POST OFFICE ENGINEERING DEPARTMENT

PRECAUTIONS AGAINST ACCIDENTS

Rg 41

(Revised November, 1956)

The following epitome of the Safety Regulations contained in various officially published instructions, is issued by agreement between the Official and Staff Sides of the Departmental Whitley Council.

The experience of actual accidents proves the necessity for these regulations, and in your own interests as well as those of the Department, you are requested to observe strictly the precautions enjoined.

REMEMBER—Report every accident without exception, and never fail to report a known defect in tools and appliances.

(Replaces all previous issues)

All staff are encouraged to take a training course in First Aid.

Arrangements for these courses are made by the Post Office to meet the convenience of trainees.

Applications should be made through your immediate supervising officer.

LAYING OUT PLANT

(*LINES, Overhead, J* 1001)

Select safe position for stores and tools to be laid out on roadside.

Stack poles in groups and wire together when erection is not to be proceeded with at once.

Safely secure handcarts, ladders and similar plant, when left unattended on road, to lessen risk of accident to children who may interfere with them.

Keep handcarts and other plant clear of metalled surface, when possible, and **use one side only of the road** for storage.

Indicate presence of obstructions by caution signs and red flags.

EXCAVATIONS

(*LINES, Underground, D* 3001, *J* 1150; *Overhead, J* 1001)

Guard against damage by flying particles by use of suitable screens when breaking up pavings or excavating in hard materials and do not work in close proximity to moving parts of mechanical excavators.

Display red flags and caution notices whenever operations may interfere with the free use of the road: when necessary employ one or more flag men.

Where needed, **excavations** must be properly **timbered. Special care** must be taken where the excavation is in **loose soil** or close to **walls or buildings ;** the latter **must be shored** if the excavations are close to them and **go below foundation level.**

Guarding Disturbed Footways and Carriageways

Mark by caution signs or flags and fence or watch excavations during day ; **guard and light** at night. Excavations should also be watched at night if any appreciable value of Department's plant is involved, or if in the interest of public safety.

Leave adequate passageway for pedestrians. If the obstruction of the entire footway cannot be avoided fence off a portion of the carriageway for their use, if practicable. **Provide temporary bridges** to entrances to premises where necessary. **Keep soil from spreading** on to paved surfaces which are left free for use of pedestrians and vehicles.

POLES

(*LINES, Overhead, J* 1001)

Handling

Keep creosote away from bare skin by using old sacking, brown paper, cotton waste, rags, etc.

Wash with soap and water, *not paraffin,* if hands or arms become stained with creosote.

Keep stained hands and arms away from face.

Load or unload only **under** the **direction** of an experienced officer.

See that poles are tied and cannot roll before standing on a stack.

Secure all poles not actually being moved.

Use check ropes when skids are employed and pass ropes round a **rigid support** to facilitate control and prevent hand-burn.

In carrying a pole place men in order of height of shoulder and **on same side of pole.** *Lower pole first on arms,* then place carefully on ground, tip first.

Do not ride on timber wagons.

FIG. 1.—KEEP CREOSOTE AWAY FROM BARE SKIN BY USING OLD SACKING, BROWN PAPER, COTTON WASTE, RAGS, ETC.

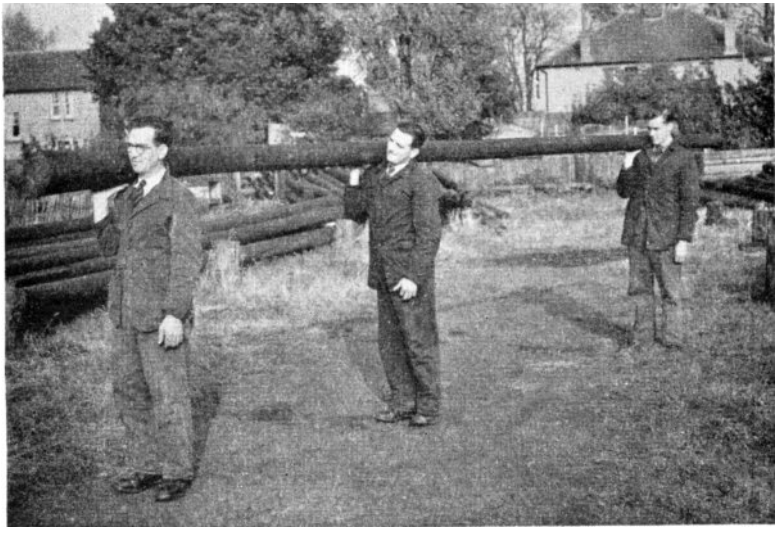

FIG. 2.—PLACE MEN IN ORDER OF HEIGHT OF SHOULDER AND ON SAME SIDE OF POLE.

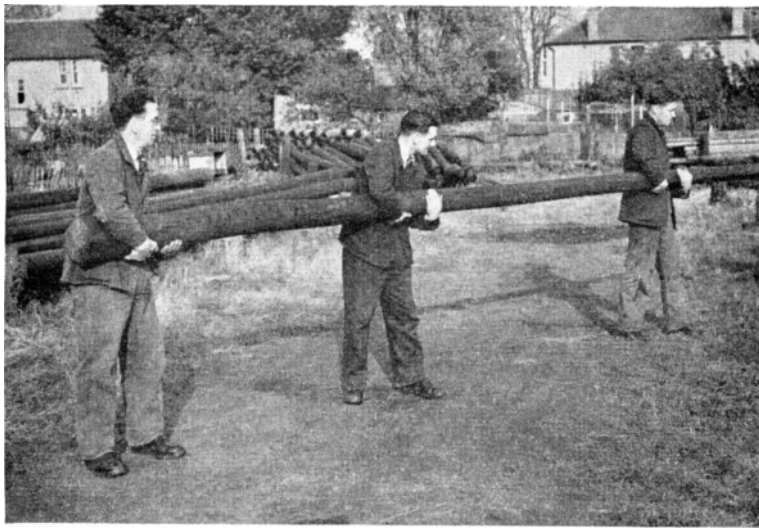

FIG. 3.—LOWER POLE FIRST ON ARMS, THEN PLACE CAREFULLY ON GROUND, TIP FIRST.

ERECTION AND REMOVAL

Fix guy lines to steady pole during erection or recovery.

See that derricks are adequately stayed.

Do not use light ladders to support weight of poles.

Do not disturb foundations while men are working aloft and until wires have been removed.

WORK ON POLES

It is your responsibility before starting work on a pole to make sure it is safe.

Poles labelled D are decayed and must be reinforced by temporary stays and ladders before they are climbed unless well supported in all directions by existing wires and stays. Special care should be taken when the work involves altering existing wires or stays—see below.

All other poles must be tested for soundness as follows (LINES, Overhead, C 5101, refers).

FIG. 4 — MAKE LIGHT TAPS AT AND ALL ROUND THE POLE AT THE GROUND LINE.

FIG. 5 — PROD WITH SHARP POINTED TOOL WHERE SURFACE DECAY IS SUSPECTED.

