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Dead line for May 1980 issue is 21 March 1980.

NEXT MEETING: 21 March 1980.

VENUE: A.R.H.S. Library Room at Windsor Railway Station.

#### MINUTES OF JANUARY 1980 GENERAL MEETING

HELD AT: A.R.H.S. Library Room on Friday, 18 January 1980. The meeting commenced at 2015 hours.

PRESENT: Jack McLean (Leader), Jim Brough (Minutes Secretary), David Langley (Archivist & Editor), Graeme Inglis, Alan Jungwirth, Keith Lambert, Alex Ratcliffe, Rob Weiss, Colin Rutledge, John Sinnatt, Peter Stoneham, Andrew Wheatland and Bob Whitehead.

VISITORS: Arthur Harradence, Brian Harradence, Michael Stoneham.

MINUTES OF PREVIOUS MEETING: owing to the minutes not having been circulated but would be shortly after, they were adopted as they will be read. (Inglis/Sinnatt).

BUSINESS ARISING: Subscriptions set at #4 Sterling (\$A8) for British membership and \$4 for Australian membership. Members are asked to send subscriptions to the Treasurer as soon as possible.

Arrangements are being made by the Victorian Leader with Bob Taaffe for Victorian copies of the British magazine to be printed in Sydney along with the NSW copies. The maximum cost for the Victorian group appears to be \$20 per issue.

CORRESPONDENCE: Copies of Blocking Back have been received from Bob Taaffe. Also a letter was received from Bob regarding the printing agreement.

GENERAL BUSINESS: 1. Apology from the Editor for the non appearance of Somersault in time for this meeting owing to his moving from Seymour to Avenel. Please note Editor's new address in Avenel.  
2. Advance notice of proposed signal box crawl for Show Day 1980. All stations bus to be arranged on the down journey and return journey to be made by train. Alan Jungwirth again appointed as one-man tours sub-committee with power to co-opt.

ITEMS OF INTEREST: 1. John Sinnatt drew attention to the Down Home signal at Maitland Street, Geelong, which is operated from Geelong A Box (rocker locking) and gives indications applying to about nine routes. John asked if this meant

that the signal would have to be worked by one of nine levers. (We have asked Alan McKenna to reply since the meeting and he explained how most of the signals on the old footbridge have been replaced by pilot levers and these release one of three levers operating the Down Home signal. Copies of the signal box diagram have been obtained and will be available for perusal.)

2. Alan Jungwirth drew attention to the centenary of Winter's Block and asked how it could best be celebrated. Some amusing but unpracticable suggestions, were forthcoming. The generally accepted date (so far anyway) is 3 October 1883, and if anyone agrees with Alan's suggestion that it was earlier, we would be pleased to hear details.
3. Alan McKenna has mentioned to our beloved Leader that a Mr. I. Michaelson had asked the VR for details of the causes of the Sunshine accident and Jack had mentioned the Bagley Book, a copy of which would be in the Library of the A.R.H.S. Jack has telephoned Mr. Michaelson, who intends to join the Society.
4. Alan Jungwirth asked were there any electric staff sections other than Creswick-Clunes where there were more than the usual 30 staffs (40 in miniature sections). The double number on this section resulted from the extra pair of instruments for the North Creswick subsidiary section which was installed on 14 January 1932 replacing the mechanical interlocking at North Creswick. Discussion seemed to indicate that only where staffs were lost or where there are composite staffs, were the numbers greater than 30 (or 40). For instance, ticket 32A for the section Croydon-Lilydale was lost around 1912. One exception noted by Jack McLean was the section Goulburn Junction-Seymour A. When it became miniature ES (in lieu of Tablet) in 1913, it had 100 miniature staffs and seems to have been supplied with staff instruments with six (or was it eight) slots like the curious ones used in certain parts of NSW. (An example of these instruments exists between Orange East Fork Junction and Molong and were seen by the Editor during 1974.)
5. Jack McLean described the progress made with the new crossing loop between Condah and Heywood (between the sites of Myamyn and Milltown) which is proceeding rapidly owing to the pressure of wheat traffic,
6. John Sinnatt asked if it were known if early Wig Wag signals were treadle operated.

