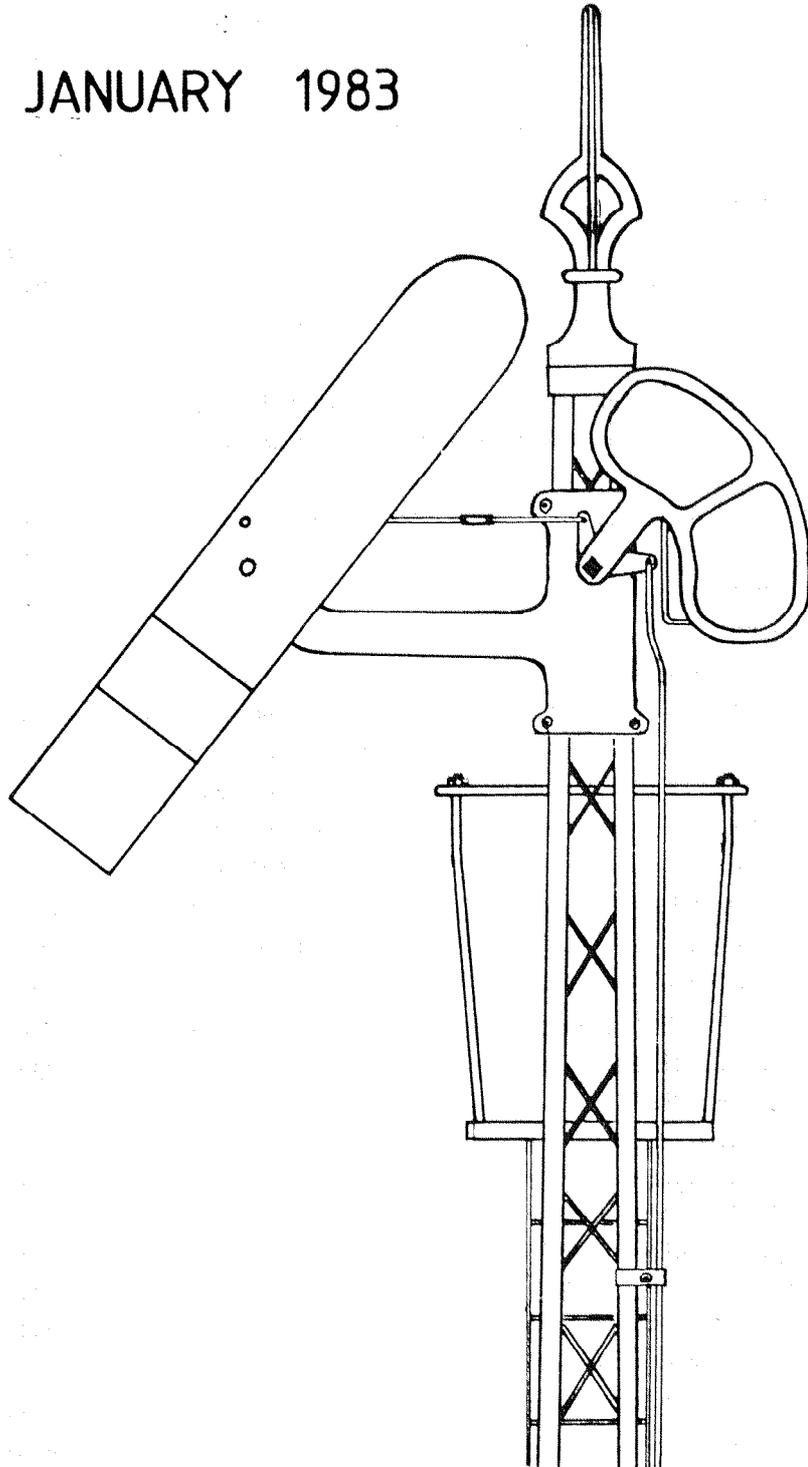


SOMERSAULT

JANUARY 1983



SRSV

Minutes fo S.R.S.V. Meeting Friday 19th November 1982

Present: J. McLean, Brough, Penn, Rutledge, Whitehead, Jefferies, McCallum, McCurry, Langley, Miller, Jungwirth, Price, Sinnatt, S. McLean, Brook, Inglis, Michaelson, Weiss, Martin, Savage, McKenna.

