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METHODS OF CALCULATING HOSIERY SHIPPING CASE DIMENSIONS

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ABSTRACT

Methods for calculating the dimensions of the most suitable arrangement of hosiery boxes which will require a minimum surface area of the shipping case, using both the proposed standard inside dimensions of hosiery boxes and boxes of other dimensions, are given. The development of the equations of a minimum surface of a hexahedron for a given volume is shown in the Appendix to be, when with sides a, b, and c, where k and c are constants, $c = \dfrac{2k}{k+1}$. Use is made of this in selecting the most economical case. The minimum areas are grouped and, in addition, the most common sizes are listed for the use of the manufacturer of all styles of hosiery. Considerations for the use of these dimensions are discussed. The saving resulting from the reduction of the surface area in the design of the case is the feature brought out by this paper.

CONTENTS

I. INTRODUCTION

The recent adoption by the hosiery association of standard sizes for hosiery boxes has encouraged similar efforts to establish dimensions for economical hosiery shipping cases. Hosiery after boxing is sent to the jobber or retail merchant in cases which contain 60, 100, or 120 dozen pairs to the case. The 60 and 120 dozen cases are in accordance with established practice, but the 100 dozen case results from a more recent trade practice. These cases are made of wood, plywood, or heavy corrugated fiber board, the thickness ranging from three-eighths to seven-eighths inch for wood. Since the material used for the cases introduces a substantial item into the operating expenses of a hosiery mill, any means of reducing this is economically desirable.

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An excellent basis for consideration of hosiery problems has been established through the cooperation of the National Association of Hosiery and Underwear Manufacturers. They have appointed a research and standardization committee to cooperate and formulate the problems which are of importance to their industry. In addition, they have established a fellowship at this bureau to work on hosiery problems. This cooperation has proven quite valuable in the solution of this and other hosiery investigations.

II. PURPOSE

The purpose of this investigation was (a) to establish a system of arranging hosiery boxes in the case which will permit the most economical size of packing case; (b) to list the dimensions of this system of arrangement of boxes in layers for each type of standard hosiery boxes which will enable the adoption of standard packing cases.

III. MINIMUM SURFACE FOR A DEFINITE VOLUME

Since hosiery is usually packed in quantities of a definite number of dozens, little consideration need be given the fact that one large case would have less surface than a number of smaller cases which would hold the same number of boxes. The relation of the dimensions of the case, however, should be given detailed study.

In considering the area of hexahedron cases (six sided, all sides forming right angles), the minimum surface for a given volume is obtained by using the perfect cube shape.[1] The relation of the sides a, ka, ca, when they are not equal, for obtaining a minimum surface of a case is, when k and c are constants

$$c = \frac{2k}{k+1}$$

A full development of this is given in the Appendix.

IV. STANDARD HOSIERY BOX DIMENSIONS USED AS BASIS FOR CALCULATIONS

It was decided that the standard hosiery boxes as established by the Bureau of Standards and the National Association of Hosiery and Underwear Manufacturers should be used as the basis for all calculations.[2]

These standards are:

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[1] See Appendix.
[2] B. S. Tech. Paper No. 253, Standardization of Hosiery Box Dimensions.

TABLE 1.—*Inside dimensions of boxes proposed as standards for ladies' hosiery*

[Accepted by National Association of Hosiery and Underwear Manufacturers]

THREE FOLD

Number	Width	Length	Height	Number of pairs in box	Number of folds of hosiery	Description of hosiery
	Inches	*Inches*	*Inches*			
1	6	9⅜	¾	3	3	All silk hose.
2	6	9⅜	1	3	3	Boot silk hose.
3	6	9⅜	1⅞	6	3	Mercerized and boot silk.
4	6	9⅜	3¾	12	3	Do.

HOSE FOLDED IN ANKLE

5	6	11⅞	1¼	6	2	Sheer mercerized hose.
6	6	11⅞	1½	6	2	Boot silk, mercerized, and light-weight cotton.
7	6	11⅞	1¾	6	2	Medium-weight cotton.
8	6	11⅞	2¼	6	2	Heavy-weight cotton.
9	6	11⅞	2½	12	2	Mercerized and boot silk.
10	6	11⅞	3	12	2	Light-weight cotton.
11	6	11⅞	3½	12	2	Medium-weight cotton.
12	6	11⅞	4⅜	12	2	Heavy-weight cotton.

HOSE FOLDED IN GORE OF HEEL

13	6	13¼	1¼	6	2	Sheer mercerized hose.
14	6	13¼	1½	6	2	Boot silk, mercerized, and light-weight cotton.
15	6	13¼	1¾	6	2	Medium-weight cotton.
16	6	13¼	2¼	6	2	Heavy-weight cotton.
17	6	13¼	2½	12	2	Boot silk and mercerized.
18	6	13¼	3	12	2	Light-weight cotton.
19	6	13¼	3½	12	2	Medium-weight cotton.
20	6	13¼	4⅜	12	2	Heavy-weight cotton.

TABLE 2.—*Inside dimensions of boxes proposed as standards for men's hosiery*

[Accepted by National Association of Hosiery and Underwear Manufacturers]

Number	Width	Length	Height	Number of pairs in box	Description of hosiery
	Inches	*Inches*	*Inches*		
1	4⅛	13¼	1¼	6	Silk, mercerized, and light-weight cotton.
2	4⅛	13¼	2½	12	Do.
3	4⅛	13¼	3	12	Heavy mercerized and cotton.

TABLE 3.—*Inside dimensions of boxes for proposed improved method of packing men's hosiery*

[Accepted by National Association of Hosiery and Underwear Manufacturers]

Number	Width	Length	Height	Number of pairs in box	Description of hosiery
	Inches	*Inches*	*Inches*		
1	3⅞	8½	1¼	6	Silk hose.
2	3⅞	8½	2	6	Mercerized and cotton hose.

TABLE 4.—*Inside dimensions of boxes proposed as standards for children's (ribbed) hosiery*

[Accepted by National Association of Hosiery and Underwear Manufacturers]

BOXES DESIGNED FOR MEDIUM-WEIGHT HOSIERY

Number	Size of hose	Width	Length	Height	Number of pairs to a box and type of box
		Inches	*Inches*	*Inches*	
1	4	2⅞	5	1½	
2	5	3¾	5¾	1¾	
3	6	3⅛	7¼	1⅞	3 pair in box; narrow box.
4	7	3½	8¾	2	
5	8	3⅞	10¼	2	
6	9	4¼	11¾	2¼	
7	4	4¾	5	1½	
8	5	5½	5¾	1¾	
9	6	6¼	7¼	1⅞	6 pairs in box; 2 layers of 3 pairs; wide box.
10	7	7	8¾	2	
11	8	7¾	10¼	2	
12	9	8½	11¾	2¼	
13	4	2⅞	5	3¼	
14	5	2¾	5¾	3½	
15	6	3⅛	7¼	3¾	6 pairs in box; narrow box.
16	7	3½	8¾	4	
17	8	3⅞	10¼	4¼	
18	9	4¼	11¾	4½	
19	4	4¾	5	3¼	
20	5	5½	5¾	3½	
21	6	6¼	7¼	3¾	12 pairs in box; 2 layers of 6 pairs; wide box.
22	7	7	8¾	4	
23	8	7¾	10¼	4¼	
24	9	8½	11¾	4½	

The children's boxes, because of their wide diversity of sizes, have not been included in the present paper. However, the plan presented in this paper may be followed for obtaining the dimensions of the most economical case for each of these sizes.

V. METHOD OF CALCULATING THE MOST ECONOMICAL DIMENSIONS

Since the proposed standards listed in Tables 1 to 4 are inside dimensions of hosiery boxes, an addition was made to each dimension to take care of the thickness of the cardboard and the covering paper. This thickness is a variable, because of the different kinds of cardboard in use and the difference of the covering paper. In these calculations the maximum thickness of the boxes available has been used.

The calculations in Tables 5 to 18, inclusive, have been made as follows:

A = width of box + 4 thicknesses of cardboard, etc.; × the number of widths in a layer (C).

B = length of box + 4 thicknesses of cardboard, etc.; × the number of lengths in a layer (D).

C = number of widths of boxes in a layer.

D = number of lengths of boxes in a layer.

$E = (C \times D) =$ total boxes in a layer.

$F = \dfrac{\left.\begin{array}{l} 60 \text{ or} \\ 100 \text{ or} \\ 120 \end{array}\right\} \text{ dozen of hosiery in case}}{E} =$ number of complete layers if boxes contain one dozen hosiery each (see G).

$G =$ number of boxes necessary to hold one dozen hosiery.

$H = (F \times G) =$ number of complete layers.

$I = \left.\begin{array}{l} 60 \text{ or} \\ 100 \text{ or} \\ 120 \end{array}\right\} - (H \times E) =$ number of dozens of hose (see G to convert to boxes) remaining over the complete layers.

$J = (I \times G) =$ number of boxes remaining over the complete layers.

$K = \dfrac{J}{E} =$ number of layers necessary to take care of remaining boxes.

$L =$ number of boxes over the extra layer or layers, when division $\dfrac{J}{E}$ is not a whole number.

$M =$ extra layer necessary to take care of these extra boxes (see N).

$N = (E - L) =$ number of empty boxes added to make the layer complete. These are known as "empties."

$O =$ height of box + 2 thicknesses cardboard and covering paper.

$P = (H + K + M) =$ total number of layers.

$Q =$ height of box + 2 thicknesses of cardboard and covering paper $\times$ number of layers.

$R = \dfrac{2\,(A \times B) + 2\,(A \times Q) + 2\,(B \times Q)}{144} =$ area of surface of the arrangement or pile of boxes in square feet.

Sa, Sb, Sc, etc., are the relative ratings of these areas based such that the lowest area for that type is 100.

Groups I, II, III, IV, etc., in the tables show the combinations which occur when the width and length are varied to form the layers of different dimensions. Groups a, b, c, etc., show the calculations for the various heights of boxes.

TABLE 5.—Ladies' hosiery (3 folds), method of packing 60 dozen to case

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d
I a	18.552	19.118	3	2	6	10	4	40	0	0	0	0	0	0	0.842	40	33.680	22.6	103.2	106.4	104.4	103.7
I b	18.552	19.118	3	2	6	10	4	40	0	0	0	0	0	0	1.092	40	43.680	27.5				
I c	18.552	19.118	3	2	6	10	2	20	0	0	0	0	0	0	1.967	20	39.340	25.0				
I d	18.552	19.118	3	2	6	10	1	10	0	0	0	0	0	0	3.842	10	38.420	25.0				
II a	18.552	28.677	3	3	9	6	4	24	6	24	2	6	1	3	.842	27	22.734	22.3	101.8	102.3	104.4	103.7
II b	18.552	28.677	3	3	9	6	4	24	6	24	2	6	1	6	1.092	27	29.484	26.7				
II c	18.552	28.677	3	3	9	6	2	12	6	12	1	3	1	6	1.967	14	27.538	25.5				
II d	18.552	28.677	3	3	9	6	1	6	6	6	0	6	1	3	3.842	7	26.894	25.0				
III a	18.552	38.236	3	4	12	5	4	20	0	0	0	0	0	0	.842	20	16.840	23.1	105.5	103.8	104.1	103.7
III b	18.552	38.236	3	4	12	5	4	20	0	0	0	0	0	0	1.092	20	21.840	27.1				
III c	18.552	38.236	3	4	12	5	2	10	0	0	0	0	0	0	1.967	10	19.670	25.4				
III d	18.552	38.236	3	4	12	5	1	5	0	0	0	0	0	0	3.842	5	19.210	25.0				
IV a	18.552	19.118	4	2	8	7	4	28	4	16	2	0	0	0	.842	30	25.260	21.9	100.0	101.5	100.4	105.0
IV b	18.552	19.118	4	2	8	7	4	28	4	16	2	0	0	0	1.092	30	32.760	26.5				
IV c	18.552	19.118	4	2	8	7	2	14	4	8	1	0	0	0	1.967	15	29.505	24.5				
IV d	18.552	19.118	4	2	8	7	1	7	4	4	0	4	1	4	3.842	8	30.736	25.3				
V a	24.736	28.677	4	3	12	5	4	20	0	0	0	0	0	0	.842	20	16.840	22.3	101.8	100.0	100.0	100.0
V b	24.736	28.677	4	3	12	5	4	20	0	0	0	0	0	0	1.092	20	21.840	26.1				
V c	24.736	28.677	4	3	12	5	2	10	0	0	0	0	0	0	1.967	10	19.670	24.4				
V d	24.736	28.677	4	3	12	5	1	5	0	0	0	0	0	4	3.842	5	19.210	24.1				
VI a	24.736	38.236	4	4	16	3	4	12	12	48	3	0	0	0	.842	15	12.630	24.3	110.9	105.0	110.2	110.4
VI b	24.736	38.236	4	4	16	3	4	12	12	48	3	0	0	0	1.092	15	16.380	27.4				
VI c	24.736	38.236	4	4	16	3	2	6	12	24	1	8	1	8	1.967	8	15.736	26.6				
VI d	24.736	38.236	4	4	16	3	1	3	12	12	0	12	1	4	3.842	4	15.368	26.6				
VII a	24.736	19.118	5	2	10	6	4	24	0	0	0	0	0	0	.842	24	20.208	22.2	101.3	101.1	100.8	100.4
VII b	24.736	19.118	5	2	10	6	4	24	0	0	0	0	0	0	1.092	24	26.208	26.4				
VII c	24.736	19.118	5	2	10	6	2	12	0	0	0	0	0	0	1.967	12	23.604	24.6				
VII d	24.736	19.118	5	2	10	6	1	6	0	0	0	0	0	0	3.842	6	23.056	24.2				
VIII a	30.920	28.677	5	3	15	4	4	16	0	0	0	0	0	0	.842	16	13.472	23.5	107.3	102.6	103.7	105.7
VIII b	30.920	28.677	5	3	15	4	4	16	0	0	0	0	0	0	1.092	16	17.472	26.8				
VIII c	30.920	28.677	5	3	15	4	2	8	0	0	0	0	0	0	1.967	8	15.736	25.3				
VIII d	30.920	28.677	5	3	15	4	1	4	0	0	0	0	0	0	3.842	4	15.368	25.0				
IX a	30.920	38.236	5	4	20	3	4	12	0	0	0	0	0	0	.842	12	10.104	26.1	119.2	111.2	113.9	114.1
IX b	30.920	38.236	5	4	20	3	4	12	0	0	0	0	0	0	1.092	12	13.104	29.0				
IX c	30.920	38.236	5	4	20	3	2	6	0	0	0	0	0	0	1.967	6	11.802	27.8				
IX d	30.920	38.236	5	4	20	3	1	3	0	0	0	0	0	0	3.842	3	11.526	27.5				

TABLE 6.—Ladies' hosiery (3 folds), method of packing 100 dozen to case

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d
X	a	37,104	19.118	6	2	12	5	4	20	0	0	0	0	0	0	.842	20	16,840	23.0	104.9	103.0	103.3	103.3
	b	37,104	19.118	6	2	12	5	4	20	0	0	0	0	0	0	1.092	20	21,840	26.9				
	c	37,104	19.118	6	2	12	5	2	10	0	0	0	0	0	0	1.967	10	19,670	25.5				
	d	37,104	19.118	6	2	12	5	1	5	0	0	0	0	0	0	3.842	5	19,210	24.9				
XI	a	37,104	28.677	6	3	18	3	4	12	6	24	1	6	1	12	.842	14	11,788	25.5	116.4	110.0	112.3	119.5
	b	37,104	28.677	6	3	18	3	4	12	6	24	1	6	1	12	1.092	14	15,288	28.7				
	c	37,104	28.677	6	3	18	3	2	6	6	12	0	12	1	6	1.967	7	13,769	27.4				
	d	37,104	28.677	6	3	18	3	1	3	6	6	0	6	1	12	3.842	4	15,368	28.8				
XII	a	37,104	38.236	5	4	24	2	4	8	12	48	2	0	0	0	.842	10	8,420	28.4	129.7	118.8	123.0	131.1
	b	37,104	38.236	6	4	24	2	4	8	12	48	2	0	0	0	1.092	10	10,920	31.0				
	c	37,104	38.236	6	4	24	2	2	4	12	24	1	0	0	0	1.967	5	9,835	30.0				
	d	37,104	38.236	6	4	24	2	1	2	12	12	0	12	1	12	3.842	3	11,520	31.6				
I	a	18,552	19.118	3	2	6	16	4	64	4	16	2	4	1	2	0.842	67	56,414	34.4	110.6	117.7	115.0	113.0
	b	18,552	19.118	3	2	6	16	4	64	4	16	2	4	1	4	1.092	67	73,164	43.2				
	c	18,552	19.118	3	2	6	16	2	32	4	8	1	2	1	4	1.967	34	66,878	39.9				
	d	18,552	19.118	3	2	6	16	1	16	4	4	0	4	1	2	3.842	17	65,314	39.1				
II	a	18,552	28.677	3	3	9	11	4	44	1	4	0	4	1	5	.842	45	37,890	32.2	103.5	107.9	106.9	108.7
	b	18,552	28.677	3	3	9	11	4	44	1	4	0	4	1	5	1.092	45	40,140	39.6				
	c	18,552	28.677	3	3	9	11	2	22	1	2	0	2	1	7	1.967	23	45,241	37.1				
	d	18,552	28.677	3	3	9	11	1	11	1	1	0	1	1	8	3.842	12	46,104	37.6				
III	a	18,552	38.236	3	4	12	8	4	32	4	16	1	4	1	8	.842	34	28,628	32.4	104.2	106.5	104.3	107.5
	b	18,552	38.236	3	4	12	8	4	32	4	16	1	4	1	8	1.092	34	37,128	39.1				
	c	18,552	38.236	3	4	12	8	2	16	4	8	0	8	1	4	1.967	17	33,439	36.2				
	d	18,552	38.236	3	4	12	8	1	8	4	4	0	4	1	8	3.842	9	34,578	37.2				
IV	a	24,736	19.118	4	2	8	12	4	48	4	16	2	4	0	0	.842	50	42,100	32.2	103.5	108.4	105.2	106.9
	b	24,736	19.118	4	2	8	12	4	48	4	16	2	4	0	0	1.092	50	54,000	39.8				
	c	24,736	19.118	4	2	8	12	2	24	4	8	1	8	0	0	1.967	25	40,175	36.5				
	d	24,736	19.118	4	2	8	12	1	12	4	4	0	4	1	4	3.842	13	40,940	37.0				
V	a	24,736	28.677	4	3	12	8	4	32	4	16	1	4	1	8	.842	34	28,628	31.1	100.0	101.9	100.0	102.6
	b	24,736	28.677	4	3	12	8	4	32	4	16	1	4	1	8	1.092	34	37,128	37.4				
	c	24,736	28.677	4	3	12	8	2	16	4	8	0	8	1	4	1.967	17	33,439	34.7				
	d	24,736	28.677	4	3	12	8	1	8	4	4	0	4	1	8	3.842	9	34,578	35.5				
VI	a	24,736	38.236	4	4	16	6	4	24	4	16	1	0	0	0	.842	25	21,050	31.5	101.3	100.8	102.3	106.1
	b	24,736	38.236	4	4	16	6	4	24	4	16	1	0	0	0	1.092	25	27,300	37.0				
	c	24,736	38.236	4	4	16	6	2	12	4	8	0	8	1	8	1.967	13	25,571	35.5				
	d	24,736	38.236	4	4	16	6	1	6	4	4	0	4	1	12	3.842	7	26,894	36.7				

