

pile, (e.g., barrels, bags, bales, bundles, and ordinary cases and crates). Small stores, such as those in small boxes, cartons, and packages, and loose supplies are put in bins. Articles of unwieldy length, like iron piping, are placed on racks.

#### Accessibility.

5. Goods will be placed so as to be as easily accessible as possible, those more frequently used being in the handier locations.

#### Minimum handling.

6. Consistent with the above, they will be placed so as to require as little handling as possible in receiving, stowing and removing. Old lots should not have to be disturbed when new lots are placed. Other things being equal, heavy bulky goods will have the shortest haul.

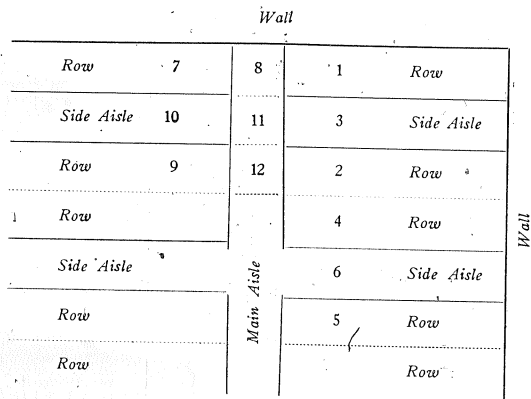


FIGURE 16

#### 3. CONCENTRATING

##### Rows.

7. In stowing a bulky item of stores in quantity, effort will be made to concentrate it. Thus two rows opposite each other (across a side aisle) will be filled in preference to two adjacent rows. Any excess over two rows full may then be stowed in the aisle between. This saves space to almost the extent of solid block piling, yet preserves the desirably flexible row arrangement with its maximum of direct accessibility.

#### Side Aisles.

8. Side aisles may be used for stowing only when the rows on either side are full of the same material.

#### Main Aisles.

9. Main aisle space adjoining a wall may be filled out to parallel full rows and aisles of the same material on either side. Platforms will when practicable, be placed for goods stowed in aisles.

Figure 16 illustrates the order in which rows and aisles may be filled with large lot of one item. Removals will be in reverse order. (See paragraph 24).

#### 4. FILING

##### Spoilage.

10. Articles should never be stowed in a position which might cause injury to them. Thus sheets of unprinted paper should lie flat, brooms should stand

on handle end, or hang, and barrels should stand on end. Likewise, placing articles so they project from the edge of a bin or platform is to be avoided. In general, articles will be kept off the floor or the ground. In placing items subject to deterioration from heat and dryness or from cold and dampness, it will be remembered that air near the ceiling is usually warmer and dryer than near the floor.

#### Height.

11. In stowing goods, the greatest economy of space is secured by tiering in cubical stacks and blocks

as high as is consistent with stability, thus leaving a maximum area for different groups and kinds of articles. Where economy of space is not critical, economy of time and effort are more important, and goods will be tiered only as high as an ordinary man can reach. Five feet to the top of the next to last tier is a normal height for packages not exceeding 100 lbs. As far as possible men should work singly, rather than in groups.

#### Shape—Cubical vs. pyramidal.

12. Where it is possible to choose between cubical and pyramidal piling of goods, the cubical method will be given preference.

Cubical piling has the following five advantages:

1. More economical in use of space.
2. Easier to keep uniform and regular.
3. Easier to inspect.
4. Easier to count.
5. Less spoilage from weather, if uncovered.

Pyramidal piling has two advantages:

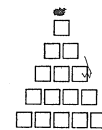
1. Simpler and easier to secure stable tiering of cylindrical or other rolling articles, such as shells, by bracing the bottom tier only of each stack. Cubical tiering of such goods requires bracing the stack all the way up.

2. Easier to cover from weather, because of its shape like a peaked roof.

Where pyramidal piling is a necessity, No. in full stack =

$$\frac{\text{No. on bottom tier} \times (\text{No. of tiers} + 1)}{2}$$

E.g. For a full pyramidal stack with 5 in bottom tier



$$\text{No. in stack} = \frac{5 \times (5 + 1)}{2} = \frac{5 \times 6}{2} = \frac{30}{2} = 15$$

The number in any block, whether pyramidal or cubical, will be the number in one full stack times the number of full stacks in the block.

#### Uniformity.

13. Full columns, stacks or blocks of any one item will be kept uniform for that item. Only the last column, stack or block may remain incomplete, containing odd quantities. This will add both to neatness, and to ease and accuracy in counting.

E.g.

	Incorrect method of piling 44 in 1 stack	Incorrect	<input type="checkbox"/>
		method	<input type="checkbox"/>
		of piling 44	<input type="checkbox"/>
		in 1 stack	<input type="checkbox"/>
Correct method of piling 44 in 1 stack	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/>
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#### Group Piling.

14. Stores are piled singly or in multiples of five. Goods may be piled singly up to ten in a column. Beyond this the columns are made as high as the space will permit but of whole groups of five only. Groups are not broken to fill in a remaining space too small for a whole group. Thus every column of articles small enough to be piled in groups of five will contain some multiple of five and will be uniform for that article. For instance, if a bin holds 24 packages of letterheads piled snug to the top, the column will be made of 20 packages only, viz., 4 groups of 5 each.

#### Stowing Area.

15. In any area to be filled, such as a platform unit, stowing is commenced at the back left-hand corner, and brought forward, each row of goods being completed to the front before a new row is started. Tiering is done as soon as the nature of the goods permits and as high as possible so long as the stacks are stable, the uniform groups are preserved, and the stack does not come too near the ceiling. Space will be left for the proper working of the sprinkler pipes (in this case . . . inches), and for properly removing (such as by upending) the goods on the top tier.

#### Stowing volume.

16. In any cubic space to be filled, such as a bin, stowing is commenced at the back left-hand corner,