Meeting opened at 8.11pm with a welcome extended to Bill Graham, ~~xxx~~ Dave Watson, and Jon Churchward.

Minutes ~~fx~~ of Previous meeting; Moved that the Minutes be accepted subject to deletion of the apology mentioned. Inglis/Jungwirth

Also that the item concerning the Yarrawonga bus be corrected to read: "The railway bus may have carried the staff to avoid bus/train meets on local level crossings."

Business arising: The Show Day tour ran very successfully although incurring a loss of \$19 (which was allowed for and authorised by the Committee).

Correspondence: Tony Palermo -(the Blocko) was thanked for his efforts on Show Day which did much to make the day a success.

Bob Taafe- various matters - "Blocking Back" and payment for SRSUK newsletter; reference to Trevor Sutcliffe's book on Lancashire and Yorkshire signal boxes; request ~~regarding the~~ for information about the introduction of staff exchangers on the SAR.

Subscriptions: Moved that subs be held at present rates.

Whitehead/S. McLean

~~Txxx~~ Tours report: Destination for Show Day tour in ~~9~~ 1983 will be Geelong.

General Business:

Brooklyn: Jack McLean reported on the working of Geelong and Werribee trains via Brooklyn due to replacement of the Stony Creek bridge and the junction points and crossing at Newport Station. Perhaps the most interesting thing to occur was with Up trains which departed from the Up platform at Newport by reversing to the Goods Line, then ~~xxx~~ forwards to Brooklyn.

XPT : It is proposed to run the Riverina XPT to Melbourne on Sunday 28th Nov. to evaluate the potential of the train for Vicrail's needs. It is timed to leave Albury at 8 am, be on public display at Spencer Street from 11 am to 1.30 pm, then run a trip to Seymour and return and finally depart Melbourne at 5.30 pm for Albury. The XPT will be limited to 130 km/h in Victoria.

Adelaide Daylight: A daylight service to Adelaide will commence on 20th Dec. on a trial basis.

CTP Murtoa-Dimboola: New diagrams have been issued.

Tasmanian Railcar: The unit (D.P. 28) has arrived safely at Queenscliff for use on the Bellarine Peninsula Railway.

METROL: is still experiencing substantial teething troubles which are adversely affecting the permanent introduction of the system. Some of the types of problem are: retaining train numbers after 15 mins have elapsed as well as difficulties with "border crossings" from one panel to another.

Bill Graham was then introduced, and gave a lively account of his experiences in Scotland in the realm of safeworking over the past forty years. It was also very enlightening to hear various comparisons between ER and VR in ~~attempting to tackle~~ their attempts to tackle modernization of signalling and higher train speeds.

A vote of thanks was made to Bill by Jack McLean and the meeting closed at 10.40pm. with Question Time.