Table 6.—*Ladies' hosiery (3 folds), method of packing 100 dozen to case*—Continued

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d
VII	a	30.920	19.118	5	2	10	10	4	40	0	0	0	0	0	0	0.842	40	33.680	31.6	101.6	104.9	102.6	100.9
	b	30.920	19.118	5	2	10	10	4	40	0	0	0	0	0	0	1.092	40	43.680	38.5				
	c	30.920	19.118	5	2	10	10	2	20	0	0	0	0	0	0	1.967	20	39.340	35.6				
	d	30.920	19.118	5	2	10	10	1	10	0	0	0	0	0	0	3.842	10	38.420	34.9				
VIII	a	30.920	28.677	5	3	15	6	4	24	10	40	2	10	1	5	.842	27	22.734	31.1	100.0	100.0	101.2	100.0
	b	30.920	28.677	5	3	15	6	4	24	10	40	2	10	1	5	1.092	27	29.484	36.7				
	c	30.920	28.677	5	3	15	6	2	12	10	20	1	5	1	10	1.967	14	27.538	35.1				
	d	30.920	28.677	5	3	15	6	1	6	10	10	0	10	1	5	3.842	7	26.894	34.6				
IX	a	30.920	38.236	5	4	20	5	4	20	0	0	0	0	0	0	.842	20	16.840	32.6	104.8	101.9	101.7	100.9
	b	30.920	38.236	5	4	20	5	4	20	0	0	0	0	0	0	1.092	20	21.840	37.4				
	c	30.920	38.236	5	4	20	5	2	10	0	0	0	0	0	0	1.967	10	19.670	35.3				
	d	30.920	38.236	5	4	20	5	1	5	0	0	0	0	0	0	3.842	5	19.210	34.9				
X	a	37.104	19.118	6	2	12	8	4	32	4	16	1	4	1	8	.842	34	28.628	32.2	103.5	106.0	103.5	106.6
	b	37.104	19.118	6	2	12	8	4	32	4	16	1	4	1	8	1.092	34	37.128	38.9				
	c	37.104	19.118	6	2	12	8	2	16	4	8	0	8	1	4	1.967	17	33.439	35.9				
	d	37.104	19.118	6	2	12	8	1	8	4	4	0	4	1	8	3.842	9	34.578	36.9				
XI	a	37.104	28.677	6	3	18	5	4	20	10	40	2	4	1	14	.842	23	19.366	32.5	104.5	102.7	100.6	104.9
	b	37.104	28.677	6	3	18	5	4	20	10	40	2	4	1	14	1.092	23	25.116	37.7				
	c	37.104	28.677	6	3	18	5	2	10	10	20	1	2	1	16	1.967	12	23.604	34.9				
	d	37.104	28.677	6	3	18	5	1	5	10	10	0	10	1	8	3.842	6	22.052	36.3				
XII	a	37.104	38.236	6	4	24	4	4	16	4	16	0	16	1	8	.842	17	14.314	34.7	111.6	106.5	110.1	115.0
	b	37.104	38.236	6	4	24	4	4	16	4	16	0	16	1	8	1.092	17	18.564	39.1				
	c	37.104	38.236	6	4	24	4	2	8	4	8	0	8	1	16	1.967	9	17.703	38.2				
	d	37.104	38.236	6	4	24	4	1	4	4	4	0	4	1	20	3.842	5	19.210	39.8				

Table 7.—*Ladies' hosiery (3 folds), improved method of packing 120 dozen to case*

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d
I	a	18.552	19.118	3	2	6	20	4	80	0	0	0	0	0	0	0.842	80	67.360	40.2	116.2	122.8	120.1	119.
	b	18.552	19.118	3	2	6	20	4	80	0	0	0	0	0	0	1.092	80	87.360	50.6				
	c	18.552	19.118	3	2	6	20	2	40	0	0	0	0	0	0	1.967	40	78.680	46.1				
	d	18.552	19.118	3	2	6	20	1	20	0	0	0	0	0	0	3.842	20	76.840	45.1				

Case																				H	H	H	H
II a	18.552	28.677	3	3	9	13	4	52	3	12	1	3	1	6	.842	54	45.468	37.2	107.5	111.9	110.2	113.0
II b	18.552	28.677	3	3	9	13	4	52	3	12	1	3	1	6	1.092	54	58.968	46.1				
II c	18.552	28.677	3	3	9	13	2	26	3	6	0	6	1	3	1.967	27	53.109	42.3				
II d	18.552	28.677	3	3	9	13	1	13	3	3	0	3	1	6	3.842	14	53.788	42.7				
III a	18.552	38.236	4	3	12	10	4	40	0	0	0	0	0	0	.842	40	33.680	36.4	105.2	107.5	106.3	106.1
III b	18.552	38.236	4	3	12	10	4	40	0	0	0	0	0	0	1.092	40	43.680	44.3				
III c	18.552	38.236	4	3	12	10	2	20	0	0	0	0	0	0	1.967	20	39.340	40.8				
III d	18.552	38.236	4	3	12	10	1	10	0	0	0	0	0	0	3.842	10	38.420	40.1				
IV a	24.736	19.118	2	4	8	15	4	60	0	0	0	0	0	0	.842	60	50.520	37.3	107.8	112.6	110.7	110.3
IV b	24.736	19.118	2	4	8	15	4	60	0	0	0	0	0	0	1.092	60	65.520	46.4				
IV c	24.736	19.118	2	4	8	15	2	30	0	0	0	0	0	0	1.967	30	59.010	42.5				
IV d	24.736	19.118	2	4	8	15	1	15	0	0	0	0	0	0	3.842	15	57.630	41.7				
V a	24.736	28.677	3	4	12	10	4	40	0	0	0	0	0	0	.842	40	33.680	34.8	100.6	102.4	101.6	101.3
V b	24.736	28.677	3	4	12	10	4	40	0	0	0	0	0	0	1.092	40	43.680	42.2				
V c	24.736	28.677	3	4	12	10	2	20	0	0	0	0	0	0	1.967	20	39.340	39.0				
V d	24.736	28.677	3	4	12	10	1	10	0	0	0	0	0	0	3.842	10	38.420	38.3				
VI a	30.920	19.118	2	4	16	7	4	28	8	32	2	8	1	0	.842	28	25.260	35.2	101.7	101.5	101.6	105.8
VI b	30.920	19.115	2	4	16	7	4	28	8	32	2	8	1	0	1.092	28	32.760	41.8				
VI c	30.920	19.118	2	4	16	7	2	14	8	16	1	8	0	8	1.967	14	29.505	39.0				
VI d	30.920	19.118	2	4	16	7	1	7	8	8	0	8	1	8	3.842	7	30.736	40.0				
VII a	30.920	28.677	3	4	10	12	4	48	0	0	0	0	0	0	.842	48	40.416	36.3	104.9	108.3	106.8	106.3
VII b	30.920	28.677	3	4	10	12	4	48	0	0	0	0	0	0	1.092	48	52.416	44.6				
VII c	30.920	28.677	3	4	10	12	2	24	0	0	0	0	0	0	1.967	24	47.208	41.0				
VII d	30.920	28.677	3	4	10	12	1	12	0	0	0	0	0	0	3.842	12	46.104	40.2				
VIII a	30.920	38.236	4	4	10	8	4	32	0	0	0	0	0	0	.842	32	26.944	34.6	103.5	100.0	100.0	100.0
VIII b	30.920	38.236	4	4	10	8	4	32	0	0	0	0	0	0	1.092	32	34.944	41.2				
VIII c	30.920	38.236	4	4	10	8	2	16	0	0	0	0	0	0	1.967	16	31.472	38.4				
VIII d	30.920	38.236	4	4	10	8	1	8	0	0	0	0	0	0	3.842	8	30.736	37.8				
IX a	30.920	19.118	2	4	15	6	4	24	0	0	0	0	0	0	.842	24	20.208	35.8	103.5	101.0	101.8	101.9
IX b	30.920	19.118	2	4	15	6	4	24	0	0	0	0	0	0	1.092	24	26.208	41.2				
IX c	30.920	19.118	2	4	15	6	2	12	0	0	0	0	0	0	1.967	12	23.604	39.1				
IX d	30.920	19.118	2	4	15	6	1	6	0	0	0	0	0	0	3.842	6	23.052	38.5				
X a	37.104	28.677	3	4	20	10	4	40	0	0	0	0	0	0	.842	40	33.680	36.2	104.6	106.8	105.7	105.3
X b	37.104	28.677	3	4	20	10	4	40	0	0	0	0	0	0	1.092	40	43.680	44.0				
X c	37.104	28.677	3	4	20	10	2	20	0	0	0	0	0	0	1.967	20	39.340	40.6				
X d	37.104	28.677	3	4	20	10	1	10	0	0	0	0	0	0	3.842	10	38.420	39.8				
XI a	37.104	19.118	2	4	18	6	4	24	12	48	2	12	1	6	.842	27	22.734	35.6	102.9	101.2	103.9	104.2
XI b	37.104	19.118	2	4	18	6	4	24	12	48	2	12	1	6	1.092	27	29.484	41.7				
XI c	37.104	19.118	2	4	18	6	2	12	12	24	1	12	1	12	1.967	14	27.538	39.9				
XI d	37.104	19.118	2	4	18	6	1	6	12	12	0	12	1	6	3.842	7	26.894	39.4				
XII a	37.104	38.236	4	4	24	5	4	20	0	0	0	0	0	0	.842	20	16.840	37.3	107.8	103.4	104.9	105.3
XII b	37.104	38.236	4	4	24	5	4	20	0	0	0	0	0	0	1.092	20	21.840	42.6				
XII c	37.104	38.236	4	4	24	5	2	10	0	0	0	0	0	0	1.967	10	19.670	40.3				
XII d	37.104	38.236	4	4	24	5	1	5	0	0	0	0	0	0	3.842	5	19.210	39.8				

Table 8.—*Ladies' hosiery (2 folds), folded in ankle, 60 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
I a	18.552	24.118	3	2	6	10	2	20	0	0	0	0	0	0	1.342	20	26.840	22.1	100.9	102.4	104.1	106.9	100	100	102.6	106.2
b	18.552	24.118	3	2	6	10	2	20	0	0	0	0	0	0	1.592	20	31.840	25.1								
c	18.552	24.118	3	2	6	10	2	20	0	0	0	0	0	0	1.842	20	36.840	28.1								
d	18.552	24.118	3	2	6	10	2	20	0	0	0	0	0	0	2.342	20	46.840	34.0								
e	18.552	24.118	3	2	6	10	1	10	0	0	0	0	0	0	2.592	10	25.920	21.6								
f	18.552	24.118	3	2	6	10	1	10	0	0	0	0	0	0	3.092	10	30.920	24.5								
g	18.552	24.118	3	2	6	10	1	10	0	0	0	0	0	0	3.592	10	35.920	27.5								
h	18.552	24.118	3	2	6	10	1	10	0	0	0	0	0	0	4.467	10	44.670	32.7								
II a	18.552	36.177	3	3	9	6	2	12	6	12	1	3	1	6	1.342	14	18.788	23.6	107.8	107.3	107.0	107.9	106.9	105.3	106.0	107.5
b	18.552	36.177	3	3	9	6	2	12	6	12	1	3	1	6	1.592	14	22.258	26.3								
c	18.552	36.177	3	3	9	6	2	12	6	12	1	3	1	6	1.842	14	25.788	28.9								
d	18.552	36.177	3	3	9	6	2	12	6	12	1	3	1	6	2.342	14	32.788	34.3								
e	18.552	36.177	3	3	9	6	1	6	6	6	0	6	1	3	2.592	7	18.144	23.1								
f	18.552	36.177	3	3	9	6	1	6	6	6	0	6	1	3	3.092	7	21.644	25.8								
g	18.552	36.177	3	3	9	6	1	6	6	6	0	6	1	3	3.592	7	25.144	28.4								
h	18.552	36.177	3	3	9	6	1	6	6	6	0	6	1	3	4.467	7	31.269	33.1								
III a	18.552	48.236	3	4	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	21.9	113.7	111.0	109.3	107.6	113.4	109.4	108.6	107.5
b	18.552	48.236	3	4	12	5	2	10	0	0	0	0	0	0	1.592	10	15.920	27.2								
c	18.552	48.236	3	4	12	5	2	10	0	0	0	0	0	0	1.842	10	18.420	29.5								
d	18.552	48.236	3	4	12	5	2	10	0	0	0	0	0	0	2.342	10	23.420	34.2								
e	18.552	48.236	3	4	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	24.5								
f	18.552	48.236	3	4	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	26.8								
g	18.552	48.236	3	4	12	5	1	5	0	0	0	0	0	0	3.592	5	17.960	29.1								
h	18.552	48.236	3	4	12	5	1	5	0	0	0	0	0	0	4.467	5	22.335	33.1								
IV a	24.736	24.118	4	2	8	7	2	14	4	8	1	4	0	0	1.342	15	20.130	21.9	100.0	100.0	100.0	100.9	103.7	102.4	103.7	105.5
b	24.736	24.118	4	2	8	7	2	14	4	8	1	4	0	0	1.592	15	23.880	34.5								
c	24.736	24.118	4	2	8	7	2	14	4	8	1	4	0	0	1.842	15	27.630	27.0								
d	24.736	24.118	4	2	8	7	2	14	4	8	0	4	0	0	2.342	15	35.130	32.1								
e	24.736	24.118	4	2	8	7	1	7	4	4	0	4	1	4	2.592	8	20.736	22.4								
f	24.736	24.118	4	2	8	7	1	7	4	4	0	4	1	4	3.092	8	24.736	27.2								
g	24.736	24.118	4	2	8	7	1	7	4	4	0	4	1	4	3.592	8	28.736	27.8								
h	24.736	24.118	4	2	8	7	1	7	4	4	0	4	1	4	4.467	8	35.736	32.5								
V a	24.736	36.177	4	3	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	23.8	108.7	105.7	103.7	101.3	108.3	104.1	103.0	101.6
b	24.736	36.177	4	3	12	5	2	10	0	0	0	0	0	0	1.592	10	15.920	25.0								
c	24.736	36.177	4	3	12	5	2	10	0	0	0	0	0	0	1.842	10	18.420	28.0								
d	24.736	36.177	4	3	12	5	2	10	0	0	0	0	0	0	2.342	10	23.420	32.2								
e	24.736	36.177	4	3	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	25.4								
f	24.736	36.177	4	3	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	25.5								
g	24.736	36.177	4	3	12	5	1	5	0	0	0	0	0	0	3.592	5	17.960	27.6								
h	24.736	36.177	4	3	12	5	1	5	0	0	0	0	0	0	4.467	5	22.335	31.3								

VII	a	24.736	48.236	4	4	16	3	2	6	24	8	8	1	8	1.342	4	8	10.736	27.5	125.6	120.4	116.6	111.9	125.4	118.8
	b	24.736	48.236	4	4	16	3	2	6	24	1	8	1	8	1.592	4	8	12.736	29.5						
	c	24.736	48.236	4	4	16	3	2	6	24	1	8	1	8	1.842	4	8	14.736	31.6						
	d	24.736	48.236	4	4	16	3	2	6	24	0	8	1	8	2.342	4	8	18.736	35.6				116.0		
	e	24.736	48.236	4	4	16	3	1	3	12	0	2	1	4	2.592	4	4	10.368	27.1						
	f	24.736	48.236	4	4	16	3	1	3	12	0	2	1	4	3.092	4	4	12.368	29.1						
	g	24.736	48.236	4	4	16	3	1	3	12	0	2	1	4	3.592	4	4	14.368	31.1						
	h	24.736	48.236	4	4	16	3	1	3	12	0	2	1	4	4.467	4	4	17.868	34.7					112.7	
VII	a	30.920	24.118	5	2	10	6	2	12	12	0	0	0	12	1.342	0	12	16.104	22.7	103.7	102.0	101.1	100.0	102.8	
	b	30.920	24.118	5	2	10	6	2	12	12	0	0	0	12	1.592	0	12	19.104	25.0						
	c	30.920	24.118	5	2	10	6	2	12	12	0	0	0	12	1.842	0	12	22.104	27.3						
	d	30.920	24.118	5	2	10	6	2	12	12	0	0	0	12	2.342	0	12	28.104	31.8						
	e	30.920	24.118	5	2	10	6	1	6	6	0	0	0	6	2.592	0	6	15.552	22.2						
	f	30.920	24.118	5	2	10	6	1	6	6	0	0	0	6	3.092	0	6	18.552	24.5						
	g	30.920	24.118	5	2	10	6	1	6	6	0	0	0	6	3.592	0	6	21.552	26.8						
	h	30.920	24.118	5	2	10	6	1	6	6	0	0	0	6	4.467	0	6	26.802	30.8						100.0
VIII	a	30.920	36.177	5	3	15	4	2	8	8	0	0	0	8	1.342	0	8	10.736	25.5	116.4	111.8	108.5	103.8	116.7	110.6
	b	30.920	36.177	5	3	15	4	2	8	8	0	0	0	8	1.592	0	8	12.736	27.4						
	c	30.920	36.177	5	3	15	4	2	8	8	0	0	0	8	1.842	0	8	14.736	29.3						
	d	30.920	36.177	5	3	15	4	2	8	8	0	0	0	8	2.342	0	8	18.736	33.0						
	e	30.920	36.177	5	3	15	4	1	4	4	0	0	0	4	2.592	0	4	10.368	25.2						
	f	30.920	36.177	5	3	15	4	1	4	4	0	0	0	4	3.092	0	4	12.368	27.1						
	g	30.920	36.177	5	3	15	4	1	4	4	0	0	0	4	3.592	0	4	14.368	28.9						
	h	30.920	36.177	5	3	15	4	1	4	4	0	0	0	4	4.467	0	4	17.868	32.2						
IX	a	30.920	48.236	5	4	20	3	2	6	6	0	0	0	6	1.342	0	6	8.052	29.6	135.2	127.4	121.8	113.8	135.6	
	b	30.920	48.236	5	4	20	3	2	6	6	0	0	0	6	1.592	0	6	9.552	31.2						
	c	30.920	48.236	5	4	20	3	2	6	6	0	0	0	6	1.842	0	6	11.052	32.9						
	d	30.920	48.236	5	4	20	3	2	6	6	0	0	0	6	2.342	0	6	14.052	36.2						
	e	30.920	48.236	5	4	20	3	1	3	3	0	0	0	3	2.592	0	3	7.776	29.3						
	f	30.920	48.236	5	4	20	3	1	3	3	0	0	0	3	3.092	0	3	9.276	30.9						
	g	30.920	48.236	5	4	20	3	1	3	3	0	0	0	3	3.592	0	3	10.776	32.6						
	h	30.920	48.236	5	4	20	3	1	3	3	0	0	0	3	4.467	0	3	13.401	35.4						104.5
X	a	37.104	24.118	6	2	12	5	2	10	10	0	0	0	10	1.342	0	10	13.420	23.9	109.1	105.7	104.1	101.6	108.3	104.5
	b	37.104	24.118	6	2	12	5	2	10	10	0	0	0	10	1.592	0	10	15.920	25.9						
	c	37.104	24.118	6	2	12	5	2	10	10	0	0	0	10	1.842	0	10	18.420	28.1						
	d	37.104	24.118	6	2	12	5	2	10	10	0	0	0	10	2.342	0	10	23.420	32.3						
	e	37.104	24.118	6	2	12	5	1	5	5	0	0	0	5	2.592	0	5	12.960	23.4						
	f	37.104	24.118	6	2	12	5	1	5	5	0	0	0	5	3.092	0	5	15.460	25.6						
	g	37.104	24.118	6	2	12	5	1	5	5	0	0	0	5	3.592	0	5	17.960	27.7						
	h	37.104	24.118	6	2	12	5	1	5	5	0	0	0	5	4.467	0	5	22.335	31.4						114.9
XI	a	37.104	36.177	6	3	18	3	2	6	6	1	12	1	6	1.342	6	7	9.394	28.2	128.8	122.4	117.8	111.0	135.2	127.4
	b	37.104	36.177	6	3	18	3	2	6	6	1	12	1	6	1.592	6	7	11.144	30.0						
	c	37.104	36.177	6	3	18	3	2	6	6	1	12	1	6	1.842	6	7	12.894	31.8						
	d	37.104	36.177	6	3	18	3	2	6	6	1	6	1	12	2.342	12	4	16.394	35.3						
	e	37.104	36.177	6	3	18	3	1	3	3	1	6	1	6	2.592	12	4	10.368	29.2						
	f	37.104	36.177	6	3	18	3	1	3	3	1	6	1	6	3.092	12	4	12.368	31.3						
	g	37.104	36.177	6	3	18	3	1	3	3	1	6	1	6	3.592	12	4	14.368	33.3						
	h	37.104	36.177	6	3	18	3	1	3	3	1	6	1	6	4.467	12	4	17.868	36.8					124.3	

