

B.R. 1277

# Laundry Manual

ENGINEER-IN-CHIEF'S DEPARTMENT  
ADMIRALTY

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B.R.1277, Laundry Manual, having been approved by My Lords Commissioners of the Admiralty, is hereby promulgated for information and guidance.

By Command of Their Lordships,

*J. G. Lang*

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## RECORD OF AMENDMENTS

Nº 1

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# Foreword

Though the provision of laundries to H.M. ships is a comparatively recent development sufficient experience has been gained to show that, efficiently run, they can make a substantial contribution to the well-being of a ship's company.

The efficiency of any laundry service depends upon good equipment, and the knowledge, skill and organization of the laundry staff. This Manual is designed to provide the officers **in charge of laundries** with the basic information necessary to **establish** an efficient laundry service, and the operating and maintenance personnel with a guide to standard practice. The principles of operation and maintenance of the machines described are generally applicable to all types of equipment installed in H.M. ships and establishments, but details will vary according to manufacturers. The Manual does not supersede detailed makers' instructions.

The process charts and washing formulae included are the **most suitable developed to date for general** service conditions ; **these should be followed to obtain the best results.** The Admiralty is aware of the constant development of **synthetic** detergents and the Fleet will be informed through the normal channels of any variations in formulae and materials.

# Administration and Organization

## INTRODUCTION

1. A large number of H.M. ships are now equipped with power-operated laundries, and the instructions contained in this manual are to be used as a basis for their organization, administration and operation.

The installation of laundry equipment in H.M. ships is governed by many factors including the area available, the shape of the space and the acceptability of top weight.

### 2. Priority of equipment

If the factors preclude the provision of full laundry facilities, equipment is installed in the following order of priority:

- |  |                                 |
|--|---------------------------------|
| Washing machines                                 | } Washing and drying equipment. |
| Hydro extractors                                 |                                 |
| Dryers (tumbler or cabinet type)                 |                                 |
| General purpose and shirt presses                | } Finishing Equipment.          |
| Flatwork ironing machines                        |                                 |
| Sleeve forms and shirt folding tables            |                                 |
| Starching machines and collar polishing machines |                                 |

These machines are provided on the maximum scale possible and in cruisers and above are capable of an output of approximately 5 to 8 lb. of laundry work per man of the total complement in a 48-hour laundry working week.

A balanced equipment catering for washing, drying and finishing is installed as far as possible.

In all modernization schemes the maximum space possible is allocated for laundries, and limitations in the scale of equipment must be accepted. After modernization, increased output if required must be obtained by working increased hours of duty in the laundry.

### 3. Flow of work

A diagrammatic arrangement of an ideal layout of laundry equipment showing the flow of work from the receiving room through the various laundry stages to the issue room is illustrated in Fig. 1. Though possible in shore laundries, an ideal arrangement is difficult to attain in H.M. ships.

### 4. Conditions affecting output of work

The total output obtainable from the laundry installation is dependent upon the following main factors:

(a) The capacity of the machinery and the type of plant installed.

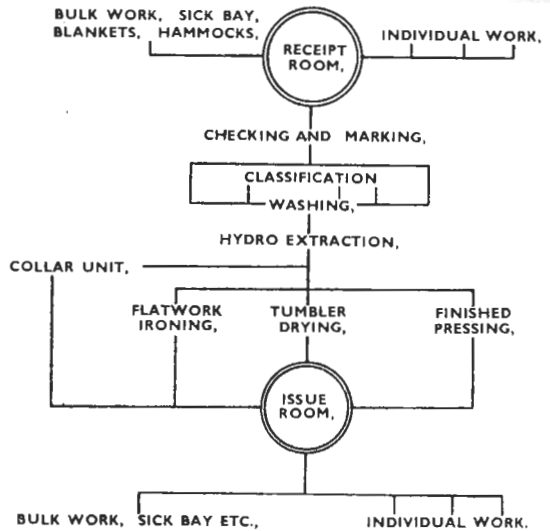


Fig. 1.—Diagrammatic arrangement showing the sequence of laundry operations.

(b) The availability of sufficient personnel from the ship's company to enable the whole plant to be worked at once, and for the receiving, marking, classification, final sorting and issuing to be effectively undertaken.

(c) The total hours worked by the laundry staff.

(d) The efficient operation of all equipment. Basic training both theoretical and practical is given at the R.N.B. Laundry, Devonport, and increased efficiency should be evident as operators gain actual working experience with the various machines and processes.

## ADMINISTRATION

5. The officer appointed for duty as Laundry Officer is to be directly responsible to the Commanding Officer for the detailed organization and operation of the laundry.

The Engineer Officer is in charge of all laundry equipment and jointly responsible with the Electrical Officer for its efficient maintenance.

### 6. Duties of the Laundry Officer

(a) To establish the laundry crew preferably on a volunteer basis (the personnel required to work the equipment can be estimated from Table I).

(b) To establish the number of hours per working week for the laundry and prepare the watch bill.

(c) To assess the total weekly output of the laundry based on the capacity of the equipment, the crew available and the hours of working.

(d) To draw up the scale of the weekly bundle which can be accepted from officers and ship's company, bearing in mind sick bay and other bulk requirements.