SIGNALLING ALTERATIONS

- 13/10/1982 MURRAYVILLE. Flashing light signals have been brought into use at Ouyen Highway crossing at 575.276 Km. Operation of lights is automatic for up and down movements.
- 13/10/1982 EUROA-VIOLET TOWN. New miniature electric staff instruments were provided incorporating staff balancing facilities.
- 13/10/1982 TANITYA. Flashing light signals have been brought into use at Ouyen Highway crossing at 594.385 Km. Operation of the lights is automatic for up and down movements.
- 14/10/1982 OUYEN. Flashing light signals have been brought into use at Ouyen Highway crossing at 467.575 Km. Operation of the lights is automatic for up and down movements.
- 19/10/1982 MATHOURA. The hand locking bars, pins and padlocks on the main points at both ends of the yard were replaced by staff locks.
- 23/10/1982 FLINDERS STREET "C" BOX. New signalling diagram No 28/82 issued cancelling diagram No 13/82. New home signals Nos 331, 341, 343 and 575 were provided. Home signals Nos 213, 266 and 610 were abolished. New points Nos 245 and 246 were provided. Automatic signals Nos 087, 287, 497 and 687 will remain as automatics.
- 23/10/1982 FLINDERS STREET "A" BOX. Concurrent with issue of above diagram Low Speed signals will not be provided on Home signals Nos 311, 329, 339, 573, 577 and 583. The Pilot Staffs will remain in Flinders Street "A" Box.
- 23/10/1982 FLINDERS STREET "C" BOX. The Overhead diagrams shows the following alterations to tracks: 'U' between Nos 4 and 5 roads abolished, crossover between Nos 3 and 4 roads abolished, connection between No 5 road and the Up Burnley local line abolished and the following connections provided - a new connection between No 4 road and the down Burnley local line, a new connection between No 4 road via turnout and up Burnley local line and between No 5 road and up Burnley local line.
- 24/10/1982 NORTH MELBOURNE. Signals Nos 4, 24, 26, M121, R121 and W121 were relocated from the existing signal bridge and placed on a new signal bridge located 10m in the down direction.
- 24/10/1982 CHELSEA-BONBEACH. The boom barrier control at Chelsea and the control panel at Bonbeach were abolished.
- 27/10/1982 BIRCHIP. The plunger locked points at the down end of the platform leading towards No 3 road were abolished.
- 28/10/1982 YENDON. Flashing light signals were brought into use at Main Street crossing at 120.547 Km. Operation of the lights is automatic for up and down movements.
- WN46/1982 ULTIMA and WYCHEPROOF. Staff Exchange Boxes have been provided and may be used as required.
- 4/11/1982 HAMILTON. The up Home signal No 6 was relocated 10m further out from track account track slue.
- 6/11/1982 CHELSEA. Boom barriers have been provided at Argyle Avenue and work inconjunction with the existing flashing lights. Operation of the boom barriers is automatic for up and down movements. A 5P key operated switch is provided on the up platform to control No 18 signal in the event of a train being held at the platform. Nos 4, 16 and 18 signals are interlocked with the boom barrier cycle.
- 7/11/1982 SPENCER STREET No 2 BOX. Illuminated letter "A's" were provided on the following signals - Nos 123, 124, 125, 302, 303, 305, 520, 524, 543, 545, 547, 563, 564, 567, 704, 707, 718 and 723. In addition, the pilot keys at No 2 box were relocated to Signal No 301 for the Burnley Loop and to Signal No 703 for the Caulfield Loop.
- 9/11/1982 BENALLA "A" BOX. A rotary detector was installed on the down end of No 22 points. The detector detects the points reverse for movements leading from the disc signal (No 43) on Post 3.

- 10/11/82 LUBECK. Post No 12, up home arrival signals Horsham line, was relocated 116 metres in the down direction.
- 19/11/82 PARRANGINNIE. The up end points leading from the siding to the dead end were removed and the up end main line points were spiked normal.
- 20/11/82 PHILL. Points No. 22, 23, 27, 28 and 29, and plungers 21 and 24 have been abolished. Levers No 21, 22 and 24 become pilot levers. A "B" pattern annett lock has been fitted to lever No 22 and the removal of the key will secure the lever reverse. A new crossover has been provided between No 1A and 2B road and the two lever ground frame is annett locked. The left hand signal arm on post 5 (lever 7) was also removed.
- 24/11/82 MELTON. New signalling diagram 31/82 (Melton & Parwan) issued replacing diagrams 15/19 Melton and 15/40 Parwan. Flashing lights were brought into operation at Coburns Road on the down side of Melton. The up distant signal was relocated 1300 metres further out and a new up outer home light signal was provided on the down side of the crossing, also a new down starting light signal was provided on the upside of the crossing. Existing signal posts were renumbered with Post 1 now being the down distant signal in lieu of the up distant signal.
- 25/11/82 MURRAYVILLE-CARINA. Flashing light signals have been brought into use at Ouyen Highway crossing at 575.276 Km. Operation of the lights is automatic for up and down movements.
- 24/11/82 LALBERT. The up and down home signals together with the plunger locks have been abolished and No 2 road taken out of service. The up end points were relocated 198 metres further out and the down end points relocated 128 metres further out. Both these points have been equipped with large pattern staff locks.
- 24/11/82 LUBECK. Post No 4 was abolished. Discs on Post No 2 controlled by levers 37 and 42 were abolished. Levers Nos 20, 21, 22, 25, 26, 29, 30, 37 and 42 were sleeved normal. The crossovers at the up end between Nos 2 and 3, and between No 3 and 4 roads were taken out of use.
- 4/12/82 MURTOA. In connection with the re-arrangement of the yard the following alterations have been carried out. Post 13 has been abolished. Home signals 65 and 70 on Posts 11 and 12, discs 39, 46 and 48 on Posts 14 and 8 were abolished. Levers 7, 12, 16, 39, 46, 48, 65 and 70 sleeved normal and lever 15 became a pilot lever. The up home signal (lever 7) on Post 14 became a fixed arm.
- 5/12/82 MOOROOLBARK. Post 10, up home signal from No 1 road to "W", was relocated six metres in the down direction.
- 11/2/82 BACCHUS MARSH-BALLAN. New signalling diagram No 47/82 issued, cancelling diagram No 3/73. Bank Box was extended at both ends and the signals and motor operated points are operated from a new control panel in Bacchus Marsh signal-box. Automatic signal No A2142 was abolished and the points and signals at Bank Box were renumbered. 5P key operated switches were provided to enable the departure home signals to be operated if a failure of the control system has occurred.
- 13/12/82 WOOME LANG-SPEED. Composite Staff No 31 was provided for the section, Woomelang-Speed. Lascelles or Gama are block posts as req.
- 19/12/82 RINGWOOD-BAYSWATER. New diagrams No 30/82 (Blackburn-Ringwood) and No 35/82 (Heathmont-Belgrave) were issued cancelling diagrams No 42/82 and 27/82 respectively. Provision of duplication of line with three position signals in lieu of single line automatic and track control system. A new up platform was provided at Heathmont and Boom Barriers were provided at Bedford Road, Ringwood. Switching facilities are provided at Bayswater. As a consequence
- 20/12/82 WODONGA. The existing shunters warning sirens were replaced by a multi loudspeaker warning system. This system will be activated automatically for both broad and standard gauge trains.
- 22/10/82 DIGGERS REST. Switching facilities have been provided and the signal box will be switched in on Monday to Friday only between 0540 hours and 2245 hours.