Table 8.—Ladies hosiery (2 folds), folded in ankle, 60 dozen to case—Continued

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_o	S_t	S_g	S_h
XII { a	37.104	48.236	6	4	24	2	2	4	12	24	1	0	0	0	1.342	5	6.710	32.8	149.8							
b	37.104	48.236	6	4	24	2	2	4	12	24	1	0	0	0	1.592	5	7.960	34.3		140.0						
c	37.104	48.236	6	4	24	2	2	4	12	24	1	0	0	0	1.842	5	9.210	35.8			132.6		157.9			
d	37.104	48.236	6	4	24	2	2	4	12	12	1	0	0	0	2.342	5	11.710	38.7				121.7		146.5		
e	37.104	48.236	6	4	24	2	1	2	12	12	0	12	1	12	2.592	3	7.776	34.1							140.3	
f	37.104	48.236	6	4	24	2	1	2	12	12	0	12	1	12	3.092	3	9.276	35.9								132.1
g	37.104	48.236	6	4	24	2	1	2	12	12	0	12	1	12	3.592	3	10.776	37.6								
h	37.104	48.236	6	4	24	2	1	2	12	12	0	12	1	12	4.467	3	13.401	40.7								

Table 9.—Ladies' hosiery (2 folds), folded in ankle, 100 dozen to case

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_o	S_t	S_g	S_h
I { a	18.552	24.118	3	2	6	16	2	32	4	8	1	2	1	4	1.342	34	45.628	33.3	107.8							
b	18.552	24.118	3	2	6	16	2	32	4	8	1	2	1	4	1.592	34	54.128	38.3		110.4						
c	18.552	24.118	3	2	6	16	2	32	4	8	1	2	1	4	1.842	34	62.628	43.3			112.5		106.9			
d	18.552	24.118	3	2	6	16	2	32	4	8	1	2	1	4	2.342	34	79.628	53.4				115.8		110.0		
e	18.552	24.118	3	2	6	16	1	16	4	4	0	4	1	2	2.592	17	44.064	32.3							112.2	
f	18.552	24.118	3	2	6	16	1	16	4	4	0	4	1	2	3.092	17	52.564	37.4								115.0
g	18.552	24.118	3	2	6	16	1	16	4	4	0	4	1	2	3.592	17	61.064	42.4								
h	18.552	24.118	3	2	6	16	1	16	4	4	0	4	1	2	4.467	17	75.939	51.2								
II { a	18.552	36.177	3	3	9	11	2	22	1	2	0	2	1	7	1.342	23	30.806	32.8	106.1							
b	18.552	36.177	3	3	9	11	2	22	1	2	0	2	1	7	1.592	23	36.616	37.2		107.2						
c	18.552	36.177	3	3	9	11	2	22	1	2	0	2	1	7	1.842	23	42.366	41.5			107.8		109.3			
d	18.552	36.177	3	3	9	11	2	22	1	2	0	2	1	8	2.342	23	53.866	50.0				109.1		110.3		
e	18.552	36.177	3	3	9	11	1	11	1	1	0	1	1	8	2.592	12	31.104	33.0							111.4	
f	18.552	36.177	3	3	9	11	1	11	1	1	0	1	1	8	3.092	12	37.104	37.5								112.6
g	18.552	36.177	3	3	9	11	1	11	1	1	0	1	1	8	3.592	12	43.104	42.1								
h	18.552	36.177	3	3	9	11	1	11	1	1	0	1	1	8	4.467	12	53.604	50.1								
III { a	18.552	48.236	3	4	12	8	2	16	4	8	0	8	1	4	1.342	17	22.814	33.6	108.7							
b	18.552	48.236	3	4	12	8	2	16	4	8	0	8	1	4	1.592	17	27.064	37.5		108.1						
c	18.552	48.236	3	4	12	8	2	16	4	8	0	8	1	4	1.842	17	31.314	41.5			107.8		112.9			
d	18.552	48.236	3	4	12	8	2	16	4	8	0	8	1	4	2.342	17	39.814	49.3				106.9		112.4		
e	18.552	48.236	3	4	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	34.1							112.2	
f	18.552	48.236	3	4	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	38.2								111.7
g	18.552	48.236	3	4	12	8	1	8	4	4	0	4	1	8	3.592	9	32.328	42.4								
h	18.552	48.236	3	4	12	8	1	8	4	4	0	4	1	8	4.467	9	40.203	49.7								

Group		a	b	c	d	e	f	g	h
IV									
	(top)	100.6	101.7	102.6	104.1	103.3	104.7	105.8	107.2
		31.1	35.3	39.0	48.0	31.6	35.6	40.0	47.7
		33.550	39.800	46.050	58.550	33.696	40.196	46.696	58.071
		25	25	25	13	13	13	13	
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		0	0	0	4	4	4	4	
		0	0	0	1	1	1	1	
		0	0	0	4	4	4	4	
		1	1	1	1	0	0	0	0
		8	8	8	8	4	4	4	
		4	4	4	4	4	4	4	
		24	24	24	12	12	12	12	
		2	2	2	1	1	1	1	
		12	12	12	12	12	12	12	
		8	8	8	8	8	8	8	
		2	2	2	2	2	2	2	
		4	4	4	4	4	4	4	
		24.118	24.118	24.118	24.118	24.118	24.118	24.118	
		24.736	24.736	24.736	24.736	24.736	24.736	24.736	
V									
	(top)	102.6	101.7	101.0	100.0	106.6	105.9	105.3	104.5
		31.7	35.3	38.9	46.1	32.2	36.0	39.8	46.5
		22.814	27.064	31.314	39.814	23.328	27.828	32.328	40.203
		17	17	17	9	9	9		
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		4	4	4	4	8	8	8	
		1	1	1	1	1	1	1	
		8	8	8	8	4	4	4	
		0	0	0	0	0	0	0	
		8	8	8	8	4	4	4	
		4	4	4	4	4	4	4	
		16	16	16	10	8	8	8	
		2	2	2	1	1	1	1	
		8	8	8	8	8	8	8	
		12	12	12	12	12	12	12	
		3	3	3	3	3	3	3	
		4	4	4	4	4	4	4	
		36.177	36.177	36.177	36.177	36.177	36.177	36.177	
		24.736	24.736	24.736	24.736	24.736	24.736	24.736	
VI									
	(top)	111.0	108.1	106.0	102.8	115.9	113.2	111.1	108.0
		34.3	37.5	40.8	47.4	35.0	38.5	42.0	48.3
		17.446	20.696	23.946	30.446	18.144	21.644	25.144	31.269
		13	13	13	7	7	7		
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		8	8	8	8	12	12	12	
		1	1	1	1	1	1	1	
		8	8	8	8	4	4	4	
		0	0	0	0	0	0	0	
		8	8	8	8	4	4	4	
		4	4	4	4	4	4	4	
		12	12	12	6	6	6	6	
		2	2	2	1	1	1	1	
		6	6	6	6	6	6	6	
		16	16	16	16	16	16	16	
		4	4	4	4	4	4	4	
		4	4	4	4	4	4	4	
		48.236	48.236	48.236	48.236	48.236	48.236	48.236	
		24.736	24.736	24.736	24.736	24.736	24.736	24.736	
VII									
	(top)	100.0	100.0	100.0	100.2	106.0	100.0	100.0	100.0
		30.9	34.1	38.5	46.2	32.0	34.0	37.8	44.5
		26.840	31.840	36.840	46.840	30.920	30.920	35.920	44.670
		20	20	20	10	10	10		
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		20	20	20	10	10	10	10	
		2	2	2	1	1	1	1	
		10	10	10	10	10	10	10	
		10	10	10	10	10	10	10	
		2	2	2	2	2	2	2	
		5	5	5	5	5	5	5	
		24.118	24.118	24.118	24.118	24.118	24.118	24.118	
		30.920	30.920	30.920	30.920	30.920	30.920	30.920	
VIII									
	(top)	106.8	104.6	102.9	100.0	107.3	105.0	103.2	100.4
		33.0	36.3	39.6	46.1	32.4	35.7	39.0	44.7
		18.788	22.288	25.788	32.788	18.144	21.644	25.144	31.269
		14	14	14	7	7	7		
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		10	10	10	10	5	5	5	
		1	1	1	1	1	1	1	
		5	5	5	5	10	10	10	
		1	1	1	1	0	0	0	0
		20	20	20	20	10	10	10	
		10	10	10	10	10	10	10	
		12	12	12	6	6	6	6	
		2	2	2	1	1	1	1	
		6	6	6	6	6	6	6	
		15	15	15	15	15	15	15	
		3	3	3	3	3	3	3	
		5	5	5	5	5	5	5	
		36.177	36.177	36.177	36.177	36.177	36.177	36.117	
		30.920	30.920	30.920	30.920	30.920	30.920	30.920	
IX									
	(top)	114.9	110.1	106.5	100.9	115.9	110.9	107.1	101.8
		35.5	38.2	41.0	46.5	35.0	37.7	40.5	45.3
		13.420	15.920	18.420	23.420	12.960	15.400	17.900	22.335
		10	10	10	5	5	5	5	
		1.342	1.592	1.842	2.342	2.592	3.092	3.592	4.467
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	
		10	10	10	5	5	5	5	
		2	2	2	1	1	1	1	
		5	5	5	5	5	5	5	
		20	20	20	20	20	20	20	
		4	4	4	4	4	4	4	
		5	5	5	5	5	5	5	
		48.236	48.236	48.236	48.236	48.236	48.236	48.236	
		30.920	30.920	30.920	30.920	30.920	30.920	30.920	

Table 9.—*Ladies' hosiery (2 folds), folded in ankle, 100 dozen to case*—Continued

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
X a	37.104	24.118	6	2	12	8	2	16	4	8	0	8	1	4	1.342	17	22.814	31.8	102.9							
b	37.104	24.118	6	2	12	8	2	16	4	8	0	8	1	4	1.592	17	27.064	35.4		102.0						
c	37.104	24.118	6	2	12	8	2	16	4	8	0	8	1	4	1.842	17	31.314	39.1			101.6					
d	37.104	24.118	6	2	12	8	2	16	4	8	0	8	1	4	2.342	17	39.814	46.3				100.4				
e	37.104	24.118	6	2	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	32.3					106.9			
f	37.104	24.118	6	2	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	36.1						106.2		
g	37.104	24.118	6	2	12	8	1	8	4	4	0	4	1	8	3.592	9	32.328	40.0							105.8	
h	37.104	24.118	6	2	12	8	1	8	4	4	0	4	1	8	4.467	9	40.203	46.6								104.7
XI a	37.104	36.177	6	3	18	5	2	10	10	20	1	2	1	16	1.342	12	16.104	35.0	113.3							
b	37.104	36.177	6	3	18	5	2	10	10	20	1	2	1	16	1.592	12	19.104	38.1		100.8						
c	37.104	36.177	6	3	18	5	2	10	10	20	1	2	1	16	1.842	12	22.104	41.1			106.7					
d	37.104	36.177	6	3	18	5	2	10	10	20	1	2	1	16	2.342	12	28.104	47.2				102.4				
e	37.104	36.177	6	3	18	5	1	5	10	10	0	10	1	8	2.592	6	15.552	34.5					114.2			
f	37.104	36.177	6	3	18	5	1	5	10	10	0	10	1	8	3.092	6	18.552	37.5						110.3		
g	37.104	36.177	6	3	18	5	1	5	10	10	0	10	1	8	3.592	6	21.552	40.6							107.4	
h	37.104	36.177	6	3	18	5	1	5	10	10	0	10	1	8	4.467	6	26.802	45.9								103.1
XII a	37.104	48.236	6	4	24	4	2	8	4	8	0	8	1	16	1.342	9	12.078	39.2	126.8							
b	37.104	48.236	6	4	24	4	2	8	4	8	0	8	1	16	1.592	9	14.328	41.8		120.4						
c	37.104	48.236	6	4	24	4	2	8	4	8	0	8	1	16	1.842	9	16.578	44.5			115.6					
d	37.104	48.236	6	4	24	4	2	8	4	8	0	8	1	16	2.342	9	21.078	49.8				108.0				
e	37.104	48.236	6	4	24	4	1	4	4	4	0	4	1	20	2.592	5	12.960	40.2					133.1			
f	37.104	48.236	6	4	24	4	1	4	4	4	0	4	1	20	3.092	5	15.460	43.2						127.0		
g	37.104	48.236	6	4	24	4	1	4	4	4	0	4	1	20	3.592	5	17.960	46.1							121.9	
h	37.104	48.236	6	4	24	4	1	4	4	4	0	4	1	20	4.467	5	22.335	51.3								115.3

Table 10.—*Ladies' hosiery (2 folds), folded in ankle, 120 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
I a	18.552	24.118	3	2	6	20	2	40	0	0	0	0	0	0	1.342	40	53.680	38.0	108.6							
b	18.552	24.118	3	2	6	20	2	40	0	0	0	0	0	0	1.592	40	63.080	43.9		111.7						
c	18.552	24.118	3	2	6	20	2	40	0	0	0	0	0	0	1.842	40	73.080	49.9			116.0					
d	18.552	24.118	3	2	6	20	2	40	0	0	0	0	0	0	2.342	40	93.680	61.7				122.2				
e	18.552	24.118	3	2	6	20	1	20	0	0	0	0	0	0	2.592	20	51.840	36.9					108.2			
f	18.552	24.118	3	2	6	20	1	20	0	0	0	0	0	0	3.092	20	61.840	42.9						111.1		
g	18.552	24.118	3	2	6	20	1	20	0	0	0	0	0	0	3.592	20	71.840	48.8							115.4	
h	18.552	24.118	3	2	6	20	1	20	0	0	0	0	0	0	4.467	20	89.340	59.2								121.3

(The following table is printed sideways on the page. Columns a–h are the lettered rows for each case group (II–VII); the numeric series are the unlabeled data columns, reading across to the computed percentage in the final column.)

Group II

	d₁	d₂													factor	count	dim	%	%
a	18.552	36.177	3	3	9	13	2	26	3	6	0	6	1	3	1.342	27	36.234	36.9	105.4
b	18.552	36.177	3	3	9	13	2	26	3	6	0	6	1	3	1.592	27	42.984	42.0	106.9
c	18.552	36.177	3	3	9	13	2	26	3	6	0	6	1	3	1.842	27	49.734	47.1	109.5
d	18.552	36.177	3	3	9	13	2	26	3	6	0	6	1	3	2.342	27	63.234	57.4	113.7
e	18.552	36.177	3	3	9	13	1	13	3	3	0	3	1	6	2.592	14	36.288	36.9	108.2
f	18.552	36.177	3	3	9	13	1	13	3	3	0	3	1	6	3.092	14	43.288	42.2	108.3
g	18.552	36.177	3	3	9	13	1	13	3	3	0	3	1	6	3.592	14	50.288	47.5	112.3
h	18.552	36.177	3	3	9	13	1	13	3	3	0	3	1	6	4.467	14	62.538	56.9	116.6

Group III

	d₁	d₂													factor	count	dim	%	%
a	18.552	48.236	3	4	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	37.3	106.6
b	18.552	48.236	3	4	12	10	2	20	0	0	0	0	0	0	1.592	20	31.840	42.0	106.9
c	18.552	48.236	3	4	12	10	2	20	0	0	0	0	0	0	1.842	20	36.840	46.6	108.4
d	18.552	48.236	3	4	12	10	2	20	0	0	0	0	0	0	2.342	20	46.840	55.9	110.7
e	18.552	48.236	3	4	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	36.5	107.0
f	18.552	48.236	3	4	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	41.1	106.5
g	18.552	48.236	3	4	12	10	1	10	0	0	0	0	0	0	3.592	10	35.920	45.7	108.0
h	18.552	48.236	3	4	12	10	1	10	0	0	0	0	0	0	4.467	10	44.670	53.9	110.4

Group IV

	d₁	d₂													factor	count	dim	%	%
a	24.736	24.118	2	4	8	15	2	30	0	0	0	0	0	0	1.342	30	40.260	35.6	101.7
b	24.736	24.118	2	4	8	15	2	30	0	0	0	0	0	0	1.592	30	47.760	40.7	103.6
c	24.736	24.118	2	4	8	15	2	30	0	0	0	0	0	0	1.842	30	55.260	45.8	106.5
d	24.736	24.118	2	4	8	15	2	30	0	0	0	0	0	0	2.342	30	70.260	56.6	110.9
e	24.736	24.118	2	4	8	15	1	15	0	0	0	0	0	0	2.592	15	38.880	34.7	101.8
f	24.736	24.118	2	4	8	15	1	15	0	0	0	0	0	0	3.092	15	46.380	39.8	103.1
g	24.736	24.118	2	4	8	15	1	15	0	0	0	0	0	0	3.592	15	53.880	44.8	105.9
h	24.736	24.118	2	4	8	15	1	15	0	0	0	0	0	0	4.467	15	67.005	53.8	110.2

