AERIAL CABLING

Cable Erection by Machines Cable Lashing

1 **GENERAL** Aerial Cable erection by Machines Cable Lashing superseded the system in which the cable was supported by rings and the machine method should also be used for replacement lengths on existing routes employing the older system.

2 Machines, Cable Lashing are suitable for erecting all types of aerial cable, up to 57 mm diameter, other than Cable, Aerial, Self Supporting, Combined.

3 The machines are carried on a pre-erected suspension-wire and can first raise the cable from ground to suspension-wire level and then lash it tightly to the wire by means of a simple helical binding applied with a lay of approximately 350 mm using Wire, Lashing, PVC.

4 The machines are of two capacities, Small for cables up to 25.4 mm diameter and large for cables up to 57 mm diameter. The maximum length of span for which the machines can be used is dependent on the length of Wire, Lashing, PVC accommodated on the spools of the machines (Table 1). The larger machine can also be provided with facilities for lashing extra long spans. The description, method of operation and periodic inspection and overhaul for each of the two sizes of machine are detailed in separate instructions.

5 **SAFETY** Particular attention is drawn to the instructions in Section E covering:-

Over-head line works

Work on poles carrying power-lines and works in the vicinity of power-lines

Work in Public streets

as well as the more general instructions on precautions against accidents both in that Section and in the Road Works Guarding Manual.

6 **POLE LINE** The pole line should be constructed or strengthened to meet aerial cabling requirements, stayed and stay-insulated as necessary and the suspension-wire erected and insulated or earthed as required. The suspension-wire should be erected on the roadside of the poles wherever possible.

7 **CABLING METHODS** Before cabling operations are commenced all stays throughout the route should be tightened as necessary.

8 All lengths of cable should, be erected with the "clockwise" end towards the "UP" station to facilitate jointing except where obstructions preclude the location of the cable-drum at the appropriate end of the cabling section or, when cabling up a gradient, it is easier to reverse the direction of pull.

9 For cables up to 25.4 mm diameter there are three methods of using either the small or large machine and, for these sizes of cable, the three methods should be employed preferentially in their numerical order. For the larger cables ie up to 57 mm diameter only the third method and the large machine can be used.

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10 **METHOD 1** The cable drum is mounted on a trailer which is drawn along the route. As the cable is paid-off and the Machines, Cable Lashing pulled along the suspension-wire, from ground level, the machine raises the cable and lashes it to the wire.

11 The method may be used to erect cables up to 25.4 mm provided the following conditions can be met:-

11.1 The road is sufficiently wide to permit other traffic to pass the vehicle and trailer freely.

11.2 The poles are sufficiently close to the road.

11.3 The suspension-wire is on the roadside of the poles.

11.4 There are no obstructions between the road and the suspension-wire.

12 **METHOD 2** The cable is first laid out on the ground, beneath the suspension-wire, and then erected and lashed in position using the machine (Fig 1).

13 The method can be used to erect cables up to 25.4 mm diameter when any of the prescribed conditions for Method 1 cannot be met and if the cable will not suffer damage in being laid-out or pulled-out along the ground.

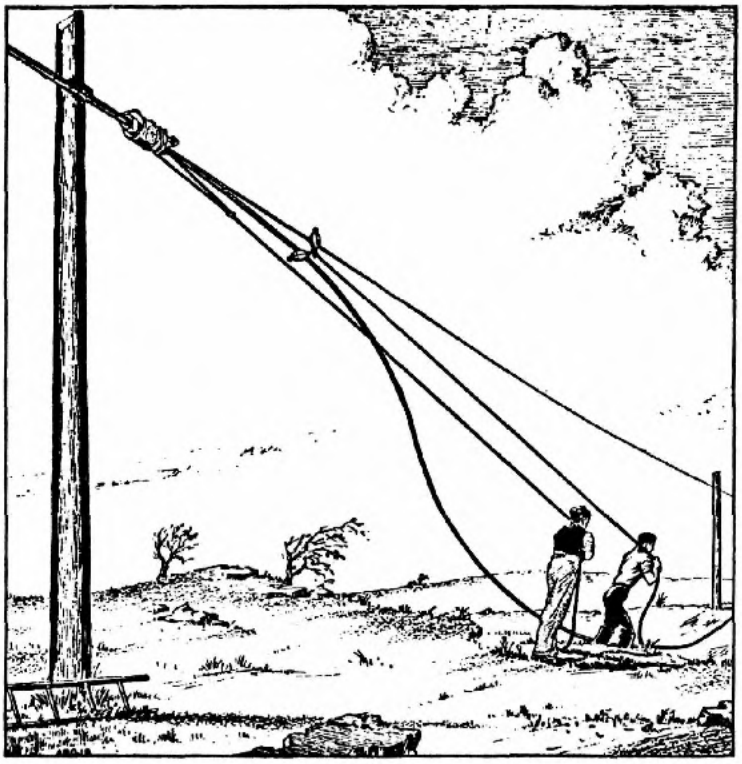


FIG 1 - METHOD 2

14 When used on account of the narrowness of the road, the cable should be paid-off the moving trailer and laid in the verge as quickly as possible so as to minimise the duration of obstruction to other traffic. The vehicle and trailer should then be parked safely off the road before commencing the erection of the cable.

15 When the method is employed because of obstructions between the road and the suspension-wire, the cable drum should be jacked-up at one end of the section (Par 8) and the cable pulled-off the drum and laid out on the ground beneath the suspension-wire.