The size of the weekly bundle may be established as follows:

(i) Formulate the composition of a desirable weekly bundle based on reasonable requirements and assuming laundry capacity to be available.

(ii) Assess the total laundry output requirements, i.e., personal washing and bulk work.

(iii) Assess from Table I the crew necessary to work the machinery installed and for receipt and issue duties.

(iv) Assess the number of hours during which the laundry would be required to work to produce the total output at (ii).

(v) If the capacity of the laundry is insufficient to meet the estimated total requirements, the composition of the individual bundle and the amount of bulk work per week must be adjusted accordingly.

*Note.*—The above procedures will enable an initial set-up to be obtained. Actual outputs will, however, only be assessed as the result of experience.

(e) To prepare a scale of charges to be applied, assuming the laundry to be run on a non-profit-making basis.

(f) To establish the accounting system to be adopted.

## 7. The Laundry Crew

The Laundry Crew is to consist as far as possible of staid hands, including representatives of each main department of the ship, under the direction of a Chief Petty Officer, Petty Officer or Leading Hand. A full and uninterrupted day's work is important if maximum efficiency is to be achieved and the crew should therefore be excused as many other duties as possible.

### DUTIES OF THE CREW

(a) The senior rating is to be thoroughly conversant with all laundry processes and with the method of operation of all machines. Normally his duties should be supervisory, but if sufficient men are at any time not available to work the machines the senior rating must assist.

He will be directly responsible under the Laundry Officer for:

- (i) The classification of the various fabrics.
- (ii) Maintaining ready use stocks of all materials and stores for the laundry.
- (iii) Training new ratings in all aspects of the work.

(iv) Reporting defects in equipment which may arise during the normal course of working, to the appropriate authority.

(v) Dealing with loss or damage complaints as they arise and referring them to the laundry officer when arbitration is needed.

(vi) Administration and welfare of the laundry crew.

(b) When it is necessary to work in watches a Second Hand is needed to take charge of a watch and deal with general queries.

(c) Operators are to be generally conversant with all laundry duties but should normally be allotted specific functions in their watch.

(d) In order to keep the laundry crew practised in all aspects of laundry work and to maintain a lively interest, a periodic change of duty is highly desirable.

## 8. Operators required

The number of ratings required to operate the laundry plant must be sufficient to receive, mark and sort the work, supply the washing machines with soiled clothing, feed and work each machine to its designed capacity and re-sort, pack and issue the completed work. The amount of soiled clothes which can be effectively dealt with at one time is called a "Journey" and is dependent upon:

- (a) The sorting and classifying facilities.
- (b) The washing machine capacity.
- (c) The re-sorting and issuing facilities.

Large receipt and issue rooms are most desirable but owing to space limitations they cannot always be provided in laundries afloat. In such circumstances makeshift arrangements have to be resorted to. Factors (a) and (c) are therefore largely influenced by the conditions existing in individual ships.

### LIMITATION OF SIZE OF CREW

In all circumstances both in the interest of the conservation of man power and of efficiency, the Laundry officer should maintain the composition of the laundry crew at the minimum number possible to deal with the required output.

As far as possible, the output is to be met by one team working extended hours rather than by two complete crews working in shortened watch periods. Before adding to the strength of the laundry crew, the laundry officer must be satisfied:

- (a) that increased output is essential.
- (b) that the increased output cannot be met by working extended hours.

## 9. Typical scheme of working

Table 2 shows a laundry organization based on the two-watch system, suitable under peace-time conditions.

Consideration must be given to the working conditions when formulating a time-table. These are capable of considerable variation, both as climates vary from temperate to tropical, and in conformity with the ventilation arrangements. Careful attention is always given to the provision of adequate ventilation in the laundry compartments.

Production will be assisted if operators are permitted to spend 10 minutes in the fresh air occasionally.

## 10. Watch Bill for the laundry crew

A typical day may be organized on the following lines:

(a) The duty watchmen commence the operation of the laundry at 0730 and work until 1200 when they become non-duty watch and proceed to dinner until 1300. They turn-to again from 1300 to 1600 and may then be free to proceed on shore leave.

(b) The non-duty watchmen commence operation at 0800 and work until 1100 turning-to after the dinner break (1100-1200) as Duty Watch.

Work is continued until 1800 or until the journeys for the day are complete, with a break for tea from 1530 to 1600. The non-duty part of the watch should also turn-to again from 1630 to 1800 if pressure of work demands.

## THE LAUNDRY BUNDLE

### 11. Limitation of work

To ensure a steady and even flow of work and to enable all members of the ship's company to obtain a fair share of the laundry service it is essential to limit the amount of personal laundry work. The weight of work which can be accepted from officers and from each class of rating must be predetermined and fixed by the laundry officer and will comprise the standard bundle. The composition of the bundle should be made as flexible as possible by the inclusion of alternative items.

### 12. Assessing composition of bundle

The controlling factor in assessing the permitted weight of the laundry bundle is the overall capacity of the laundry. The scale of "fully finished" laundry output is dictated solely by the capacity of the ironing and pressing machinery installed. Where capacity does not exist for the complete processing of all work, finished ironing must be done personally with the hand ironing facilities normally provided in the various messes for this purpose.

Except in isolated instances it will be found that the capacity of the laundry equipment, even when long hours are worked, is sufficient only to cater for the essential requirements of each member of the ship's company.