Stamp aside or cut away any grass or undergrowth to permit testing as near as possible to the ground line, and **using a 1 lb. hammer, make LIGHT taps RIGHT DOWN AT THE GROUND LINE and ALL ROUND THE POLE, with not more than 1 in. spaces between the taps—see Fig. 4.**

Where the wood is sound a good ring should be heard, but at points where the sound is hollow, dull or noticeably different from the sound at other points, decay probably exists. **A CHANGE OF TONE as the tapping proceeds around the pole at the ground line is an indication that decay probably exists below the ground line.**

If the test at the ground line shows some decay, or there is doubt as to the condition below ground line, excavate to determine the extent of decay or to remove the doubt.

Use the hammer test at any other points where decay is suspected and if surface decay is apparent or suspected prod with a sharp pointed tool. Where the wood is sound the point will go in only a fraction of an inch and will need a little effort to pull it out ; where decay exists it will sink in quite easily.

If there is external decay averaging 1 in. or more in depth for more than a third of the way round, or any internal decay for more than half way round **TREAT THE POLE AS D,** take the necessary precautions and advise your supervising officer.

Poles, including those marked S (Suspect), which do not appear to be D as determined by the test, may be climbed without special precaution, but **ALWAYS TAKE SPECIAL CARE** when testing, or working on, a pole :—

(*a*) which has an unbalanced pull, particularly if more wires are to be added
(*b*) when wires are to be cut away
(*c*) when the position of the 10 ft. marking shows that the pole is set at a shallow depth or that the original ground line is buried below the surface
(*d*) when metal or wooden fittings are badly corroded or decayed. Report defective fittings to your maintenance control or supervising officer.

If you feel that you are not reasonably sure about judging the soundness of a pole by the hammer test seek guidance. **Do not chance it.**

STAYS

Provide additional stays, if necessary, before increasing load on pole.

See that end of screwed rod, or bolt, always projects through the nut or swivel-bow, after adjustment.

LADDERS

(*LINES, Overhead, J* 1001)

For care of ladders, see TOOLS, sheet 11

Rest ladder against strong and rigid support, e.g. poles (*not* conductors), tree trunk or main branch (*not* small branches).

Top of ladder to be **securely lashed** to its support if intending to climb beyond top of ladder, if ground is uneven or slippery, if there is risk of pedestrians or vehicle running into ladder, or in stormy weather.

Only if no alternative available should *two* **men work** on ladder at same time—**top of ladder** to be **securely lashed.**

If erected against aerial cable suspension strand, pass **two ropes** over strand and secure one to each stile—other end of ropes to be securely held or fastened—**have man on foot of ladder.**

When **two ladders** are to be **lashed together,** provide **overlap** of **at least 3 ft.** and rope securely.

Ladders with wire reinforcement of the stiles should **always be used with the wire on the underside** so that the wire is in tension.

Ladders borrowed on site from subscribers, contractors or any unofficial source should be closely inspected before use **and if considered unsafe should not be used.**

FIG. 6.—GET FIRM FOOTHOLD FOR LADDER AND ERECT AT MODERATELY STEEP ANGLE. (4 : 1)

FIG. 7.—IF GOOD FOOTHOLD IS NOT OBTAINABLE, AND IN BUSY STREETS, HAVE MAN AT FOOT UNTIL LADDER IS SECURELY FASTENED AT TOP.

FIG. 8

Figs. 8 and 9 illustrate a **method of securely lashing a ladder to a pole where conditions are likely to involve risk of the ladder slipping and the assistance of a second man is not available.**

The ladder should be erected with one end of a rope securely tied around the right-hand stile and the top rung of the ladder. Pass the remainder of the rope around the back of the pole and from ground level flick the rope over the left-hand stile of the erected ladder. Pull the rope taut down the

face of the ladder and thread it through and under the fourth rung from the base and take one turn of the rope around the left-hand stile and again under the fourth rung; keeping the rope taut take 1½ turns around the pole at a point horizontally opposite the fourth rung, pull tight and make off the rope securely around the right-hand stile and the fourth rung of the ladder.

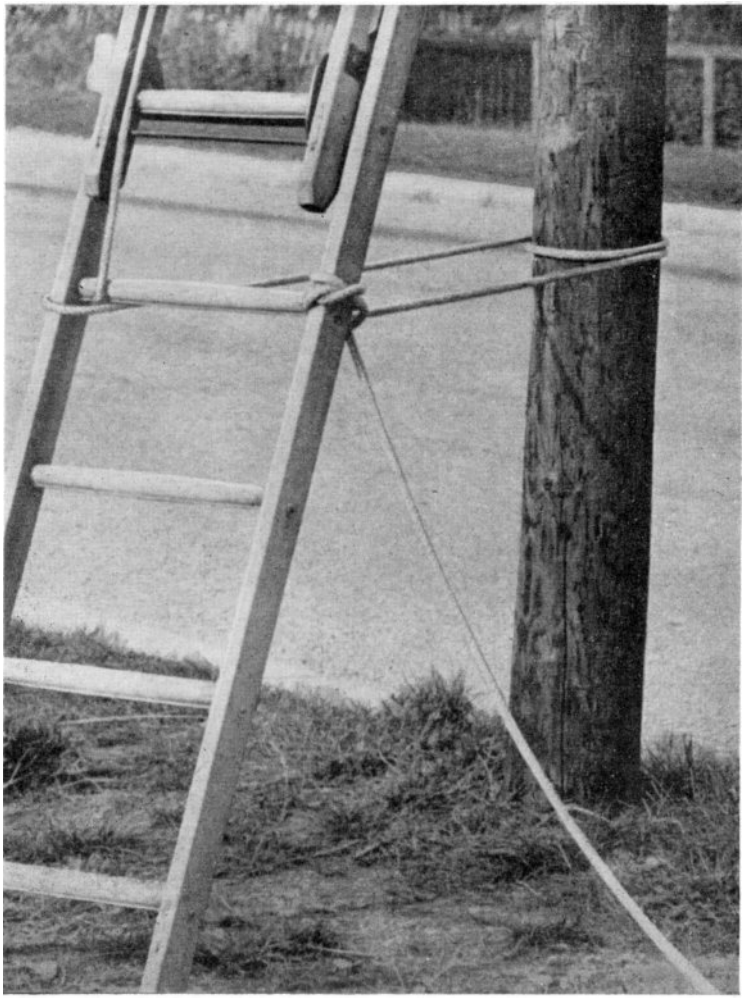

FIG. 9

USE OF SAFETY BELT
(*LINES, Overhead, J* 1001)