16 Because of the conditions of use for this method, the Machines, Cable Lashing is pulled across the span by hand (Fig 1) and when erecting all but the smallest cables, within the prescribed range (Par 13), it is advantageous to support the cable ahead of the machine by means of two Blocks, Snatch hooked together with the upper block running on the suspension wire and the lower block supporting the cable. The hook of both blocks should be moused (Dooaz) and a separate towing line used to pull the blocks along the suspension-wire a metre or two ahead of the machine.

17 **METHOD 3** The cable is first erected, temporarily, in wire rings and the machine is then used to push away the rings and to lash the cable in position (Fig 2). Details of the method are given in later paragraphs.

18 The method can be used to erect:-

18.1 Cables up to 25.4 mm, when neither Method 1 or 2 can be employed.

18.2 Cables over 25.4 mm and up to 57 mm diameter, using the large machine.

19 The use of the method may also be necessary when erecting odd spans such as extra-long spans (Par 4) or spans across busy roads.

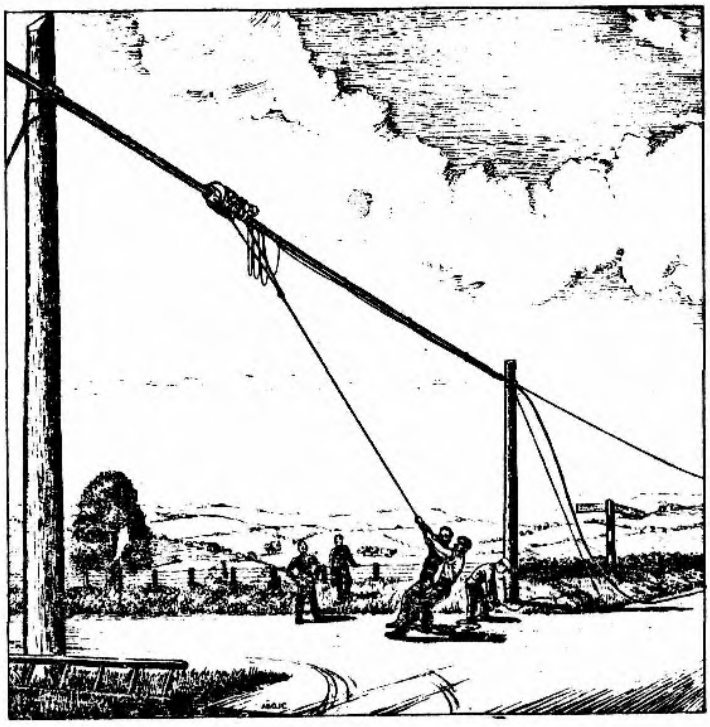


FIG 2 - METHOD 3

20 **LOCATION OF JOINTS** Joints can be both vertical and horizontal. Vertical joints are made only between lengths of cable not exceeding 25.4 mm diameter and are located on the poles

21 Horizontal joints can be made between cables of all sizes ie up to 57 mm diameter, and between those cables and loading-coil stub cables. Horizontal joints should be located so that the whole of the completed joint will be within 1.5 m of the pole.

22 The actual positions for horizontal joints depends on the length of sleeve for the joints as well as other factors and should be ascertained before the cable is erected.

23 **JOINTING ALLOWANCE** For vertical joints, sufficient cable, should be allowed to extend on each side of the pole so that the joint can be made on the pole 1 m above ground level.

24 For horizontal joints the cable ends should extend 0.5 m on either side of the proposed centre of the joint to provide an overlap of 1m.

25 **CABLE PROTECTION** At all points where the cable runs close to a bracket or clamp and also where the cable leaves the suspension-wire at vertical joints, the cable should be protected against abrasion by a length of Tubing, Plastic, Split (Figs 6 to 9).

26 Three sizes of Tubing, Plastic, Split are employed (Tables 1 and 2) and the tubing should extend 25 mm beyond the ends of the brackets or clamps and be secured by wire ties near each end.

27 **STORES AND EQUIPMENT** The stores (other than the cable) and the tools and other equipment required, for each of the three cabling methods, are as detailed in the Tables.

TABLE 1 - STORES AND EQUIPMENT REQUIRED
WHEN ERECTING AERIAL CABLES BY METHODS 1, 2 OR 3

Item	Quantity	Notes
Motor vehicle (30 cwt) or greater capacity	1	
Trailer, Cable Drum	1	
or		
Jacks, Cable Drum, Small	2	For Mounting Drums up to 1.37 m diameter
Spindles, Drums, Cable No. 1 (5 ft 4 in)	1	
Bars, Operating, Small	1	
or		
Jacks, Cable Drum, Large	2	For Mounting Drums up to 2.13 m diameter
Spindles, Drums, Cable No. 2 (6 ft)	1	
Bars, Operating, Large	1	
Tools, Slewing	1	
Machines, Cable Lashing, Small	1	For cables up to 25.4 mm diameter
or		
Machines, Cable Lashing, Large	1	For cables up to 57 mm diameter
Blocks, Snatch (2 in) (Tables 2 and 3 for Method 3)	2	For supporting cable in front of Machines, Cable Lashing
Rope, Sisal, Prepared (2 in) (Tables 2 and 3 for Method 3)	20-30 m	For towing Machines, Cable Lashing
Wire, Lashing, PVC	Supplied in coils to suit spans from 35 to 70 m	
Tubing, Plastic, Split ($\frac{1}{2}$ in)	As required	For protecting cable up to 25.4 mm diameter at Brackets, Clamps, etc