Group V

	d₁	d₂													factor	count	dim	%	%
a	24.736	36.177	2	2	8	10	2	20	0	0	0	0	0	0	1.342	20	26.840	35.1	100.3
b	24.736	36.177	2	2	8	10	2	20	0	0	0	0	0	0	1.592	20	31.840	39.4	100.3
c	24.736	36.177	2	2	8	10	2	20	0	0	0	0	0	0	1.842	20	36.840	43.6	101.4
d	24.736	36.177	2	2	8	10	2	20	0	0	0	0	0	0	2.342	20	46.840	52.1	103.2
e	24.736	36.177	2	2	8	10	1	10	0	0	0	0	0	0	2.592	10	25.920	34.4	100.9
f	24.736	36.177	2	2	8	10	1	10	0	0	0	0	0	0	3.092	10	30.920	38.6	100
g	24.736	36.177	2	2	8	10	1	10	0	0	0	0	0	0	3.592	10	35.920	42.8	101.2
h	24.736	36.177	2	2	8	10	1	10	0	0	0	0	0	0	4.467	10	44.670	50.2	102.9

Group VI

	d₁	d₂													factor	count	dim	%	%
a	24.736	48.236	4	4	16	7	2	14	8	1	16	1	8	8	1.342	14	20.130	37.0	105.7
b	24.736	48.236	4	4	16	7	2	14	8	1	16	1	8	8	1.592	14	23.880	40.8	103.8
c	24.736	48.236	4	4	16	7	2	14	8	1	16	1	8	8	1.842	14	27.630	44.6	103.7
d	24.736	48.236	4	4	16	7	2	14	8	1	16	1	8	8	2.342	14	35.130	52.2	103.4
e	24.736	48.236	4	4	16	7	1	7	8	0	8	0	8	8	2.592	7	20.736	37.6	110.2
f	24.736	48.236	4	4	16	7	1	7	8	0	8	0	8	8	3.092	7	24.736	41.6	107.8
g	24.736	48.236	4	4	16	7	1	7	8	0	8	0	8	8	3.592	7	28.736	45.7	108.0
h	24.736	48.236	4	4	16	7	1	7	8	0	8	0	8	8	4.467	7	35.736	52.8	108.2

Group VII

	d₁	d₂													factor	count	dim	%	%
a	30.920	24.118	2	5	10	12	2	24	0	0	0	0	0	0	1.342	24	32.208	35.0	100
b	30.920	24.118	2	5	10	12	2	24	0	0	0	0	0	0	1.592	24	38.208	39.6	100.8
c	30.920	24.118	2	5	10	12	2	24	0	0	0	0	0	0	1.842	24	44.208	44.2	107.8
d	30.920	24.118	2	5	10	12	2	24	0	0	0	0	0	0	2.342	24	56.208	53.3	105.5
e	30.920	24.118	2	5	10	12	1	12	0	0	0	0	0	0	2.592	12	31.104	34.1	100
f	30.920	24.118	2	5	10	12	1	12	0	0	0	0	0	0	3.092	12	37.104	38.7	100.3
g	30.920	24.118	2	5	10	12	1	12	0	0	0	0	0	0	3.592	12	43.104	43.3	102.4
h	30.920	24.118	2	5	10	12	1	12	0	0	0	0	0	0	4.467	12	53.604	51.3	105.1

TABLE 10.—Ladies' hosiery (2 folds), folded in ankle, 120 dozen to case—Continued

Row	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
VIII a	30.920	36.177	5	3	15	8	2	16	0	0	0	0	0	0	1.342	16	21.472	35.5	101.4	100	100	100	102.3	100	100	100.0
VIII b	30.920	36.177	5	3	15	8	2	16	0	0	0	0	0	0	1.592	16	25.472	39.3								
VIII c	30.920	36.177	5	3	15	8	2	16	0	0	0	0	0	0	1.842	16	29.472	43.0								
VIII d	30.920	36.177	5	3	15	8	2	16	0	0	0	0	0	0	2.342	16	37.472	50.5								
VIII e	30.920	36.177	5	3	15	8	1	8	0	0	0	0	0	0	2.592	8	20.736	34.9								
VIII f	30.920	36.177	5	3	15	8	1	8	0	0	0	0	0	0	3.092	8	24.736	38.6								
VIII g	30.920	36.177	5	3	15	8	1	8	0	0	0	0	0	0	3.592	8	28.736	42.3								
VIII h	30.920	36.177	5	3	15	8	1	8	0	0	0	0	0	0	4.467	8	35.736	48.8								
IX a	30.920	48.236	5	4	20	6	2	12	0	0	0	0	0	0	1.342	12	16.104	38.4	109.7	106.1	104.6	102.2	110.8	106.5	105.0	102.9
IX b	30.920	48.236	5	4	20	6	2	12	0	0	0	0	0	0	1.592	12	19.104	41.7								
IX c	30.920	48.236	5	4	20	6	2	12	0	0	0	0	0	0	1.842	12	22.104	45.0								
IX d	30.920	48.236	5	4	20	6	2	12	0	0	0	0	0	0	2.342	12	28.104	51.6								
IX e	30.920	48.236	5	4	20	6	1	6	0	0	0	0	0	0	2.592	6	15.552	37.8								
IX f	30.920	48.236	5	4	20	6	1	6	0	0	0	0	0	0	3.092	6	18.552	41.1								
IX g	30.920	48.236	5	4	20	6	1	6	0	0	0	0	0	0	3.592	6	21.552	44.4								
IX h	30.920	48.236	5	4	20	6	1	6	0	0	0	0	0	0	4.467	6	26.802	50.2								
X a	30.920	24.118	6	2	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	35.3	100.9	100.5	101.6	103.6	101.2	100.3	101.7	103.3
X b	30.920	24.118	6	2	12	10	2	20	0	0	0	0	0	0	1.592	20	31.840	39.5								
X c	30.920	24.118	6	2	12	10	2	20	0	0	0	0	0	0	1.842	20	36.840	43.7								
X d	30.920	24.118	6	2	12	10	2	20	0	0	0	0	0	0	2.342	20	46.840	52.3								
X e	30.920	24.118	6	2	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	34.5								
X f	30.920	24.118	6	2	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	38.7								
X g	30.920	24.118	6	2	12	10	1	10	0	0	0	0	0	0	3.592	10	35.920	43.0								
X h	30.920	24.118	6	2	12	10	1	10	0	0	0	0	0	0	4.467	10	44.670	50.4								
XI a	37.104	36.177	6	3	18	6	2	12	12	24	1	6	1	12	1.342	14	18.788	37.8	108.0	105.1	104.4	103.0	108.8	105.4	104.5	103.5
XI b	37.104	36.177	6	3	18	6	2	12	12	24	1	6	1	12	1.592	14	22.288	41.3								
XI c	37.104	36.177	6	3	18	6	2	12	12	24	1	6	1	12	1.842	14	25.788	44.9								
XI d	37.104	36.177	6	3	18	6	2	12	12	12	1	12	1	12	2.342	14	32.788	52.0								
XI e	37.104	36.177	6	3	18	6	1	6	12	12	0	12	1	6	2.592	7	18.144	37.1								
XI f	37.104	36.177	6	3	18	6	1	6	12	12	0	12	1	6	3.092	7	21.644	40.7								
XI g	37.104	36.177	6	3	18	6	1	6	12	12	0	12	1	6	3.592	7	25.144	44.2								
XI h	37.104	36.177	6	3	18	6	1	6	12	12	0	12	1	6	4.467	7	31.269	50.5								
XII a	37.104	48.236	6	4	24	5	2	10	0	0	0	0	0	0	1.342	10	13.420	40.8	116.6	111.2	108.6	104.2	117.9	111.9	109.0	105.1
XII b	37.104	48.236	6	4	24	5	2	10	0	0	0	0	0	0	1.592	10	15.920	43.7								
XII c	37.104	48.236	6	4	24	5	2	10	0	0	0	0	0	0	1.842	10	18.420	46.7								
XII d	37.104	48.236	6	4	24	5	2	10	0	0	0	0	0	0	2.342	10	23.420	52.6								
XII e	37.104	48.236	6	4	24	5	1	5	0	0	0	0	0	0	2.592	5	12.960	40.2								
XII f	37.104	48.236	6	4	24	5	1	5	0	0	0	0	0	0	3.092	5	15.460	43.2								
XII g	37.104	48.236	6	4	24	5	1	5	0	0	0	0	0	0	3.592	5	17.960	46.1								
XII h	37.104	48.236	6	4	24	5	1	5	0	0	0	0	0	0	4.467	5	22.335	51.3								

TABLE 11.—*Ladies' hosiery (2 folds), folded in gore of heel, 60 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
I a	18.552	26.868	3	2	6	10	2	20	0	0	0	0	0	0	1.342	20	26.840	23.9	101.3							
b	18.552	26.868	3	2	6	10	2	20	0	0	0	0	0	0	1.592	20	31.840	27.0		102.7						
c	18.552	26.868	3	2	6	10	2	20	0	0	0	0	0	0	1.842	20	36.840	30.2			104.1					
d	18.552	26.868	3	2	6	10	2	20	0	0	0	0	0	0	2.342	20	46.840	36.5				107.3				
e	18.552	26.868	3	2	6	10	1	10	0	0	0	0	0	0	2.592	10	25.920	23.3					100.0			
f	18.552	26.868	3	2	6	10	1	10	0	0	0	0	0	0	3.092	10	30.920	26.5						100.4		
g	18.552	26.868	3	2	6	10	1	10	0	0	0	0	0	0	3.592	10	35.920	29.6							102.8	
h	18.552	26.868	3	2	6	10	1	10	0	0	0	0	0	0	4.467	10	44.670	35.1								106.4
II a	18.552	40.302	3	3	9	6	2	12	6	12	1	3	1	6	1.342	14	18.788	25.7	108.9							
b	18.552	40.302	3	3	9	6	2	12	6	12	1	3	1	6	1.592	14	22.288	28.6		108.7						
c	18.552	40.302	3	3	9	6	2	12	6	12	1	3	1	6	1.842	14	25.788	31.5			108.6					
d	18.552	40.302	3	3	9	6	2	12	6	12	1	3	1	6	2.342	14	32.788	37.2				109.4				
e	18.552	40.302	3	3	9	6	1	6	6	6	0	6	1	3	2.592	7	18.144	25.2					108.1			
f	18.552	40.302	3	3	9	6	1	6	6	6	0	6	1	3	3.092	7	21.644	28.1						106.4		
g	18.552	40.302	3	3	9	6	1	6	6	6	0	6	1	3	3.592	7	25.144	30.9							107.3	
h	18.552	40.302	3	3	9	6	1	6	6	6	0	6	1	3	4.467	7	31.269	35.9								108.8
III a	18.552	53.736	3	3	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	27.3	115.7							
b	18.552	53.736	3	3	12	5	2	10	0	0	0	0	0	0	1.592	10	15.920	29.8		113.3						
c	18.552	53.736	3	3	12	5	2	10	0	0	0	0	0	0	1.842	10	18.420	32.3			111.4					
d	18.552	53.736	3	3	12	5	2	10	0	0	0	0	0	0	2.342	10	23.420	37.4				110.0				
e	18.552	53.736	3	3	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	26.8					115.0			
f	18.552	53.736	3	3	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	29.3						111.0		
g	18.552	53.736	3	3	12	5	1	5	0	0	0	0	0	0	3.592	5	17.960	31.9							110.8	
h	18.552	53.736	3	3	12	5	1	5	0	0	0	0	0	0	4.467	5	22.335	36.3								110.0
IV a	24.736	26.868	4	2	8	7	2	14	4	8	1	4	0	4	1.342	15	20.130	23.6	100.0							
b	24.736	26.868	4	2	8	7	2	14	4	8	1	4	0	4	1.592	15	23.880	26.3		100.0						
c	24.736	26.868	4	2	8	7	2	14	4	8	1	4	0	4	1.842	15	27.630	29.0			100.0					
d	24.708	26.868	4	2	8	7	2	14	4	8	1	4	0	4	2.342	15	35.130	34.4				101.2				
e	24.736	26.868	4	2	8	7	1	7	4	4	0	4	1	4	2.592	8	20.736	24.1					103.4			
f	24.736	26.868	4	2	8	7	1	7	4	4	0	4	1	4	3.092	8	24.736	26.9						101.9		
g	24.736	26.868	4	2	8	7	1	7	4	4	0	4	1	4	3.592	8	28.736	29.8							103.5	
h	24.736	26.868	4	2	8	7	1	7	4	4	0	4	1	4	4.467	8	35.736	34.8								105.5
V a	24.736	40.302	4	3	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	26.0	110.2							
b	24.736	40.302	4	3	12	5	2	10	0	0	0	0	0	0	1.592	10	15.920	28.2		107.2						
c	24.736	40.302	4	3	12	5	2	10	0	0	0	0	0	0	1.842	10	18.420	30.5			105.2					
d	24.736	40.302	4	3	12	5	2	10	0	0	0	0	0	0	2.342	10	23.420	35.0				102.9				
e	24.736	40.302	4	3	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	25.6					109.9			
f	24.736	40.302	4	3	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	27.8						105.3		
g	24.736	40.302	4	3	12	5	1	5	0	0	0	0	0	0	3.592	5	17.960	30.1							104.5	
h	24.736	40.302	4	3	12	5	1	5	0	0	0	0	0	0	4.467	5	22.335	34.0								103.0

TABLE 11.—*Ladies' hosiery (2 folds), folded in gore of heel, 60 dozen to case*—Continued

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
VI a	24.736	53.736	4	4	16	3	2	6	12	24	1	8	1	8	1.342	8	10.736	30.2	128.0	122.8						
b	24.736	53.736	4	4	16	3	2	6	12	24	1	8	1	8	1.592	8	12.736	32.3			119.0		127.9			
c	24.736	53.736	4	4	16	3	2	6	12	24	1	8	1	8	1.842	8	14.736	34.5				114.4		120.8		
d	24.736	53.736	4	4	16	3	1	3	12	24	1	8	1	8	2.342	8	18.736	38.9							118.4	
e	24.736	53.736	4	4	16	3	1	3	12	12	0	12	1	4	2.592	4	10.368	29.8								114.5
f	24.736	53.736	4	4	16	3	1	3	12	12	0	12	1	4	3.092	4	12.368	31.9								
g	24.736	53.736	4	4	16	3	1	3	12	12	0	12	1	4	3.592	4	14.368	34.1								
h	24.736	53.736	4	4	16	3	1	3	12	12	0	12	1	4	4.467	4	17.868	37.8								
VII a	30.920	26.868	5	2	10	6	2	12	0	0	0	0	0	0	1.342	12	16.104	24.4	103.4	101.9						
b	30.920	26.868	5	2	10	6	2	12	0	0	0	0	0	0	1.592	12	19.104	26.8			100.7		103.0			
c	30.920	26.868	5	2	10	6	2	12	0	0	0	0	0	0	1.842	12	22.104	29.2				100.0		100.0		
d	30.920	26.868	5	2	10	6	1	12	0	0	0	0	0	0	2.342	12	28.104	34.0							100.0	
e	30.920	26.868	5	2	10	6	1	6	0	0	0	0	0	0	2.592	6	15.552	24.0								100.0
f	30.920	26.868	5	2	10	6	1	6	0	0	0	0	0	0	3.092	6	18.552	26.4								
g	30.920	26.868	5	2	10	6	1	6	0	0	0	0	0	0	3.592	6	21.552	28.8								
h	30.920	26.868	5	2	10	6	1	6	0	0	0	0	0	0	4.467	6	26.802	33.0								
VIII a	30.920	40.302	5	3	15	4	2	8	0	0	0	0	0	0	1.342	8	10.736	27.9	118.2	113.7						
b	30.920	40.302	5	3	15	4	2	8	0	0	0	0	0	0	1.592	8	12.736	29.9			110.0		118.4			
c	30.920	40.302	5	3	15	4	2	8	0	0	0	0	0	0	1.842	8	14.736	31.9				105.3		100.0		
d	30.920	40.302	5	3	15	4	1	8	0	0	0	0	0	0	2.342	8	18.736	35.8							109.4	
e	30.920	40.302	5	3	15	4	1	4	0	0	0	0	0	0	2.592	4	10.368	27.6								100.0
f	30.920	40.302	5	3	15	4	1	4	0	0	0	0	0	0	3.092	4	12.368	29.5								
g	30.920	40.302	5	3	15	4	1	4	0	0	0	0	0	0	3.592	4	14.368	31.5								
h	30.920	40.302	5	3	15	4	1	4	0	0	0	0	0	0	4.467	4	17.868	35.0								
IX a	30.920	53.736	5	4	20	3	2	6	0	0	0	0	0	0	1.342	6	8.052	32.5	137.7	130.4						
b	30.920	53.736	5	4	20	3	2	6	0	0	0	0	0	0	1.592	6	9.552	34.3			124.5		138.2			
c	30.920	53.736	5	4	20	3	2	6	0	0	0	0	0	0	1.842	6	11.052	36.1				116.5		128.8		
d	30.920	53.736	5	4	20	3	1	6	0	0	0	0	0	0	2.342	6	14.052	39.6							123.9	
e	30.920	53.736	5	4	20	3	1	3	0	0	0	0	0	0	2.592	3	7.776	32.2								117.6
f	30.920	53.736	5	4	20	3	1	3	0	0	0	0	0	0	3.092	3	9.276	34.0								
g	30.920	53.736	5	4	20	3	1	3	0	0	0	0	0	0	3.592	3	10.776	35.7								
h	30.920	53.736	5	4	20	3	1	3	0	0	0	0	0	0	4.467	3	13.401	38.8								
X a	37.104	26.868	6	2	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	25.8	109.3	106.5						
b	37.104	26.868	6	2	12	5	2	10	0	0	0	0	0	0	1.592	10	15.920	28.0			104.1		109.0			
c	37.104	26.868	6	2	12	5	2	10	0	0	0	0	0	0	1.842	10	18.420	30.2				102.6		104.5		
d	37.104	26.868	6	2	12	5	1	10	0	0	0	0	0	0	2.342	10	23.420	34.9							103.5	
e	37.104	26.868	6	2	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	25.4								102.1
f	37.104	26.868	6	2	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	27.6								
g	37.104	26.868	6	2	12	5	1	5	0	0	0	0	0	0	3.592	5	17.960	29.8								
h	37.104	26.868	6	2	12	5	1	5	0	0	0	0	0	0	4.467	5	22.335	33.7								