For care of belts see TOOLS, sheet 11

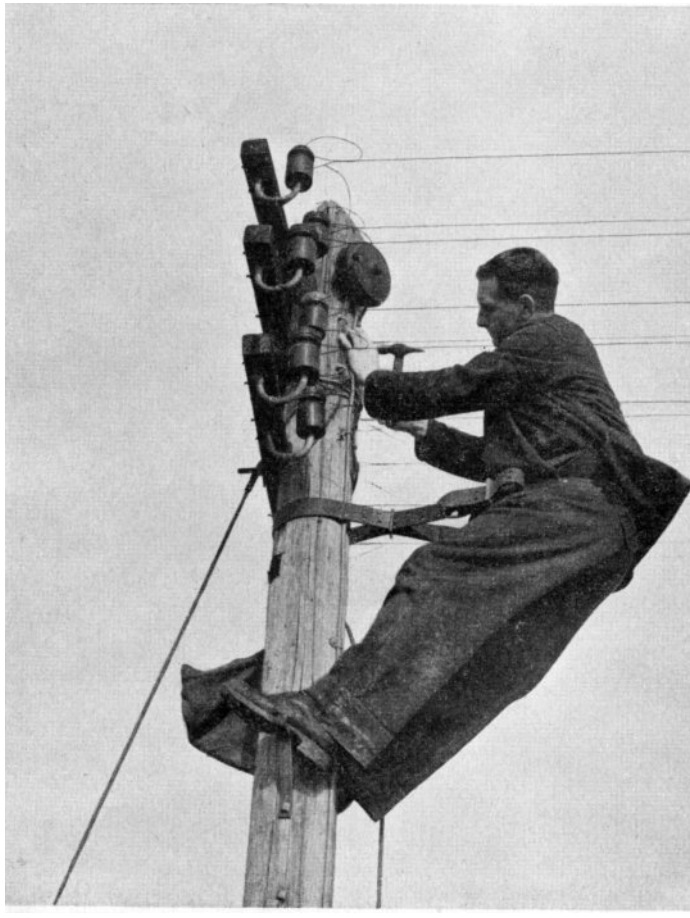

FIG. 11.—EXAMINE SAFETY BELT BEFORE USE. REJECT IF LEATHER BADLY CRACKED OR STITCHES BROKEN.

Fasten belt to firm support—*not* to wall brackets, insulator spikes, pole finials, window frames, old chimneys or other fixtures liable to give way.

Use *both* safety slides to prevent belt slipping in case buckles or stitches break.

WIRING

(*LINES, Overhead, J* 1001)

Display red flags and caution signs whenever operations may interfere with the free use of the road.

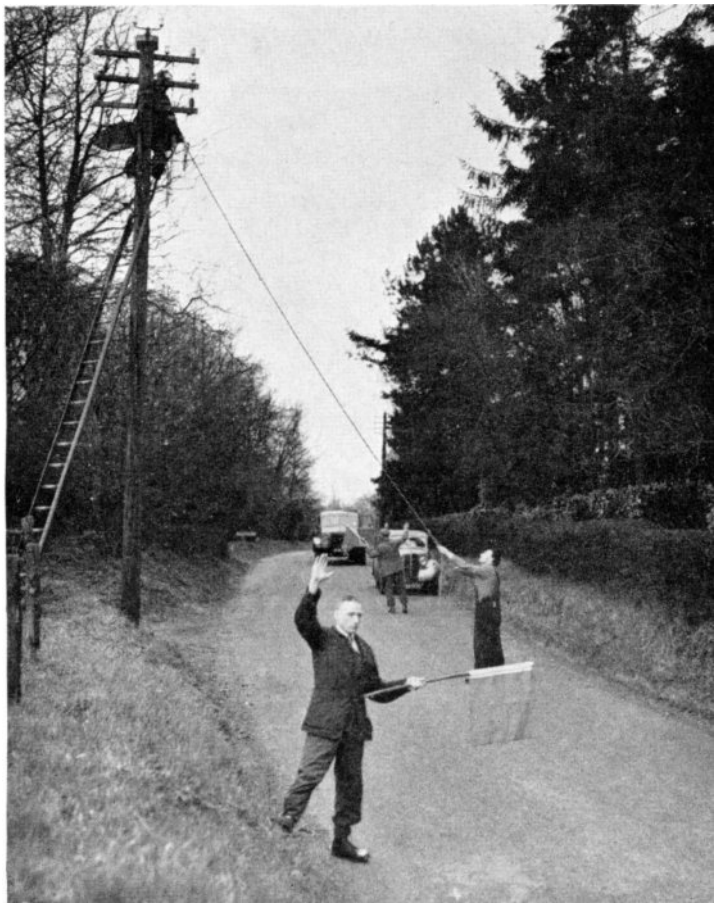

FIG. 12.—EMPLOY FLAGMAN AS AN ADDITIONAL PRECAUTION WHEN WORKING ACROSS BUSY ROADS. TWO FLAGMEN MAY BE NEEDED AT ROAD BENDS OR JUNCTIONS.

Cause as little interference as possible to vehicular and pedestrian traffic.

Avoid working single handed across roads—make work safe and obtain assistance.

Get firm foothold aloft to enable hands to be freed where possible—except on Joint User poles carrying HV lines (see below) **work on pole** in preference to less secure position as on ladder or building. Always regulate wires between poles and buildings from the pole.

Use sash line for passing tools to or from working positions—**do not intentionally drop or throw** tools from *any* position—**keep tools in a basket.**

Do not remain aloft or handle wires during a thunderstorm.

Hold wire when cutting to prevent ends springing towards you.

Work from safe side of wires at angle poles and, to avoid injury to eyes by wire dust, **keep back to wind.**

For same reason **use emery cloth (never a knife)** to clean wires. **Eye Shields No. 3 should be worn.**

Reduce tension gradually when recovering wires and **lower** by means of **sash line** if liable to cause injury or damage.

Stand clear of men working aloft to avoid accidentally dropped tools, solder, etc.

POWER PLANT

(LINES, Overhead, J 1201)

Keep yourself and all wires, ropes, etc., clear of all low, medium and high voltage lines and plant.

On poles carrying P.O. and power wires, i.e., "joint poles," keep self and equipment **clear of power wires and stays.** Do not touch any metal work above the P.O. wires or climb above the DANGER notice. Do not use climbing irons when the pole carries high voltage wires—all work must be done from a ladder which should not project above the uppermost P.O. wire. **Take particular care when working from a metal ladder.**

Do not touch, or allow wires to come into contact with, a cradle guard under a high voltage line.

Never run P.O. wire ABOVE a high voltage line or other high voltage equipment.

Never erect temporary overhead wire to replace faulty underground pairs **at a power crossing.**

Neon signs—have power disconnected before working near a neon sign.

Working near to low or medium voltage power lines (under 650 volts)—**use " sash line and loops " method** to erect or recover wires which cross above or below a power line or are liable to make contact with one. *Treat insulated power wires as bare wires.*

Wear rubber gloves when handling wires, wet ropes, etc., which might make contact with a power circuit—see that gloves are in **good condition** and keep them **dry.**

Rubber gloves give no protection against high voltage circuits.

Fallen P.O. wires in contact with power wires (bare or insulated) or trolley wires of tramways or medium voltage electrified railways—**keep public away. Stop traffic** if necessary for safety.