In fixing the composition of a standard bundle it will readily be appreciated that officers and chief and petty officers in Class I and III uniforms require more laundry to be done per week than personnel dressed in Class II uniform.

While the principle of fixing a standard bundle is generally satisfactory and provides a fair solution for the major portion of the ship's company, flexibility should be allowed in the case of men employed on specific duties. For example, a petty officer while doing duty as a quartermaster requires a different quantity and different types of washing than a similar rating employed in charge of the side party.

## 13. Standard weekly bundles

### TEMPERATE CLIMATES

Representative bundles for officers, men dressed in Classes I, II and III uniform, with the dry weight of new article are tabulated below and form a guide from which a standard bundle can be selected, up to the weight allowed.

#### OFFICERS

	lb.	oz.
3 shirts at 10 oz. . . . .	=	1 14
5 collars at 1.3 oz. . . . .	=	6.5
4 handkerchiefs at .75 oz. . . . .	=	3
2 towels at 5 oz. . . . .	=	10
1 pr. pyjamas at 1 lb. 8 oz. . . . .	=	1 8
3 prs. of socks at 2 oz. . . . .	=	6
2 sets of underwear at 8 oz. . . . .	=	1
1 sheet at 2 lb. . . . .	=	2
1 pillow case at 5.9 oz. . . . .	=	5.9
1 pr. of overalls at 2 lb. . . . .	=	2
Total . . . . .	..	10 lb. 5 oz. approx.

#### MEN DRESSED IN CLASS II UNIFORM

2 blue jeans at 5.6 oz. . . . .	=	11.2
4 handkerchiefs at .75 oz. . . . .	=	3
2 towels at 5 oz. . . . .	=	10
1 pr. pyjamas at 1 lb. 8 oz. . . . .	=	1 8
3 prs. of socks at 2 oz. . . . .	=	6
2 sets of underwear at 8 oz. . . . .	=	1
1 working shirt at 12 oz. . . . .	=	12
1 working trousers at 1 lb. 4 oz. . . . .	=	1 4
1 flannel front . . . . .	=	14.8
1 sheet . . . . .	=	2
Total . . . . .	..	9 lb. 5 oz. approx.

#### MEN DRESSED IN CLASS I AND III UNIFORM

2 shirts at 10 oz. . . . .	=	1 4
4 collars at 1.3 oz. . . . .	=	5.2
4 handkerchiefs at .75 oz. . . . .	=	3
2 towels at 5 oz. . . . .	=	10
1 pr. pyjamas at 1 lb. 8 oz. . . . .	=	1 8
3 prs. of socks at 2 oz. . . . .	=	6
2 sets of underwear at 8 oz. . . . .	=	1
1 working shirt at 12 oz. . . . .	=	12
1 working trousers at 1 lb. 4 oz. . . . .	=	1 4
1 sheet . . . . .	=	2
Total . . . . .	..	9 lb. 4 oz. approx.

**TROPICAL CONDITIONS.**—In tropical climates the composition of the standard bundle will vary. Typical bundles are as follows, but these will require adjustment as necessary in relation to the total laundry capacity.

## OFFICERS

	lb.	oz.
2 sets underwear at 8 oz.	=	I
1 pr. pyjamas at 1 lb. 8 oz.	=	I 8
1 sheet at 2 lb. . . .	=	2
1 pillow case at 6 oz. . .	=	6
2 towels at 5 oz. . . .	=	10
2 tropical shirts at 13 oz.	=	I 10
2 tropical shorts at 15 oz.	=	I 14
2 white suits (No. 10) at 2 lb. 7 oz. . . . .	=	4 14
Total..	..	14 lb. 4 oz.

## MEN DRESSED AS SEAMEN

2 sets underwear at 8 oz.	=	I
1 pr. pyjamas at 1 lb. 8 oz.	=	I 8
2 towels at 5 oz. . . .	=	10
1 shirt, No. 8, at 12 oz. . .	=	12
1 trousers, No. 8, at 1 lb. 4 oz.	=	I 4
2 tropical shirts at 12 oz.	=	I 8
2 tropical trousers at 12 oz.	=	I 8
1 No. 6 suit at 2 lb. 6 oz.	=	2 6
1 sheet . . . . .	=	2
Total..	..	12 lb. 8 oz.

## MEN NOT DRESSED AS SEAMEN

2 sets underwear at 8 oz.	=	I
1 pr. pyjamas at 1 lb. 8z.	=	I 8
2 towels at 5 oz. . . .	=	10
1 No. 8 shirt at 12 oz. . .	=	12
1 No. 8 trousers at 1 lb. 4 oz.	=	I 4
2 tropical shirts at 12 oz.	=	I 8
2 tropical shorts at 12 oz.	=	I 8
1 suit, No. 10, at 2 lb. 7 oz.	=	2 7
1 sheet . . . . .	=	2
Total..	..	12 lb. 9 oz.

## 14. Bulk work

To deal with large articles not included in the bundle, namely overalls, bedcovers, blankets and hammocks, a system of bulk washing is necessary.

To permit this work being undertaken, the changing of bedding should be organized in separate divisions or mess-decks at fixed periods throughout the ship. Blankets should, if possible, be washed at least once in three months, but where sheets are used this period may be extended up to six months.