TABLE 12.—Ladies' hosiery (2 folds), folded in gore of heel, 100 dozen to case

Upper section

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
XI a	37.104	40.302	6	3	18	3	2	6	6	12	0	12	1	6	1.342	7	9.394	30.9	130.9	124.3	119.3	112.9	136.9	129.2	125.7	120.9
b	37.104	40.302	6	3	18	3	2	6	6	12	0	12	1	6	1.592	7	11.144	32.7								
c	37.104	40.302	6	3	18	3	2	6	6	12	0	12	1	6	1.842	7	12.894	34.6								
d	37.104	40.302	6	3	18	3	2	6	6	12	0	12	1	6	2.342	7	16.394	38.4								
e	37.104	40.302	6	3	18	3	1	3	6	6	0	6	1	12	2.592	4	10.368	31.9								
f	37.104	40.302	6	3	18	3	1	3	6	6	0	6	1	12	3.092	4	12.368	34.1								
g	37.104	40.302	6	3	18	3	1	3	6	6	0	6	1	12	3.592	4	14.368	36.2								
h	37.104	40.302	6	3	18	3	1	3	6	6	0	6	1	12	4.467	4	17.868	39.9								
XII a	37.104	53.736	6	4	24	4	2	4	12	24	1	0	0	0	1.342	5	6.710	36.2	153.4	143.3	135.5	125.0	161.0	149.2	143.4	135.1
b	37.104	53.736	6	4	24	4	2	4	12	24	1	0	0	0	1.592	5	7.960	37.7								
c	37.104	53.736	6	4	24	4	2	4	12	24	1	0	0	0	1.842	5	9.210	39.3								
d	37.104	53.736	6	4	24	4	2	4	12	12	0	0	0	0	2.342	5	11.710	42.5								
e	37.104	53.736	6	4	24	4	1	2	12	12	0	12	1	12	2.592	3	7.776	37.5								
f	37.104	53.736	6	4	24	4	1	2	12	12	0	12	1	12	3.092	3	9.276	39.4								
g	37.104	53.736	6	4	24	4	1	2	12	12	0	12	1	12	3.592	3	10.776	41.3								
h	37.104	53.736	6	4	24	4	1	2	12	12	0	12	1	12	4.467	3	13.401	44.6								

Lower section

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
I a	18.552	26.868	3	2	6	16	2	32	4	8	1	2	1	4	1.342	34	45.628	35.7	107.9	110.8	112.9	116.5	107.7	110.5	112.6	115.6
b	18.552	26.868	3	2	6	16	2	32	4	8	1	2	1	4	1.592	34	54.128	41.1								
c	18.552	26.868	3	2	6	16	2	32	4	8	1	2	1	4	1.842	34	62.628	46.4								
d	18.552	26.868	3	2	6	16	2	16	4	8	1	2	1	4	2.342	34	79.628	57.2								
e	18.552	26.868	3	2	6	16	1	16	4	4	0	4	1	2	2.592	17	44.064	34.8								
f	18.552	26.868	3	2	6	16	1	16	4	4	0	4	1	2	3.092	17	52.564	40.1								
g	18.552	26.868	3	2	6	16	1	16	4	4	0	4	1	2	3.592	17	61.064	46.5								
h	18.552	26.868	3	2	6	16	1	16	4	4	0	4	1	2	4.467	17	75.939	54.8								
II a	18.552	40.302	3	3	9	11	2	22	1	2	0	2	1	7	1.342	23	30.866	35.6	107.6	108.6	109.5	110.8	110.8	112.1	112.9	112.7
b	18.552	40.302	3	3	9	11	2	22	1	2	0	2	1	7	1.592	23	36.616	40.3								
c	18.552	40.302	3	3	9	11	2	22	1	2	0	2	1	7	1.842	23	42.366	45.0								
d	18.552	40.302	3	3	9	11	2	11	1	1	0	1	1	7	2.342	12	53.866	54.4								
e	18.552	40.302	3	3	9	11	1	11	1	1	0	1	1	8	2.592	12	31.104	35.8								
f	18.552	40.302	3	3	9	11	1	11	1	1	0	1	1	8	3.092	12	37.104	40.7								
g	18.552	40.302	3	3	9	11	1	11	1	1	0	1	1	8	3.592	12	43.104	45.6								
h	18.552	40.302	3	3	9	11	1	11	1	1	0	1	1	8	4.467	12	52.604	53.4								
III a	18.552	53.736	3	4	12	8	2	16	4	8	0	8	1	4	1.342	17	22.814	36.7	110.9	110.5	110.2	109.6	115.5	115.1	114.6	114.3
b	18.552	53.736	3	4	12	8	2	16	4	8	0	8	1	4	1.592	17	27.064	41.0								
c	18.552	53.736	3	4	12	8	2	16	4	8	0	8	1	4	1.842	17	31.314	45.3								
d	18.552	53.736	3	4	12	8	2	16	4	8	0	8	1	4	2.342	17	39.814	53.8								
e	18.552	53.736	3	4	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	37.3								
f	18.552	53.736	3	4	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	41.8								
g	18.552	53.736	3	4	12	8	1	8	4	4	0	4	1	8	3.592	9	32.328	46.3								
h	18.552	53.736	3	4	12	8	1	8	4	4	0	4	1	8	4.467	9	40.203	54.2								

TABLE 12.—*Ladies' hosiery (2 folds), folded in gore of heel, 100 dozen to case*—Continued

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
IV	a	24.736	26.868	4	2	8	12	2	24	4	8	1	0	0	0	1.342	25	33.550	33.3	100.6	101.6	102.7	105.7	103.1	104.7	105.7	107.4
	b	24.736	26.868	4	2	8	12	2	24	4	8	1	0	0	0	1.592	25	39.800	37.7								
	c	24.736	26.868	4	2	8	12	2	24	4	8	1	0	0	0	1.842	25	46.050	42.2								
	d	24.736	26.868	4	2	8	12	2	12	4	8	0	0	0	0	2.342	25	59.550	51.9								
	e	24.736	26.868	4	2	8	12	1	12	4	4	0	4	1	4	2.592	13	33.696	33.3								
	f	24.736	26.868	4	2	8	12	1	12	4	4	0	4	1	4	3.092	13	40.196	38.0								
	g	24.736	26.868	4	2	8	12	1	12	4	4	0	4	1	4	3.592	13	46.696	42.7								
	h	24.736	26.868	4	2	8	12	1	12	4	4	0	4	1	4	4.467	13	58.071	50.9								
V	a	24.736	40.302	4	3	12	8	2	16	4	8	0	8	1	4	1.342	17	22.814	34.5	104.2	103.2	102.4	101.4	108.0	107.4	106.4	105.9
	b	24.736	40.302	4	3	12	8	2	16	4	8	0	8	1	4	1.592	17	27.064	38.3								
	c	24.736	40.302	4	3	12	8	2	16	4	8	0	8	1	4	1.842	17	31.314	42.1								
	d	24.736	40.302	4	3	12	8	2	16	4	8	0	8	1	4	2.342	17	39.814	49.8								
	e	24.736	40.302	4	3	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	34.9								
	f	24.736	40.302	4	3	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	39.0								
	g	24.736	40.302	4	3	12	8	1	8	4	4	0	4	1	8	3.592	9	32.328	43.0								
	h	24.736	40.302	4	3	12	8	1	8	4	4	0	4	1	8	4.467	9	40.203	50.2								
VI	a	24.736	53.736	4	4	16	6	2	12	4	8	0	8	1	8	1.342	13	17.446	37.5	113.3	110.5	108.3	105.1	118.3	115.7	113.4	110.8
	b	24.736	53.736	4	4	16	6	2	12	4	8	0	8	1	8	1.592	13	20.696	41.0								
	c	24.736	53.736	4	4	16	6	2	12	4	8	0	8	1	8	1.842	13	23.946	44.5								
	d	24.736	53.736	4	4	16	6	2	12	4	8	0	8	1	8	2.342	13	30.446	51.6								
	e	24.736	53.736	4	4	16	6	1	6	4	4	0	4	1	12	2.592	7	18.144	38.2								
	f	24.736	53.736	4	4	16	6	1	6	4	4	0	4	1	12	3.092	7	21.644	42.0								
	g	24.736	53.736	4	4	16	6	1	6	4	4	0	4	1	12	3.592	7	25.144	45.8								
	h	24.736	53.736	4	4	16	6	1	6	4	4	0	4	1	12	4.467	7	31.269	52.5								
VII	a	30.920	26.868	5	2	10	10	2	20	0	0	0	0	0	0	1.342	20	26.840	33.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	b	30.920	26.868	5	2	10	10	2	20	0	0	0	0	0	0	1.592	20	31.840	37.1								
	c	30.920	26.868	5	2	10	10	2	20	0	0	0	0	0	0	1.842	20	36.840	41.1								
	d	30.920	26.868	5	2	10	10	2	20	0	0	0	0	0	0	2.342	20	46.840	49.1								
	e	30.920	26.868	5	2	10	10	1	10	0	0	0	0	0	0	2.592	10	25.920	32.3								
	f	30.920	26.868	5	2	10	10	1	10	0	0	0	0	0	0	3.092	10	30.920	36.3								
	g	30.920	26.868	5	2	10	10	1	10	0	0	0	0	0	0	3.592	10	35.920	40.4								
	h	30.920	26.868	5	2	10	10	1	10	0	0	0	0	0	0	4.467	10	44.670	47.4								
VIII	a	30.920	40.302	5	3	15	6	2	12	10	20	1	5	1	10	1.342	14	18.788	35.9	108.5	106.2	104.1	101.2	100.3	106.6	104.5	101.7
	b	30.920	40.302	5	3	15	6	2	12	10	20	1	5	1	10	1.592	14	22.288	39.4								
	c	30.910	40.202	5	3	15	6	2	12	10	20	1	5	1	10	1.842	14	25.788	42.8								
	d	30.920	40.302	5	3	15	6	2	12	10	20	1	5	1	10	2.342	14	32.788	49.7								
	e	30.920	40.302	5	3	15	6	1	6	10	10	0	10	1	5	2.592	7	18.144	35.3								
	f	30.920	40.302	5	3	15	6	1	6	10	10	0	10	1	5	3.092	7	21.644	38.7								
	g	30.920	40.302	5	3	15	6	1	6	10	10	0	10	1	5	3.592	7	25.144	42.2								
	h	30.920	40.302	5	3	15	6	1	6	10	10	0	10	1	5	4.467	7	31.269	48.2								

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	'Q	R	Sₐ	S_b	S_c	S_d	S_e	S_f	S_g	S_h
IX a	30.920	53.736	5	4	20	5	2	10	0	0	0	0	0	0	1.341	10	13.420	38.8	117.2	112.7	108.8	103.1	118.6	113.5	109.4	104.0
b	30.920	53.736	5	4	20	5	2	10	0	0	0	0	0	0	1.592	10	15.920	41.8								
c	30.920	53.736	5	4	20	5	2	10	0	0	0	0	0	0	1.842	10	18.420	44.7								
d	30.920	53.736	5	4	20	5	2	10	0	0	0	0	0	0	2.342	10	23.420	50.6								
e	30.920	53.736	5	4	20	5	1	5	0	0	0	0	0	0	2.592	5	12.960	38.3								
f	30.920	53.736	5	4	20	5	1	5	0	0	0	0	0	0	3.092	5	15.460	41.2								
g	30.920	53.736	5	4	20	5	1	5	0	0	0	0	0	0	3.592	5	17.960	44.2								
h	30.920	53.736	5	4	20	5	1	5	0	0	0	0	0	0	4.467	5	22.335	49.3								
X a	37.104	26.868	6	2	12	8	2	16	4	8	1	8	1	4	1.342	17	22.814	34.1	103.0	102.2	101.5	100.2	107.1	106.3	105.4	104.4
b	37.104	26.868	6	2	12	8	2	16	4	8	1	8	1	4	1.592	17	27.064	37.9								
c	37.104	26.868	6	2	12	8	2	16	4	8	1	8	1	4	1.842	17	31.314	41.7								
d	37.104	26.868	6	2	12	8	2	16	4	8	1	8	1	4	2.342	17	39.814	49.2								
e	37.104	26.868	6	2	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	34.6								
f	37.104	26.868	6	2	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	38.6								
g	37.104	26.868	6	2	12	8	1	8	4	4	0	4	1	8	3.592	9	32.328	42.6								
h	37.104	26.868	6	2	12	8	1	8	4	4	0	4	1	8	4.467	9	40.203	49.5								
XI a	37.104	40.302	6	3	18	8	2	16	10	20	1	2	1	16	1.342	12	16.104	38.1	115.1	111.3	108.3	103.9	116.1	112.1	108.7	104.6
b	37.104	40.302	6	3	18	8	2	16	10	20	1	2	1	16	1.592	12	19.104	41.3								
c	37.104	40.302	6	3	18	8	2	16	10	20	1	2	1	16	1.842	12	22.104	44.5								
d	37.104	40.302	6	3	18	8	2	16	10	20	1	2	1	16	2.342	12	28.104	51.0								
e	37.104	40.302	6	3	18	8	1	8	10	10	0	10	1	8	2.592	6	15.552	37.5								
f	37.104	40.302	6	3	18	8	1	8	10	10	0	10	1	8	3.092	6	18.552	40.7								
g	37.104	40.302	6	3	18	8	1	8	10	10	0	10	1	8	3.592	6	21.552	43.9								
h	37.104	40.302	6	3	18	8	1	8	10	10	0	10	1	8	4.467	6	26.802	49.6								
XII a	37.104	53.736	6	4	24	4	2	10	10	10	0	8	1	16	1.342	9	12.078	42.9	129.6	123.4	118.3	110.6	136.2	130.0	124.8	117.9
b	37.104	53.736	6	4	24	4	2	10	10	10	0	8	1	16	1.592	9	14.328	45.8								
c	37.104	53.736	6	4	24	4	2	10	10	10	0	8	1	16	1.842	9	16.578	48.6								
d	37.104	53.736	6	4	24	4	2	10	10	10	0	8	1	16	2.342	9	21.078	54.3								
e	37.104	53.736	6	4	24	4	1	5	10	10	0	4	1	20	2.592	5	12.960	44.0								
f	37.104	53.736	6	4	24	4	1	5	10	10	0	4	1	20	3.092	5	15.460	47.2								
g	37.104	53.736	6	4	24	4	1	5	10	10	0	4	1	20	3.592	5	17.960	50.4								
h	37.104	53.736	6	4	24	4	1	5	10	10	0	4	1	20	4.467	5	22.335	55.9								

TABLE 13.—*Ladies' hosiery (2 folds), folded in gore of heel, 120 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	'Q	R	Sₐ	S_b	S_c	S_d	S_e	S_f	S_g	S_h
a	18.552	26.868	3	2	6	20	2	40	0	0	0	0	0	0	1.342	40	53.680	40.8	109.1	111.9	114.8	121.3	108.8	111.4	114.4	120.1
b	18.552	26.868	3	2	6	20	2	40	0	0	0	0	0	0	1.592	40	63.680	47.1								
c	18.552	26.868	3	2	6	20	2	40	0	0	0	0	0	0	1.842	40	73.680	53.4								
d	18.552	26.868	3	2	6	20	2	40	0	0	0	0	0	0	2.342	40	93.680	66.0								
e	18.552	26.868	3	2	6	20	1	20	0	0	0	0	0	0	2.592	20	51.840	39.7								
f	18.552	26.868	3	2	6	20	1	20	0	0	0	0	0	0	3.092	20	61.840	46.0								
g	18.552	26.868	3	2	6	20	1	20	0	0	0	0	0	0	3.592	20	71.840	52.3								
h	18.552	26.868	3	2	6	20	1	20	0	0	0	0	0	0	4.467	20	89.340	63.3								

TABLE 13.—*Ladies' hosiery (2 folds), folded in gore of heel, 120 dozen to case*—Continued

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c	S_d	S_e	S_f	S_g	S_h
II a	18.552	40.302	3	3	9	13	2	26	3	6	0	6	1	3	1.342	27	36.234	40.0	107.0	108.1	109.7	114.2	109.6	110.9	112.7	116.7
II b	18.552	40.302	3	3	9	13	2	26	3	6	0	6	1	3	1.592	27	42.984	45.5								
II c	18.552	40.302	3	3	9	13	2	26	3	6	0	6	1	3	1.842	27	49.734	51.0								
II d	18.552	40.302	3	3	9	13	2	26	3	6	0	6	1	3	2.342	27	63.234	62.1								
II e	18.552	40.302	3	3	9	13	1	13	3	3	0	3	1	6	2.592	14	36.288	40.0								
II f	18.552	40.302	3	3	9	13	1	13	3	3	0	3	1	6	3.092	14	43.288	45.8								
II g	18.552	40.302	3	3	9	13	1	13	3	3	0	3	1	6	3.592	14	50.288	51.5								
II h	18.552	40.302	3	3	9	13	1	13	3	3	0	3	1	6	4.467	14	62.538	61.5								
III a	18.552	53.736	3	4	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	40.8	109.1	108.8	109.3	111.9	109.3	108.7	109.2	111.4
III b	18.552	53.736	3	4	12	10	2	20	0	0	0	0	0	0	1.592	20	31.840	45.8								
III c	18.552	53.736	3	4	12	10	2	20	0	0	0	0	0	0	1.842	20	36.840	50.8								
III d	18.552	53.736	3	4	12	10	2	20	0	0	0	0	0	0	2.342	20	46.840	60.9								
III e	18.552	53.736	3	4	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	39.9								
III f	18.552	53.736	3	4	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	44.9								
III g	18.552	53.736	3	4	12	10	1	10	0	0	0	0	0	0	3.592	10	35.920	49.9								
III h	18.552	53.736	3	4	12	10	1	10	0	0	0	0	0	0	4.467	10	44.670	58.7								
IV a	24.736	26.868	4	2	8	15	2	30	0	0	0	0	0	0	1.342	30	40.260	38.1	101.9	103.1	105.4	109.6	101.6	102.9	104.6	108.7
IV b	24.736	26.868	4	2	8	15	2	30	0	0	0	0	0	0	1.592	30	47.760	43.4								
IV c	24.736	26.868	4	2	8	15	2	30	0	0	0	0	0	0	1.842	30	55.260	49.0								
IV d	24.736	26.868	4	2	8	15	2	30	0	0	0	0	0	0	2.342	30	70.260	59.6								
IV e	24.736	26.868	4	2	8	15	1	15	0	0	0	0	0	0	2.592	15	38.880	37.1								
IV f	24.736	26.868	4	2	8	15	1	15	0	0	0	0	0	0	3.092	15	46.380	42.5								
IV g	24.736	26.868	4	2	8	15	1	15	0	0	0	0	0	0	3.592	15	53.880	47.8								
IV h	24.736	26.868	4	2	8	15	1	15	0	0	0	0	0	0	4.467	15	67.005	57.3								
V a	24.736	40.302	4	3	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	38.1	101.9	101.2	101.3	103.3	102.2	101.2	101.3	102.8
V b	24.736	40.302	4	3	12	10	2	20	0	0	0	0	0	0	1.592	20	31.840	42.6								
V c	24.736	40.302	4	3	12	10	2	20	0	0	0	0	0	0	1.842	20	36.840	47.1								
V d	24.736	40.302	4	3	12	10	2	20	0	0	0	0	0	0	2.342	20	46.840	56.2								
V e	24.736	40.302	4	3	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	37.3								
V f	24.736	40.302	4	3	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	41.8								
V g	24.736	40.302	4	3	12	10	1	10	0	0	0	0	0	0	3.592	10	35.920	46.3								
V h	24.736	40.302	4	3	12	10	1	10	0	0	0	0	0	0	4.467	10	44.670	54.2								
VI a	24.736	53.736	4	4	16	7	2	14	8	16	1	8	0	0	1.342	15	20.130	40.4	108.0	105.7	104.5	104.4	112.6	109.9	109.0	105.7
VI b	24.736	53.736	4	4	16	7	2	14	8	16	1	8	0	0	1.592	15	23.880	44.5								
VI c	24.736	53.736	4	4	16	7	2	14	8	16	1	8	0	0	1.842	15	27.630	48.6								
VI d	24.736	53.736	4	4	16	7	2	14	8	16	1	8	1	8	2.342	15	35.130	56.8								
VI e	24.736	53.736	4	4	16	7	1	7	8	8	0	8	1	8	2.592	8	20.736	41.1								
VI f	24.736	53.736	4	4	16	7	1	7	8	8	0	8	1	8	3.092	8	24.736	45.4								
VI g	24.736	53.736	4	4	16	7	1	7	8	8	0	8	1	8	3.592	8	28.736	49.8								
VI h	24.736	53.736	4	4	16	7	1	7	8	8	0	8	1	8	4.467	8	35.736	55.7								