Notify Power Supply or Traction Authority by *quickest* available means and get **power cut off.**

If public endangered or traffic stopped put on rubber gloves and remove wire to less dangerous position. Take care that no part of wire touches unprotected parts of the body. Rubber gloves are carried on every tramcar and trolley vehicle.

If no rubber gloves available **do not move wire until power is cut off,** *unless* **a person is in contact with it.** To drag wire or person clear use insulated tools, dry stick or dry clothing. Avoid touching the person or his damp clothing, e.g., under person's armpits.

Wireless Aerials. Any wireless aerial *may* be charged at a **dangerous voltage.** Where practicable, do not touch or allow wires to come into contact with any wireless aerial. If contact cannot be avoided **use rubber gloves.**

Renewal of line fuses in pole test boxes, etc. Never renew a blown fuse without **first testing lines for contact** with **power** circuits as follows :—

First connect one end of a (preferably insulated) wire to the earth terminal ; then put on rubber gloves and apply the free end of the wire to the terminals on the line side of the fuse. If sparking occurs locate power circuit contact and get cleared before further work is attempted.

TREE CUTTING

(*LINES, Overhead, J* 1001)

Use ladder to ascend trees.

Rest ladder against trunk or stout branch.

Obtain firm foothold—do *not* sit on branch to work.

Use safety belt and, if necessary, **safety lines.**

WORK IN DANGEROUS PREMISES

(*STAFF, Establishment, E* 0032)

Before proceeding with **work** where there is a **risk of danger** from explosives, explosive gases, petroleum, radio active materials, poisonous substances, or any other dangerous materials, **consult a responsible representative of the subscriber and obtain,** IN WRITING, **a statement that the area** in which you require to work **has been rendered safe. Obey any instructions** which may be given and **take any other precautions** which may be necessary **for your own safety** and the safety of the subscriber's property.

WORK ON ROOFS

(*LINES, Overhead, J* 1001)

Make sure roof is safe before venturing on it, especially when outhouses, etc., are concerned. NEVER TRUST ASBESTOS CEMENT SHEETING. This, whether corrugated or flat, is unsafe. Corrugated asbestos sheeting may easily be mistaken for corrugated iron, especially if painted. Use duckboards or ladders when crossing.

Use lifeline of 2 in. rope fastened to **firm support** when **working on sloping roofs**—sash line must not be used.

Do not attach line to window frames, weak chimney stacks or other **insecure fittings** and keep line **clear of sharp edges.**

Use duckboards and ladders, where possible, to provide easier foothold and reduce risk of damage to roof— make sure they are **sound and securely fastened.**

Sprinkle sand, ashes or salt and exercise special care when roof is slippery.

Crawl on hands and knees on a steep roof—do not walk.

Do not tread on skylight frames. In smoky localities skylight frames may not easily be distinguished.

Keep on side of wires opposite to the direction of pull.

Use sound strong ropes for hoisting and **stand clear** during hoisting operations.

Keep tools in tool basket and **secure basket** to prevent slipping—see that tension ratchets are securely attached.

Clean out gutters of sloping roof from ladder, when possible. If clearing is done from roof *do not work single-handed.* Have mate standing by, and, in addition, **use safety belt and life line.**

Ease gently if line or wire becomes entangled in roof tiles or slates—do not jerk or tug.

Take all steps to ensure the safety of the public as well as your own.

WORK ON RAILWAYS

(*LINES, Overhead, J* 1101)

Read LINES, Overhead, J 1101 before commencing work on a railway.

Walking on Railways

Ascertain the direction of traffic on all tracks before entering on the railway.

Keep on right-hand side of railway, when possible, using recognized paths—if not possible, walk **between right-hand rails** and **move to right if** train approaches **from** *either* **direction.**

Exercise special care when crossing rails, especially at junctions, goods yards and sidings.

Avoid treading on switch rails, crossings, rods or signal gear.

Keep sharp look-out in both directions, especially when more than two tracks exist.

Exercise special caution when smoke or steam likely to obscure track as trains may approach simultaneously from opposite directions and *may not be distinctly seen or heard.*

Avoid walking through tunnels if work permits.

Do not follow up external faults after dark.

Hand Signal-men and Watchmen

Before commencing work see that **hand signal-man** (flagman) **is in attendance, if risk of danger** to railway traffic.

Appoint **watchman** in **busy or difficult situations** to work in close co-operation with hand signal-man—additional watchmen may be necessary

(*a*) on curves or elsewhere when view is restricted

(*b*) on single lines or when working on more than one set of rails

(*c*) in tunnels.

Place watchmen within earshot of all workmen.

Work in Tunnels

Exercise special care—**oncoming train often cannot be heard** until it enters tunnel.

Before commencing work find out **position of nearest refuge.**

Employ mate for *each* **man working on ladder** to assist in removal of ladder on receipt of watchman's signal.

Place ladders **lengthwise** in tunnel on approach of train.

If clear space between outer rail and wall is less than 4 *ft.* 6 *in. and refuge is not handy, lie flat on ground in* 6 *ft. way or between rail and wall as train approaches.*

HANDLING STORES AND PLANT

Exercise care in handling stores.

Avoid fouling signal wires, bridges and other railway property especially when handling poles.

Keep permanent way clear of stores and plant when possible.

Obtain authority of Permanent Way Inspector and observe carefully his instructions when it is **necessary to obstruct track** with trolley or other plant.

Do not carry ladder single-handed.

Ensure that bare wires or other uninsulated materials do not cause contacts between the running rails.

TRAVELLING

Do not travel by goods train unless special arrangements for this have been made.

Do not enter or leave a train in motion.

Do not drop stores from train in motion.

ELECTRIC RAILWAYS

(*See LINES, Overhead, J* 1201 *for additional precautions where the trains are run from overhead conductors*)

Observe following **additional precautions** where **conductor rails** are in use :—

Avoid stepping on " live " or other rails.

Wear rubber gloves where there is slightest risk of contact with live rail.

Keep wires, metal work and wet clothing clear of all rails.

Avoid contact with all railway cables running alongside lines.

Keep away from flood water lying on the surface of the permanent way—it may be highly charged with electricity.

BLASTING

(*LINES, Overhead, A* 3090)

Blasting must only be done by men qualified on a course of explosives at Regional Training Schools or by men possessing suitable qualifications (e.g. certificate of competency from a recognized School of Mines).

Use special containers provided for conveying and storing explosives. Keep containers locked when not in use.

Never keep detonators in same container as other explosives.

Use only the special tools provided for crimping, tamping and piercing.

Avoid contact with paste in gelignite cartridge and allow fumes to disperse in blown hole before working in it.

Do not handle explosives during approach or progress of a thunderstorm.

Smoking within 30 ft. of explosives being handled is prohibited.

Take only explosives needed to the bore hole.

Do not allow safety fuse to become kinked or sharply bent.

Do not use force in attaching detonator to safety fuse.

