CHAPTER VIII

Presses and Pressing

1. The introduction of mechanically-operated presses has reduced the necessity for hand ironing to a minimum. To meet requirements in the vast field of work which is capable of being pressed mechanically, manufacturers have developed numerous types of presses ranging from general purpose machines to those designed for specific duties such as shirt, coat and pillow-slip work.

The size of machines manufactured for a particular duty varies also with individual makers, so that a very wide choice of machinery is available to the laundry trade.

Fig. 65 (on pages 78-79) illustrates a typical selection of lower buck press specifications, and demonstrates the flexibility of manufacture available.

PRESSES, ETC.

2. Types of presses used in Admiralty services

The following types of presses are in general use in H.M. Ships and Shore Establishments and the products of numerous manufacturers are accepted.

General purpose press with rectangular buck-Fig. 66.

General purpose press with tapered buck-

Shirt bosom press with neckband attachment-Fig. 68.

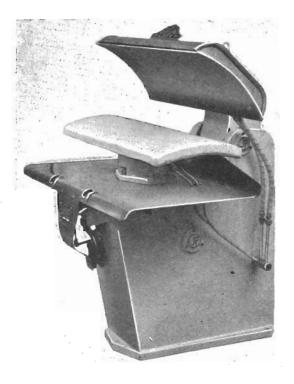


Fig. 66.—General purpose press with rectangular buck.

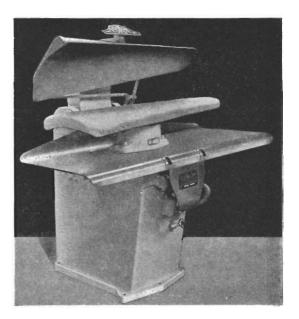


Fig. 67.—General purpose press with tapered buck.

Shirt body press (also G.P. press with rectangular buck)-Fig. 66.

Collar and cuff (triple head) press-Fig. 69.

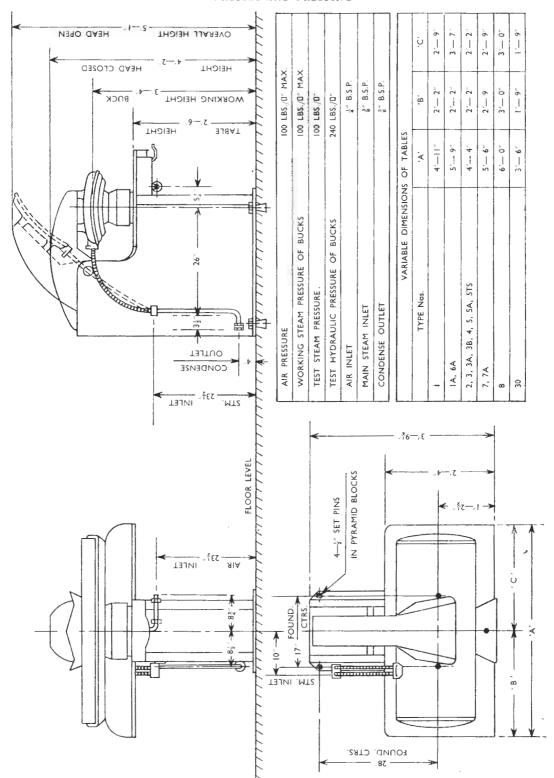
Single yoke press

Duck coat press Not illustrated. Garment press

3. Classification

Presses can be classified generally into three groups, namely:

- (a) Presses having a stationary lower buck with a moving head.
- (b) Presses having a fixed head with one or two movable lower bucks.
- (c) Garment presses used mainly in conjunction with a dry cleaning unit for pressing woollen and serge materials.



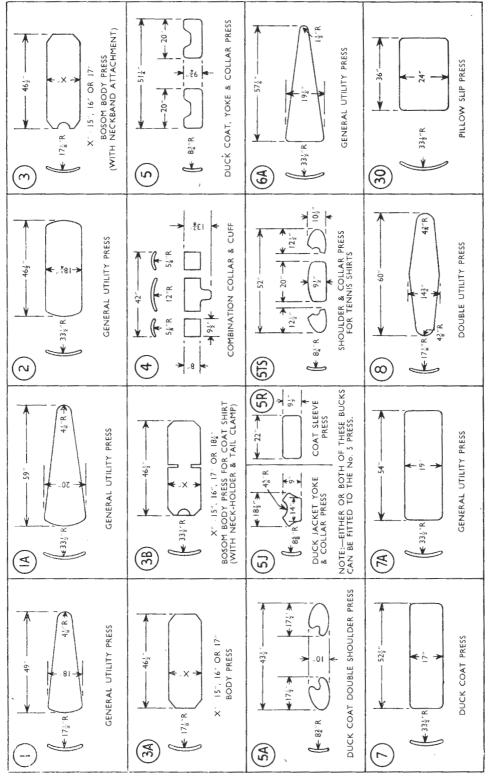


Fig. 65.—Typical shapes of press bucks.



Fig. 68.—Shirt bosom press with neckband attachment.

STATIONARY LOWER BUCK PRESSES

4. Description of typical press

In its essential features and irrespective of the duty for which the press is designed, the machine consists of a pedestal base (preferably of fabricated construction for shipboard use) carrying a steamheated stationary lower buck on which the work to be pressed is placed.