VII	a	30.920	26.868	5	2	10	12	2	24	0	0	0	0	0	0	1.342	24	32.208	37.4	100.0	--------	--------	--------	--------	--------	--------	--------
	b	30.920	26.868	5	2	10	12	2	24	0	0	0	0	0	0	1.592	24	38.208	42.2	--------	100.2	--------	--------	--------	--------	--------	--------
	c	30.920	26.868	5	2	10	12	2	24	0	0	0	0	0	0	1.842	24	44.208	47.0	--------	--------	101.1	--------	--------	--------	--------	--------
	d	30.920	26.868	5	2	10	12	2	24	0	0	0	0	0	0	2.342	24	56.208	56.6	--------	--------	--------	104.0	--------	--------	--------	--------
	e	30.920	26.868	5	2	10	12	1	12	0	0	0	0	0	0	2.592	12	31.104	36.5	--------	--------	--------	--------	100.0	--------	--------	--------
	f	30.920	26.868	5	2	10	12	1	12	0	0	0	0	0	0	3.092	12	37.104	41.3	--------	--------	--------	--------	--------	100.0	--------	--------
	g	30.920	26.868	5	2	10	12	1	12	0	0	0	0	0	0	3.592	12	43.104	46.1	--------	--------	--------	--------	--------	--------	100.9	--------
	h	30.920	26.868	5	2	10	12	1	12	0	0	0	0	0	0	4.467	12	53.604	54.6	--------	--------	--------	--------	--------	--------	--------	103.6
VIII	a	30.920	40.302	5	3	15	8	2	16	0	0	0	0	0	0	1.342	16	21.472	38.5	102.9	--------	--------	--------	--------	--------	--------	--------
	b	30.920	40.302	5	3	15	8	2	16	0	0	0	0	0	0	1.592	16	25.472	42.5	--------	100.9	--------	--------	--------	--------	--------	--------
	c	30.920	40.302	5	3	15	8	2	16	0	0	0	0	0	0	1.842	16	29.472	46.5	--------	--------	100.0	--------	--------	--------	--------	--------
	d	30.920	40.302	5	3	15	8	2	16	0	0	0	0	0	0	2.342	16	37.472	54.4	--------	--------	--------	100.0	--------	--------	--------	--------
	e	30.920	40.302	5	3	15	8	1	8	0	0	0	0	0	0	2.592	8	20.736	37.8	--------	--------	--------	--------	103.6	--------	--------	--------
	f	30.920	40.302	5	3	15	8	1	8	0	0	0	0	0	0	3.092	8	24.736	41.8	--------	--------	--------	--------	--------	101.2	--------	--------
	g	30.920	40.302	5	3	15	8	1	8	0	0	0	0	0	0	3.592	8	28.736	45.7	--------	--------	--------	--------	--------	--------	100.0	--------
	h	30.920	40.302	5	3	15	8	1	8	0	0	0	0	0	0	4.467	8	35.736	52.7	--------	--------	--------	--------	--------	--------	--------	100.0
IX	a	30.920	53.736	5	4	20	6	2	12	0	0	0	0	0	0	1.342	12	16.104	42.0	112.3	--------	--------	--------	--------	--------	--------	--------
	b	30.920	53.736	5	4	20	6	2	12	0	0	0	0	0	0	1.592	12	19.104	45.5	--------	108.1	--------	--------	--------	--------	--------	--------
	c	30.920	53.736	5	4	20	6	2	12	0	0	0	0	0	0	1.842	12	22.104	49.1		--------	105.6	--------	--------	--------	--------	--------
	d	30.920	53.736	5	4	20	6	2	12	0	0	0	0	0	0	2.342	12	28.104	56.1	--------	--------	--------	103.1	--------	--------	--------	--------
	e	30.920	53.736	5	4	20	6	1	6	0	0	0	0	0	0	2.592	6	15.552	41.3	--------	--------	--------	--------	113.1	--------	--------	--------
	f	30.920	53.736	5	4	20	6	1	6	0	0	0	0	0	0	3.092	6	18.552	44.9	--------	--------	--------	--------	--------	108.7	--------	--------
	g	30.920	53.736	5	4	20	6	1	6	0	0	0	0	0	0	3.592	6	21.552	48.4	--------	--------	--------	--------	--------	--------	105.9	--------
	h	30.920	53.736	5	4	20	6	1	6	0	0	0	0	0	0	4.467	6	26.802	54.6	--------	--------	--------	--------	--------	--------	--------	103.6
X	a	37.104	26.868	6	2	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	37.7	100.8	--------	--------	--------	--------	--------	--------	--------
	b	37.104	26.868	6	2	12	10	2	20	0	0	0	0	0	0	1.592	20	31.840	42.1	--------	100.0	--------	--------	--------	--------	--------	--------
	c	37.104	26.868	6	2	12	10	2	20	0	0	0	0	0	0	1.842	20	36.840	46.6	--------	--------	100.2	--------	--------	--------	--------	--------
	d	37.104	26.868	6	2	12	10	2	20	0	0	0	0	0	0	2.342	20	46.840	55.5	--------	--------	--------	102.0	--------	--------	--------	--------
	e	37.104	26.868	6	2	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	36.9	--------	--------	--------	--------	101.1	--------	--------	--------
	f	37.104	26.868	6	2	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	41.3	--------	--------	--------	--------	--------	100.0	--------	--------
	g	37.104	26.868	6	2	12	10	1	10	0	0	0	0	0	0	3.592	10	35.920	45.7	--------	--------	--------	--------	--------	--------	100.0	--------
	h	37.104	26.868	6	2	12	10	1	10	0	0	0	0	0	0	4.467	10	44.670	53.5	--------	--------	--------	--------	--------	--------	--------	101.5
XI	a	37.104	40.302	6	3	18	6	2	12	12	24	1	6	1	12	1.342	14	18.788	40.9	109.4	--------	--------	--------	--------	--------	--------	--------
	b	37.104	40.302	6	3	18	6	2	12	12	24	1	6	1	12	1.592	14	22.288	44.6	--------	105.9	--------	--------	--------	--------	--------	--------
	c	37.104	40.302	6	3	18	6	2	12	12	24	1	6	1	12	1.842	14	25.788	48.4	--------	--------	104.1	--------	--------	--------	--------	--------
	d	37.104	40.302	6	3	18	6	2	12	12	24	1	6	1	12	2.342	14	32.788	55.9	--------	--------	--------	102.6	--------	--------	--------	--------
	e	37.104	40.302	6	3	18	6	1	6	12	12	0	12	1	6	2.592	7	18.144	40.2	--------	--------	--------	--------	110.1	--------	--------	--------
	f	37.104	40.302	6	3	18	6	1	6	12	12	0	12	1	6	3.092	7	21.644	43.3	--------	--------	--------	--------	--------	104.8	--------	--------
	g	37.104	40.302	6	3	18	6	1	6	12	12	0	12	1	6	3.592	7	25.144	47.7	--------	--------	--------	--------	--------	--------	104.4	--------
	h	37.104	40.302	6	3	18	6	1	6	12	12	0	12	1	6	4.467	7	31.269	54.3	--------	--------	--------	--------	--------	--------	--------	103.0
XII	a	37.104	53.736	6	4	24	5	2	10	0	0	0	0	0	0	1.342	10	13.420	44.7	119.5	--------	--------	--------	--------	--------	--------	--------
	b	37.104	53.736	6	4	24	5	2	10	0	0	0	0	0	0	1.592	10	15.920	47.8	--------	113.6	--------	--------	--------	--------	--------	--------
	c	37.104	53.736	6	4	24	5	2	10	0	0	0	0	0	0	1.842	10	18.420	50.9	--------	--------	109.5	--------	--------	--------	--------	--------
	d	37.104	53.736	6	4	24	5	2	10	0	0	0	0	0	0	2.342	10	23.420	57.2	--------	--------	--------	105.1	--------	--------	--------	--------
	e	37.104	53.736	6	4	24	5	1	5	0	0	0	0	0	0	2.592	5	12.960	44.0	--------	--------	--------	--------	120.5	--------	--------	--------
	f	37.104	53.736	6	4	24	5	1	5	0	0	0	0	0	0	3.092	5	15.460	47.2	--------	--------	--------	--------	--------	114.3	--------	--------
	g	37.104	53.736	6	4	24	5	1	5	0	0	0	0	0	0	3.592	5	17.960	50.4	--------	--------	--------	--------	--------	--------	110.3	--------
	h	37.104	53.736	6	4	24	5	1	5	0	0	0	0	0	0	4.467	5	22.335	55.9	--------	--------	--------	--------	--------	--------	--------	106.1

TABLE 14.—Men's hosiery, 60 dozen to case

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c
I	a	12.927	13.434	3	1	3	20	2	40	0	0	0	0	0	0	1.342	40	53.080	22.1	117.6		
	b	12.927	13.434	3	1	3	20	1	20	0	0	0	0	0	0	2.592	20	51.840	21.4		115.7	122.4
	c	12.927	13.434	3	1	3	20	1	20	0	0	0	0	0	0	3.092	20	61.840	25.1			
II	a	12.927	26.868	3	2	6	10	2	20	0	0	0	0	0	0	1.342	20	26.840	19.7	104.8		
	b	12.927	26.868	3	2	6	10	1	10	0	0	0	0	0	0	2.592	10	25.920	19.2		103.8	106.8
	c	12.927	26.868	3	2	6	10	1	10	0	0	0	0	0	0	3.092	10	30.920	21.9			
III	a	17.236	13.434	4	1	4	15	2	30	0	0	0	0	0	0	1.342	30	40.260	20.4	108.4		
	b	17.236	13.434	4	1	4	15	1	15	0	0	0	0	0	0	2.592	15	38.880	19.8		107.0	112.2
	c	17.236	13.434	4	1	4	15	1	15	0	0	0	0	0	0	3.092	15	46.380	23.0			
IV	a	17.236	26.868	4	2	8	7	2	14	4	8	1	0	0	4	1.342	15	20.130	18.1	100.0		
	b	17.236	26.868	4	2	8	7	1	7	4	4	0	4	1	4	2.592	8	20.736	19.1		103.2	105.4
	c	17.236	26.868	4	2	8	7	1	7	4	4	0	4	1	4	3.092	8	24.736	21.6			
V	a	21.545	13.434	5	1	5	12	2	24	0	0	0	0	0	0	1.342	24	32.208	19.7	104.8		
	b	21.545	13.434	5	1	5	12	1	12	0	0	0	0	0	0	2.592	12	31.104	19.1		103.2	107.3
	c	21.545	13.434	5	1	5	12	1	12	0	0	0	0	0	0	3.092	12	37.104	22.0			
VI	a	21.545	26.868	5	2	10	6	2	12	0	0	0	0	0	0	1.342	12	16.104	18.9	100.5		
	b	21.545	26.868	5	2	10	6	1	6	0	0	0	0	0	0	2.592	6	15.552	18.5		100.0	100.0
	c	21.545	26.868	5	2	10	6	1	6	0	0	0	0	0	0	3.092	6	18.552	20.5			
VII	a	25.854	13.434	6	1	6	10	2	20	0	0	0	0	0	0	1.342	20	26.840	19.5	103.7		
	b	25.854	13.434	6	1	6	10	1	10	0	0	0	0	0	0	2.592	10	25.920	19.0		102.7	105.8
	c	25.854	13.434	6	1	6	10	1	10	0	0	0	0	0	0	3.092	10	30.920	21.7			
VIII	a	25.854	26.868	6	2	12	5	2	10	0	0	0	0	0	0	1.342	10	13.420	19.5	103.7		
	b	25.854	26.868	6	2	12	5	1	5	0	0	0	0	0	0	2.592	5	12.960	19.0		103.2	102.4
	c	25.854	26.868	6	2	12	5	1	5	0	0	0	0	0	0	3.092	5	15.460	21.0			
IX	a	30.163	13.434	7	1	7	8	2	16	4	8	1	1	1	6	1.342	18	24.156	20.3	108.0		
	b	30.163	13.434	7	1	7	8	1	8	4	4	0	4	1	3	2.592	9	23.328	19.8		107.0	109.7
	c	30.163	13.434	7	1	7	8	1	8	4	4	0	4	1	3	3.092	9	27.828	22.5			
X	a	30.163	26.868	7	2	14	4	2	8	4	8	0	8	1	6	1.342	9	12.078	20.8	110.6		
	b	30.163	26.868	7	2	14	4	1	4	4	4	0	4	1	10	2.592	5	12.960	21.5		116.2	114.6
	c	30.163	26.868	7	2	14	4	1	4	4	4	0	4	1	10	3.092	5	15.460	23.5			

TABLE 15.—Men's hosiery, 100 dozen to case

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c
I	a	17.236	13.434	4	1	4	25	2	50	0	0	0	0	0	0	1.342	50	67.100	31.8	121.8		
	b	17.236	13.434	4	1	4	25	1	25	0	0	0	0	0	0	2.592	25	64.800	30.8		120.8	
	c	17.236	13.434	4	1	4	25	1	25	0	0	0	0	0	0	3.092	25	77.300	36.1			125.3
II	a	17.236	26.868	4	2	8	12	2	24	4	8	1	0	0	0	1.342	25	33.550	27.0	103.5		
	b	17.236	26.868	4	2	8	12	1	12	4	4	0	4	1	4	2.592	13	33.696	27.1		106.3	
	c	17.236	26.868	4	2	8	12	1	12	4	4	0	4	1	4	3.092	13	40.196	31.1			108.0
III	a	21.545	13.434	5	1	5	20	2	40	0	0	0	0	0	0	1.342	40	53.680	30.1	115.3		
	b	21.545	13.434	5	1	5	20	1	20	0	0	0	0	0	0	2.592	20	51.840	29.2		114.5	
	c	21.545	13.434	5	1	5	20	1	20	0	0	0	0	0	0	3.092	20	61.840	34.1			118.4
IV	a	21.545	26.868	5	2	10	10	2	20	0	0	0	0	0	0	1.342	20	26.840	24.1	100.0		
	b	21.545	26.868	5	2	10	10	1	10	0	0	0	0	0	0	2.592	10	25.920	25.5		100.0	
	c	21.545	26.868	5	2	10	10	1	10	0	0	0	0	0	0	3.092	10	30.920	28.8			100.0
V	a	25.854	13.434	6	1	6	16	2	32	4	8	1	2	1	4	1.342	34	45.628	29.7	113.8		
	b	25.854	13.434	6	1	6	16	1	16	4	4	0	4	1	2	2.592	17	44.064	28.9		113.3	
	c	25.854	13.434	6	1	6	16	1	16	4	4	0	4	1	2	3.092	17	52.564	33.5			116.3
VI	a	25.854	26.868	6	2	12	8	2	16	4	8	0	8	1	4	1.342	17	22.814	26.4	101.2		
	b	25.854	26.868	6	2	12	8	1	8	4	4	0	4	1	8	2.592	9	23.328	26.7		104.7	
	c	25.854	26.868	6	2	12	8	1	8	4	4	0	4	1	8	3.092	9	27.828	30.0			104.2
VII	a	30.163	13.434	7	1	7	14	2	28	2	4	0	4	1	3	1.342	29	38.918	29.2	111.9		
	b	30.163	13.434	7	1	7	14	1	14	2	2	0	2	1	5	2.592	15	38.880	29.2		114.5	
	c	30.163	13.434	7	1	7	14	1	14	2	2	0	2	1	5	3.092	15	46.380	33.7			117.0
VIII	a	30.163	26.868	7	2	14	7	2	14	2	4	0	4	1	10	1.342	15	20.130	27.2	104.2		
	b	30.163	26.868	7	2	14	7	1	7	2	2	0	2	1	12	2.592	8	20.736	27.7		108.6	
	c	30.163	26.868	7	2	14	7	1	7	2	2	0	2	1	12	3.092	8	24.736	30.8			107.0

Table 16.—*Men's hosiery, 120 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b	S_c
I a	17.236	13.434	4	1	4	30	2	60	0	0	0	0	0	0	1.342	60	80.520	37.5	127.9	126.9	132.2
I b	17.236	13.434	4	1	4	30	1	30	0	0	0	0	0	0	2.592	30	77.760	36.3			
I c	17.236	13.434	4	1	4	30	1	30	0	0	0	0	0	0	3.092	30	92.760	42.7			
II a	17.236	26.868	4	2	8	15	2	30	0	0	0	0	0	0	1.243	30	40.260	31.1	108.1	105.9	107.7
II b	17.236	26.868	4	2	8	15	1	15	0	0	0	0	0	0	2.592	15	38.880	30.3			
II c	17.236	26.868	4	2	8	15	1	15	0	0	0	0	0	0	3.092	15	46.380	34.8			
III a	21.545	13.434	5	1	5	24	2	48	0	0	0	0	0	0	1.342	48	64.416	35.3	120.4	119.6	124.1
III b	21.545	13.434	5	1	5	24	1	24	0	0	0	0	0	0	2.592	24	62.208	34.2			
III c	21.545	13.434	5	1	5	24	1	24	0	0	0	0	0	0	3.092	24	74.208	40.1			
IV a	21.545	26.868	5	2	10	12	2	24	0	0	0	0	0	0	1.342	24	32.208	29.7	101.4	101.0	102.2
IV b	21.545	26.868	5	2	10	12	1	12	0	0	0	0	0	0	2.592	12	31.104	28.9			
IV c	21.545	26.868	5	2	10	12	1	12	0	0	0	0	0	0	3.092	12	37.104	33.0			
V a	25.854	13.434	6	1	6	20	2	40	0	0	0	0	0	0	1.342	40	53.680	34.1	116.4	115.7	119.5
V b	25.854	13.434	6	1	6	20	1	20	0	0	0	0	0	0	2.592	20	51.840	33.1			
V c	25.854	13.434	6	1	6	20	1	20	0	0	0	0	0	0	3.092	20	61.840	38.6			
VI a	25.854	26.868	6	2	12	10	2	20	0	0	0	0	0	0	1.342	20	26.840	29.3	100.0	100.0	100.0
VI b	25.854	26.868	6	2	12	10	1	10	0	0	0	0	0	0	2.592	10	25.920	28.6			
VI c	25.854	26.868	6	2	12	10	1	10	0	0	0	0	0	0	3.092	10	30.920	32.3			
VII a	30.163	13.434	7	1	14	17	2	34	1	2	1	2	1	5	1.342	35	46.970	34.1	116.4	118.5	121.7
VII b	30.163	13.434	7	1	14	17	1	17	1	1	0	1	1	6	2.592	18	46.656	33.9			
VII c	30.163	13.434	7	1	14	17	1	17	1	1	0	1	1	6	3.092	18	55.656	39.3			
VIII a	30.163	26.868	8	2	8	8	2	16	8	16	0	2	1	12	1.342	18	24.156	30.4	103.8	103.8	103.1
VIII b	30.163	26.868	8	2	8	8	1	8	8	8	0	8	1	6	2.592	9	23.328	29.7			
VIII c	30.163	26.868	8	2	8	8	1	8	8	8	0	8	1	6	3.092	9	27.828	33.3			
IX a	34.472	13.434	8	1	8	15	2	30	0	0	0	0	0	0	1.342	30	40.260	33.2	113.3	112.9	115.5
IX b	34.472	13.434	8	1	8	15	1	15	0	0	0	0	0	0	2.592	15	38.880	32.3			
IX c	34.472	13.434	8	1	8	15	1	15	0	0	0	0	0	0	3.092	15	46.380	37.3			
X a	34.472	26.868	8	2	16	7	2	14	8	16	1	0	0	0	1.342	15	20.130	30.0	102.4	106.6	105.3
X b	34.472	26.868	8	2	16	7	1	7	8	8	0	8	1	8	2.592	8	20.736	30.5			
X c	34.472	26.868	8	2	16	7	1	7	8	8	0	8	1	8	3.092	8	24.736	34.0			