Before firing charge check adequacy of :—

(*a*) damping material near charged hole to prevent injury or damage

(*b*) time allowed to get outside the area likely to be affected by flying debris

(*c*) warnings to public and traffic, also ensure that when safety fuse is used it is straight and not coiled on itself.

The firing handle of the exploder must always be in the possession of the man fixing and preparing the charge for detonation.

HANDLING LEAD

(*LINES, Overhead, J* 1001)

Use leather gloves if considerable amount of handling necessary.

Cut and trim only with **official pocket-knife** *which should not be used to cut food, tobacco, etc.*

Do not expose wounds or scratches to risk of infection.

Keep soiled hands away from face—*wash with soap and brush* before meals.

If lead-poisoning is suspected, consult **medical officer** immediately.

COAXIAL CABLES

Never work on coaxial cables until the power has been disconnected.

Never open up a coaxial cable unless you or your foreman have the token key in your possession indicating that the power is off. In spite of having the key, **always test for safety** by means of a Screwdriver, No. 10, which contains a neon bulb, see LINES, Underground, F 5401, etc.

MANHOLES AND JOINT BOXES

(*LINES, Underground, C* 5901, *F* 3080, *J* 1111, *J* 1150, *TOOLS & TRANSPORT, Hand Tools, G* 1200)

Loosen jammed covers by mechanical means.

Never use methods involving flame or causing **sparks. Gas** may be present.

Keys only should be used **for raising covers.** *Never put fingers under partly raised covers.* Do not use worn or damaged keys.

Petrol, other than that contained in blowlamps, must not be taken into any jointing chamber.

Guard against members of the **public stepping into open boxes** by fixing guards before lifting covers.

USE OF POT AND LADLE

(*LINES, Underground, D* 3301 *and F* 3240)

The ladle must be thoroughly dry when it is inserted in the molten metal, otherwise the resulting sudden generation of steam may cause an accident.

GASES IN UNDERGROUND STRUCTURES OR PLANT

(LINES, Underground, J 1101, et seq.)

Never bring a naked light near *before* **testing for gas.**

Always follow **Gas Test procedure** (see LINES, Underground, J 1111, J 1122 and J 1133, and Indicator Instruction Book, A 1040) *before* **work is commenced** and where necessary while working operations are in progress.

Never use faulty solution or solution and test papers *not* supplied by the Supplies Dept.

FIG. 13—ALWAYS MAKE GAS TESTS PRECISELY IN ACCORDANCE WITH THE INSTRUCTIONS.

Always keep phial of solution, test papers and indicator in their cases when not in use.

Keep testing appliances clean and in good working order.

When coal gas detected follow correct procedure immediately (see LINES, Underground, J 1111).

SUBWAYS

Smoking or use of **matches** or other **naked lights is strictly prohibited.**

Use only **safety lamps** in all unlighted subways and tunnels.

UNDERGROUND STRUCTURES OR PLANT CONTAMINATED WITH SEWAGE

After working in contact with sewage **wash** your hands and forearms **thoroughly with soap and warm water. If your clothes or boots are contaminated with sewage, wash thoroughly after handling them.** It is **particularly important** to do this **before taking any food or drink.** Avoid rubbing your mouth or nose with your hands while at work.

Take particular care to **wash thoroughly any cut, scratch or abrasion** of the skin as soon as possible, whether the injury was caused on the work or not, then **apply an antiseptic** to the wound and **cover it with a sterile dressing** from the first-aid outfit. If you have to go to your doctor or to a hospital while you are on this sort of work, be sure to inform them of the nature of your recent occupation.

SYMPTOMS, RESCUE AND TREATMENT OF PERSONS SUFFERING FROM EFFECTS OF GAS

Remove victim at once into fresh air. Send for a doctor immediately in all cases.

The rescuer must **hold his breath** while effecting the rescue. (Note. **Forced breathing** of 12 or more deep breaths taken in quick succession immediately before attempting the rescue will prolong the period during which breath can be held and thus enable fairly strenuous work to be performed for a period of about 60 seconds without breathing.)

Do not attempt to use a gas mask or wet handkerchief as a protection against carbon monoxide.

Type of Gas	Symptoms	Treatment
Carbon monoxide (coal gas, petrol engine exhausts, etc.)	1. Lassitude, giddiness, vomiting, fall in body temperature, indistinct vision, loss of muscular power, breathlessness, palpitation, headache	Complete rest, quiet, fresh air, warmth ; if breathing shallow or threatens to fail apply artificial respiration *Never walk patient about*
Effect :— Poisoning	2. Loss of consciousness, breathing shallow or absent	Artificial respiration, when breathing restored watch for relapse. Complete rest, warmth, energetic massage of limbs in upward direction *Never give a drug (such as aspirin) to relieve headache*
Foul air, asphyxiating gases, etc. (oxygen deficiency)	1. Headache, indistinct vision, mental dullness, distressful panting, loss of muscular power	Fresh air, warmth, if breathing shallow or threatens to fail apply artificial respiration
Effect :— Suffocation	2. Loss of consciousness, breathing shallow or absent	Artificial respiration—warmth

ARTIFICIAL RESPIRATION

To Revive Persons suffering from the effects of Electric Shock, Gas or Foul Air

Send for a Doctor.

Start operations as soon as possible *and keep going* until Doctor arrives.

If you are already trained in a method not illustrated below, e.g. the Holger Neilson method, it may be used, otherwise proceed as follows :—

Lay the patient on the ground, preferably on a dry coat or a dry tarpaulin, face downwards, arms above head, head turned to one side, so as to keep his nose and mouth away from the ground.

Kneel astride or at one side of the unconscious man, *facing his head*, at about the level of the man's hips.

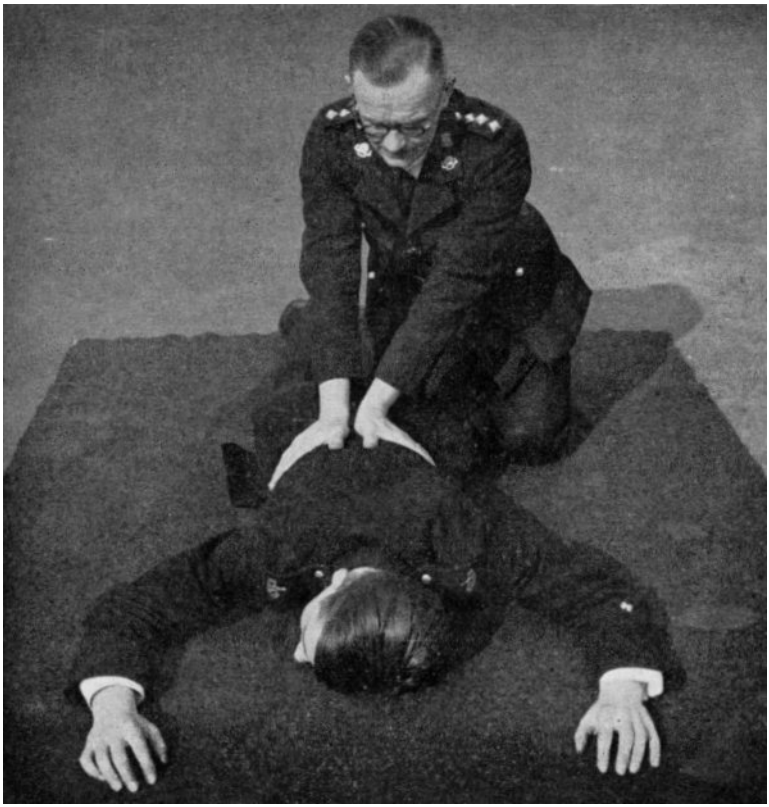

FIG. 14.—PLACE YOUR HANDS ON THE SMALL OF THE BACK, THUMBS PARALLEL AND NEARLY TOUCHING AND FINGERS CLOSED, POINTING TO THE GROUND

