No one type of crossing protection is best adapted for all crossings nor is any one type the most efficient for all; machinery is often more reliable than a man and is on duty 24 hr. a day, whereas the man may be on duty but a few hours. Therefore, from a signalman's viewpoint, each crossing must be studied separately and only after

considering fully all of the conditions surrounding it can a decision be reached as to proper protection needed.

The uniforming of flagmen is a point that should be considered, particularly in protecting crossings in cities, because the average automobile driver will recognize a man who wears a policeman's uniform.

## An Old Electric Interlocking in France

## By S. D. Ashford

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W HILE in Bordeaux, France, on my return home with the A. E. F., I had the opportunity of visiting an old electric interlocking plant at the "Gare du Midi." The accompanying photograph shows a towerman operating an electric interlocking machine, which



The Electric Machine Has Peculiar Locking Arrangement

was built similar to some of the early machines in the United States; however, the outward appearance is rather novel. This French machine was equipped with vertical type mechanical locking, together with electric locks and



Checkerboard Signal in Stop Position

electric indication. Miniature electric semaphore and disc signals were used in conjunction with various toned bells and an electro-magnetic track model, to give the indication of the approach of trains and the position of switches and signals. The towerman on duty at the time stated

HILE in Bordeaux, France, on my return home that this same interlocking machine had been exhibited with the A. E. F., I had the opportunity of visit- at the Brussels exposition.

A "checkerboard" signal in the "Stop" position is shown in the second photograph directly over the German cars. The rear of the signal is shown, including the oil lamp, which is a part of the signal and moves with it. The "Clear" position is indicated by turning the whole signal through 45 deg. by means of an electric motor situated on the signal mast. The edge of the "checkerboard" is then towards an oncoming train and by night a white light is shown, the lamp having two lenses. The motor operated mechanism might be compared with the



Special Three-Point Switch and Home Signals

type of signal once in use on the Cumberland-Connellsville section of the Baltimore & Ohio.

The throat or exit from the yard to the double track main line is shown in one of the illustrations. In the foreground the tracks converge in a three point triple switch operated by two electric switch machines. This is possible as the traffic here passes very slowly as it enters the train shed. Two "checkerboard" signals are shown in the background at the entrance to the yards and control traffic from the main line. For the convenience of yard engines and switching movements another signal is located a short distance beyond the two signals shown, and is suspended from the railway bridge spanning the Gironde river, over which the line passes immediately after leaving the yard tracks.