UNATTENDED HAND-OPERATED CROSSING LOOPS1 Departure Signals at Proceed

Provision was made in the original APB system for the special precautions necessary when two opposing trains were approaching a passing siding (crossing loop) at the same time. In Figure 22, when a Down train leaves the station on the left, signals 6 and 8 fall to Stop as previously explained. Signal 10 goes back to Warning when signal 8 goes to Stop, and then itself back to Stop when the Down train passes point 'x'. Signal 7 similarly goes to Stop when the Down train passes 'y'. Thus if trains are approaching signals 7 and 10 at the same time, both will encounter Stop indications. The signals are permissive and may be passed at Stop in accordance with the rules.

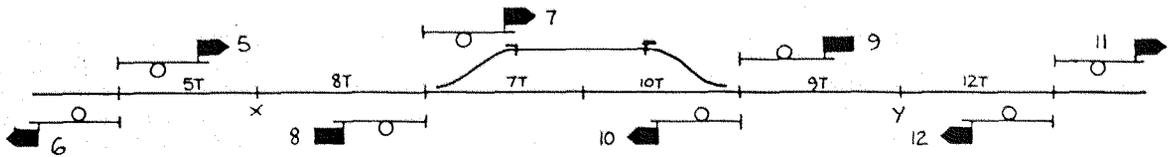


Figure 22.

Special arrangements were introduced to avoid the possibility of an Up train passing signal 12 at Proceed then finding signal 10 at Stop owing to a Down having meanwhile passed point x. Signal 12 now falls to Warning, as well as signal 10, when signal 8 falls to Stop owing to a Down train having departed from the station on the left. Signal 5 similarly falls to Warning as soon as an Up train leaves the station on the right, thus, if a train passes signals 5 or 12 at Warning, it may expect to have to Stop at the signal ahead, even if that signal is initially at Warning.

The special arrangements described apply only for opposing movements. For following movements, the signals work in the normal way in that signal 7 goes to warning and signal 5 to Proceed as soon as the van of a Down train passes signal 9. So signal 7 will be at Stop only with an Up train in 9T, and signal 5 will be at Warning instead of Proceed, only when an Up train occupies the single line section ahead of signal 9. The directional controls required are readily provided by equipping Departure signals 8 and 9 with stick relays of the usual APB type. Signal 7 is now controlled not only by 7T and 10T being clear, but also by 9T clear unless 9SR has operated. The 90 degree position of signal 5 is now controlled by a relay 7PCR located at signal 7 which requires not only signal 7 to be at 40 to 90 degrees but also 9GR to be up unless 9SR has operated. Similar controls are applied to signals 10 and 12. The PCR relays require additional line wires to be run between the two ends of the loop.