## ORGANIZATION

## 15. Organizing journeys

The organization of the weekly programme in the form of journeys is entirely dependent upon the bulk and class of work received.

The laundry work for officers, chief petty officers and men dressed in Class III uniform will include a large proportion of white shirts and collars, whereas that for seamen and stokers and men dressed in Class II uniform will include a large percentage of blue jean collars and white cotton flannels. It follows therefore, that a suitable balance has to be maintained to ensure the continuous employment of all equipment.

Manning proportions vary with the class of ship. An aircraft carrier normally carries a higher percentage of officers and men dressed in Class I and III uniform, than does a cruiser or battleship and the organization of work to ensure constant full use being made of all equipment will require detailed consideration by the laundry officer. In this connection, Tables 3, 4 and 5 cater for Class I and III uniforms to be dealt with at the beginning of the day's work. This allows for a possible work lag on the pressing operations; it also enables pressing to be continued during the processing of the afternoon load, since the latter is largely comprised of items which do not require a press finish, or which need not be pressed if time does not permit. When considering journeys in terms of bundles, as an ideal the maximum number of bundles should not exceed the number of sorting racks available. The amount handled will also be affected by the standard of finish required for a particular article.

When necessary, special arrangements must be made to deal with certain types of articles for the ship's company, *e.g.*, blankets, hammocks, etc.

## 16. Examples of processing necessary

*White shirts.*—These articles need pressing and folding after hydroing and particular care in handling and sorting.

*Underwear*—(*Vests or pants*).—It is preferable to have these articles pressed or calendered. In the absence of such facilities these items need only be dried and folded.

*White stiff collars.*—These need a special process of starching and polishing after leaving the hydro.

*Overall suits.*—These need drying and folding only.

## 17. Weekly Programmes

Tables 3 to 5 give typical examples of a weekly routine for different classes of ships, showing the intake and balance of work related to various types of clothing.

## 18. Limitation of size of journey

The importance of relating the total intake of work to an amount which can be readily dealt with by the laundry crew cannot be overstressed. The capacity of the laundry plant varies for each and within each class of ship and it is impracticable therefore to lay down a fixed scale for the acceptance of work. The actual total capacity (as opposed to the theoretical capacity) depending as it does on numerous factors, can be determined by experience only and the composition of the standard bundle and the frequency of dealing with bulk work must be adjusted accordingly.

As a guide output should be catered for in the following order of weight priority.

SICK BAY.—Full requirements.

COOKS, GALLEY RATINGS, STEWARDS, ETC.—In the interests of hygiene men employed in these duties should at all times be provided with clean occupational clothing.

## ORGANIZATION

**STANDARD BUNDLE.**—The permissible overall weight of the personal bundle can be varied by the laundry officer at any time as conditions demand. The inclusion of alternative items as recommended in articles 18 and 19 will normally enable personnel to regulate their own requirements in respect of personal washing within the weight limit.

### BULK WORK

**Overalls.**—As necessary by reason of occupational duties; engine room personnel will in general require overalls to be washed more frequently than, say, E.A.s.

**Blankets.**—Once in three months but where sheets are used, the frequency of washing may be extended so that each individual is issued with a clean blanket once in 6 months.

**Hammocks and bed covers.**—If practicable these should be cleaned for each man once in 4 weeks.

In view of the varying conditions existing in laundries in H.M. ships no standard formula for the limitation of work to a scale within the capacity of the laundry crew and plant can be established. The restrictions on the type and bulk of work accepted must necessarily be enforced by internal organization.

It should be noted that:

(a) A complete ban may be necessary in consecutive weeks in rotation on the acceptance of

Coloured cottons and linens

Coloured woollens

(b) In all instances operators engaged in checking should be instructed not to accept personal bundles in excess of the weight allowance.

### 19. Limitation following temporary breakdown

Should the laundry schedule become temporarily disrupted because of drills, breakdowns or other unforeseen causes it is not advisable to make up the time lost by hard and continuous work. In these circumstances the best solution is obtained by the cancellation for a week of the next journey due to be handed into the laundry. This procedure will allow time to make good defects, if any, and cause minimum interference with the planned weekly schedule. To compensate personnel whose bundles were not accepted under such circumstances, it may be possible to fit in an extra journey of limited amount at the end of the week.



# Receipt and Preparation of Work

## RECEIPT

### 1. Receipt of soiled clothing at the laundry

The handing in of bundles should be arranged to ensure that the work reaches the laundry at the scheduled time. Odd bundles arriving after the journey has started should not be accepted as these upset the planned flow of work. The method of receipt employed should be adjusted to fit into the ship's routine. If lack of handling spaces does not permit the acceptance of clothes in the laundry, a central collecting point must be established elsewhere in the ship.

Two satisfactory methods of arranging receipt are:

(a) Bundles may be handed to the laundry by the individual owner. With this method a queue is inevitable. It does, however, allow the owner to satisfy himself that his bundle is handed in, and to raise any queries or impart information to the laundry staff regarding his bundle.

(b) A canvas bag may be provided in each mess and one rating in that mess be made responsible for the delivery of the laundry for the whole mess. The mess number should be attached to the bag.