Induce expiration. Lean forward, keep the arms straight and allow the weight of the body to fall on the wrists, and so apply a firm downward pressure. *Do not use violence.* This produces expiration and drives out air (see Fig. 15). This part should occupy the time necessary to say " one thousand, two thousand."

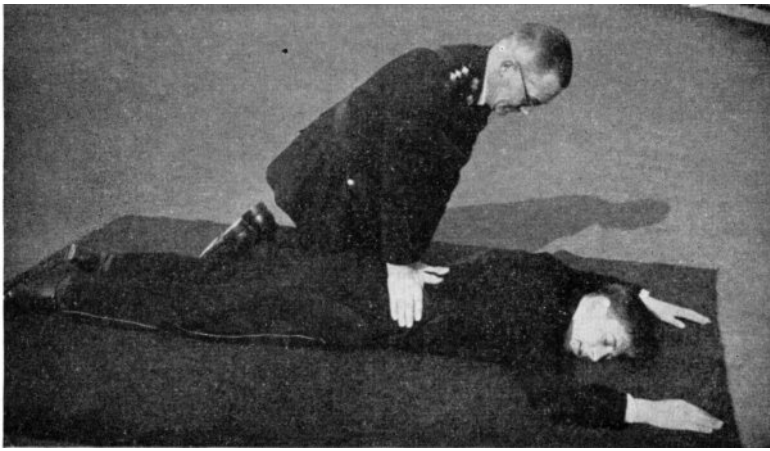

FIG. 15

Induce inspiration. Swing backward, rapidly releasing the pressure, but *do not remove your hands from the body*. This produces inspiration and air enters the lungs (see Fig. 16). Say " three thousand, four thousand, five thousand."

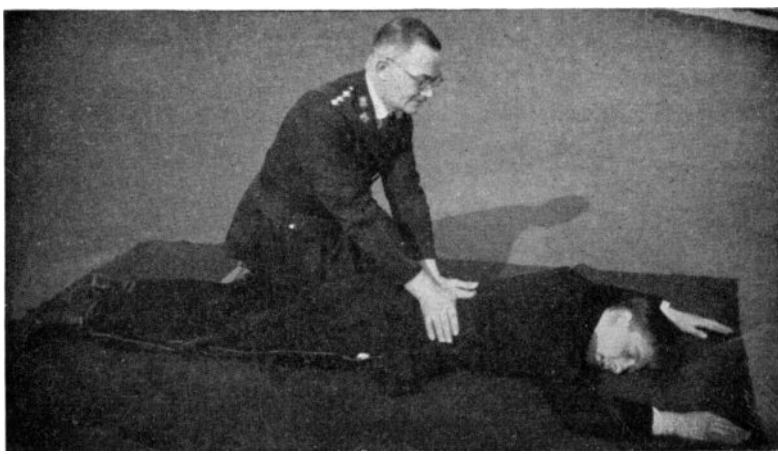

FIG. 16

Keep repeating this forward and backward movement (12 to 15 times a minute) without any marked pause between the movements.

When natural breathing begins regulate your movements to correspond with it—that is, as the man breathes out apply the pressure and as he breathes in release the pressure.

Do not use a stimulant or even water unless ordered by the Doctor.

TOOLS

(*TOOLS & TRANSPORT, General, A* 5011; *LINES, Overhead, J* 1001)

Safety Belts

Take care of your belt—dress monthly with " Dressing, Leather." Store carefully—keep it away from heat and acid.

Ladders

Examine frequently for signs of weakness. Store in cool and dry situation clear of ground. Paint wooden ladders at least once every *two years.*

Ropes and Sash Lines

Inspect regularly and carefully. Renew if showing signs of weakness or mildew. Spread on ladder or pole to dry—do not coil when wet.

Sling Chains

Send to Supplies Dept., Birmingham, once every *twelve months* for annealing.

Rubber Gloves

Exchange at Section Stock every *six months* for examination and for retested gloves.

Vices, Blocks and other appliances

These must be maintained in good order.

Cold Chisels, Wedges, Jumpers, Punches and similar tools

The heads of these tools should be ground to a chamfered edge when signs of mushrooming are noticed. This will avoid fragments flying off when the tool is hammered. During plugging operations, to avoid injury to eyes, Eye Shields No. 3 should be worn.

BLOW LAMPS

(*TOOLS & TRANSPORT, Hand Tools, L* 1167, *L* 1168; *Form A* 447)

FIG. 17.—NEVER LIGHT A BLOWLAMP IN A MANHOLE, FOOTWAY BOX, VEHICLE OR NEAR INFLAMMABLE MATERIAL

ALL TYPES

1. Never use leaded petrol or methylated spirit in a blow lamp. **Never fill a lamp near a fire or naked light** or more than 2/3*rd full.*

2. Always tighten filler cap *by finger and thumb only*. If this is not effective renew washer. Always carry spare washers.

3. Never interfere with the base nut of the lamp, except to keep it tight.

4. Never interfere with the **safety valve.** Return lamp to stores if valve is out of order.

5. When the cleaning needle is broken never use pieces of wire, etc., to clean the burner jet. Change the lamp.

6. Never light a lamp in a **manhole or footway box** or near **inflammable** material.

7. Never allow petrol used for lighting to overflow the cup. Pour petrol direct into cup and not over the nozzle.

8. Never light a lamp **near a can of petrol or other inflammable liquid** or if it has been spilled on the **hands or clothing.**

9. When a lamp does not start properly at the first attempt make sure the flame has been **completely extinguished** before repriming.

10. Never place a lamp on a fire or gas stove *or use the flame of one lamp to heat another.*

11. Return to stores any lamp which does not burn satisfactorily.

12. **Never turn down a hot lamp suddenly** *as pressure rises rapidly.*

13. Never remove **filler cap** while lamp is **hot or under pressure.**

14. Never stand a **lighted lamp** in a position likely to cause **injury** to persons or **damage** to clothing.

15. Never leave a lighted lamp **unattended.**

16. Never light a lamp inside, or take a lighted lamp into a vehicle.

LAMPS WITH PUMPS—ADDITIONAL PRECAUTIONS

17. **Never use pump until the lamp is alight** and then only sufficient to ensure a good flame.