MEETING CLOSED: at 2130 hours and after a sojourn or something, Rob Weiss presented the entertainments part of the meeting, by showing us slides featuring the Wingrove Railway's famous five position nine-wire block instruments as well as Tony Howker's miniature miniature electric staff instruments and the beautiful locking frame made by apprentices in England many years ago.

NEXT MEETING: Friday, 21 March 1980, to be held at Windsor.

SYLLABUS ITEM: Wilfrid Brook will show us the rest of his signal slides (the ones he showed to the ARHS last year).

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### SIGNALLING ALTERATIONS

- 2.12.1979 FLINDERS STREET A BOX. Two way running was provided on the crossover for set back movements from the Down North Viaduct line to Nos 7, 8, 9 and 9A roads. The set back movements provided are from signal post 330 towards signal posts 732, 742, 754 and 932.
- 6.12.1979 PRAHRAN. Automatic signal B167 was converted to a light signal.
- 9.12.1979 KEON PARK. Boom barriers have been added to the flashing lights at Settlement Road level crossing and operation is the same as for the flashing lights.
- 15.12.1979 NEWPORT A BOX. Sidings D were renumbered 1 to 12 inclusive with 12 road being adjacent to the Down Williamstown line. Points 76, 77U and 110 were abolished. Post 63 (two discs) was abolished, Post A (one disc) was relocated eight metres in the down direction and post 61 (two discs) was relocated 12 metres in the down direction. Levers 76, 96, 108 and 110 were sleeved normal.
- 16.12.1979 MITCHAM. Boom barriers have been provided at Mitcham Road and Rooks Road level crossings. At both crossings, express and stopping movements are provided for, the down movements are via push buttons controlled through signals 18 and 20 at Blackburn. When Blackburn is switched out, the timing is automatic via timing tracks at Blackburn. Up movements re automatically timed for both crossings. L665 and L672, controlled by levers 2 and 6 at Mitcham respectively, will be approach operated for express and stopping trains and interlocked with the boom barrier cycle. At Mitcham Road, signals L691 and L696, controlled by levers 26 and 28 respectively, are also interlocked with the boom barrier cycles. Up trains may be held at signals 22 and 24 without activating the booms at Rooks Road, also trains may be held at L691 and L696 without activating the booms at Mitcham Road. 5P key operated switches are provided on both platforms to hold signal L691 (down line) and 24 (up line) at Stop when

Mitcham is switched out, to prevent unnecessary operation of the booms.

17.12.1979 DANDENONG. Dwarf signal 33 has been converted to a light signal.

20.12.1979 PRAHRAN-WINDSOR. Automatic signals B175, B187 and B180 have been converted to light signals.

10.1.1980 BOWMAN. The down end staff locked points and rodded derail were abolished. A baulk was placed at the down end of the siding.

15.1.1980 EUROBIN. The up end staff locked points were abolished. The scotch block was removed and a baulk placed across the siding.

15.1.1980 MERBEIN was closed as a staff and ticket station, the new section becoming Mildura-Yelta. The Up and Down Home signals and plunger locks have been retained.

15.1.1980 WINDSOR. Automatic signal B190 was converted to a light signal.

WN6/1980 ST ARNAUD. No 5 road has been removed and the points leading to No 5 road at the up end were abolished.

22.1.1980 MULYARRA. The Hand Locking Bar, pin and padlock securing the main line points were replaced by a large pattern staff lock and the points equipped with a WSa lever. The scotch block will remain.

WN6/1980 SUNSHINE. The hand signal relay platform has been relocated 30 metres in the down direction.

WN7/1980 BENDIGO. Commencing forthwith, there will only be one signaller on duty at B and C Boxes for the following trains - 8025 & 8061 Saturdays, and 8081, 8091 & 8090 Sundays. The signaller must attend to the necessary signalling requirements at B Box before proceeding to C Box.

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## SAFEWORKING ON SINGLE LINES

by John Sinnatt

(reprinted from the ARE magazine)

### GENERAL

On single lines, opposing trains must not be allowed in the same section of track between crossing stations at the same time. Following trains must also not be allowed unless some provision has been made to space them apart properly.