Method (b) is preferable as it reduces the number of ratings attending the laundry and ensures the delivery of the journey in suitable sub-lots with attendant advantages to the laundry crew on marking and classifying duties.

In the case of officers' laundry the stewards concerned should deliver the bundle to the laundry, or to a central collecting point. In the case of special services, e.g., cooks, bakers, special dutymen, etc., an individual of the party concerned should deliver the occupational clothing to the laundry in one lot.

### 2. The laundry chit

Each article of clothing must be clearly listed by the owner on the laundry chit, which must be attached to, or placed inside the bundle.

*Note.*—The bundle should be made up as small as possible and placed in a pillow slip (if included) or alternatively rolled into one of the larger items.

Service pattern laundry chits, Forms S.1279 a, b, c, d, are available.

S.1279a (buff) for use by officers.

S.1279b (pink) for use by men in Class I and Class III uniform.

S.1279c (blue) for use by men in Class II uniform.

S.1279d (white) for use by Sick Bay, Naval Stores, etc.

The forms are produced in different colours to aid identification and contain a few blank lines to allow for the addition of special articles.

It is essential that the owner's name and official number be completed by him in block capitals on the laundry chit in order that the laundry number can be correctly computed by the laundry staff. The columns marked "Received" and "Checked Out" must be checked by the laundry staff at the receipt and issue stages respectively and the signature or initials of the checker(s) inserted at the bottom of the appropriate column. (See also Sorting and Marking). Queries regarding discrepancies can then be dealt with by the operator(s) who checked the bundle.

### 3. Use of the laundry chit

An example of a completed laundry chit form S.1279b is indicated below.

In the example given, it is observed that a discrepancy exists in the list of articles. The owner indicated that 2 vests were included in his bundle, whereas 1 only was found at the checking stage. The checker has made a notation of the discrepancy in the "Received" column.

P/JX129622		
Established September, 1946		
S.1279b		
LAUNDRY CHIT		
Class I and III		
Uniform		
NAME: J. F. Smith Date: 1.1.50		
MESS: E.R.A's Laundry No.: J. S. 9622		
ARTICLES	REC'D	CHECKED OUT
Shirts (white)	2	
Shirts (working)		
Collars (soft and semi stiff)	2	
Collars (stiff)	1	
Vests	2 1 only E.J.V.	
Pants	2	
Pyjamas (suit)		
Cap covers		
Handkerchiefs	4	

ARTICLES	REC'D	CHECKED OUT
Towels (hand)	I	
Towels (bath)	I	
Sheets		
Pillowcases		
Overalls		
Hammock		
Bedcover		
Work'g dress shirt	I	
Work'g dress trousers		
TROPICAL		
Shirt		
Shorts		
Trousers		
Tunics		
White stockings		
White scarf		
Socks		
Pullover		
BY WHOM	E.J.V.	

#### 4. Collection of bulk work

Each unit should appoint a senior hand to muster the articles, preferably into bundles of ten for ease in counting, and deliver them to the laundry receipt room. The articles should be similarly collected from the issue-room when clean. These items are already marked in accordance with normal service procedure and further personal identification of individual articles by means of the laundry marking system is unnecessary. The collection and subsequent re-issue to the owner is the responsibility of the division representative. Overalls can be similarly delivered and collected from the laundry in lots.

### MARKING

#### 5. The Marking System

The responsibility for marking and identifying articles rests with the laundry, and a marking machine (SO 7546)

is supplied for this purpose in cruisers and larger ships. A standard marking system has been established based on a man's name and official number, which will serve an individual throughout his service career.

*Example:* John Frank Smith Official No. P/JX.129622. The initials of his first christian name and surname "J.S." and the last four figures of his official number 9622 are used for purposes of laundry marking. Hence his laundry Number is J.S.9622. This number will not change during his career unless he is transferred from one branch to another. The chance of duplication of identity is negligible.

For officers the figures to be used in lieu of the official number are those on the National Registration Card (S.1151).

The Laundry marking system does not relieve individuals of the responsibility for marking their clothing in accordance with the Uniform Regulations.

#### 6. Marking Woollens

By reason of the comparatively loose texture and absorbent properties of wool, the marking machine cannot be used for marking woollens, blankets etc., similarly the black marking ink used is not readily visible on navy blue or other dark garments.

To overcome this difficulty two methods of marking can be resorted to:

(a) A piece of white tape to carry the mark may be sewn on the garment. The time factor will not permit the laundry crew to undertake this work and the tape should be sewn on by the owner of the article.

(b) The alternative system involves the use of numbered safety pins which are attached to the article by the laundry staff during the sorting process. The number of the pin is then entered on the owner's laundry chit.

Method (a) is preferable and should be used wherever possible as this provides a permanent mark.

#### 7. Correct positions for marking

When selecting the position for marking individual garments two requirements must be satisfied. Firstly, the laundry mark must be readily visible to the sorter and packer without the article needing to be unfolded and secondly, the mark must not be visible when the article is being worn.

Table 6 indicates the correct place to mark each garment.