18. Never use the pump with the regulating valve closed.

USE OF BLOW-LAMPS INDOORS

19. Blow-lamps with pumps must not be used indoors.

20. Blow-lamps without pumps must not be used indoors without permission in each case from the foreman or Inspector.

21. Make sure that fire-fighting appliances including sand are within easy reach.

22. **Do not fill** blow-lamps on a **floor** made of, or covered with, **inflammable material.** Wherever possible blow-lamps must be **filled** and **lit outside** buildings.

23. Liquid fuel other than that contained in the lamp must not be taken into any room in which the lamp is to be lit or used.

24. Take **special care** to observe strictly all blow-lamp precautions.

GAS CYLINDERS

(GENERAL, General, Z 3004)

STORAGE AND HANDLING

Never allow a cylinder to be dropped, subjected to shock, or to fall from a vehicle.

Never place a cylinder on a vehicle so that it extends beyond the limits of the vehicle.

Keep cylinders away from all sources of heat, including direct sunlight, and away from sparks and corrosion.

Do not lay cylinders in contact with damp floors or ground.

Valves or fittings must be kept clean and free from grit. Never lubricate cylinder valves or fittings or allow them to come into contact with any oil or grease, nor handle them with greasy hands, gloves or rags. Oil or grease **will burn violently** in the presence of oxygen; if the oxygen is under pressure an **explosion may result.**

WELDING PLANT

Before a welding plant is moved, the by-pass flame should be extinguished and the gas-cylinder valves shut off.

CUTS AND WOUNDS

Carefully protect any kind of cut or wound, however slight, from dirt, rust, creosote, etc.

Cuts, wounds, and **abrasions, however slight,** should be sterilized as soon as practicable and covered with a sterile dressing. **Serious wounds should receive medical attention.**

CLEANLINESS AT MEALS

After handling copper, bronze, or J. or P.B.J. wire, lead covered cables, or battery materials, always **wash hands with soap and brush before meals, etc.,** using hot water if possible.

BATTERIES

Strict personal cleanliness is essential after handling battery materials. **Smoking** and the use **of naked lights** in battery rooms is **forbidden.**

SULPHURIC ACID (*GENERAL, General, A* 0551)

Wherever Sulphuric acid, whether strong or diluted, may be handled **preventive stores** with an **Instruction Card (A 153)** must be kept handy.

See that the stores are always ready and in good condition, and read and understand the directions.

ALKALINE BATTERY ELECTROLYTE (*TOOLS & TRANSPORT, Hand Tools, G* 1100)

Whenever alkaline battery electrolyte is being handled **Eye Shields No. 3** *must* be worn.

CABLE WAXING

When using heated bees-wax for impregnating switchboard cables, the precautions against fire and accident laid down in INTERNAL WIRING, General, A 1101 should be carefully observed. **The greatest care should be exercised when working on ladders or raised platforms.** Bees-wax should not be left unattended while being heated, unless the heater is efficiently controlled by a thermostat.

PETROL

Naked lights are not allowed within **20 ft. of a petrol store or empty containers.**

Do not smoke while handling petrol or empty petrol cans.

Cover spilt petrol with sand or earth at once.

STARTING UP INTERNAL COMBUSTION ENGINES, INCLUDING MOTOR VEHICLES

See that the **starting handle** is hanging **straight down.** Push well in and pull up smartly. Grasp the handle with the fingers only—*keep the thumb clear.*

INFLATION OF TYRES AFTER FITTING TO ROAD WHEELS

Always use tyre inflation device in the M.T. Workshop when inflating tyres after fitting to road wheels with flat base, straight sided rims (i.e., where one rim is detachable and a spring locking ring is employed). This type of wheel is fitted to postal vehicles of 200 cu. ft. capacity and upwards and with few exceptions to engineering vehicles of one ton capacity and upwards.

GARAGES

(*ACCOMMODATION, General, F* 0011)

Keep garages well ventilated.

Never start up an engine in a closed garage.

MOTOR TRANSPORT

(*TOOLS & TRANSPORT, Vehicles, B* 2001, *D* 0401, *and Ministry of Transport Booklet "The Highway Code"*)

Before starting out each morning ensure that the vehicle is roadworthy.

Drive at all times with due care and attention.

No person must be carried in the cab unless properly seated on the seats provided.

See that the load carried at any time is **not excessive** and is **properly distributed and secured.**

Load and unload poles under the direction of an experienced officer and see that any mechanical aid available is used and used correctly.

Securely lash heads and butts when poles have been placed in position on a vehicle. **Securely lash all ladders** at each bracket or in two places at least.

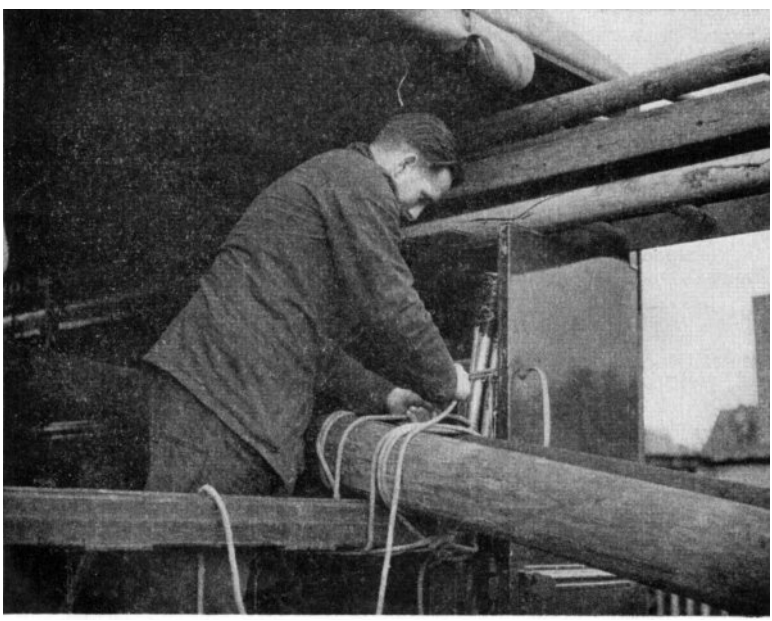

FIG. 18—SECURELY LASH HEADS AND BUTTS OF POLES CARRIED ON A VEHICLE.

Apply hand brake before quitting vehicle. When stopped on a hill, turn the wheels which are down the hill so that **the vehicle is locked against the kerb** and **engage low gear.**

Do not drive the vehicle while making observations of overhead plant.

Turn off the battery master switch (unless lights are required) whenever the vehicle is to be left unattended for a considerable time or when in a garage.

Lighted blowlamps or other " naked flame " appliances must neither be hung upon a motor vehicle nor taken inside one.

MAINTENANCE OF MOTOR VEHICLES

Never work underneath a van which is supported only on a jack (or jacks) or in slings. **Always use positive supports** such as trestles, or chassis stands, or wood blocks.