A circuit published in the book "Railroad Operation and Railway Signalling" (1953) by E. J. Phillips, Jr., shows that it is possible to arrange for the first train approaching for a 'meet' to hold its Arrival signal at Warning and only the second train encounters a Stop indication. This is achieved by providing normally-operated stick relays (not of the APB type) at signals 7 and 10. If when a Down train passes point x signal 7 is at Warning, the stick relay there drops and opens the circuit to 10GR so that signal 10 goes to Stop. Then when the Up train passes y as signal 10 is not at Warning, the stick relay at that end stays up and signal 7 therefore remains at Warning. Another method of enabling the first train to hold its Arrival signal at Warning will be described in section 3.

2 Departure Signals at Stop

On railways in Australia and New Zealand, Departure signals at hand-worked crossing loops were normally at Stop. The signal cleared automatically when a train approached the loop, or it could be cleared manually by operation of a push button. The points and associated plunger at each end of the loops in Victoria (Upwey, Rock and Drome) were worked by a single catch-handle lever through an escapement mechanism. The lever was secured only by a padlock, no electric locking being provided. The points were detected normal in the Arrival signal circuits and also in the automatic approach-clearing circuit.

The description of the approach clearing arrangements given here apply to those in force in South Australia. Any difference at Upwey will be explained later. In Figure 23, signal 9 clears automatically when a Down train passes x provided that points A and B are then normal. As soon as the engine passes Z, points A can, however, be reversed if required to allow a movement from the loop without affecting signal 9, but this signal always requires B normal.

In fact, a recognised way to put signal 9 to Stop, if required, is to reverse these points. This action might be necessary if a Down train scheduled to arrive

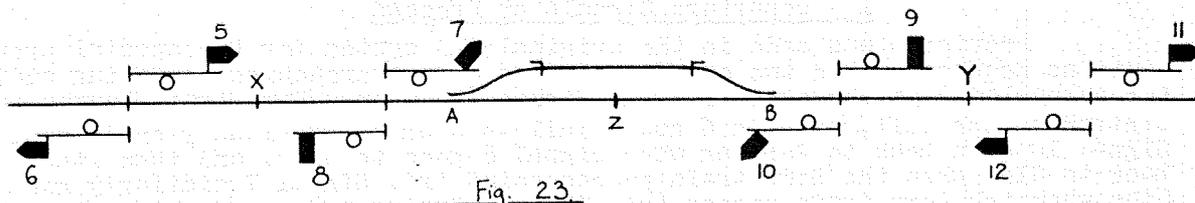


Fig. 23

in No 1 road for a cross, was so early (or the Up was so late) that signal 9 cleared. It would then have to be put back to Stop to allow the opposing Up Departure signal to clear.

Clearing of signal 8 behind a receding Down train must be prevented as this would hold Departure signal 1 at the other end of the single line section at Stop. The unwanted clearing is suppressed by a break contact on a directional stick relay provided at signal 7 for this sole purpose. A similar relay is provided at signal 10. Use of a stick relay to prevent a signal in the opposite direction from clearing has already been described with reference to the Geelong line, but the method was adopted at Upwey seven years earlier.

To enable a Departure signal to be cleared for a movement from No 2 or for the return of a terminating, a Releasing Switch containing a push button is provided at both ends of the loop. Opening the door breaks a contact to disable the automatic clearing circuit and places the appropriate clearing relay under the direct control of the push button. The relay sticks up until the door is closed or the train passes the Departure signal. Pushing the button also drops the directional stick relay at the Arrival signal.

Figure 24 gives control diagrams for various functions at a loop of the type described. In (b) is shown the special directional controls applied to 7GR and 5GR (through 7PCR) as explained in section 1 for an original loop. In (c) is shown the controls for the approach clearing relays 8ZR & 9ZR. At first sight this might appear to be a reversible circuit because of its symmetry, but in fact, although power may be connected at either end, the two relays generally operate in parallel. In (d) are 7SR and 10SR, the stick relays specially provided to suppress clearance of the opposing Departure signals, and in (e) are the signal mechanisms 8G and 9G. Relays 8GR and 9GR are not shown as these are the same as for 1GR in Figure 8(c).