A steam-heated press-head is brought into contact with the work to be pressed by means of a system of levers. The work is processed in the damp condition as received from the hydro, and the heated head serves the dual purpose of both drying and imparting finish to the garment.

A table, supported on the pedestal below the fixed buck, is provided, on which the work can be conveniently prepared for pressing.

The steam supply adopted practically universally by all press manufacturers to both the head and the lower buck, is 100 lb. per sq. in.

A noteworthy feature of most presses is the flexible steam and drain piping necessitated by the movement of the press head. The air supply pressure necessary for efficient operation is approximately 85 lb. per sq. in., but in all instances the pressure recommended by the individual maker should be worked to. The drains from the head and lower buck are trapped.

THE LOWER BUCK

This is a steam-heated chamber having a convex top, the contour of which varies with the duty for which the press is designed. The pressing surface of the buck is resilient, and in most cases the buck

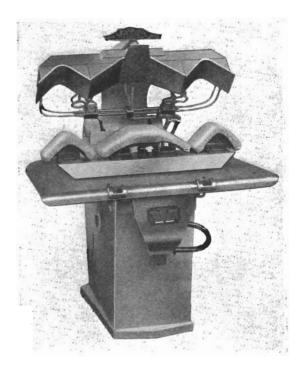


Fig. 69.—Triple head, collar and cuff press.

seat is given a further measure of flexibility in its mounting. The latter feature assists in the preservation of complete alignment when contact with the upper head is established, and thus ensures an even distribution of pressure over the whole surface of the lower buck. In most makes of press the resiliency is obtained by means of spring padding, a typical example being that adopted by Messrs. Wm. Jack in the Jaxon type press, Fig. 70.

With this press the buck is built up in the following

order:

(a) Springs, easily detachable for replacement

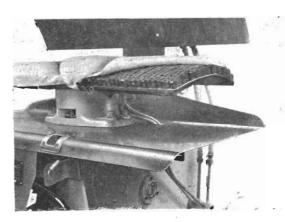


Fig. 70.—Typical build up of lower buck.

purposes, are secured by metal strips to the baseplate of the buck.

(b) The springs are covered by a pressed asbestos

pad, over which is placed

(c) One thickness of canton flannel or knitted cotton padding. A further thickness may be added when the clothing is bedded down.

(d) The whole is covered by a single thickness of calico sheeting of sufficient size to provide an overlap reaching to the underside of the buck, thus allowing for a hem to be threaded with cord for tying.

Means are provided to permit of the adjustment of pressure on the buck. This adjustment is usually effected by the provision of lifting screws situated on the underside of the lower buck. Pressure is increased or decreased by raising or lowering the buck within predetermined limits. A tell-tale indicator which registers the pressure on the spring padding is fitted on some machines.

THE PRESS HEAD

This consists of a steel, cast iron, or aluminium alloy steam-heated chamber having a very highly polished concave face, the plated surface of which mates with the padded profile of the lower buck. The polished head is capable of movement in the vertical plane on a fulcrum arm, the fulcrum pin being housed in the press pedestal. The weight of the press head is balanced by means of either counterbalance weights, or restraining springs, which also assist in returning the head from the "closed" to the "open" position.

5. Action of hand-operated presses

A few hand-operated presses are installed in H.M. ships but the majority of the presses installed are of the air-operated type. Manually operated presses have a wide handle fixed to, and projecting from, the head by which the operator pulls the head

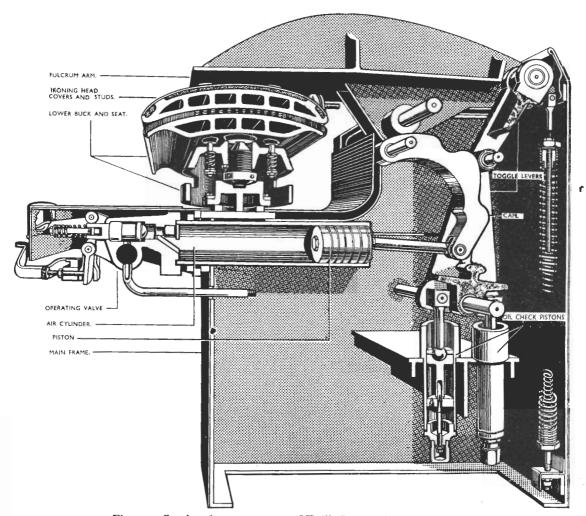


Fig. 71.—Sectional arrangement of Tullis Imperial type press.

down to the lower buck. With this type of press, both hands should always be used to depress the head. This prevents the possibility of burning the free hand, which might occur were one hand only used. When in the closed position, pressure is conveyed from the head to the lower buck by means of a foot-operated lever system, and the pressure maintained by a toggle. Damper gear is fitted to bring the head smoothly to rest on its return to the open position.

6. Action of air-operated presses

The method of operation of pneumatic presses varies with different makers, but in general conforms

to the broad principles described below and illustrated in Figs. 71 and 72. Movement of the head is obtained by means of an air-operated piston which conveys pressure to the head by means of a system of levers. The head is retained in the closed position by means of a toggle or cam mechanism, which automatically locks it when closed. The admission of air supply to the operating piston is controlled by two pushbuttons situated on the front of the machine. The air circuit is so arranged that both push-buttons must be depressed simultaneously before air is admitted to the cylinder. This is a positive safety device, designed to ensure that the operator's two hands are clear of the buck before the head can be lowered.