#### 8. Precautions

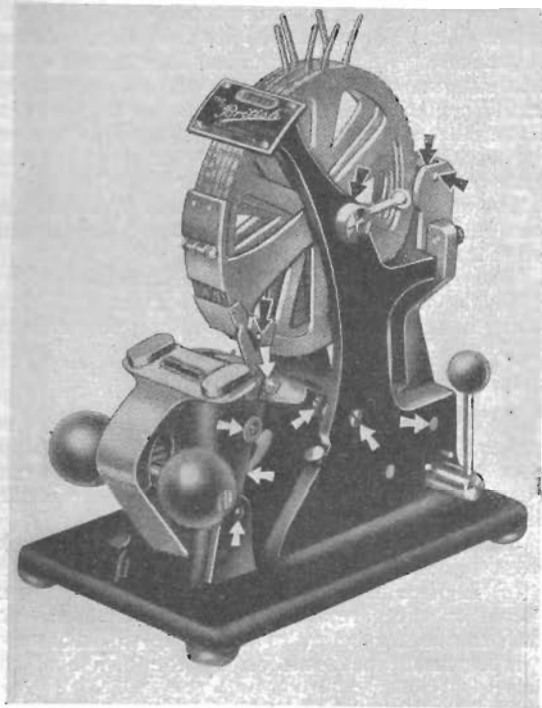
- (a) Make sure that the correct number is set.
- (b) Make sure that the article is plainly marked.
- (c) Make sure that old markings are obliterated.

#### 9. Marking Machine

The hand operated marking machines installed are capable of developing a mark having six characters. Six type wheels are provided, the first two of which each bear the complete alphabet and the other four, each the figures 0-9, together with additional symbols.



The machine in general use in H.M. Ships is the "British" marking machine manufactured by Messrs. A. & C. Jenner Ltd., and illustrated in figure 2.



**Fig. 2.—Arrangement of "British" type marking machine with lubricating points.**  
Lubricating points shown thus →

#### OPERATING THE MARKING MACHINE

The method of operation is illustrated and described in Fig. 3.

(a) *To remove the inkwell.*—Close the machine by pressing the handles towards the type until the hammer strikes, then press down the thumbpiece at the back of the inkwell carriage and lift out the inkwell by the handles provided.

(b) *To fill the inkwell.*—Fit a new felt pad with the face marked TOP upward, remove the screw plug and fill with ink, wait until the ink has soaked into the pad and then replace the screw plug reasonably tight. Care must be taken to ensure that no leakage occurs as this allows too much ink on the pad. If the pad appears wet, the surplus ink should be wiped off; the pad should have a "matt" appearance.

Replace the inkwell in the machine taking care that the projection in front of the inkwell fits snugly in place in the carriage, and finally release the spring-clip at the back of the carriage.

To fit a new pad. Remove the inkwell, and without removing the screw plug, lift out the old pad with the hook provided. Fit a new pad. If the screw plug is left, screwed tightly in position, the ink will not flood the pad chamber.

The inkwell must not be removed or replaced when machine is in the open position.

(c) *To clean the type.*—By moving the lever at the side of the machine to the back the register bracket is released. By then removing the rubber pressure block and closing the machine it is possible to move the type wheels freely and to clean them with a brush and methylated spirit.

The type wheels can be easily removed by unscrewing the nut at the side of the machine with the spanner supplied and removing the bolt. The type wheels will then be freed.

Cleaning is essential at least once a day, and if possible the type should also be brushed during the day while the ink is still wet.

(d) *Lubrication.*—Efficient lubrication should be maintained at the lubrication points indicated by arrows in Fig. 2.

(e) *Precautions.*—The undermentioned precautions should be observed at all times:

**DON'T** start the day without a new pad.

**DON'T** go on marking when the pad is getting dry.

**DON'T** close the machine without fabric in it.

**DON'T** move the type wheel when the machine is closed without first removing the printing block, or the rubber will tear.

**DON'T** leave the machine open for any length of time.

**DON'T** use a steel pin for cleaning types; a soft brass pin is supplied.

**DON'T** use corrosive marking ink.

**DON'T** forget to put the cover on at night.

**DON'T** forget that clear marking is the key to accurate packing.

**DON'T** use inferior inks.

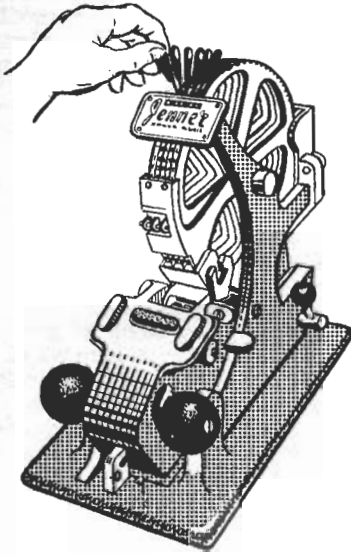
#### PREPARATION

##### 10. Sorting and marking

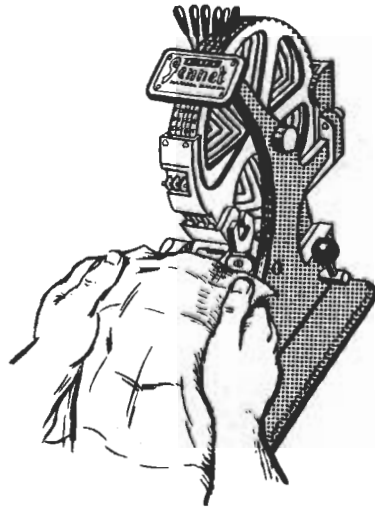
The laundry process begins with the receipt of the soiled articles in the laundry and ends when clean, neatly folded articles are collected by or delivered to the owner.

