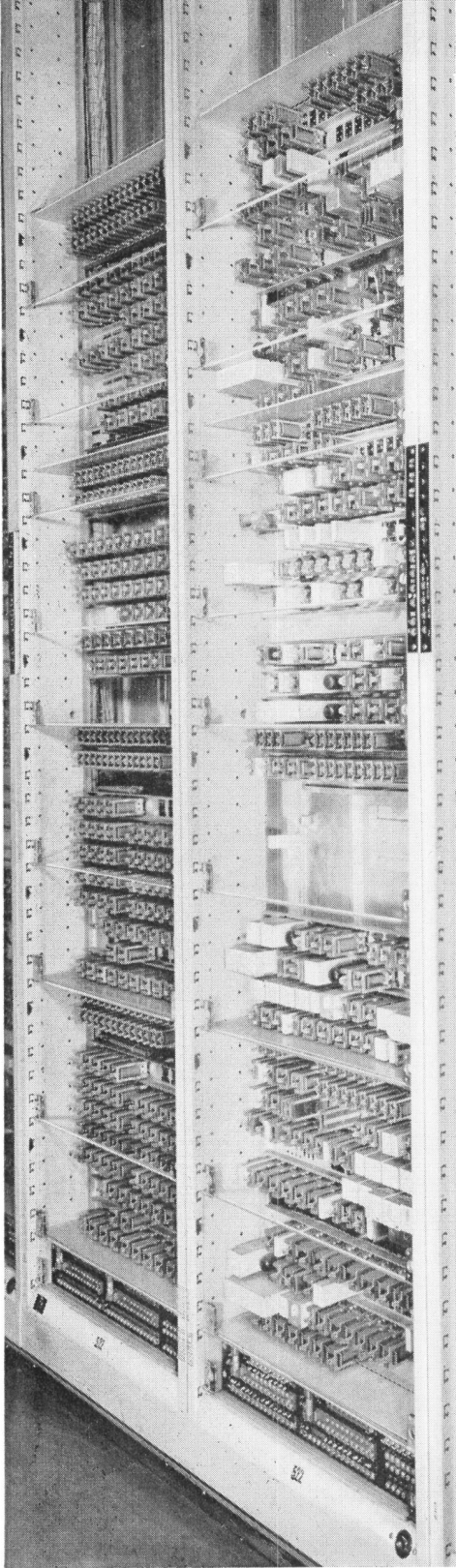


*A pre-translator with its connector occupies half of a single frame; two or three may be used in each installation. They furnish certain code information to the originating registers.*





*Each No. 5 crossbar marker includes the four bays shown at the right. The two bays at the right are the translator and route relay bays, while the next two at the left comprise the common equipment bays. The bay at the extreme left—the trunk frame test lead connector—will serve six markers. A class-of-service bay, not shown, serves four markers.*