TABLE 2 - STORES AND EQUIPMENT, ADDITIONAL TO THOSE IN TABLE 1 REQUIRED WHEN ERECTING AERIAL CABLE BY METHOD 3

Item	Quantity	Notes
Wire, Suspension / or / Wire, Stay — Any size readily available	12 m (Approx)	For cable-guiding wire
Clamps, Stay	3	For use with cable-guiding wire
Crowbars No. 2	2 or 3	For anchoring and tightening cable-guiding wire
Pullers, Chain (3-ton) / or / Blocks and Tackle (To suit cable-guiding wire)	1	For anchoring and tightening cable-guiding wire
Grips, Cable, Single-eye, Closed	1	Sizes (Table 3)
Links, Keystone	1	Sizes (Table 3)
Swivel or Swivel, Stay	1	Sizes (Table 3)
Rope, Sisal, Prepared	30 m greater than longest length of cable to be pulled-in	Cable Draw-rope, Size (Table 3)
Blocks, Snatch	As required	For supporting cable at poles and securing draw-rope to foot of poles, size (Table 3)
Chains, Sling (4 ft)	As required	For attaching snatch-blocks to poles
Brackets No. 7	As required	For retaining sling-chain in position
Winches, Trailer, Motor / or / Motor vehicle (see Table 1)	1	For pulling-in cable
Tarpaulins (size as required)	1	For protecting cable at drum
Tubing, Plastic, Split (1 in)	As required	For protecting cables over 25.4 mm and up to 50.8 mm diameter — At Brackets, Clamps etc
Tubing, Plastic, Split (2 in)	As required	For protecting cables over 50.8 mm and up to 57 mm diameter — At Brackets, Clamps etc
Fibre mats, 250 mm by 250 mm (Approx	As required	Obtained locally, for protecting cable during pulling-in at certain angle poles (Par 39)
Line Sash No. 2	As required	For use with temporary wire rings

TABLE 3 - SIZES OF PARTICULAR STORES AND EQUIPMENT TO BE USED FOR METHOD 3

Diameter of cable to be pulled-in		Grips, Cable single-eye Closed (in)	Swivel or Swivel-stay (in)	Links, Keystone (in)	Rope, Sisal, Prepared (in)	Blocks, Snatch (in)
Above (mm)	Up to (mm)					
-	12.7	-	$\frac{3}{16}$	-	$1\frac{1}{2}$	2
12.7	25.4	1	$\frac{1}{2}$	$\frac{1}{2}$	2	2
25.4	38.1	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	2	2
38.1	57	2	$\frac{1}{2}$	$\frac{1}{2}$	3	3

28 CABLE LENGTHS The location of joints for balancing and distribution purposes and the requirement that all joints shall be on, or close to, poles (Pars 20-22) will determine, in general, the lengths of cable to be requisitioned. For balancing purposes a maximum length of 250 to 300 m between joints should be assumed.

29 The length of cable which can be erected in one operation depends on the method of cabling (Pars 10-19) adopted:-

METHOD 1 - Entire length on drum.

METHOD 2 - Length which can be laid- or pulled-out along the ground.

METHOD 3 - 200 to 450 m according to the number of angles in the cabling section and their sizes.

30 When requisitioning cable, the following allowances should be made for jointing and dip of the erected cable:-

Jointing:-

Cables up to 25.4 mm diameter - 3 m per jointing length

Cables over 25.4 mm and up to 57 mm diameter - 2 m per jointing length

Dip:-

35 m spans	25 mm per span
45 m spans	50 mm per span
55 m spans	75 mm per span
65 m spans	100 mm per span

For Method 3 an allowance should also be made in respect of the use of a cable grip (Par 42).

31 ERECTING CABLE - METHOD 3 With Methods 1 and 2 the Machines Cable Lashing are used for both erecting the cable (Pars 10 and 12) and lashing it to the suspension wire but with Method 3 the cable has to be erected by a system analogous to that employing the superseded cable-supported-by-rings method (Par 1). The Machines, Cable Lashing, fitted with a ring pusher, are then used to lash the erected cable to the suspension wire (Par 17).

32 To obviate the chance of the Grips, Cable fouling the wire rings, used temporarily for the initial support of the cable, the wire rings are not first placed on the suspension-wire (as with the earlier system) and the cable subsequently pulled through them but are placed in position as the cable is being pulled-in.

33 **PREPARING WIRE RINGS** The wire-rings are prepared in sets for each span of the section to be cabled in one operation. Scrap suspension-wire cut into lengths of approximately 430 mm and the strands separated into single wires is used for the purpose. The individual wires should be attached, at their mid-points, to a length of Line Sash No. 2 by clove hitch ties in the line, at 2 m spacings commencing 2 m from one end of the line after making an allowance for tieing that end to a pole. The length of line should be at least 4 m longer than the span for which the set of wire rings is being prepared. The wire rings should then be formed into the shape shown in the inset to Fig 3. The small loop at the clove hitch can be made by bending the wire round a combiner or arm bolt.