Do not use a hammer and chisel to cut off old brake lining rivets before knocking them out. Prise off the brake lining first then saw off the rivets with a hacksaw.

Never drain petrol from a vehicle tank or dismantle a vehicle petrol tank which contains petrol whilst the vehicle is standing over an inspection pit. Always move the vehicle to a clear space on the workshop or garage floor, or, better still, outside in the open air if this is practicable.

Always have a **supply of sand** at hand and cover spilt petrol with sand immediately.

Do not attempt to repair a drum, tank or can which has contained petrol or other inflammable liquid by means of heat such as a blow-lamp, welding outfit, or soldering iron until you are quite certain that all trace of inflammable vapour has been removed from the vessel. Such attempts are highly dangerous and are forbidden by the Factories Act.

Filling and emptying a petrol tank, drum or can several times with boiling water should not be regarded as an adequate method of removing petrol vapour for repair purposes. (For method of preparing a drum or tank for repair see TOOLS & TRANSPORT, Vehicles, J 9001 (M), paragraph 118).

MACHINERY AND MAINS OPERATED PLANT

Remove or fasten any loose garments when in the vicinity of **working machinery** of any kind and **stand so that clothing cannot get caught** by moving parts or ropes.

While a **machine is running, alterations** to the running conditions or the cleaning or moving of adjacent stationary parts is to be done **only by men well acquainted with the construction and working of the machine** they are handling, *and only then when it can be done with safety* and the nature of the service supplied by the machine makes it undesirable to stop the machine.

Lifts

Before commencing work, **put lift out of service**; in the case of work on the motor controller or wiring, **disconnect the electricity supply at the main switch in the motor room.** *Any condensers on the controller should be discharged to earth.*

When working on top of the car, **be careful of head room** as lift approaches the top floor.

Do not enter a lift well on a subscriber's premises **unless** the owner's qualified maintenance **engineer is in attendance.**

Take care to **avoid the counter-weight** whilst working in the lift well or on top of the lift car. *Keep all wiring clear of the counter-weight.*

Never work beneath a lift until it is certain that the lift is out of use.

If the lift car has a glass roof, protect the glass.

None of the safety devices, e.g., gate locks and contacts, governors, limit switches, **may be put out of use** to facilitate the completion of any work on the lift.

Worn ropes removed from lifts **must not be used** for any other purpose. They should be disposed of as scrap.

Winches

When not in use see that action is secured or locked where possible so as to prevent misuse.

Mains Operated Plant and Apparatus

Always see that **supply is completely disconnected** *before* carrying out any work on electric motors, fans, starting or control switches, heaters or other devices operated from the mains.

Mains Operated Telecommunications Apparatus

Such apparatus has a **protective cover** and is labelled **DANGER . . . V A.C. or D.C. Never work on live apparatus unless absolutely necessary. Only competent persons** must work on **exposed live apparatus** and **great care to avoid danger** must be exercised.

Main Distribution Frames

A **blown fuse or heat coil** indicates a fault somewhere on the circuit and the line may be **live.** To minimise the risk of **electric shock** from an external line, care should be taken to avoid contact with metal work when a **fuse or heat coil is being replaced.** If a fuse or heat coil blows shortly after being inserted, or if for any other reason contact with a power circuit is suspected, the condition must be **fully and cautiously investigated.**

MANUAL WEIGHT LIFTING

Do not try to lift excessive weights alone

Maximum Loads

The maximum safe load which can be lifted without assistance depends upon the size and shape of the load, upon the physique of the lifter, and upon how frequently the load is lifted.

The following maximum loads for individual lifting indicate upper limits only.

Men	130 lb.—compact load
Young men 16 to 18 years	60 lb.—intermittent work
Young men 16 to 18 years	45 lb.—continuous work.

The lifting may be regarded as continuous if a total of one ton or more is lifted each day.

Before lifting a heavy article estimate the weight roughly and if beyond your lifting capacity, or if on attempting to lift the load proves deceptively heavy, **DO NOT LIFT ALONE BUT SEEK ASSISTANCE.**

When lifting heavy weights from floor level lift in stages, from floor to knee, from knee to bench or platform and thence to shoulder if necessary. The stomach muscles should be kept taut, the breath should not be held and to prevent loss of balance the feet should be slightly apart, with one foot in advance of the other.

Lifting from ground level should be done chiefly with the leg and thigh muscles by bending at the knees, keeping the back straight and with the arms fully extended downwards.

If the load interferes with the natural movement of walking or if the load is held outside the body's normal base of support, necessitating a bent body or awkward gait, then **unnecessary strain is caused.** It is also more difficult to maintain balance under such conditions.

Team Lifting

The manpower must be appropriate to the load and the team must not be handicapped by inequalities in height, weight and physique.

A rough mental estimate of the effort required must be formed for each member of the team, and then positions selected so that **each man takes his fair share of the load to be lifted.**

Effort must be synchronized by the appointment of and obedience to a leader.

FIG. 19.—AT COMMENCEMENT OF LIFT THE BACK SHOULD BE STRAIGHT AND ARMS FULLY EXTENDED

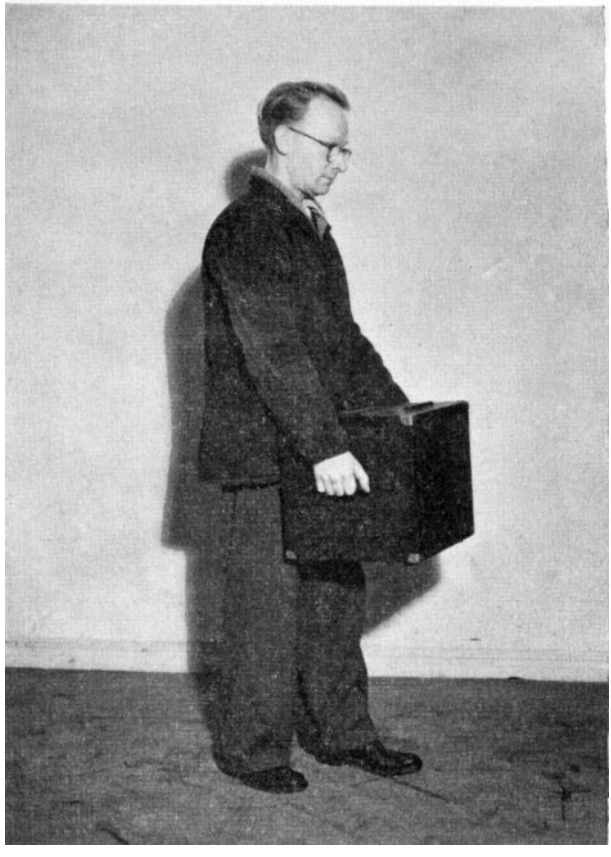

FIG. 20.—ON COMPLETION OF LIFT MAINTAIN YOUR BALANCE BY CORRECT POSITIONING OF FEET AND ARMS

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