TABLE 17.—*Men's hosiery, improved method of packing, 60 dozen to case*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b
I a	12.177	8.684	3	1	3	20	2	40	0	0	0	0	0	0	1.434	40	57.360	18.1	130.3	---
I b	12.177	8.684	3	1	3	20	2	40	0	0	0	0	0	0	2.184	40	87.360	26.8	---	144.8
II a	12.177	17.368	3	2	6	10	2	20	0	0	0	0	0	0	1.434	20	28.680	14.7	105.0	---
II b	12.177	17.368	3	2	6	10	2	20	0	0	0	0	0	0	2.184	20	43.680	20.9	---	113.0
III a	12.177	26.052	3	3	9	6	2	12	0	0	0	0	0	0	1.434	14	20.076	15.1	107.8	---
III b	12.177	26.052	3	3	9	6	2	12	0	0	0	0	0	0	2.184	14	30.576	20.6	---	111.3
IV a	12.177	34.736	3	4	12	5	2	10	0	0	0	0	0	0	1.434	10	14.340	15.2	101.1	---
IV b	12.177	34.736	3	4	12	5	2	10	0	0	0	0	0	0	2.184	10	21.840	20.1	---	108.6
V a	16.236	8.684	4	1	4	15	2	30	6	0	1	3	1	0	1.434	30	43.020	16.8	120.8	---
V b	16.236	8.684	4	1	4	15	2	30	6	0	1	3	1	0	2.184	30	65.520	24.0	---	133.0
VI a	16.236	17.368	4	2	8	7	2	14	4	0	1	0	0	0	1.434	15	21.510	14.0	100.7	---
VI b	16.236	17.368	4	2	8	7	2	14	4	0	1	0	0	0	2.184	15	32.760	19.2	---	103.8
VII a	16.236	26.052	4	3	12	5	2	10	0	12	0	0	0	6	1.434	10	14.340	14.3	102.2	---
VII b	16.236	26.052	4	3	12	5	2	10	0	12	0	0	0	6	2.184	10	21.840	18.7	---	101.1
VIII a	16.236	34.736	4	4	16	3	2	6	12	0	1	8	1	8	1.434	8	11.472	16.0	115.2	---
VIII b	16.236	34.736	4	4	16	3	2	6	12	0	1	8	1	8	2.184	8	17.472	20.3	---	109.2
IX a	20.295	8.684	5	1	5	12	2	24	0	24	0	8	0	8	1.434	24	34.416	16.3	117.2	---
IX b	20.295	8.684	5	1	5	12	2	24	0	24	0	8	0	0	2.184	24	52.416	23.5	---	127.0
X a	20.295	17.368	5	2	10	6	2	12	0	0	0	0	0	0	1.434	12	17.208	13.9	100.0	---
X b	20.295	17.368	5	2	10	6	2	12	0	0	0	0	0	0	2.184	12	26.208	18.6	---	100.5
XI a	20.295	26.052	5	3	15	4	2	8	0	0	1	0	0	0	1.434	8	11.472	14.7	105.8	---
XI b	20.295	26.052	5	3	15	4	2	8	0	0	1	0	0	0	2.184	8	17.472	18.6	---	100.5
XII a	20.295	34.736	5	4	20	3	2	6	0	0	0	0	0	0	1.434	6	8.604	16.4	117.9	---
XII b	20.295	34.736	5	4	20	3	2	6	0	0	0	0	0	0	2.184	6	13.104	19.8	---	107.0
XIII a	24.354	8.684	6	1	6	10	2	20	0	0	0	0	0	0	1.434	20	28.680	16.1	115.8	---
XIII b	24.354	8.684	6	1	6	10	2	20	0	0	0	0	0	0	2.184	20	43.680	23.0	---	124.3
XIV a	24.354	17.368	6	2	12	5	2	10	6	12	0	12	1	6	1.434	10	14.340	14.2	102.2	---
XIV b	24.354	17.368	6	2	12	5	2	10	6	12	0	12	1	6	2.184	10	21.840	18.5	---	100.0
XV a	24.354	26.052	6	3	18	3	2	6	12	24	1	0	0	6	1.434	7	10.038	15.8	113.6	---
XV b	24.354	26.052	6	3	18	3	2	6	12	24	1	0	0	0	2.184	7	15.288	19.5	---	105.4
XVI a	24.354	34.736	6	4	24	2	2	4	12	24	1	0	0	8	1.434	5	7.170	17.6	106.4	---
XVI b	24.354	34.736	6	4	24	2	2	4	12	24	1	0	0	8	2.184	5	10.920	20.7	---	111.9
XVII a	28.413	8.684	7	1	7	8	2	16	4	8	1	1	1	6	1.434	18	25.812	16.7	120.1	---
XVII b	28.413	8.684	7	1	7	8	2	16	4	8	1	1	1	6	2.184	18	39.312	23.7	---	128.1
XVIII a	28.413	17.368	7	2	14	4	2	8	4	8	1	8	1	6	1.434	9	12.906	15.1	108.7	---
XVIII b	28.413	17.368	7	2	14	4	2	8	4	8	1	8	1	6	2.184	9	19.656	19.4	---	104.9
XIX a	28.413	26.052	7	3	21	2	2	4	18	36	1	15	1	6	1.434	6	8.604	16.8	120.8	---
XIX b	28.413	26.052	7	3	21	2	2	4	18	36	1	15	1	6	2.184	6	13.104	20.2	---	109.2
XX a	32.472	8.684	8	1	8	7	2	14	4	8	1	0	0	0	1.434	15	21.510	16.2	116.5	---
XX b	32.472	8.684	8	1	8	7	2	14	4	8	1	0	0	0	2.184	15	32.760	22.6	---	122.2
XXI a	32.472	17.368	8	2	16	3	2	6	12	24	1	8	1	8	1.434	8	11.472	15.8	114.6	---
XXI b	32.472	17.368	8	2	16	3	2	6	12	24	1	8	1	8	2.184	8	17.472	19.9	---	107.6

TABLE 18.—*Men's hosiery, improved method of packing, 100 dozen to case*

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Sa	Sb
I	a	12.177	8.684	3	1	3	33	2	66	1	2	0	2	1	1	1.434	67	96.078	29.3	146.5	-----
	b	12.177	8.684	3	1	3	33	2	66	1	2	0	2	1	1	2.184	67	146.328	43.9	114.5	165.6
II	a	12.177	17.368	3	2	6	16	2	32	4	8	1	2	1	4	2.184	34	48.756	22.9	109.5	-----
	b	12.177	17.368	3	2	6	16	2	32	4	8	1	2	1	4	2.184	34	74.256	33.4	109.0	126.0
III	a	12.177	26.052	3	3	9	11	2	22	1	2	1	2	1	7	1.434	23	32.982	21.9	109.5	-----
	b	12.177	26.052	3	3	9	11	2	22	1	2	1	2	1	7	1.434	23	50.232	31.1	109.0	117.3
IV	a	12.177	34.736	3	4	12	8	2	16	4	8	0	8	1	4	1.434	17	24.378	21.8	101.0	-----
	b	12.177	34.736	3	4	12	8	2	16	4	8	0	8	1	4	1.434	17	37.128	30.1	105.0	113.6
V	a	16.236	8.684	4	1	4	25	2	50	0	8	0	0	0	0	1.434	50	71.700	26.8	134.0	-----
	b	16.236	8.684	4	1	4	25	2	50	0	8	0	0	0	0	1.434	50	109.200	39.8	103.0	150.2
VI	a	16.236	17.368	4	2	8	12	2	24	4	0	1	0	0	0	1.434	25	35.850	20.6	101.0	-----
	b	16.236	17.368	4	2	8	12	2	24	4	0	1	0	0	0	2.184	25	54.600	29.4	103.0	110.9
VII	a	16.236	26.052	4	3	12	8	2	16	4	8	0	8	1	4	1.434	17	24.378	20.2	101.0	-----
	b	16.236	26.052	4	3	12	8	2	16	4	8	0	8	1	4	2.184	17	37.128	27.7	105.0	104.5
VIII	a	16.236	34.736	4	4	16	6	2	12	0	8	0	8	0	8	1.434	13	18.642	21.0	101.0	-----
	b	16.236	34.736	4	4	16	6	2	12	0	8	0	8	0	8	2.184	13	28.332	27.9	105.0	105.3
IX	a	20.295	8.684	5	1	5	20	2	40	0	8	0	0	0	0	1.434	40	57.360	25.5	127.5	-----
	b	20.295	8.684	5	1	5	20	2	40	0	8	0	0	0	0	1.434	40	87.360	37.6	100.0	141.9
X	a	20.295	17.368	5	2	10	10	2	20	0	0	0	0	0	0	1.434	20	28.680	20.0	101.5	-----
	b	20.295	17.368	5	2	10	10	2	20	0	0	0	0	0	0	1.434	20	43.680	27.7	104.0	104.5
XI	a	20.295	26.052	5	3	15	6	2	12	10	0	0	5	1	10	1.434	14	20.076	20.3	101.5	-----
	b	20.295	26.052	5	3	15	6	2	12	10	0	0	5	1	10	2.184	14	30.576	27.0	104.0	101.9
XII	a	20.295	34.736	5	4	20	5	2	10	10	20	1	5	1	10	1.434	10	14.340	20.8	104.0	-----
	b	20.295	34.736	5	4	20	5	2	10	10	20	1	5	1	10	2.184	10	21.840	26.5	104.0	100.0
XIII	a	24.354	8.684	6	1	6	16	2	32	0	0	0	0	0	4	1.434	34	48.756	25.3	126.5	-----
	b	24.354	8.684	6	1	6	16	2	32	0	0	0	0	0	4	1.434	34	74.256	37.0	100	139.6
XIV	a	24.354	17.368	6	2	12	8	2	16	4	8	1	2	1	4	1.434	17	24.378	20.0	104.5	-----
	b	24.354	17.368	6	2	12	8	2	16	4	8	1	2	1	4	2.184	17	37.128	27.4	104.5	103.4
XV	a	24.354	26.052	6	3	18	5	2	10	4	8	0	8	1	16	1.434	12	17.208	20.9	104.5	-----
	b	24.354	26.052	6	3	18	5	2	10	4	8	0	8	1	16	1.434	12	26.208	27.2	104.5	102.6
XVI	a	24.354	34.736	6	4	24	4	2	8	0	8	1	8	1	16	1.434	9	12.906	23.3	111.5	-----
	b	24.354	34.736	6	4	24	4	2	8	0	8	1	8	1	16	2.184	9	19.656	27.9	111.5	105.3
XVII	a	28.413	8.684	7	1	7	14	2	28	2	4	0	4	1	3	1.434	29	41.586	24.9	124.5	-----
	b	28.413	8.684	7	1	7	14	2	28	2	4	0	4	1	3	2.184	29	63.336	36.1	102.5	136.2
XVIII	a	28.413	17.368	7	2	14	7	2	14	2	4	0	4	1	10	1.434	15	21.510	20.5	102.5	-----
	b	28.413	17.368	7	2	14	7	2	14	2	4	0	4	1	10	2.184	15	32.760	27.1	102.5	104.5
XIX	a	28.413	26.052	7	3	21	4	2	8	2	4	1	11	1	10	1.434	10	14.340	20.9	105.5	-----
	b	28.413	26.052	7	3	21	4	2	8	2	4	1	11	1	10	1.434	10	21.840	26.8	105.5	101.1
XX	a	32.472	8.684	8	1	8	12	2	24	16	32	1	0	0	0	1.434	25	35.850	24.1	122.0	-----
	b	32.472	8.684	8	1	8	12	2	24	16	32	1	0	0	0	1.434	25	54.600	35.1	103.5	132.4
XXI	a	32.472	17.368	8	2	16	6	2	12	4	8	0	8	1	8	1.434	13	18.642	20.7	103.5	-----
	b	32.472	17.368	8	2	16	6	2	12	4	8	0	8	1	8	2.184	13	28.392	27.5	103.5	103.8

Table 19.—Men's hosiery, improved method of packing, 120 dozen to case

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S_a	S_b
I	a	12.177	8.684	3	1	3	40	2	80	0	0	0	0	0	0	1.434	80	114,720	34.7	157.0	175.4
	b	12.177	8.684	3	1	3	40	2	80	0	0	0	0	0	0	2.184	80	174,720	52.1		
II	a	12.177	17.308	3	2	6	20	2	40	0	0	0	0	0	0	1.434	40	57,360	26.5	119.9	130.6
	b	12.177	17.308	3	2	6	20	2	40	0	0	0	0	0	0	1.434	40	87,360	38.8		
III	a	12.177	26.052	3	3	9	13	2	26	3	6	0	6	1	3	1.434	27	38,718	25.0	113.1	120.2
	b	12.177	26.052	3	3	9	13	2	26	3	6	0	6	1	3	2.184	27	58,908	35.7		
IV	a	12.177	34.736	3	4	12	10	2	20	0	0	0	0	0	0	1.434	20	28,680	24.5	110.9	115.5
	b	12.177	34.736	3	4	12	10	2	20	0	0	0	0	0	0	2.184	20	43,680	34.3		
V	a	16.236	8.684	4	1	4	30	2	60	0	0	0	0	0	0	1.434	60	86,040	31.7	143.4	159.2
	b	16.236	8.684	4	1	4	30	2	60	0	0	0	0	0	0	2.184	60	131,040	47.3		
VI	a	16.236	17.308	4	2	8	15	2	30	0	0	0	0	0	0	1.434	30	43,020	24.0	108.6	116.1
	b	16.236	17.308	4	2	8	15	2	30	0	0	0	0	0	0	2.184	30	65,520	34.5		
VII	a	16.236	26.052	4	3	12	10	2	20	0	0	0	0	0	0	1.434	20	28,680	22.7	102.7	106.1
	b	16.236	26.052	4	3	12	10	2	20	0	0	0	0	0	0	2.184	20	43,680	31.5		
VIII	a	16.236	34.736	4	4	16	7	2	14	8	16	1	0	0	0	1.434	15	21,519	23.1	104.5	104.4
	b	16.236	34.736	4	4	16	7	2	14	8	16	1	0	0	0	2.184	15	32,760	31.0		
IX	a	20.295	8.684	5	1	5	24	2	48	0	0	0	0	0	0	1.434	48	68,832	30.2	136.6	150.1
	b	20.295	8.684	5	1	5	24	2	48	0	0	0	0	0	0	2.184	48	104,832	44.6		
X	a	20.295	17.308	5	2	10	12	2	24	0	0	0	0	0	0	1.434	24	34,416	22.9	103.6	108.8
	b	20.295	17.308	5	2	10	12	2	24	0	0	0	0	0	0	1.434	24	52,416	32.3		
XI	a	20.295	26.052	5	3	15	8	2	16	0	0	0	0	0	0	1.434	16	22,944	22.1	100.0	100.3
	b	20.295	26.052	5	3	15	8	2	16	0	0	0	0	0	0	2.184	16	34,944	29.8		
XII	a	20.295	34.736	5	4	20	6	2	12	0	0	0	0	0	0	1.434	12	17,208	22.9	103.6	100.3
	b	20.295	34.736	5	4	20	6	2	12	0	0	0	0	0	0	2.184	12	26,208	29.8		
XIII	a	24.354	8.684	6	1	6	20	2	40	0	0	0	0	0	0	1.434	40	57,360	29.3	132.6	144.8
	b	24.354	8.684	6	1	6	20	2	40	0	0	0	0	0	0	2.184	40	87,360	43.0		
XIV	a	24.354	17.308	6	2	12	10	2	20	0	0	0	0	0	0	1.434	20	28,680	22.5	101.8	105.0
	b	24.354	17.308	6	2	12	10	2	20	0	0	0	0	0	0	2.184	20	43,680	31.2		
XV	a	24.354	26.052	6	3	18	6	2	12	12	24	1	6	1	12	1.434	14	20,076	22.9	103.6	101.7
	b	24.354	26.052	6	3	18	6	2	12	12	24	1	6	1	12	1.434	14	30,576	30.2		
XVI	a	24.354	34.736	6	4	24	5	2	10	0	0	0	0	0	0	1.434	10	14,340	23.5	106.3	100.0
	b	24.354	34.736	6	4	24	5	2	10	0	0	0	0	0	0	2.184	10	21,840	23.7		
XVII	a	28.413	8.684	7	1	7	17	2	34	1	2	0	2	1	5	1.434	35	50,190	29.3	132.6	144.1
	b	28.413	8.684	7	1	7	17	2	34	1	2	0	2	1	5	2.184	35	76,440	42.8		
XVIII	a	28.413	17.308	7	2	14	8	2	16	8	16	1	2	1	12	1.434	18	25,812	23.3	105.4	107.4
	b	28.413	17.308	7	2	14	8	2	16	8	16	1	2	1	12	2.184	18	39,312	31.9		
XIX	a	28.413	26.052	7	3	21	5	2	10	15	30	1	9	1	12	1.434	12	17,208	23.3	105.4	101.3
	b	28.413	26.052	7	3	21	5	2	10	15	30	1	9	1	12	2.184	12	26,208	30.1		
XX	a	32.472	8.684	8	1	8	15	2	30	0	0	0	0	0	0	1.434	30	43,020	28.5	129.0	139.0
	b	32.472	8.684	8	1	8	15	2	30	0	0	0	0	0	0	2.184	30	65,520	41.3		
XXI	a	32.472	17.308	8	2	16	7	2	14	8	16	1	0	0	0	1.434	15	21,510	22.7	102.7	102.7
	b	32.472	17.308	8	2	16	7	2	14	8	16	1	0	0	0	2.184	15	32,760	30.5		