To follow (c) we start at the top left hand corner and assume that a Down train enters 8T. Relay 8TR drops and provided points A and B are both normal, relays 8ZR and 9ZR operate in parallel. Signal 9 clears but 8 remains at Stop because its GR is down. Relay 7SR picks up as the train passes, so that when the van clears, signal 8 remains at Stop although its GR now picks up. When the engine enters 10T and 10TR drops, 9ZR is energised from the other end and so stays up even if points A are now reversed. Relay 9SR (not shown) picks up as the signal is passed, so rendering dropping of 9TR ineffective for a Down train. Relays 8ZR and 9ZR therefore drop when the van passes signals 9 & 10, and 7SR also drops, so that all is back to normal. The progress of an Up train is similar. Operations of the push buttons 8PB and 9PB requires no detailed explanation.

As mentioned earlier, the arrangements described are based on those used in South Australia. Controls at Upwey in Victoria were generally similar except those for 8ZR and 9ZR which are shown in Figure 25. The South Australian circuit is certainly simpler to follow and it also saves a wire between the two ends of the loop. Perhaps it could be regarded as a modification of the original Upwey circuit which was installed first. Figure 25 may also be considered deficient in that only the one set of point detection contacts shown, if the train stops at the Arrival signal for the points to be thrown for it to enter No 2, then the Departure signal, if it had cleared, will not go back to Stop until the train vacates the main line; the signal desirably should go to Stop as soon as the points are reversed. The details in Figure 25 were, however, taken from a plan dated 1922 and may have been changed later. I do not know what the controls were at Rock and Drome loops while the points there were worked by hand.

If a train is to arrive in No 2 road, it stops for the points to be reversed, as mentioned above, and then may proceed past the Arrival signal at Stop provided that the track ahead is seen to be clear. The points are restored to normal when the van passes and the train proceeds along the loop and stops at the other end. When the train is ready to depart, the button in the Releasing Switch box is pressed and, with the door left open, the points are set. The train starts but stops again when the engine has passed the Departure signal.