On receipt in the laundry, the bundles containing dirty clothing are placed into dirty-bundle bins (see Fig. 4). The bundles are then individually checked by the laundry "checker" in the sorting and marking booth provided for this purpose. The size of the booth may vary with different installations, but the principles of construction are illustrated in Fig. 5.

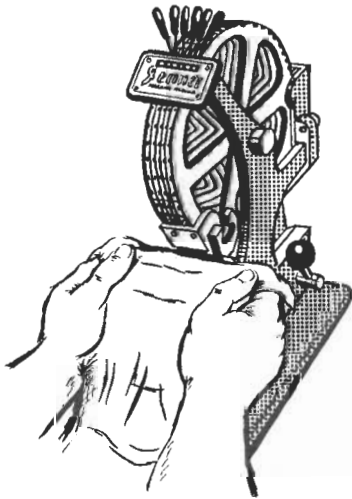
The bundle should be placed in the left-hand compartment of the marking booth and the laundry chit clipped on the board provided over the marking machine. The owner's laundry number should be set on the marking machine. The contents of the bundle should then be checked against the contents list and correct items "ticked off" in the received column. Each item should be marked if necessary



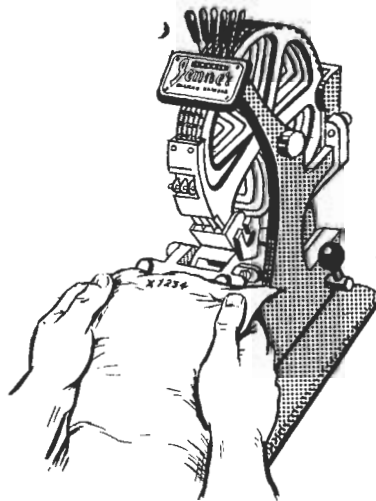
SELECT THE MARK BY ROTATING TYPE  
WHEELS IN SUCCESSION.  
CHECK AT METAL SIGHTING PLATE.



PLACE ARTICLE IN POSITION OVER  
RUBBER PRINTING BLOCK, MEANWHILE  
HOLDING ROUND HANDLES AT EITHER  
SIDE IN THE PALMS OF THE HANDS.



STRETCH FABRIC BY HOLDING IT WITH  
THUMBS ON RUBBER SIDE-PADS AND /  
MOVE FORWARD TILL STOP IS REACHED.



DEPRESS HANDLES UNTIL LATCH IS  
DISENGAGED, DRAW HANDLES FORWARD,  
AND LIFT CLEARLY MARKED ARTICLE OUT.

Fig. 3.—Diagrams showing the method of operation of the marking machine.

and old laundry marks, i.e., those marks not in conformity with the correct marking system, obliterated. Articles should then be placed in the right-hand  
(SO 7546)

compartment, care being taken to search clothing having pockets for extraneous articles.

When he is satisfied that the bundle is correct,

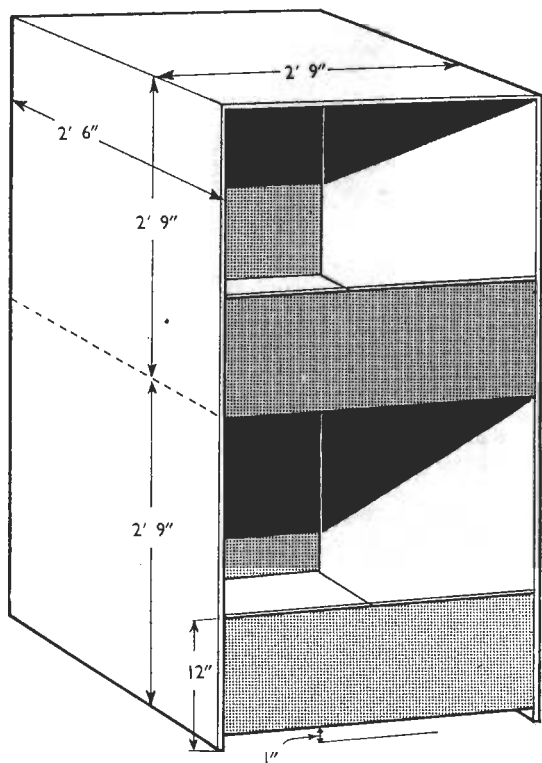


Fig. 4.—Classification and soiled bundle bins.

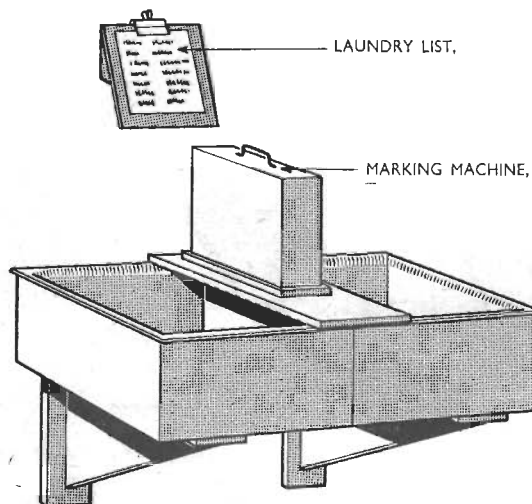


Fig. 5.—Double compartment sorting booth.

the "checker" should sign or initial the chit at the bottom of the "received" column and pass the articles to the "classifier." If there are discrepancies a note of these should be made on the chit and the chit set aside.