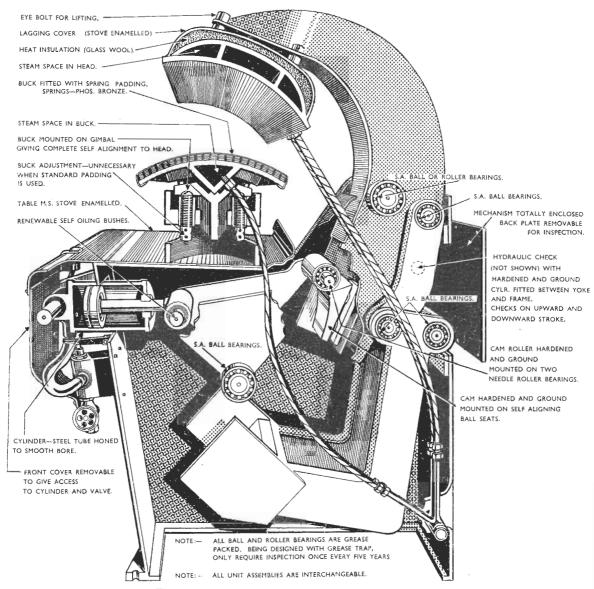


Fig. 72.—Sectional arrangement of Jaxon type press.

A separate lever is provided to exhaust the air from the cylinders; the head then returns to the open

position.

Movement of the head is worked in association with a shock-absorbing device. This usually takes the form of an oil-check piston directly coupled to the lever mechanism of the press head, thus ensuring a smooth movement of the head on to the work and the elimination of "slamming" when the head reaches the extreme up or down positions of travel.

7. General maintenance

(a) All bolts, nuts, etc., should be kept properly secure, as the securing arrangements have a tendency

to work loose.

(b) The machine should be regularly lubricated, particular attention being directed to the maintenance of the correct quantity of oil in the "oil check" mechanism.

(c) Air and steam connections must be kept tight, particular attention being paid to the steam glands and connections at the ends of the flexible steam and drain pipes.

(d) The steam-trap and air-strainer should be constantly maintained in an efficient condition.

(e) The press should not be allowed to continue working if a slamming action develops on the down or return stroke. If slamming occurs, immediate adjustment should be made.

(f) The press head should be kept in the open position when not in use, to prevent the padding from

being scorched.

(g) The press should be constantly maintained in a clean condition externally, and the mechanism kept free from accumulations of dust, lint, and excessive oil and grease.

(h) The air supply to the press should be "shut

off" when making internal adjustments.

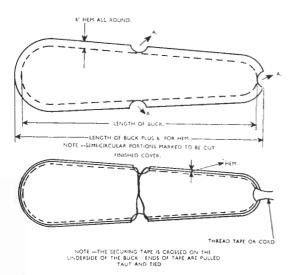


Fig. 73.—Method of cutting out a press cover.

CLEANING THE POLISHED HEAD

Particular care is necessary to preserve the highly polished surface of the press head. On no account must harsh abrasive or liquid metal polish be used. The press head should be cleaned daily with powdered chalk or lime on a damp cloth. Alternatively, the press head can be cleaned when hot by briskly rubbing the surface with a paraffin-waxed rag.

At the end of each day's work, the polished surface should be thinly smeared with a film of paraffin wax. This prevents condensation overnight, with the associated formation of rust. The film of wax should be rubbed off before commencing the day's work.

RE-COVERING THE LOWER BUCK

Ready-made replacement top clothing (press covers) are not supplied, but can easily be manufactured. Fig. 73 illustrates a method of making the replace cover for a general purpose press of the tapered buck type. The same principles can be applied for any shape of buck.

New covers should be washed before use. When the cover is removed for washing, the padding under should be shaken out and allowed to "open up" and soften. At this stage opportunity should also be taken to brush accumulations of burnt fibres and dust from the spring pad. The top cover should be washed weekly, or more frequently if the occasion demands.

TWIN PRESSES

8. Description

These presses are of the fixed head type with movable lower bucks. Various types are manufactured and are designed for specific duties dependent upon the shape of the lower bucks, such as shirt-pressing, duck-coat-pressing or general purpose work.

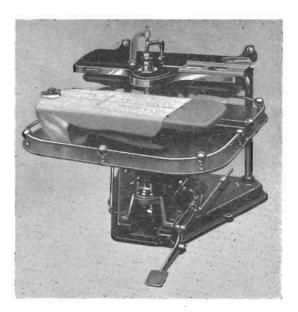


Fig. 74.—Twin rapid type shirt press.

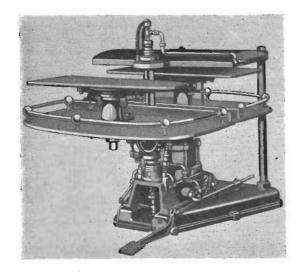


Fig. 75.—Twin rapid type general purpose press.