34 **FITTING SETS OF WIRE-RINGS** Each of the rings forming a set should be clipped to the suspension-wire close to the pole of the span nearest to the cable drum location (Par 8) care being taken to see that the rings are clipped in the same order in which they are attached to the line. The end of the line at the ring nearest the pole should be tied to the pole so that the ring is approximately 2 m from the pole (Par 33). Each set of rings for each span in the section to be cabled should be similarly placed in position (Fig 3).

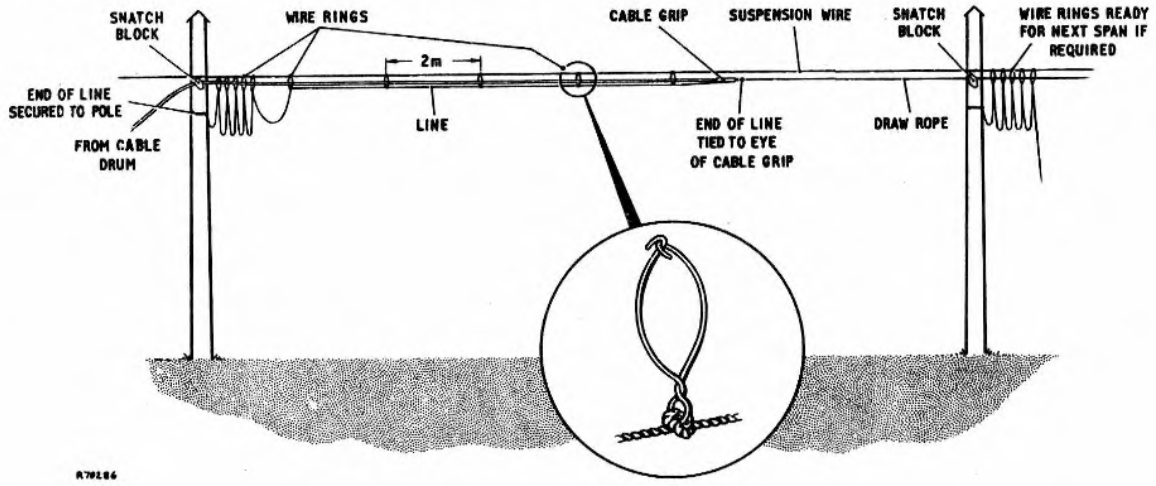
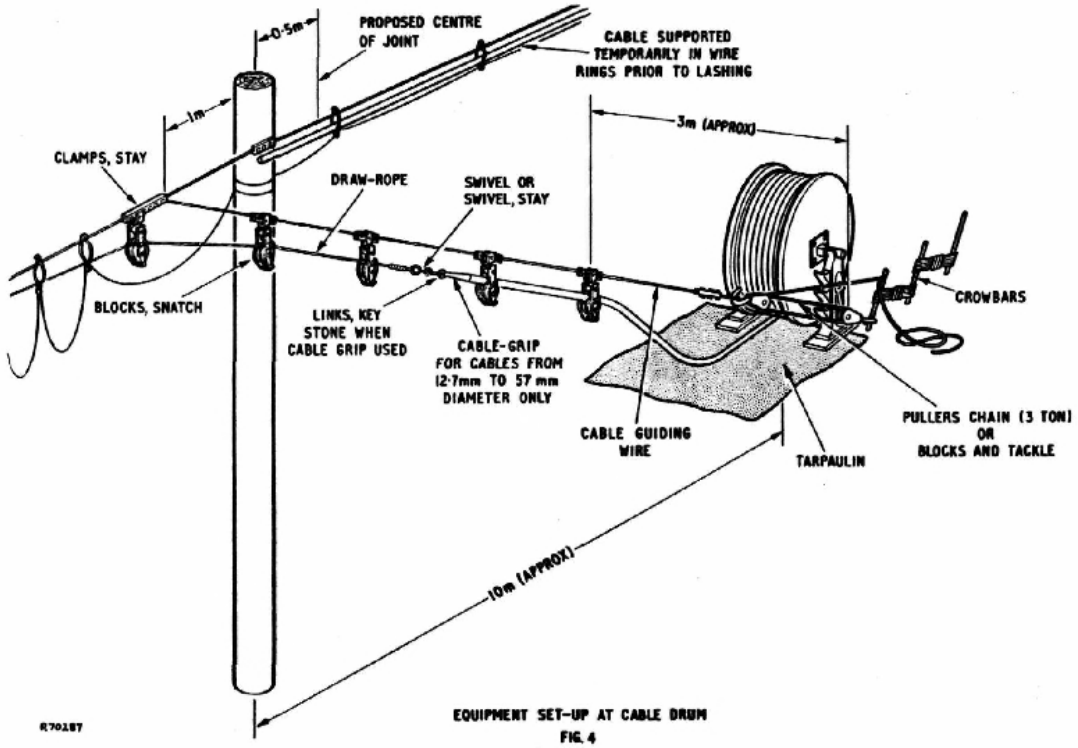


FIG 3 - LOCATING WIRE RINGS

35 **SETTING-UP EQUIPMENT AT CABLE DRUM** The equipment required and its arrangement, at the cable drum location (Par 8), is shown in Fig 4. The drum should be located approximately 10 m behind the first pole of the section to be cabled and so that the pole does not obstruct the passage of the cable from the drum to the wire-rings.



