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Interlocking Plant at the Track Junction East of the Torup Station.

I t is now about two years since the small electric interlocking plant for a triangular track junction (fig. 1) near the Torup station on the Halmstad Nässjö R'y was put in service.

At the time this junction — which is situated about 800 metres east of the Torup station — was built,

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unusual interest is the fact that the interlocking machine is located outside of the area bounded by the points and signals belonging to the plant; another feature is that the plant is designed for the unguarded passage of trains in certain directions according to the detailed description given in the following.



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the question came up as to the advisability of building a suitable interlocking plant. An electric plant was found most suitable on account of its low cost of operation, this condition being obtained by placing the interlocking machine in the office of the train dispatcher at Torup, whereby no special operator was required for its manoeuvering, as would have been the case if the machine had been placed in the immediate vicinity of the junction.

One of the features which make this plant of

The three points nos. 100, 101 and 102 — each one forming one of the angles of the triangular junction —, as well as the corresponding signals $C^{1}/_{2}$, $D^{1}/_{2}$ and $E^{1}/_{2}$ which are designed as day signals, are manoeuvred from the interlocking machine (fig. 2). Behind and slightly above the interlocking machine is mounted a chart T with indicator lamps, each one connected in series with a corresponding signal lamp by means of which it is possible to ascertain whether the signal lamps are intact and which show the exact



combination of lights for which the interlocking machine has been manoeuvred. The indicator lamps are shunted so as to prevent the extinguishing of a signal lamp if the corresponding indicator lamp should be broken or removed.

In order to prevent the setting of a point during the passage of a train, the point levers in the interwhich case all the signal levers are locked in the positions required by the directions of the trains to be considered. The special lever is moved to the left for trains from Torup to Kinnared and vice versa, in which case the signals $C^{1}/_{2}$ and $D^{1}/_{2}$ are set to clear, or else it is moved to the right for trains from Torup to Hyltebruk and vice versa, in which case the signals



locking machine are provided with locking devices in conjunction with an insulated track section through the corresponding point. Each track section is provided with a rail contact for the release of the track locking arrangement in the usual manner.

In order to permit — to a certain extent — the passage of trains over the track junction at such times of the day during which no one is on guard at the Torup station, the interlocking machine has been provided with an arrangement for 'unguarded passage', consisting of a special lever which can be locked in normal position by means of a special control lock, this position being the one in which the lever shall be locked when the train dispatcher is on duty. For 'unguarded passage' the lock is released and the lever can be moved at will to the left or to the right, in C^{1}_{2} and E^{1}_{2} are set to clear. When the special lever is moved to the one or to the other side for 'unguard passage' the track locking devices are disconnected to be again connected up when this lever is restored to normal.

Power is obtained from the alternating current service net, the two storage batteries — one motor and one control battery — being charged by means of rotating transformers. The signal lamps obtain the necessary current from the service net with the aid of a transformer, the motor battery serving this purpose in case of emergency.

This plant has proved to be unusually economical in operation and has been delivered through 'Signalbolaget' of Stockholm, this company having also prepared the project for the same. G. P.

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