A number of "twin rapid" shirt presses are installed in Naval laundries.

The press, Figs. 74 and 75, is constructed with a turn table carrying two lower bucks which swing under a header situated at the back of the machine. The head and lower bucks are steam heated to a pressure of 100 lb. per square in. The table is rotated manually, but vertical movement of the lower buck towards and away from the press-head is arranged by air pressure acting on a ram. The bucks are released by pressing the foot treadle in the front of the machine. A centring device is provided to ensure the correct disposition of the lower buck beneath the press head, before vertical movement takes place.

With this type of machine, while the work on one buck is being pressed under the head, the other buck is in front of the operator, allowing removal and

relaying of the work to be effected.

Twin rapid presses of a type in which the table is rotated by compressed air are also manufactured.

9. Operation

(1) Before working the press each morning, open the by-pass valve on the $\frac{1}{2}$ in. trap, allowing steam to blow straight through, clearing the circuit of all condensate. This promotes rapid heating of the head and tables.

(2) When the head and tables are thoroughly

heated, close the by-pass. (3) The main air and steam stop valves should be

fully open when working. (4) When the table is central under the head, the pressure is automatically applied by the tappets opening the centre valve and admitting air to the cylinder.

(5) To release the pressure depress the foot lever, and when the table has dropped swing away from the head.

(6) The pressure between the head and the table is automatically maintained. As the padding is pressed down, the ram of the cylinder rises slightly to compensate for the reduced thickness of padding. No adjustments are required.

(7) At least 1; in. thickness of padding should be provided on the tables. With thin padding the table has to travel farther to reach the head, which causes unnecessary strain on the banjos and a larger air consumption.

(8) The press can be rotated in either direction.(9) When the press is not in use the steam supply should be turned off and the bucks lowered away from the press head.

10. Maintenance

(a) The machine should be thoroughly examined once a week to ensure that all bolts and nuts are tight, and that all moving parts are properly lubricated.

(b) Grease nipples should be given a charge of

grease each week.

(c) All valves should be properly adjusted to ensure that no leakage of steam and air takes place.

(d) The main and centring cylinders should be oiled weekly to keep the cylinder cups in good condition and to prevent corrosion of the cylinder walls.

(e) If leakage occurs at the stuffing-boxes, the gland nut should not be tightened excessively. Subject to the spindles being in correct alignment with the

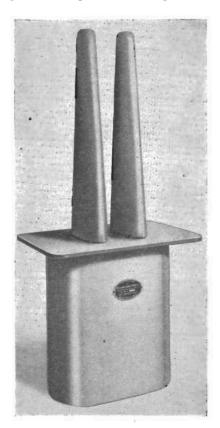


Fig. 76.-Double sleeve form.

stuffing-box, hand tightening of the gland nut should be quite sufficient to maintain a tight steam-joint.

(f) Always make sure that the air supply is shut off before making internal adjustments.

OTHER APPARATUS

11. The sleeve form

This item is an important component of the shirt unit and is ued to dry and smooth out the shirt sleeves and gussets.

Sleeve forms are of either the single or double type, and vary in shape according to the duty for which they are required, e.g., shirt work or coat processing. A typical double sleeve form, shirt type, is illustrated in Fig. 76. It consists of two steam heated "formers" mounted on a pedestal type base. Steam at a pressure of 100 lb. per square in. is admitted to the inside of each "former" casting. The drain from the "formers" is led to a steam trap.

12. The shirt-folding table

A shirt-folding table is supplied in large vessels. A typical table is shown in Fig. 77 and consists of a

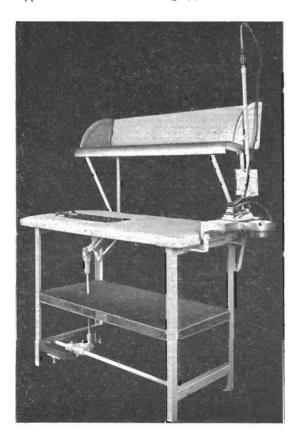


Fig. 77.—Shirt folding table.

fabricated framework carrying a padded top on which the shirts are folded and "finish" ironed.

On completion the finished articles are placed in the rack above the table. The table is fitted with a hand iron and damping bowl. The shirt is held in position by means of a foot-operated neckband attachment, and is folded around a highest plate former or folding blade.

PROCEDURE:

- (1) Insert a small metal stud in the stud holes.
- (2) Lay the shirt face downwards on the folding table.
- (3) Depress the foot pedal and place the neckband of the shirt around the neckband attachment.
- (4) Release the foot pedal, thus allowing the neckband attachment to grip the shirt firmly, and smooth out the shirt.
- (5) Bring the folding blade on to the back of the shirt.
- (6) Proceed as (k) to (k) of the shirt folding operation described, in para. 16 *i.e.*, when using the shirt-board.
- (7) Depress the treadle and slide the shirt off the blade.
- (8) Touch up the shirt as necessary with the hand iron provided.

LAYOUT

13. Arrangement of presses on installation

The layout adopted at the installation stage has a large effect on the subsequent production rate which can be obtained from a press unit. In this connection, the presses should be arranged where possible in a sequence of operation from left to right and be so disposed as to necessitate a minimum amount of movement by the operators when changing from one operation to another.