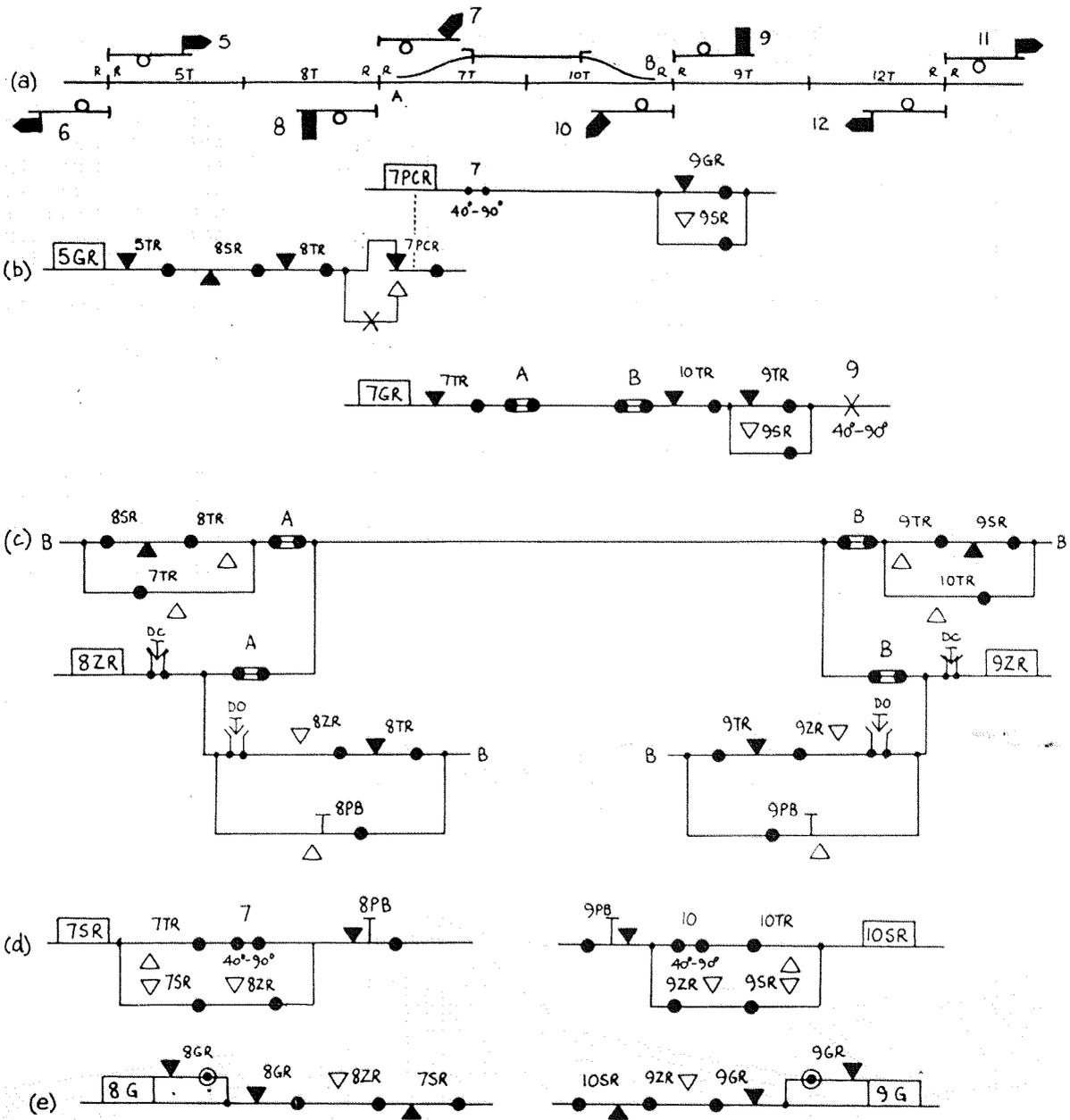


Figure 24.

The door is then closed and the train restarts only to stop again when the van clears the points so that they can be restored to normal. Finally the train is able to leave for the next station. This procedure may have been satisfactory for Upwey, but it scarcely suprising that Rock and Drome Loops, on the Geelong

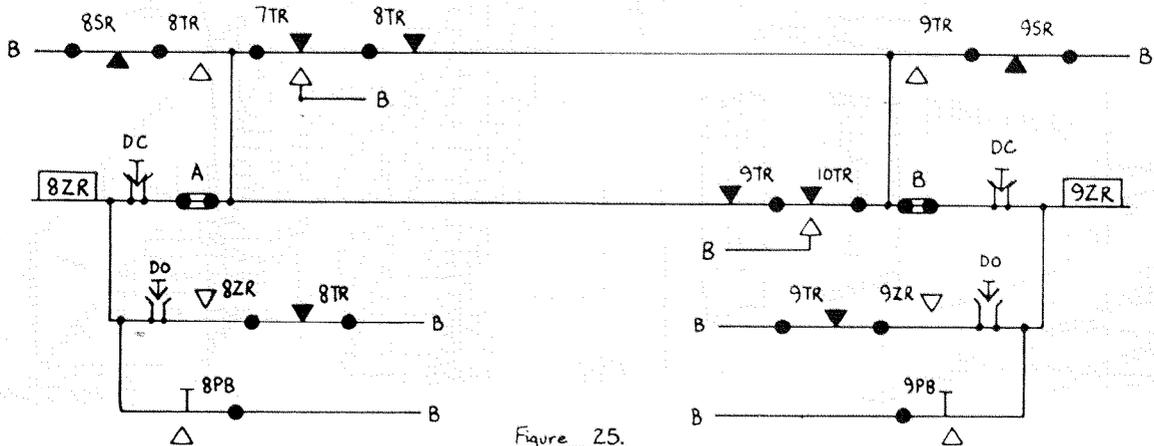


Figure 25.

line were converted to remote-controlled operation within about three and a half years of their original installation.

A more modern design of unattended hand-operated crossing loop, installed on the Standard Gauge line between Koolyanobbing and West Kalgoorlie in W.A., is described and illustrated in "Railway Transportation", Jan 1973. The points are fitted with trailable mechanisms and separate Departure signals (searchlights) are provided for the main and loop lines. The main line Departure signals clear automatically on the approach of a train as described in the foregoing notes, provided that the points at each end are normal. Two pairs of normally clear searchlights are installed between loops, and specific reference is made to the one corresponding to signal 5, going back to warning when the Departure signal at the station on the right is cleared. A similar feature was included in the original APB loops of 1911.