EQUIPMENT SET-UP AT CABLE DRUM
FIG. 4

36 To avoid damage to the cable the drum should be rolled only in the direction of the arrow on the drum and the tarpaulin placed so as to protect the cable as it leaves the underside of the drum. The drum should be steered during rolling using the Tool, Slewing.

37 The cable drum end of the cable-guiding wire is formed into a loop and connected to the Pullers Chain or blocks and tackle anchored onto the crowbars and its top end secured to the suspension-wire by the Clamps Stay. The cable-guiding wire should be suitably tensioned by means of the Pullers, Chain or blocks and tackle so as not to sag unduly when supporting the cable.

38 The number of Blocks, Snatch for supporting the cable from the cable-guiding wire will depend on the size of cable and the highest block should be attached to the guiding wire at the point where it passes the pole and the others spaced evenly between the highest block and a point approximately 3 m from the lower end of the guide wire. A further block should be attached at the point at which the guide wire is secured to the suspension-wire.

39 **EQUIPMENT - INTERMEDIATE POLES** A Blocks, Snatch should be attached to the suspension-wire, at all intermediate poles, to support the draw-rope and cable. The block should be attached to the suspension-wire bracket except when the cable is to be pulled-in round the outside of an angle pole with a pull-on-pole of more than 4.5 m. At such angle poles a well lubricated fibre mat should be secured to the pole below the suspension-wire bracket so that the cable is prevented from rubbing against the pole (Fig 5). In these cases the Blocks, Snatch should be attached to the suspension-wire approximately 300 mm from the bracket.

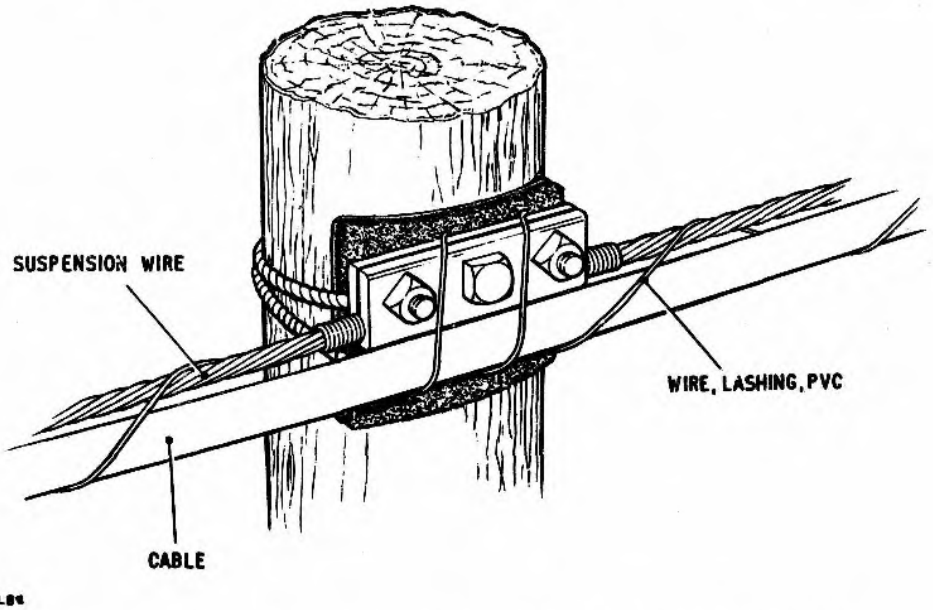


FIG 5 - PROTECTION OF CABLE AT CERTAIN ANGLE POLES

40 **DRAW-ROPE** The draw-rope should be passed through all the wire rings and Blocks, Snatch throughout the section to be cabled and connected to the large ring of the Swivel or Swivel-Stay by means of an eye-splice (D 0022). The connection between the smaller ring of the swivel and the cable depends on the size of cable.

41 For cables less than 12.7 mm diameter the end of the cable, should be bent back for a distance of approximately 140 mm and the loop formed secured to the smaller ring of the swivel ($\frac{3}{16}$ in) by means of a length of Wire, Galvd Binding (60 lb). The wire should be threaded several times through the loop in the cable and the smaller ring of the swivel, and the end bound tightly round the centre of the binding-wire loop to form a figure "8". On completion of the connection, the loop formed in the cable should be made as small as possible with a Dressers, Boxwood.

42 For cables from 12.7 mm to 57 mm diameter the Grips, Cable should be located on the cable, for a length approximately 50 mm shorter than the Grips, Cable itself and its mouth secured with tape, twine or wire. The grip is connected to the Swivel or Swivel-Stay with the Links, Keystone.

43 SETTING-UP EQUIPMENT AT PULLING-END The other end of the draw-rope (Par 40) should be passed through a Blocks, Snatch fitted to the suspension-wire as near as possible to the last pole in the section to be cabled and on the cable drum side of the pole (Par 35). The end of the draw-rope is then attached to the Winches, Trailer, Motor or motor vehicle which should be of (30 cwt) capacity or greater.

44 If a winch is employed it should be located near the foot of the first pole beyond the last pole in the section to be cabled, but should this position not be practicable, due to a road crossing or other obstruction, the winch should be located on the cable-drum side of the last pole in the cabling section and the draw-rope passed through a Blocks, Snatch attached to the foot of that pole before attachment to the winch.