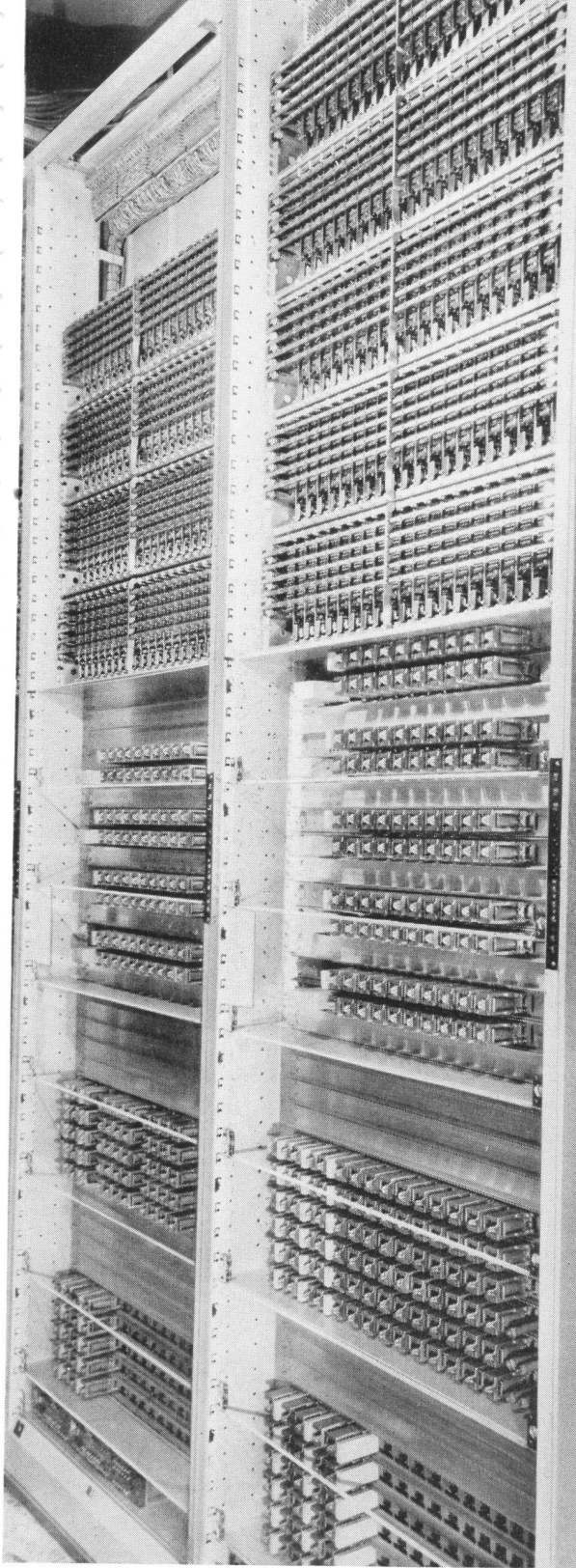


*The outgoing sender frame, like the originating register frame, has space for five senders on two bays. This photograph was taken in the Switching Laboratory.*

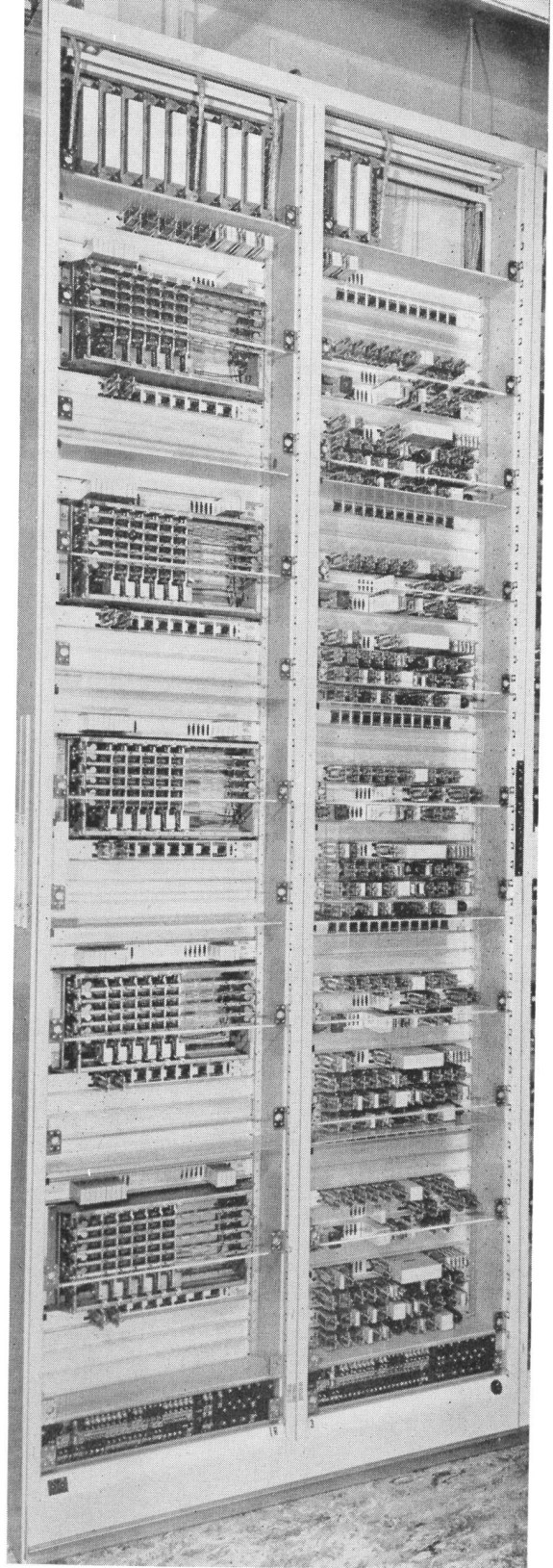


*An outgoing sender link frame at the end of a line of relay rack bays. These links connect outgoing trunks, on their verticals, to outgoing senders, on their horizontals, under control of the marker.*