Safeworking systems currently in use on single lines on the VR are of two main types.

In the first type, which includes the Train Staff and Ticket, and the Electric Staff systems, the Driver must be in possession of some physical token or authority while travelling through the section, and so there must be an assurance that only one token will be on issue at the one time.

In the second type, which includes the Lever Locking and Track Control, and the Automatic and Track Control systems, the Driver proceeds only according to the indications given by the signals. As the whole length of the section must be track circuited and electrical apparatus installed to ensure that the appropriate signals are held at Stop while the section is occupied, this type of system, although it expedites train movements, is more expensive to provide than a staff system. Consequently it is installed only when the traffic is of such density or nature that the delays inherent in the staff system would be intolerable, or where sufficient operating economy can be effected by remotely controlling the crossing loops and so dispensing with signalmen.

The various systems in use are described in greater detail below.

### TRAIN STAFF AND TICKET

In this system, a TRAIN STAFF, suitably engraved with the names of the stations, is provided as the authority for each section. When trains run alternatively in opposite directions, the Driver of each train carries the staff, but if one or more trains follow in the same direction, only the Driver of the last train carries the staff; the preceding trains must sight the staff before departing, but carry a printed form known as a STAFF TICKET, one of which must be made out for each train. The TICKET BOOK is kept locked in a specially designed TICKET BOX, the key for which is the Train Staff for the section. The Staff is held in the lock while the box is open and the book removed, and the rules provide that only one Ticket may be taken from the book at a time. These arrangements, while not foolproof, help to ensure that a Ticket is not issued while the Staff is at the other end of the section.

When a train travels on Ticket, a telephone message that it has arrived complete - the ACRE message - must be received from the Staff station in advance before a second train is allowed to depart. Where the sections are long, or trains are required to follow closely, an intermediate non-staff station may be opened as a TELEPHONE BLOCK POST. In this case, the Guard of the first train sends the ACRE message from the block post to the staff station in the rear, and the Guard of the second train obtains the ACRE message from the staff station in advance. Where specially authorised, a train may follow another into a section after a specified time interval has elapsed, but such workings are rare in Victoria.

If a train is to proceed when the Staff is at the other end

of the section and cannot be transferred, e.g. by car or trolley, in time to avoid serious delay, the Staff may be locked up and an application made by the signalmen at both ends to the Train Controller or Depot Station-master for the issue of a LINE CLEAR REPORT.

Points in the main lines at intermediate stations or sidings are usually secured by STAFF LOCKS. The staff is held in the lock while the points are reversed. MASTER KEYS, which must be properly accounted for, may be supplied to unlock the points for a train travelling on Ticket or Line Clear Report but shunting by a train travelling on a Line Clear Report is discouraged.

On certain lines, mainly those that are virtually goods sidings or those that lead to terminal stations with limited accommodation, Staff Tickets are not ordinarily in use and unless specially authorised to the contrary, every train must carry the Train Staff. Ticket Boxes are, however, often provided for these sections.

Certain places may be opened as Temporary Staff stations as required, e.g. for seasonal traffic or for the crossing of suburban peak period trains every weekday.

The Train Staff and Ticket system may be regarded as the usual method of safeworking on branch lines in Victoria. It is unsuitable for lines with heavy traffic partly owing to the difficulty of ensuring, when trains are running out of course, that the Staff will be at the correct end of the section. It is, however, used on certain suburban lines where sections are short and train run to a regular pattern.