45 When a vehicle is employed to draw-in the cable, the requirements of (D 3131) must be met and to facilitate signalling it is preferable for the vehicle to travel towards the cable drum and to achieve this the draw-rope should pass through a Blocks, Snatch attached to the foot of the first pole beyond the last pole in the section being cabled, before attachment to the vehicle. Should this be impracticable then the last pole in the cabling section should be employed as in the case of the winch (Par 44).

46 When the last pole in the cable section is used for either the winch or vehicle method, a temporary line-stay should be fitted to the pole against the pull on the cable unless a suitable stay is already fitted and has been tightened as necessary.

47 PULLING-IN THE CABLE The cable should be pulled-in at an even speed of approximately 1.5 m/s and, throughout the operation the travelling end of the cable should be kept under observation so that an immediate signal to cease the pull can be given when necessary.

48 To avoid obstructing side roads, or when a convex bend in the road intervenes, when a vehicle is being used, it is necessary to pull-in the cable by a series of short pulls, the vehicle returning to its starting point at the end of each pull.

49 When a concave bend in the road would result in the draw-rope being pulled over the roadway, Blocks, Snatch attached to the feet of conveniently placed poles should be employed to divert the draw-rope and due regard paid to any resulting line-staying requirements (as in Par 46).

50 The pulling-in operations should continue until all the temporary rings are in position and the cable supported in them (Par 32) with the cable correctly located to provide the required jointing allowances at the jointing points (Pars 20 to 24), the sequence of operations being as follows:-

50.1 Pull the cable through the Blocks, Snatch and wire rings at the first pole (Par 34) until the Swivel (Par 41), or Grips, Cable (Par 42) is just clear of the ring furthest from the pole.

50.2 Tie the free end of the line (Par 34) from the ring furthest from the pole to the smaller ring of the Swivel (Par 41) or the eye of the Grips, Cable (Par 42).

50.3 Pull the cable until the Swivel or Grips, Cable has passed through the rings at the next pole. The rings will have slid along the suspension-wire and taken-up their positions at 2 m spacings supporting the cable.

50.4 Untie the line from the Swivel or Grips, Cable and pull it out of the rings and Blocks, Snatch.

50.5 Tie the free end of the line (as in 50.2) from the ring furthest from the pole in the next span and continue the sequence of operations.

51 **LASHING THE CABLE AND REMOVING THE RINGS** For lashing the cable to the suspension-wire and removing the temporary wire rings the Machines, Cable Lashing is first fitted, at its front end, with a ring pusher.

52 The end of the line which was tied to the pole (Par 34) is now untied and the machine pulled across the span as for Methods 1 and 2. The ring pusher collects the rings and pushes them across the span to the next pole and, at the same time, the machine lashes the cable to the suspension wire.

53 The rings can now be un-clipped from the suspension-wire and retained for further use after threading them, in order, on a length of wire.

54 Successive spans are dealt with similarly after transferring the machine to each span in turn.

55 **OPERATING THE MACHINES, CABLE LASHING** The machine is fitted with a coil of Wire, Lashing, PVC, set-up on the suspension-wire, the cable fitted into the machine, the towing harness attached and the towing rope tied to the harness. The operations required for these purposes depend on the size of machine being employed and the instruction (Par 4) dealing with the particular machine to be used should be consulted. When recharging the machine with lashing wire any wire remaining on the reel should be removed and a new coil fitted.

56 **LASHING THE CABLE** To lash the cable to the suspension-wire release the locking device on the Machines, Cable Lashing and pull the machine across the span to the next pole. The machine can be pulled by hand or by vehicle but if a vehicle is used the same requirements (Par 45) as when drawing-in the cable by Method 3 must be met.

57 **TRANSFERRING MACHINE TO NEXT SPAN**

57.1 Secure the lashing wire to the suspension-wire with the special clip provided with the machine. The lashing wire must remain tight and care should be taken to ensure that no slack wire runs back into the span.

57.2 Pull sufficient wire off the reel to complete the lashing by hand (Par 58.1) and cut it so that it extends about 1 m beyond the pole (do not pull the wire off from the rear of the machine as it will bind on the rear drive wheel).

57.3 Turn the drum of the machine to the normal position and lock it.

57.4 Support the cable about 1 m along the next span by a Blocks, Snatch hooked to the suspension-wire.

57.5 The cable can now be released from the machine and the machine removed from the suspension-wire by the reverse action to when setting it up (Par 55), moved to the next span and re-set-up close to the pole.

57.6 Finally the cable is re-fitted into the machine, the towing harness re-attached and the machine is ready to lash the next span. The Blocks, Snatch (sub Par 57.4) can then be removed from the suspension-wire.

58 COMPLETING THE LASHING

58.1 As the machine cannot lash the cable right up to the pole, this portion should be lashed by hand (Par 57.2) by wrapping the lashing wire tightly round the cable and suspension-wire, and any Clamps or Brackets, with the same lay as applied by the machine (Par 3).

NOTE: The length of lashing wire required at the commencement of the span for this purpose, is allowed for when fitting the coil of wire into the machine (Par 55 and the instruction dealing with the size of machine being used).

58.2 On completion of the wrapping by hand the lashing wire should be made-off and the clip (Par 57.1) removed.

58.3 The method of making-off the lashing wire varies in detail with the location concerned ie terminations, joints etc but in all cases the wire is finally made-off by wrapping it ten times round the suspension-wire only. The first turn being close up to a Bracket or Clamp to prevent it slipping along the suspension-wire and becoming loose.