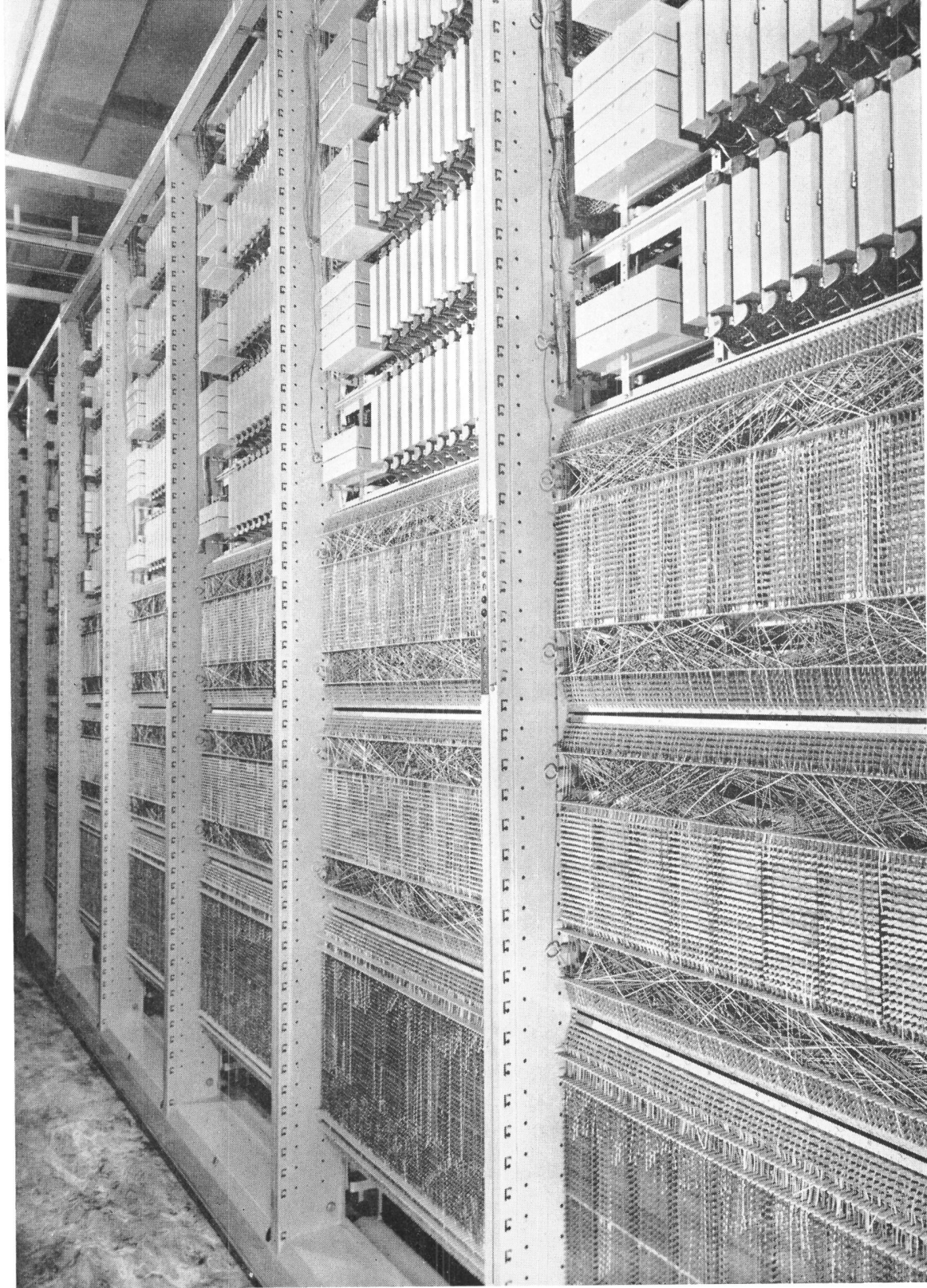




*Depending on the number of trunks served by the particular type of register, incoming register links occupy from one to six bays. Above are two links serving two register groups.*