When the checking of bundles for the whole journey is complete, the chits should be transferred to the sorting and packing section; those bearing discrepancies should be placed on top and the details communicated to the senior hand of the laundry.

## II. Classification

The classifying of work is one of the most important and essential steps in the whole laundry process and involves the sorting of the articles into "lots" having similar fibre construction. In view of its important nature, the senior rating must in all instances constantly supervise ratings engaged on this duty. Articles of clothing in general use cannot all be washed together in a common process, as irreparable damage to many, and the discoloration of others by loose dyes from coloured goods, would result.

It is essential, therefore, to classify all articles of clothing into groups which can be safely washed together in a single process. The determination of these groups must be based on the following factors:

- The nature of the material (*i.e.*, the fibre from which the article is manufactured).
- The colour and type of dye.
- The type of clothing or general use to which the article is put.
- The degree and nature of soiling.

## 12. Fabrics

The materials used in the manufacturing of clothing can be classified into three main groups, namely vegetable, animal and synthetic (or artificial) fibres.

- VEGETABLE FIBRES, *e.g.*,
  - Cotton.
  - Flax.
  - Jute, hemp and rami (China grass).
- ANIMAL FIBRES, *e.g.*,
  - Wool.
  - Silk.
- SYNTHETIC OR "MAN-MADE" FIBRE, Rayons, etc.

## 13. Colour and type of dye

Dyes employed can be classified generally under two headings, "Fast" and "Loose" (or "Fugitive"). Fast dyes will wash well, subject to alkali and temperature control. Loose or fugitive dyes are liable to run in the washing processes.

Although some printed shirtings are not completely satisfactory, the majority of dyes used in shirts are quite fast to the white-work washing process. In many instances, particularly with shirts having black stripes, the striping tends to become brown if hyperchlorite bleach is used. Detachable coloured collars should be washed with the shirts to which they belong so that any variation in colour will be uniform in both the shirt body and collar.

Most of the difficulties with dyes arise in the washing of coloured table linen, bed linen, pyjamas, bath towels, and other miscellaneous coloured articles

and are due to the fact that the dyes used are variable in fastness.

In all cases of doubt, therefore, coloured articles should be washed in low temperatures, with little alkali and NO bleach.

#### 14. Types of clothing and nature of soiling

The different types of clothing and the use to which individual specialist type garments are put provide an indication of the nature of soiling to be expected and enable the washing process best suited for the removal of that soiling to be readily assessed.

##### (a) PERSONAL CLOTHING

(i) *Underwear*.—Vests and pants will be soiled generally by body exudations, which are acidic.

Pyjamas will be similarly soiled though to a lesser degree, except under tropical conditions.

Shirts and collars will be soiled by both contact with dirt and acidic soiling, the fabric at the neck band, collar and cuffs being more heavily soiled due to rubbing on the body.

(ii) *Top clothing*.—Working dress, white uniform, etc., will be soiled by contact with the work benches, and general dirt in the atmosphere, etc.

(iii) *Overall clothing*.—Overall suits and similar clothing will contain soiling matter peculiar to the trade of the user, in addition to the soiling found in ordinary top clothing.

##### (b) TABLE LINEN, ETC.

This will be subjected to all the stains common to food juices, spices, mustard, etc.

##### (c) BED LINEN

Mostly acidic soiling plus general dust of the atmosphere.

In all cases of heavy soiling the article must be separated from the general classification and given special treatment to prevent the contamination of cleaner articles. Examples of heavy soiling may be expected from the following groups:

Cooks.

E.R.A.'s, O.A.'s, E.A.'s, etc.

Stokers (boiler cleaning).

Men working in boilers, double bottoms, and oil fuel tanks.

#### 15. Typical classifications

##### WHITES

COTTONS	WOOLLENS	SILKS AND RAYONS
Vests	Socks	Vests
Pants	Mufflers	Pants
Shirts	Pullovers	Shirts
Handkerchiefs	Gloves	Scarfs
Bed linen	Seaboot	Handkerchiefs
Table linen	stockings	
Cap covers	Vests	
Collars	Pants	
Drill suits	Blankets	
Tropical suits		
Towels		

##### COLOURED

COTTONS	WOOLLENS	SILKS AND RAYONS
Shirts	Socks	Vests
Working dress	Stockings	Pants
Blue jean collars	Mufflers	Shirts (sports)
Pyjamas	Jerseys	
Handkerchiefs	Cardigans	
Overall suits	Pullovers	
Towels	Seaboot	
	stockings	
	Balaclava helmets	
	Gloves	
	Serge suits	
	Blankets	

#### 16. Classification bins

Classification bins of the type illustrated in Fig. 4 are provided. The number of bins installed is dependent upon the space available but an endeavour is made to provide at least six bins in all installations. Separate bins should be used for each material classification and, if available, for further sub-classification dependent upon the state of soiling.