14. The shirt unit

An ideal arrangement of a shirt unit comprising the following items is illustrated in Fig. 78.

Work bin.

Double sleeve form.

Collar and Cuff Press (triple head).

Shirt body press.

Shirt bosom press with neckband attachment.

Shirt folding table.

Shirt hanger.

Although a layout closely approximating this ideal has been possible of achievement in certain isolated cases, it can seldom be realised in H.M. ships, as the siting of presses is governed by space limitations and normal shipboard obstructions such as pillars, ventilation trunking etc.

Typical arrangements of presses as installed in H.M. ships are indicated in Fig. 79.

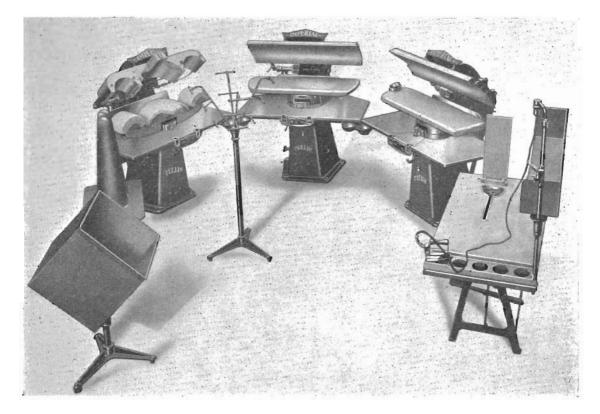


Fig. 78.—Arrangement of shirt unit.

PRESSING AND FOLDING

15. Sequence of pressing operations

In the finished pressing processes described in the next section the operations have largely been related to a general purpose press, to emphasise the general utility value and range of work which can be performed with this single machine. Where machines designed for specific duties, namely, collar and cuff pressing, shirt neckband pressing, etc., are installed, the particular operation should naturally be done on the special machine provided.

16. Shirts (Fig. 80)

(a) SLEEVES

Place the shirt sleeves over the sleeve former. While the sleeves are drying, the operator should take a careful hold on the cuff of each sleeve alternately, and dry the gusset by moving it around the top of the sleeve former.

(b) Collar and cuffs

Press the cuffs and neck band by laying these front downwards on the collar and cuff press, or G.P. press if the former type machine is not installed.

(c) SHIRT BODY, SIDES

Fold the shirt in halves and press the sides.

(d) SHIRT BODY, BACK

Open the shirt and place it on the press with the back in position. Most shirts have a pleat at the back; the tail piece should be pulled out allowing this pleat to fall in position before pressing.

(e) SHIRT BODY, BOSOM

Pass the shirt over the buck with the front uppermost. When available, the shirt bosom press with neckband attachment should be used and the neck band held in position accordingly. The shirt buttons should be fastened before the final pressing.

(f) No. 8's (COLLAR ATTACHED)

The sequence of pressing operations is as previously described, excepting that when the cuffs are being pressed on the collar and cuff press, the collar also should be laid out and pressed.

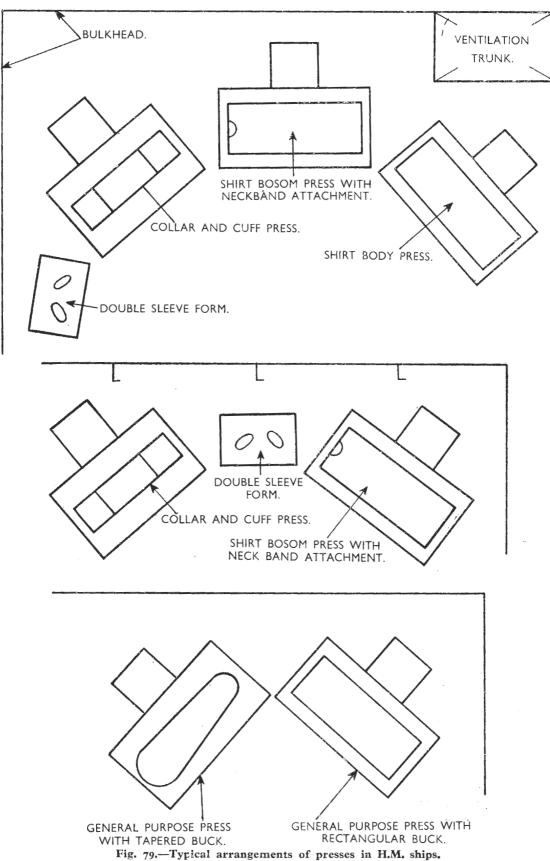
FOLDING—(See also Para. 12)

Shirts can be effectively folded by using a shirt-folding board which consists of a rectangular piece of thin wood of size 14×8 ins.

Insert a small metal stud in the front stud holes.

(g) Lay the shirt face downward on the table, and place the folding board centrally on it, at a position in line with the top edge of the shoulders.