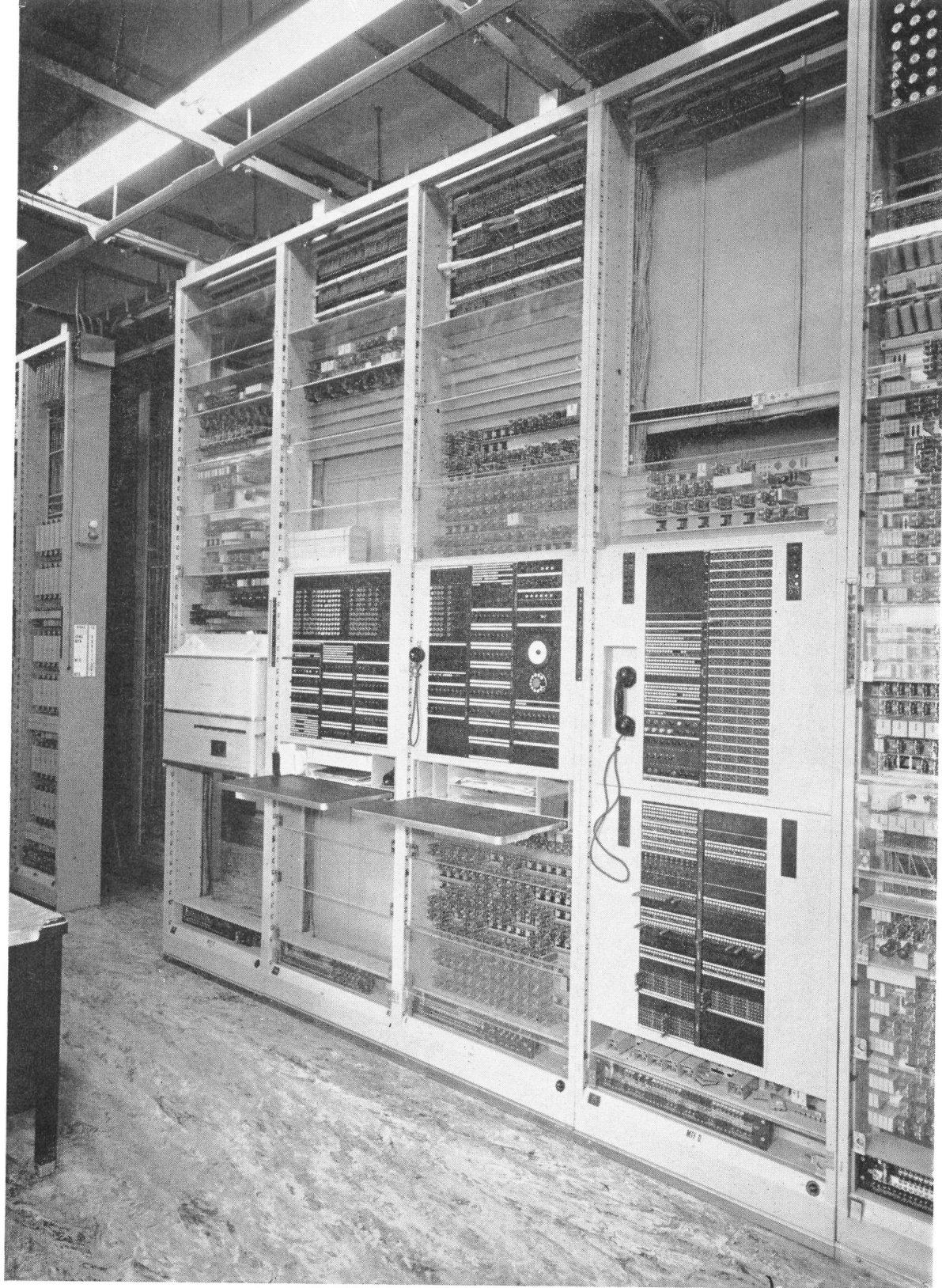


*Five incoming registers are mounted on a two-bay frame, but they may be of different types. The registers on the two bays shown above are all of the revertive-pulse type.*

