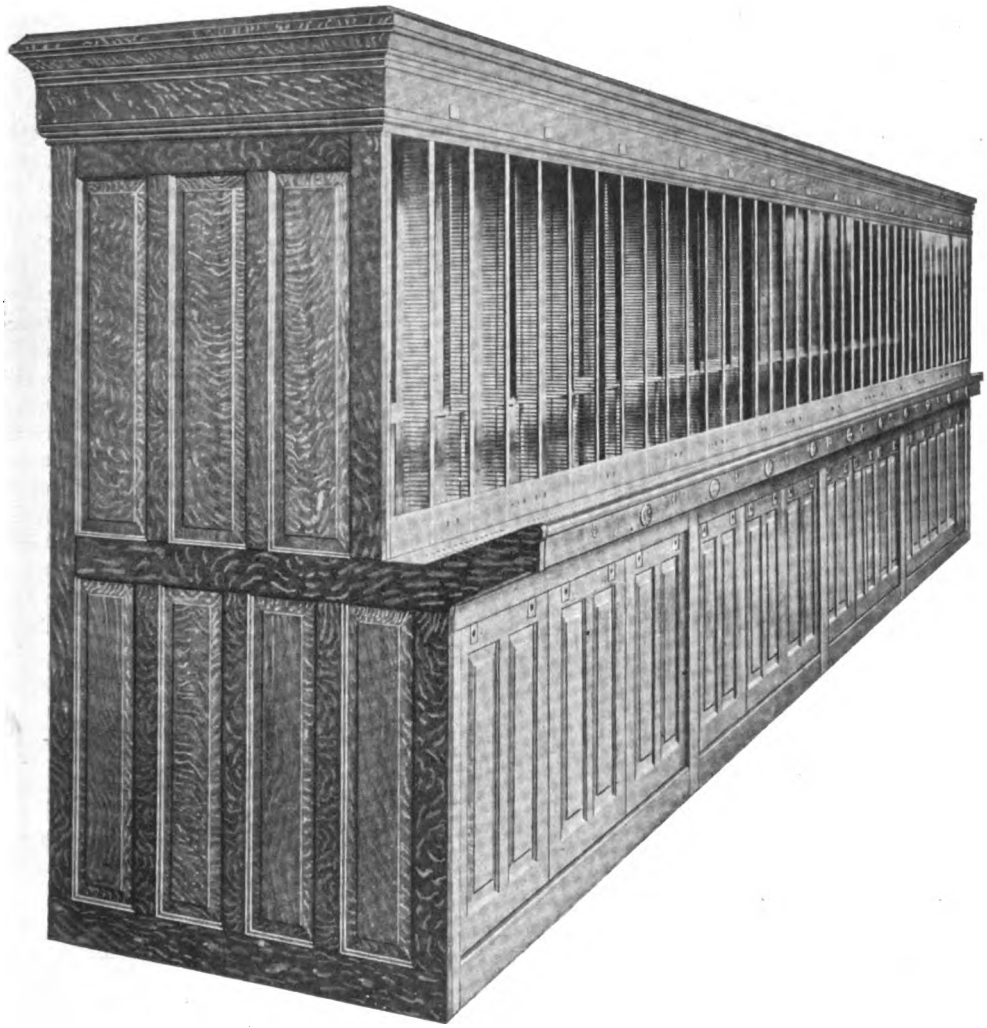
### Kellogg Company Ships Big Board to Brazil.

Among the many common battery exchange systems installed recently by the Kellogg Switchboard & Supply Co., the 11 section 10,000 line capacity exchange for San Paulo, Brazil, is of special interest on account of its size and importance. This contract was secured by Mr. J. C. Murray, the company's sales engineer.

This system is to be used first as a magneto multiple lamp signal switchboard, but is so designed that it may be changed to a common battery system without discarding any of the original apparatus. The present equipment is for 4,960 lines.

This handsome, massive quartered oak board, illustrated herewith from a photograph taken just previous to packing, will be equipped for 31 operators' positions, each to have 15 universal cord circuits with ring back keys.



Kellogg 10,000 Line Board Built for San Paolo, Brazil; Eleven Sections equipped.

The Kellogg company has furnished complete accessory apparatus, including intermediate distributing frame terminal clips for 4,960 lines on answering and multiple sides. The relay frame is for 5,400 subscribers' lines.

The Kellogg main distributing frame is equipped with 4,960 Kellogg arresters and terminal clips for 6,250 outside lines. There is to be one two-position chief operator's desk and a one-position wire chief's desk.

The complete operating plant will be made up as follows: One set of 11 cells of storage battery, 2 motor generator charging sets operated from 220 volts, 60 cycle, 3-phase alternating current. Two ringing machines with howler attachment, one to operate from the battery and the other to operate from the primary battery circuit. One white Italian marble power switchboard.

As stated, the system is sent out as a magneto multiple lamp signal exchange, but is so designed that it may be gradually changed to a common battery system without discarding any of the original apparatus. A slight change in the wiring at the relay rack is all that is necessary to convert a magneto line to a common battery line. The cord circuits as furnished are of the universal type and will automatically adapt themselves to line conditions.

### The "Rubberneck" Detector.

The evils of party line telephone service are nowhere more apparent than in the rural districts. There a large number of subscribers on a single line is the rule. And the more or less isolated life of the farmer, as has been told in song and story scores of times, renders him and his family peculiarly liable to attacks of the "rubberneck bug." The telephone bell rings and at once from one to ten or a dozen people, who are not involved in the conversation then beginning, become eager listeners. And, until now, there has been no sure way of telling who is innocent and who is guilty.

As one who knows these conditions thoroughly writes us: "The farmer's telephone has ceased to be a business proposition. Calling the doctor, selling stock or grain, collecting accounts, selling a piece of property, cannot be conducted with safety or satisfaction over the rural line as it is operated today. One cannot talk confidentially to his physician with a half dozen people taking in every word, and the result is the doctor frequently arrives at his destination without the proper medicines or instruments.

"I have, let us say, some first class hogs to sell. A buyer, knowing the stock, offers me 8 for them. Smith, who has been listening to the conversation, is angry at once because the buyer had offered only 7¾ for his and he and the buyer are enemies thenceforth.

"Cases have been known of this character—a man contracts to buy a horse over the telephone. On his way to get the animal he is met by another farmer in the road. The second man, having overheard the deal on the telephone, waylays the buyer and sells him his horse. Farmer number one is left stranded, because someone 'rubbered.'