#### ELECTRIC STAFF

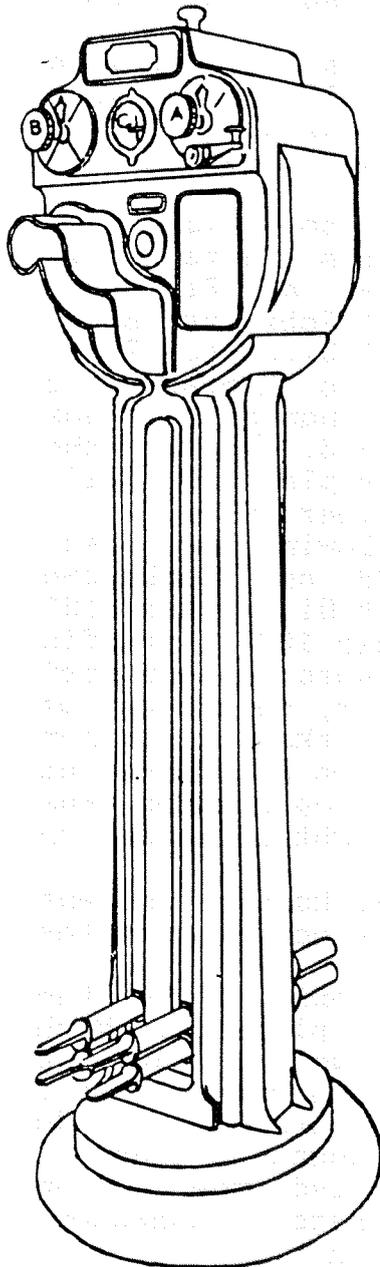
This is an abbreviation for "Electric Train Staff Block System". In this system, the Driver of every train must carry a Staff. A number of Staffs are kept in instruments at either end of the section, the two instruments being electrically interconnected such that once a Staff has been withdrawn at one end, a second Staff cannot be withdrawn at either end until the first one has been replaced. This may be at the same end if the Staff was required for shunting purposes, or, more usually, at the other end if it was required for a train travelling through the section. Only one Staff can, therefore, be on issue to a Driver at the one time and the system takes care of both opposing and following movements. The detailed working of the instruments will not be described here, but it is important to note that a Staff can be withdrawn at one end, only with the co-operation of the signalman at the other end - he must hold down his bell key while the Staff is being taken out. Before a Staff is replaced, the signalman must be satisfied that the train has arrived complete with tail disc or light. The staffs are metal rods, the original type being about two feet long and the later type, known as "Miniature Electric Staff", being about ten inches long. The miniature electric staff is strapped in a cane carrier after being withdrawn.

The Staffs are fitted with rings, the position of one of these being varied so that a Staff cannot be wrongly placed in the instruments for an adjoining section.

The feature of the entry of a train to a Staff Station is the "Staff Exchange" when the fireman of the train hands the Staff for the previous section to the signalman and at the same time receives the Staff for the next section ahead. Speed must be reduced to 20mph when exchanging the Miniature Staff with cane carrier, or to 15mph when exchanging the large type. On main lines, automatic staff exchanging apparatus may be installed,

using miniature electric staffs with a special metal carrier, speeds up to 70 mph being permitted. In all cases it is vitally important that both the Fireman and Driver check that the staff for the correct section has been received. When the Driver himself exchanges the staff (as in the case of an electric train or railmotor) speed must be reduced to 6mph or even zero. The Guard of a non-stop Walker Diesel Railcar may exchange the Staff but it must be shown to the Driver as soon as possible.

(to be continued)



#### ORDINARY ELECTRIC STAFF INSTRUMENT.

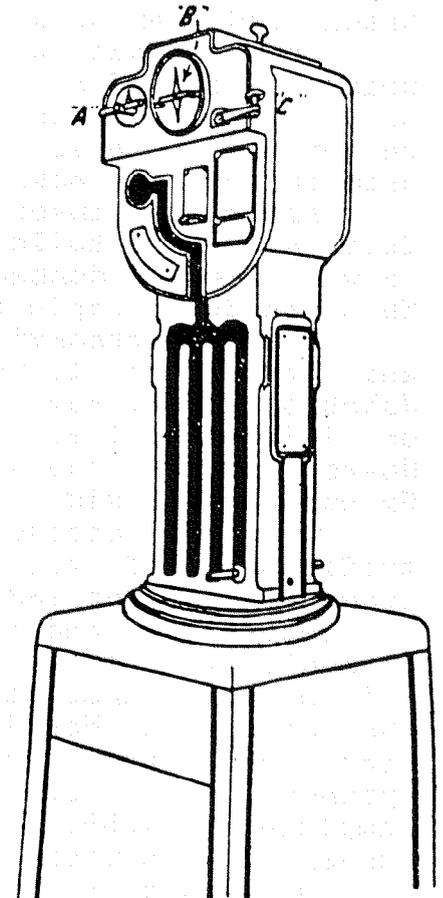
##### EXPLANATORY NOTE :—

- A. Right-hand Indicator (where provided).
- B. Left-hand Indicator.
- C. Galvanometer Needle.
- D. Bell Key.