(to be continued)

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WODONGA-ALBURY TOUR - 1982

As a follow up to the successful tour to the Wodonga & Albury area on Show Day 1982, Peter Brook has sent in the drawing below for publication. This is only one of a number of drawings he did on the day, the Editor noted a drawing being made in Wodonga "A" Box looking towards Melbourne and was very realistic. Perhaps we shall see more of Peter's drawings in the future.

Albury Station Box



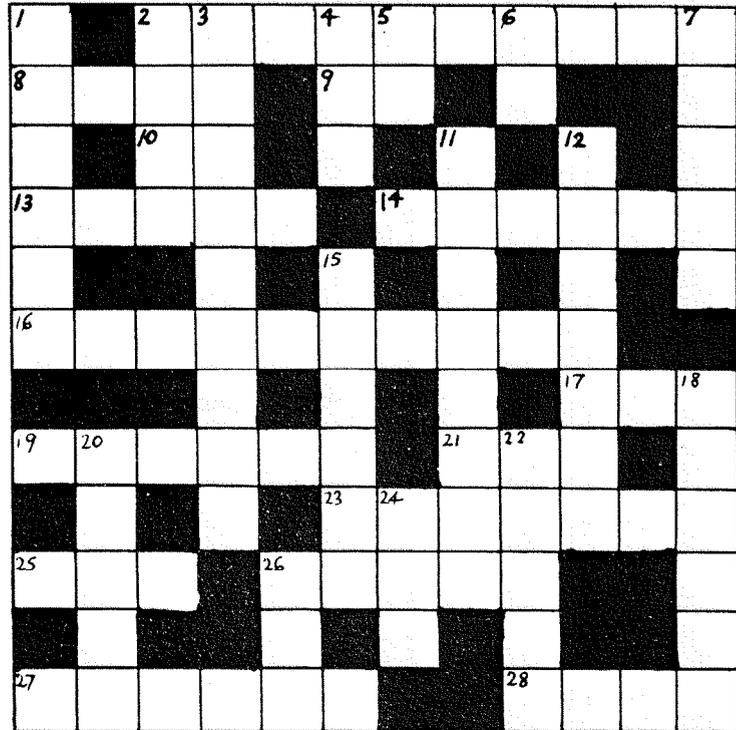
Watch this space for YOUR article.

S.R.S.V. CROSSWORD No 2

compiled by S. McLean

Across

2. Just this side of the border, since voter changed (10)
8. Cancel first section of a Mexican train (4)
9. Indefinite system (2)
10. Unattended part of the branch (2)
13. Will it hold signalling information? Part of it will. (5)
14. I am among the last to finish off the signal (6)
16. Twice ran back, then continue to Gippsland station (10)
17. Sometimes inclined to equip with guns (3)
19. Lance M. could become the group leader (6)
21. Where to wipe your feet on returning to sleeping car (3)
23. Fellow thespian provides second arm (7).
25. Watery surround for frame (3)
26. Hunts around to get a train into the siding (5)
27. Platform surrounded by water (6)
28. Zhivago's favourite station (4)



Down

1. Station found in the middle of where Hannibal landed (6)
2. Half a steam car dispatched (4)
3. Used for fast peg exchange (9)
4. The front, but sometimes (not always, now!) at the rear (3)
5. at home, unlike 24 (2)
6. A suitable routing for empty cars (2)
7. Sounds like there's nothing at this crossing station (5)
11. Flighty sounding fellow with a single purpose (8)
12. He draws on cigarettes and on blackboards (7)
15. Off the main route (or root!) (6)
18. Country junction with a 27 (6)
20. Form of trainee signalman (5)
22. This linen was on a line in South Australia (5)
24. What Moriac and Birregurra are at the moment (3)
26. A station shortly past Tottenham (3)

Solution to No 1. Across: 1. Winter, 6. BS, 8. AN, 9. Order, 11. Yard, 13. Due, 14. Ingliston, 17. BES, 18. Gheringhap, 20. HU, 21. Dines, 24. Starter, 26. SB, 28. Ore, 30. Clipped, 31. Trap. Down: 1. Warning, 2. In, 3. Trail, 4. Rod, 5. Odd, 7. Somersault, 10. Red, 12. Staggered, 15. Green, 16. ICI, 17. BP (I admit that strictly speaking a BP is a boxvan not a louvre) 19. Annett, 21. Disc, 22. ES, 23. Stop, 24. Are, 27. BL, 29. La.