LAYOUT 87



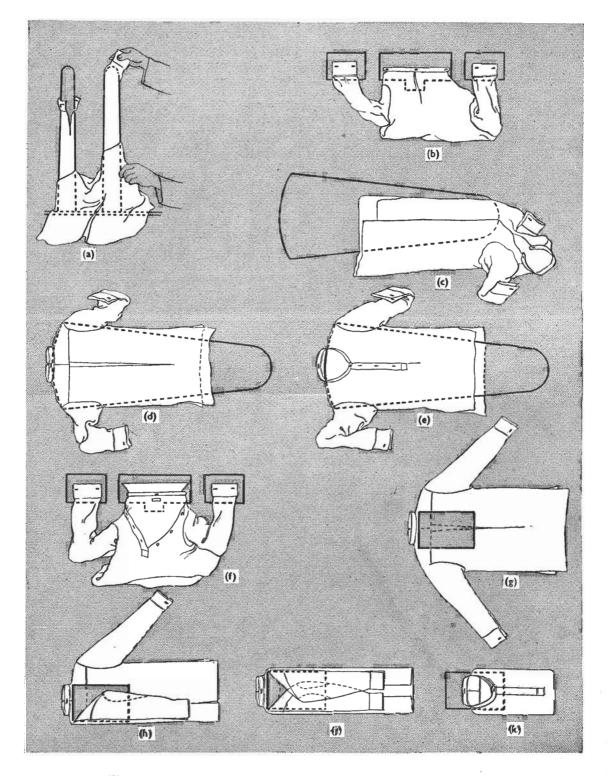


Fig. 80.—Shirt pressing and folding operations using limited facilities.

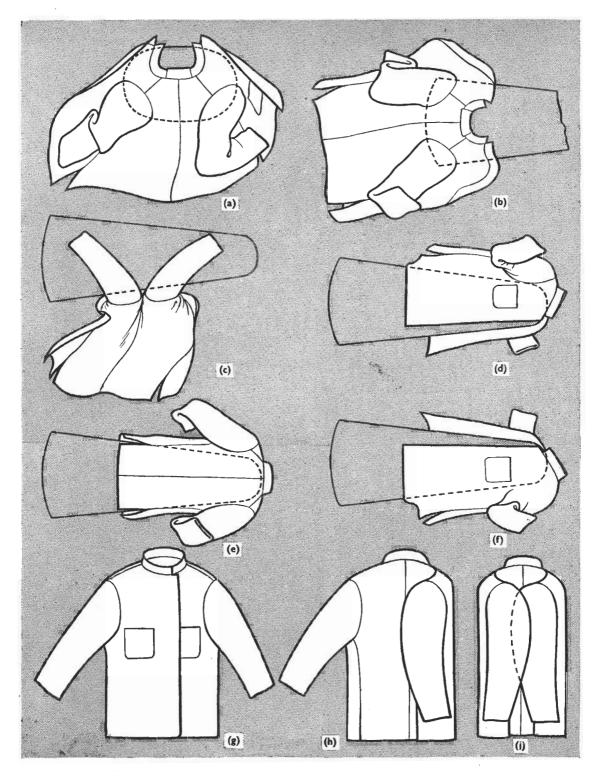


Fig. 81.—Method of pressing and folding white tunic coats.

(SO 7546)

Smooth out the shirt.

(h) Fold the left hand side of the shirt over the folding board, and lay the sleeve along the body parallel with the fold.

(j) Repeat the process with the right hand side

and right sleeve.

Fold the tail back as far as the cuffs.

(k) Fold again until the bottom portion is in line with the neck band.

Slide the board away from the shirt.

Touch up where necessary with a hand iron after olding.

17. Coats (White tunics) (Fig. 81)

(a) Press the shoulders on the yoke press, or on the end of the G.P. press, as shown in the diagrams.

(b) The collar may be pressed on the collar-and-cuff press, or at the opposite end of the G.P. press.

(c) Press both sleeves by laying them across the buck. After pressing the sleeves the operator should pass his hand through them to prevent the material sticking together.

(d) Press the right hand side of the coat.

(e) Press the back of the coat.

(f) Press the left hand side of the coat.

(g) Take the coat by the shoulders and lay it flat on the table back downward and with the right hand side overlapping the left hand side of the coat. Turn the coat completely over, keeping the front folded.

(h) Fold in both sides about 4 ins.

(j) Lay the sleeves down the edge of the fold.

(k) Fold the coat from bottom to top and turn it over front top uppermost. See Fig. 82 (a).

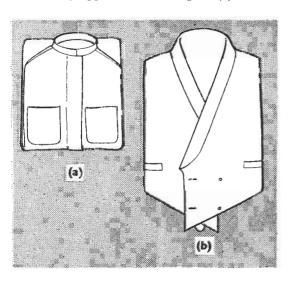


Fig. 82.-Method of folding officers mess jackets.

18. Officers mess jackets

(a) These should be pressed in a similar manner to coats, except that the collars and lape s should not be pressed into position, but folded by hand to produce a rolled effect.

(b) Fold as for white tunics, but instead of the last fold being from top to bottom as for tunics, fold the jacket into halves right side over left.

19. Trousers (Fig. 83).

(a) Press the pockets, with the trousers inside out.

(b) Press the fly fronts, with the trousers inside

(c) Press the front left hand side, trousers right side out.

(d) Press the back.

(e) Press the front right hand side.

(f) Lay out the legs separately so that the inner and outer seams of each single leg are together. This will ensure that the front crease is in the right position. position. Press each leg separately from the crutch down.