58.4 At intermediate poles and false terminations the lashing wire should be made-off as shown in Fig 6.

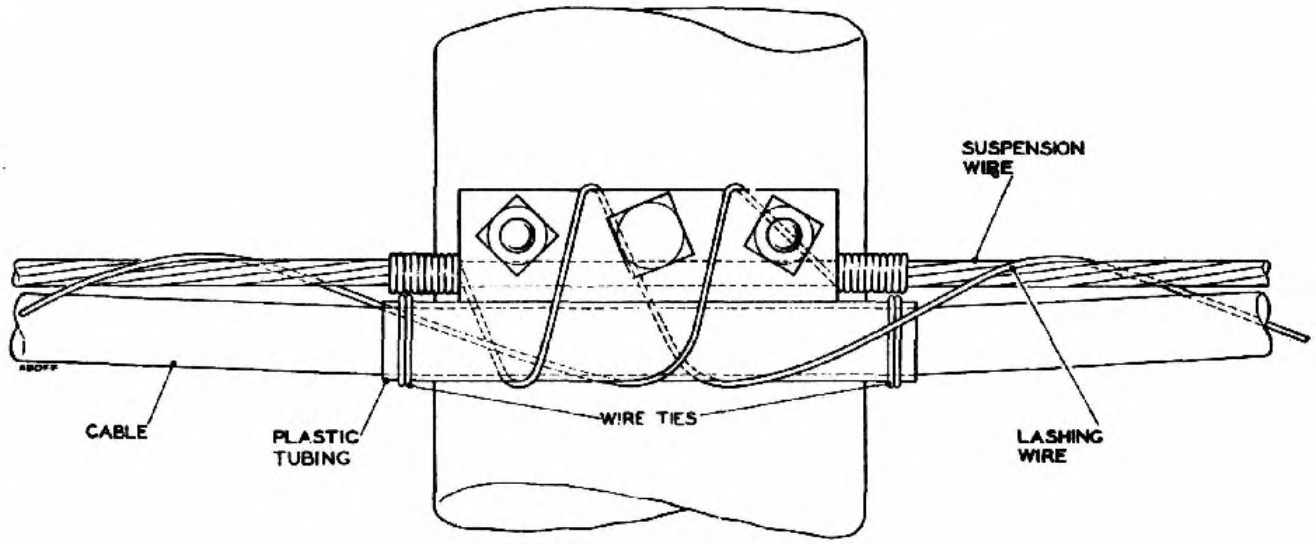


FIG 6 - METHOD OF MAKING-OFF LASHING WIRE AT INTERMEDIATE POLES AND FALSE TERMINATIONS, ETC

58.5 At splices near poles the lashing wire should be made-off as shown in Fig 6 but where the splice is in mid-span the wire should be made-off round each leg of the suspension-wire at the thimbles (Fig 7).

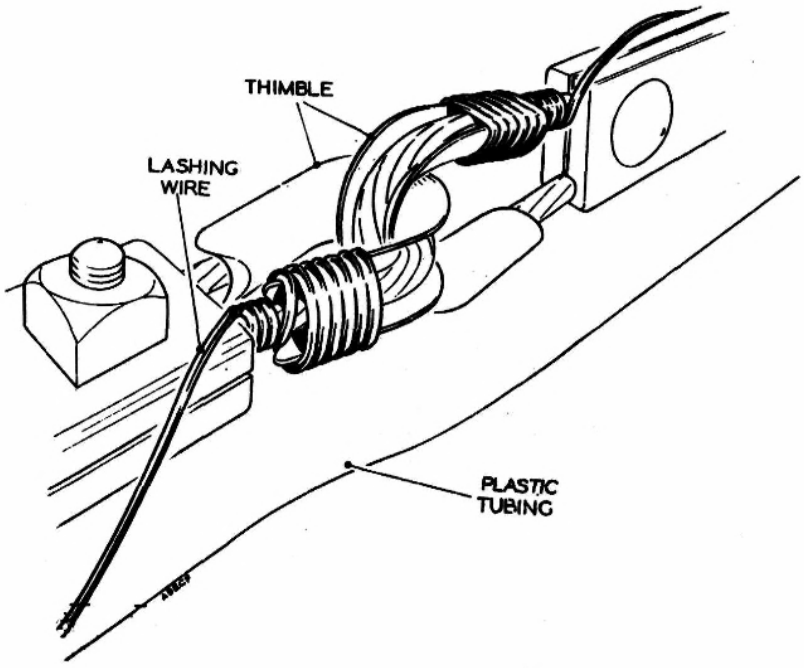


FIG 7 - METHOD OF MAKING-OFF LASHING WIRE AT MID-SPAN SPLICES

58.6 At single, true terminations, the lashing wire should be made-off close to the Clamp nearest the pole and round one leg of the suspension-wire passing round the pole (Fig 8).

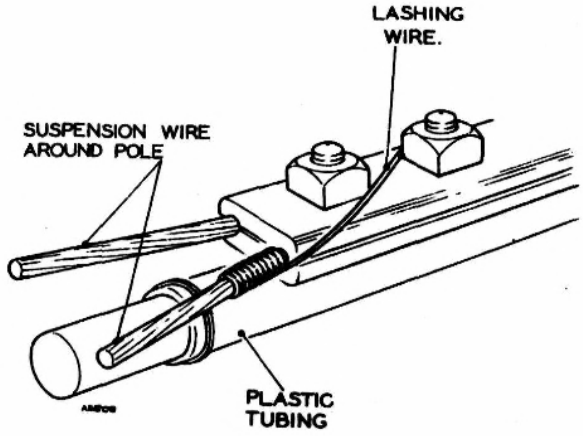


FIG 8 - METHOD OF MAKING-OFF LASHING WIRE AT SINGLE, TRUE TERMINATIONS

58.7 At double, true terminations, the lashing wire for each span should be made-off round one leg of the suspension-wire of the other span and close to the pole (Fig 9).