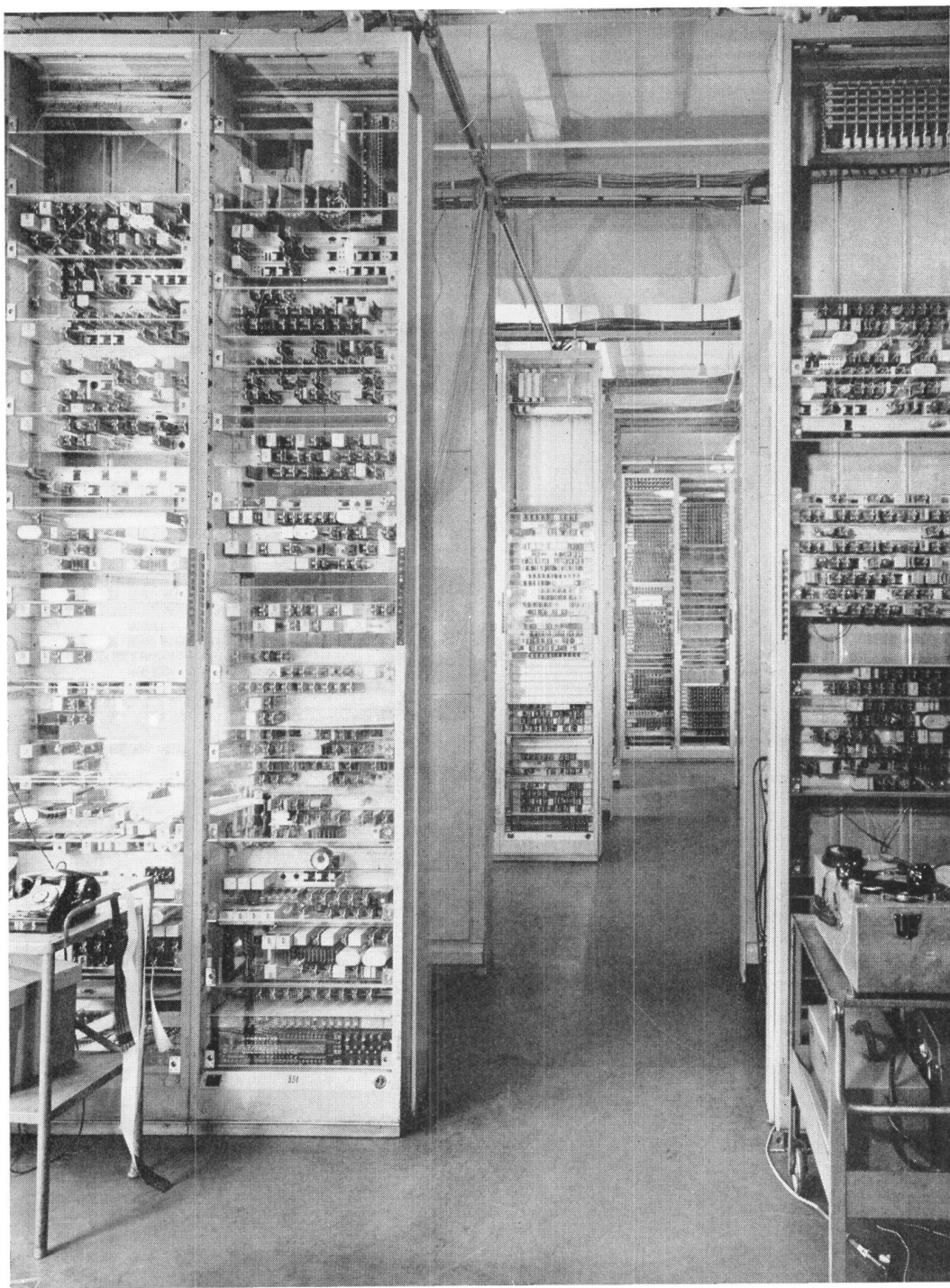


*Each number group frame, comprising the equipment between two verticals, represents 1000 subscriber numbers, and thus ten are required for an office with 10,000 numbers. When a marker has a call to complete within the office, it gives the subscriber's number to the number group frame, and receives the location of the line equipment for that number on the line link frame.*





*The master test frame is the central maintenance point of a No. 5 crossbar office. Here troubles are recorded, and tests are applied. At the extreme left is the trouble recorder; the next two bays are used in setting up and applying tests of the common control circuits; the right-hand bay is used principally for testing outgoing trunks, and for making various common control elements busy.*



*Looking down the main aisle of the No. 5 crossbar laboratory in Bell Telephone Laboratories. As the development of the No. 5 system progressed, the various frames were set up here and tested: first to determine that they perform their functions properly as individual circuits, and then to determine that they work properly with the circuits with which they are associated. As improvements are made and new features added, they are also added here.*