(g) Lay both legs together for final pressing and folding.

 (\tilde{h}) Fold the trouser legs about a line A-B just below the knee.

Fold again about C-D.

SHORTS

(j) These should be pressed as for trousers, and folded in halves from hem to waistband about A-B.

20. Pyjamas (Fig. 84)

COATS

(a) Press the collar flat on the buck.

(b) Lay both sleeves across the buck and press. Press right side, back and left side, as for white tunics,

Fold into four and give a final pressing.

(c) Fold both sleeves over together and fold end to end.

TROUSERS

(d) Unlike ordinary ones, pyjama trousers do not require creases in the front of the legs. They can be pressed flat, then folded leg to leg and finally pressed lengthwise along the buck.

(e) Fold as for trousers first, about A-B, and

then C-D.

21. Underclothes (Fig. 84 (f))

Simple pressing only is necessary. Shake out vests and pants and lay them flat across the buck of the press. Several articles may be pressed in one operation. Undervests should be folded, first left over right to bring the outer edges together and then from bottom to top.

Note.—If the machines are installed, underclothes should be part dried in the tumbler and finished on the flatwork ironer. This reduces press work, leaving the presses free to cope with the articles

requiring a higher degree of finish.

PRESSING LAYS

For twin rapid type presses

22. Figs. 85 and 86 illustrate the methods of pressing when using the "Twin rapid" type of press, and are self-explanatory.

The garment-lays indicated are those recommended by the makers to obtain maximum output.

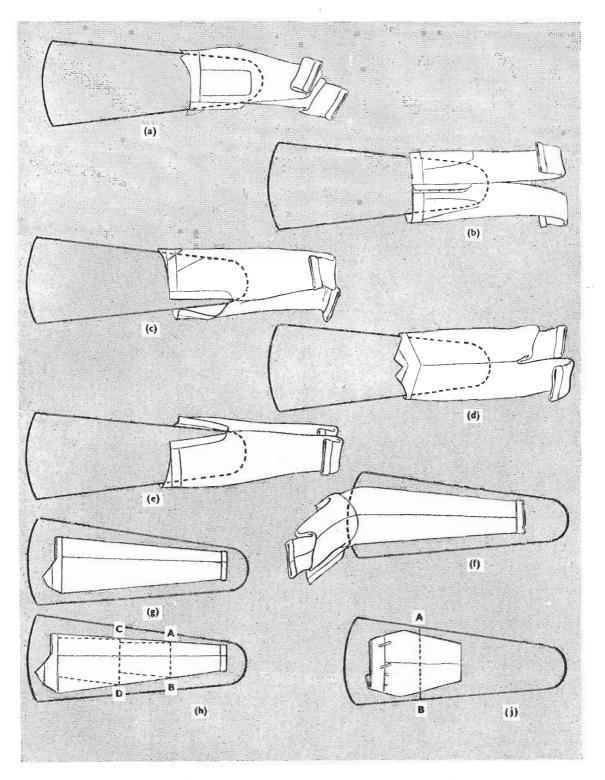


Fig. 83.—Method of pressing and folding trousers and shorts

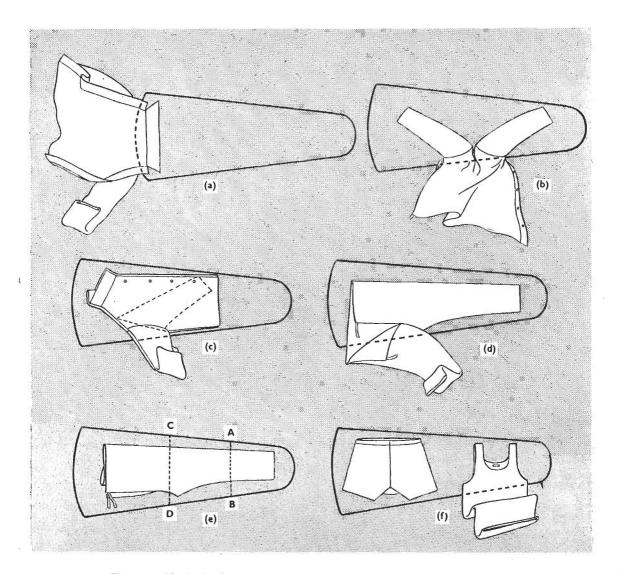
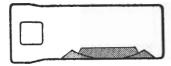
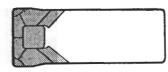


Fig. 84.—Method of pressing and folding pyjamas and underclothing.

INSTRUCTIONS FOR LAYING COATS



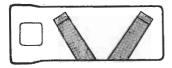
I. LAY COLLAR AND LAPEL OF FIRST COAT.



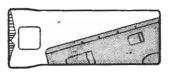
2. LAY YOKE OF FIRST COAT.



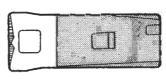
3. LAY BOTH SLEEVES OF FIRST COAT WITH UNDERSIDE UPPERMOST AND LIGHTLY PRESS FOR STEAMING.



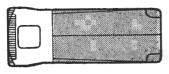
4. OPEN SLEEVES OF FIRST COAT AND LAY WITH OUTSIDE UPPERMOST FOR FINISHING.