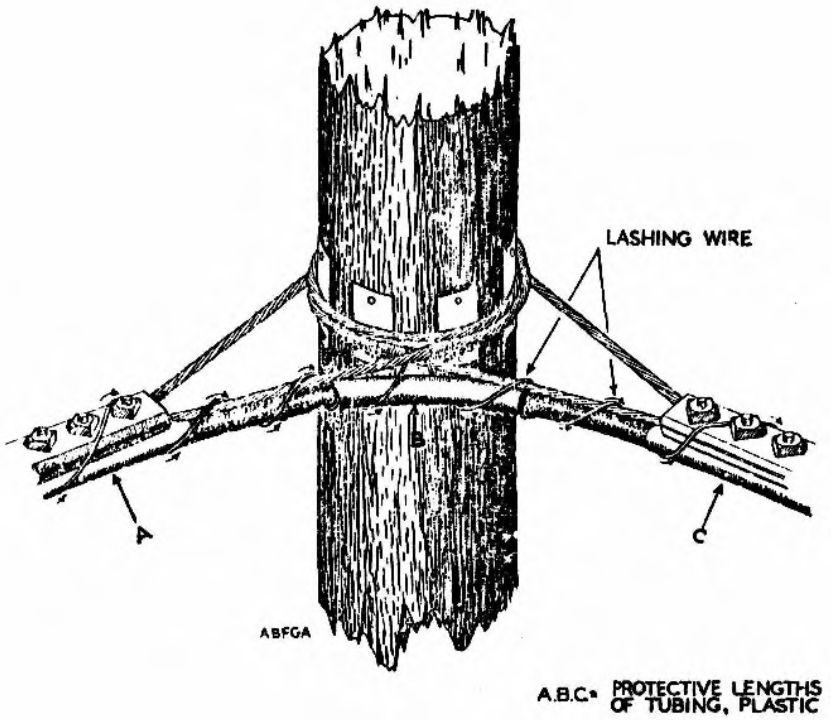


FIG 9 - METHOD OF MAKING-OFF LASHING WIRE AT DOUBLE, TRUE TERMINATIONS

58.8 At horizontal joints the lashing wire should be wrapped tightly round both the joint and suspension-wire and then made-off round the suspension-wire only (sub Par 58.3). No Tubing, Plastic, Split is required round the joint unless it is in contact with Clamps, Stay.

58.9 At vertical joints the lashing wire should be wrapped round both the cable and suspension-wire up to the point where the cable is bent away from the suspension-wire. Beyond this point the lashing wire should be wrapped round the suspension-wire only and then made-off (sub Par 58.3). The length of cable from the first turn of the lashing wire on one side of the pole and to the last turn on the other side of the pole should be protected with Tubing, Plastic, Split.

59 REPLACING "RINGS, CABLE" WITH WIRE LASHING When it is required to lash an existing cable supported in "Rings, Cable" (Par 1) the cable must be supported temporarily in wire rings (Par 33) as the Machines, Cable Lashing cannot be used to remove "Rings, Cable". The "Rings, Cable" should be replaced with wire rings at 2 m spacings using a Platforms, Elevating. The cable can then be lashed as in Method 3 (Pars 51 to 58).

60 LASHING A SECOND CABLE A second cable can be lashed by the Machines, Cable Lashing to a suspension-wire to which a cable is already lashed provided the suspension-wire is sufficently strong to carry the combined weights of the two cables and the combined size of the two cables is within the capacity of the machine (Par 4). The method of lashing the second cable depends also on the size of the existing cable.

61 When the combined size of the two cables is 25.4 mm (largest dimension) or less, both sizes of machine can be used. When the combined size of the two cables is more than 25.4 mm but not greater than 57 mm only the larger machine can be used.

62 When the combined size of the two cables is 25.4 mm or less (using either size machine) or when the existing cable is 25.4 mm diameter or smaller (using the large machine only), the machine is set-up on the suspension-wire (Par 55) at the pole concerned, with both cables fitted into the machine.

63 The existing lashing wire should next be freed at its termination and the existing cable allowed to drop away from the suspension-wire. The strand tensioning roller (larger machine) or suspension-wire guide roller (small machine) is then placed under the suspension-wire and above the existing cable.

64 The replacing lashing wire should next be terminated, and with the ring pusher fitted to the front of the machine, the mashine pulled along the suspension-wire (Par 56). The ring pusher moves the existing lashing wire to the end of the span, where it should be cut off and removed.

65 When the existing cable is more than 25.4 mm diameter the new cable should be lashed to both the suspension-wire and the existing cable, leaving the existing lashing in place. With this method it is necessary to remove the strand tensioning roller from the machine and the machine pulled across the span by hand taking care to ensure that the front strand wheel is not pulled off the suspension-wire.

TD8.1.3
(From EI Lines, Overhead,
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E N D