The mode of Signalling on this type of Instrument is as set out in Appendix VII., Book of Rules and Regulations.

The Right-hand Indicator (where provided) works a switching apparatus which switches the current from the Bell to the Staff Instrument, and when the Indicator points to "For Staff" the Bell Instrument is cut out.

On some of these Staff Instruments the Switching Apparatus is automatically worked in the process of withdrawing the Staff from the Instrument, and in such cases the Right-hand Indicator is not provided.

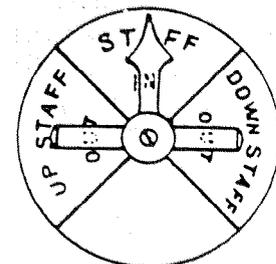


MINIATURE ELECTRIC STAFF INSTRUMENT.

##### Explanatory Notes :—

- A. Indicator.
- B. Galvanometer Needle.
- C. Bell Key.

The mode of Signalling on the Miniature Electric Staff Instrument is the same as for the ordinary Electric Staff Instrument (see Appendix VII., Book of Rules and Regulations), except that on the Miniature Instrument there is no Right Hand Indicator showing "For Staff" and "For Bell."



Enlarged view of Indicator

THE GOLDEN LEVER TROPHY

(Reprinted from Blocking-Back, July 1979.)

Readers may recall that some time ago we made mention of the Golden Domino, a trophy awarded to luckless Illawarra Junction signalmen, who sent long distance South Coast trains around the City Circle. We asked at that time if any of you knew of similar awards, and we received this story from Reg Lloyd.

In the early 1880's, the then single line of railway between Granville and Campbelltown was heavily taxed and could not handle the increasing traffic. Likewise, the double line between Sydney and Granville was nearing saturation point. Proposals for extra tracks had been studied.

Someone had put forward the idea to build a line from a point now called St Peters, on the newly opened Illawarra line, to Liverpool, with the twofold idea of serving new areas and of relieving the existing route via Granville, thus obviating the need for extra tracks, etc.

After much investigation, a contract was let to David Proudfoot & Co. to build a double line of railway from Marrackville (now called Sydenham) to Burwood Road (now known as Belmore). This was duly completed and brought into use on 1 February 1895.

Thus, Marrackville signal box at mileage 3.37.21 (5.576Km) and opened on 15 October 1884, was changed to Marrackville Junction on 31 May 1894 and became known as Sydenham signal box on 1 February 1895. The actual junction, in 1895, was at the Nowra end of the station. The line was quadrupled in 1913. Sydenham Power signal box was opened on 27 September 1925.

Over the intervening years up to 1962, following the electrification of the Illawarra line (1 March 1926) and Bankstown line (24 October 1926), the opening of the East Hills line (21 September 1931) and the Cronulla line (16 December 1939), traffic gradually increased to a state where delays were encountered waiting admittance to the four platforms. However, on account of the depression, World War 2 and other important works, it was not practicable that work could commence on two extra platforms at Sydenham until after the Lidcombe-Granville quadruplication was completed in 1959. These were completed and brought into use on Sunday, 2 September 1962.

On this date, the actual junction of the Bankstown line was moved to the Sydney end of Sydenham station. We now come to the award.

From that date onward, no connection existed to the Bankstown line at the Hurstville end of the platform. Much protesting had taken place during the construction but the authorities saw things differently and so the Hurstville end connections were removed. That is to say, once a train enters No 4 platform at Sydenham, it cannot get onto the Bankstown line.

The present day signalmen have a prize called the Golden Lever Trophy which is held by any signalman who gets a Bankstown line train into No 4 Down Illawarra local platform.

The trophy consists of a lever, complete with catch rod handle, set in cement in a round plastic basin and suitably inscribed.