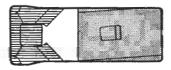
5. LAY FRONT OF FIRST COAT WITH CORNERS OF THE TABLE WELL INTO TOP PART OF SLEEVES. LAY SECOND COAT FOR PRESSING HALF THE COLLAR. AND LAPEL ON THE OUTSIDE.



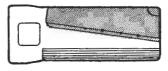
 LAY SIDE OF FIRST COAT WITH SEAM ON NEAR EDGE OF TABLE TO PRESERVE SHAPE OF COAT. LAY SECOND HALF OF THE COLLAR AND LAPEL OF THE SECOND COAT.



 LAY BACK THE FIRST COAT. REVERSE COLLAR AND LAPEL OF SECOND COAT TO PRESS ON UNDERSIDE.



8. LAY SIDE OF FIRST COAT WITH SEAM ON FAR EDGE OF TABLE TO PRESERVE SHAPE OF COAT. LAY YOKE OF SECOND COAT.



 LAY FRONT OF FIRST COAT WITH CORNER OF TABLE WELL INTO TOP PART OF SLEEVE. LAY EDGE OF SECOND COAT ON NEAR SIDE OF TABLE.

Fig. 85.—Coat pressing sequence using a twin type press.

The nine lays completely finish the first coat. To finish the second coat continue as from Diagram 3, laying sleeves.

The sleeve lay, as in Diagram 3, is the only time when one coat is on the table. When sleeves are

pressed, commence laying the body of one coat and half the collar and lapel of another, as shown in Diagram 5.

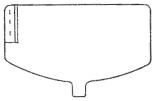
The operations are performed on both press tables, thus it will be seen that four coats are being pressed simultaneously.

KEY I ** SHIRT \[2 nd \[3 thd \] 3 thd \[\text{SM}

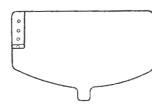
TWIN-RAPID COMBINATION SHIRT PRESS RECOMMENDED LAYS FOR BEST QUALITY FINISH

- PRELIMINARY LAYS -

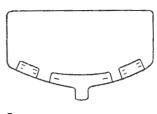
(UNTIL THE PRELIMINARY LAYS ARE COMPLETED THE RECTANGULAR BUCK IS NOT USED)



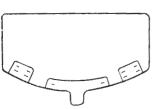
A. LAY BUTTON HOLE STRIP OF FIRST SHIRT.



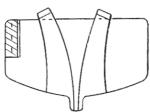
B. LAY BUTTON STRIP OF FIRST SHIRT.



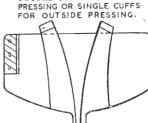
C. LAY NECKBAND OF FIRST SHIRT FOR INSIDE PRESSING, AND DOUBLE CUFFS FOR INSIDE PRESSING OR SINGLE CUFFS FOR OUTSIDE PRESSING.



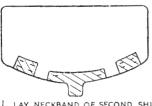
D. REVERSE NECKBAND AND CUFFS OF FIRST SHIRT FOR SECOND PRESSING.



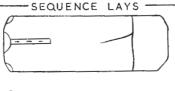
E. LAY SLEEVES OF FIRST SHIRT. LAY BUTTON HOLE STRIP OF SECOND SHIRT.



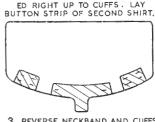
F. REVERSE SLEEVES OF FIRST SHIRT FOR SECOND PRESSING, ENSURING SLEEVES ARE PRESS-ED RIGHT UP TO CUFFS. LAY BUTTON STRIP OF SECOND SHIRT.



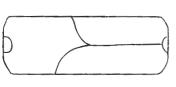
1. LAY NECKBAND OF SECOND SHIRT FOR INSIDE PRESSING AND DOUBLE CUFFS FOR INSIDE PRESSING OR SINGLE CUFFS FOR OUTSIDE PRESSING.



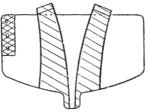
2. LAY FRONT OF FIRST SHIRT.



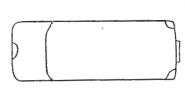
3. REVERSE NECKBAND AND CUFFS OF SECOND SHIRT FOR SECOND PRESSING.



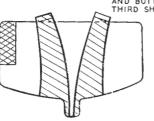
4. LAY LEFT SIDE OF FIRST SHIRT SINGLY.



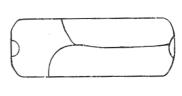
5. LAY SLEEVES OF SECOND SHIRT AND BUTTON HOLE STRIP OF THIRD SHIRT.



6. SLIDE SIDE OF FIRST SHIRT OVER BUCK TO LAY BACK.



7. REVERSE SLEEVES OF SECOND SHIRT FOR SECOND PRESSING, ENSURING SLEEVES ARE PRESSED RIGHT UP, LAY BUTTON STRIP OF THIRD SHIRT



8. SLIDE BACK OF FIRST SHIRT OVER BUCK TO LAY RIGHT SIDE.

RECOMMENCE SEQUENCE, LAYING NECKBAND AND CUFFS OF THIRD SHIRT.

THE SEQUENCE OF LAYS SHOWN IN THIS DIAGRAM GIVES ONE SHIRT EVERY EIGHT PRESSING OPERATION

Fig. 86.—Shirt pressing sequence using a twin type press.