TABLE 20.—*Summary of minimum areas. Area of the surface and the dimensions of the arrangement of boxes in layers which will permit a minimum surface area. Arrangement dimensions given in nearest one-eighth of an inch. For more accurate figures, see tables*

Type	Height of boxes, O (Inches)	60 dozens per case — Area, R (Sq. ft.)	C	D	P	A	B	Q	100 dozens per case — Area, R (Sq. ft.)	C	D	P	A	B	Q	120 dozens per case — Area, R (Sq. ft.)	C	D	P	A	B	Q
Ladies' hosiery, three-fold	0.842	21.9	4	2	30	24¾	19½	25¼	31.1	5	3	27	31	28⅜	22⅜	34.6	5	3	32	31	28⅝	27
	.842								31.1	4	3	34	24¼	28⅜	28⅜	41.2	5	3	32	31	28⅜	35
	1.092	26.1	4	3	20	24¾	28⅜	21⅛	36.7	5	3	27	31	28⅜	31⅛	38.4	5	3	16	31	28⅜	31⅛
	1.907	24.4	4	3	15	24¾	28⅜	19⅞	34.7	4	3	17	24¾	28⅜	33½	37.8	5	3	8	31	28⅜	29⅜
	3.842	24.1	4	4	5	24¾	28⅜	19¼	34.6	5	3	7	31	28⅜	26⅜							30⅛
Ladies' hosiery, two-fold, folded in ankle	1.342	21.9	4	2	15	24⅜	24⅛	20⅛	30.9	5	2	20	31	24⅛	26⅞	35.0	5	2	24	31	24⅛	32¼
	1.592	24.5	4	2	15	24⅝	24⅛	23⅛	34.7	5	2	20	31	24⅛	31⅛	39.3	5	3	16	31	36⅛	25⅛
	1.842	27.0	4	2	15	24⅜	24⅛	27	38.5	5	2	17	31	24⅛	36⅞	43.0	5	3	16	31	36⅛	29⅛
	2.342	31.8	4	2	12	31	24⅛	28⅛	46.1	4	3	14	24¾	36⅛	39⅛	50.5	5	3	16	31	36⅛	37½
	2.342								30.2	4	2	10	31	24⅛	22¼							
	2.592								34.0	5	2	10	31	24⅛	26	34.1	5	2	12	31	24⅛	31⅛
	3.092	21.6	3	2	10	18½	24⅛	26								38.6	5	3	8	31	36⅛	24¼
Ladies' hosiery, two-fold, folded in gore of heel	1.342	21.9	4	2	15	24⅜	26⅞	20⅛	33.1	5	2	20	31	26⅞	26⅞	37.4	5	2	24	31	26⅞	32¼
	1.592	26.3	4	2	15	24⅝	26⅞	23⅛	37.1	5	2	20	31	26⅞	31⅛	42.1	6	2	20	37⅜	26⅞	31⅛
	1.842	29.0	4	2	15	24⅝	26⅞	27	41.1	5	2	20	31	26⅞	36⅞	46.5	5	3	16	31	40⅜	35⅞
	2.342	34.0	4	2	12	31	26⅞	28⅜	49.1	4	3	20	24¾	40⅜	39⅛	54.4	5	3	16	31	40⅜	37⅛
	2.592								32.3	4	2	10	18½	26⅞	26	36.5	5	2	12	31	26⅞	31⅛
	3.092	23.3	4	5	12	31	26⅞	18½	36.3	5	2	10	31	26⅞	18⅛	41.3	5	2	12	31	26⅞	31
	3.092	26.4	4	2	10	31	26⅞	26⅜								41.3	6	2	10	37⅛	26⅞	31
	3.592															45.7	6	2	8	37⅛	40⅜	28⅜
	3.592	28.8	5	2	6	31	26⅜	21½	40.3	5	2	10	31	26⅜	36	45.7	6	3	10	37⅛	26⅞	31⅛
	4.467	33.0	5	2	6	31	26⅜	26⅜	47.4	5	2	10	31	26⅜	44⅛	52.7	5	3	8	31	40⅜	35⅛
Men's hosiery	1.342	18.8	4	2	15	17¼	26⅞	20¼	26.1	5	2	20	21⅜	26⅞	26⅞	29.3	6	2	20	25⅝	26⅞	26⅞
	2.592	18.5	5	2	6	21⅝	26⅜	15½	25.5	5	2	10	21½	26⅜	26	28.6	6	2	10	25⅝	26⅜	26
	3.092	20.5	5	2	6	21½	26⅜	18½	28.8	5	2	10	21½	26⅜	31	32.3	6	2	10	25⅝	26⅜	31
Men's hosiery, improved method of packing	1.434	13.9	5	2	12	20¼	17⅜	17¼	20.0	5	2	20	20⅜	17⅜	28⅞	22.1	5	3	16	20⅜	17⅜	23
	2.184	18.5	5	6	10	24⅜	17⅜	14⅜	26.5	5	4	10	20⅜	34⅜	21⅛	29.7	6	4	10	20⅜	34⅜	21⅛

TABLE 21.—*Sizes for use when manufacturer ships all styles*

Type	Description	60 dozen			100 dozen			120 dozen		
		Width	Length	Height	Width	Length	Height	Width	Length	Height
		Inches	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*
Ladies' hosiery, three-fold	All silk hose.	31	28⅝	13⅛	31	28⅝	22¼	31	28⅞	27
	Boot silk hose.			17⅞			29½			35
	Mercerized and boot silk.			15½			27⅛			31½
	Do.			15⅛			26⅝			30¾
Ladies' hosiery, two-fold, folded in ankle	Sheer mercerized hose.	31	24⅛	16⅛	31	24⅛	26⅞	31	24⅛	32¼
	Boot silk, mercerized, and light-weight cotton.			19⅛			31⅞			38¼
	Medium-weight cotton.			22¼			36⅝			44¼
	Heavy-weight cotton.			28⅜			46⅝			56¼
	Mercerized and boot silk.			15⅜			26			31⅛
	Light-weight cotton.			18⅛			31			37⅝
	Medium-weight cotton.			21⅜			36			43⅝
	Heavy-weight cotton.			26⅜			44⅜			53⅝
Ladies' hosiery, two-fold, folded in gore of heel.	Sheer mercerized hose.	31	26⅞	16⅛	31	26⅞	26⅞	31	26⅛	32¼
	Boot silk, mercerized, and light-weight cotton.			19⅛			31⅞			38¼
	Medium-weight cotton.			22¼			36⅝			44¼
	Boot silk and mercerized.			28⅜			46⅝			56¼
	Light weight cotton.			15⅜			26			31⅛
	Medium-weight cotton.			18⅞			31			37⅝
	Medium-weight cotton.			21⅜			36			43⅝
	Heavy-weight cotton.			26⅜			44⅜			53⅝
Men's hosiery	Silk, mercerized, and light-weight cotton.	21½	26⅞	16⅛	21½	26⅞	26⅞	21¾	26⅞	32¼
	Do.			15½			26			31⅛
	Heavy mercerized cotton.			18½			31			37⅛
Men's hosiery, improved method of packing.	Silk.	20¼	17½	17¼	20¼	34¾	14¾	20¾	34¾	17¼
	Mercerized and cotton hose.			26¼			21¼			26¼

VI. UTILITY AND CONSIDERATION FOR THE USE OF THESE DIMENSIONS

These calculations have been based on the standard hoisery box dimensions. It must be remembered that the calculated dimensions given are not the inside dimensions of the packing case, but are the outside dimensions of the assembly of empty hoisery boxes arranged as indicated.

In the summary of minimum areas, Table 20, there have been collected all the arrangements which resulted in a minimum surface area. Table 20 will be useful to any manufacturer who ships only a few of these styles, for he can select from the list the arrangement resulting in the greatest economy.

In Table 21 there has been prepared a list of the dimensions of the arrangements of boxes for the use of manufacturers shipping all styles. These dimensions were obtained by selecting the length and width dimensions which would permit the smallest area when all styles of hosiery of a certain type were considered. To use these dimensions it is necessary in a few instances to use a case slightly larger than the minimum given in Table 20, but it is thought that the saving resulting from the cutting of lumber or the manufacture of these boxes on a large production basis will warrant this.

Since there is a tendency among the more progressive manufacturers toward the use of the standard hosiery boxes exclusively, the measurements given herein will serve as a means of supplying them with the dimensions for the most efficient hosiery case.

There is a practice among packers of hosiery to make a slight additional allowance in the width and height of the hosiery case, so that more rapid packing may be obtained. This should not be carried to the point where the boxes are packed loosely in the case, for it is this constant shifting of the boxes which causes the greatest amount of breakage.

When the standard hosiery box dimensions were investigated, it was decided not only to make the hosiery fit snugly in the length and width, but to make the height slightly less, so that a slight compression would result. The reason for this was that the hosiery would act as a support for the box and, in addition, insure the presentation to view of unrumpled hosiery when the box was opened.

This compression feature will be nullified if the case is made with too large a tolerance in the height. It may be well to sacrifice a slight loss in time of packing to obtain better conditions of the finished product at the receiving end. However, the necessity for some slight tolerance is obvious to take care of variations in the thickness of the

cardboard and covering paper and variations in the dimension of the box. It should be remembered that the thickness of box and cover paper which was added in these calculations was the maximum thickness of available boxes.

The actual tolerance for any type is a matter of individual experience and depends somewhat on the method of placing the boxes for packing. This can be taken care of individually by each manufacturer.

VII. SUMMARY AND CONCLUSIONS

There has been presented here a method of calculating the most economical case for packing hosiery boxes, and by using this method the most desirable arrangement for each type of hosiery has been selected. These calculations have been based on the standard hosiery box dimensions, but a suggestion for obtaining the dimensions of a case when other than the standard boxes are used is given.

The most desirable feature which recommends the use of these standard cases is the reduction of waste material in the construction of the case. The case with the smallest surface is most economical where other packing considerations are similar. Considered from the standpoint of a single case, the saving may be small, but the large quantity of hosiery shipped in cases makes this saving of primary importance.

The adoption of the suggestion regarding the use of the dimensions in Table 21 by manufacturers of all styles of hosiery will promote better and more efficient packing and shipping systems by those manufacturers, since the lengths and widths can be readily determined by this method, large quantities of this lumber can be made up and stored for convenient use. This plan might also be followed by the manufacturers of one or two styles.

The adoption of uniform sizes of cases should be welcomed by the jobber, for he could then be better enabled to plan his storage space to the best advantage. Manufacturers of special types of cases would benefit also by the general adoption of these cases, for not only would the cost per case be reduced by any reduction in the surface area, but the parts could be made up on a large quantity production basis for the market would be certain.

VIII. APPENDIX

Ratios of the sides of a hexahedron to give minimum surface for a given volume:

Let the sides of the hexahedron be a, ka, ca; k and c being ratios and a the largest side.

Then the volume (V) and surface (S) are, respectively,

$$V = a^3kc \tag{1}$$

$$S = 2a^2(k+c+kc) \tag{2}$$

By substituting for a from (1) into (2) there is obtained:

$$S = 2V^{2/3} \ \frac{k+c+kc}{(kc)^{2/3}} \tag{3}$$

$$\frac{\delta S}{\delta k} = 2/3 \ \left(\frac{V}{kc}\right)^{2/3} \left(1+c-2\frac{c}{k}\right), \quad \frac{\delta S}{\delta c} = 2/3 \ \left(\frac{V}{kc}\right)^{2/3} \left(1+k-2\frac{k}{c}\right) \tag{4}$$

for V fixed, S is a minimum at

$$\frac{\delta S}{\delta k} = \frac{\delta S}{\delta c} = 0$$

The zero values of the partial derivatives determine, respectively (k, c, $\neq 0$),

$$k = \frac{2c}{1+c} \tag{5_1}$$

$$c = \frac{2k}{1+k} \tag{5_2}$$

Hence, for V and k fixed, minimum S determines $c = \frac{2k}{1+k}$, which gives by substituting in (2)

$$S = 6ka^2 \tag{6}$$

For V above fixed, minimum S determined by simultaneous solution of (5_1) and (5_2)

$$k = c = 1 \tag{7}$$

Therefore, the cube is the hexahedron of minimum surface.

In order to make use of values for a, ka, and ca, different values have been assigned to k, and the ratios of the sides have been found which will give minimum surfaces for the conditions when one side is equal to the other multiplied by a constant. These ratios are given in Table 1.

TABLE 1.—*The ratio of the sides for different values of k, when $k = \dfrac{2c}{1+c}$*

Condition	Ratios
1	$a{:}ka{:}ca =$ 1:1: 1$=$ 30:30:30
2	$a{:}ka{:}ca =$ 2:1:4/3$=$ 60:30:40
3	$a{:}ka{:}ca =$ 3:1:3/2$=$ 90:30:45
4	$a{:}ka{:}ca =$ 4:1:8/5$=$120:30:48
5	$a{:}ka{:}ca =$ 5:1:5/3$=$150:30:50
6	$a{:}ka{:}ca =$1/2:1:2/3$=$ 15:30:20

In order to show what the effect would be if this side were increased or decreased from the value which provides a minimum surface condition, this was calculated in terms of surface per unit volume, the results of which are given in Tables 2 to 7. These results are plotted in Figure 1. The less the surface per unit of volume the more economical the box. The value of ca has been taken in the tables such that the curves for all cases would be comparative. The curve holds for any multiple or division of the values for ca, since the surface per unit of volume is a unit quantity.
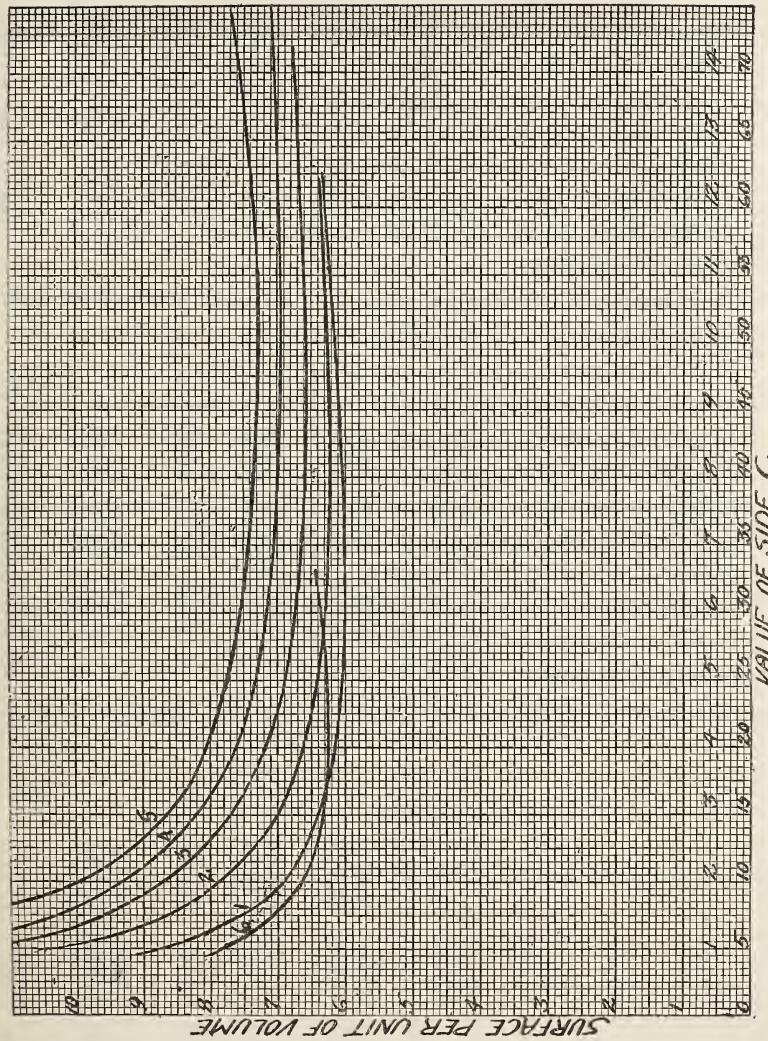
Fig. 1—The relation of surface per unit volume to value of side *c*

TABLE 2.—*Condition 1, varying ca when k=1 the ratio a:ka:ca=1:1:1=30: 30:30=minimum*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	4,500	16.51	272.3	2,400	8.80
10	9,000	20.80	432.6	3,000	6.94
15	13,500	23.81	566.4	3,600	6.36
20	18,000	26.21	686.4	4,200	6.14
25	22,500	28.24	795.2	4,800	6.04
30	27,000	30.00	900.0	5,400	6.00
35	31,500	31.60	998.6	6,000	6.02
40	36,000	33.02	1,089.0	6,600	6.07
45	40,500	34.38	1,183.4	7,200	6.08
50	45,000	35.57	1,267.4	7,800	6.16
55	49,500	36.78	1,354.2	8,400	6.20
60	54,000	37.80	1,428.8	9,000	6.31

$S/V^{2/3}$=surface per unit of volume.

TABLE 3.—*Condition 2, varying ca when k=2 the ratio a:ka:ca=6:3:4=60: 30:40*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	9,000	20.80	432.6	4,500	10.4
10	18,000	26.20	686.4	5,400	7.86
15	27,000	30.00	900.0	6,300	7.00
20	36,000	33.02	1,089	7,200	6.61
25	45,000	35.57	1,267	8,100	6.41
30	54,000	37.80	1,429	9,000	6.30
35	63,000	39.79	1,584	9,900	6.25
40	72,000	41.60	1,731	10,800	6.23
45	81,000	43.27	1,875	11,700	6.24
50	90,000	44.81	2,007	12,600	6.26
55	99,000	46.26	2,144	13,500	6.28
60	108,000	47.62	2,266	14,400	6.34

$S/V^{2/3}$=surface per unit of volume.

TABLE 4.—*Condition 3, varying ca when k=3 the ratio a:ka:ca=6:2:3=90: 30:45*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	13,500	23.83	566.4	6,600	11.7
10	27,000	30.00	900	7,800	8.67
15	40,500	34.39	1,183	9,000	7.60
20	54,000	37.80	1,429	10,200	7.15
25	67,500	40.80	1,664	11,400	6.86
30	81,000	43.27	1,875	12,600	6.73
35	94,500	45.58	2,079	13,800	6.65
40	108,000	47.62	2,266	15,000	6.62
45	121,500	49.58	2,460	16,200	6.55
50	135,000	51.30	2,632	17,400	6.62
55	148,500	53.00	2,809	18,600	6.64
60	162,000	54.51	2,970	19,800	6.67
65	175,500	56.00	3,136	21,000	6.70
70	189,000	57.39	3,283	22,200	6.76

$S/V^{2/3}$=Surface per unit of volume.

TABLE 5.—*Condition 4, varying ca when k=4 the ratio a:ka:ca=20:5:8=120: 30:48*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	18,000	26.20	686	8,700	12.7
10	36,000	33.02	1,089	10,200	9.38
15	54,000	37.80	1,428	11,700	8.21
20	72,000	41.60	1,730	13,200	7.63
25	90,000	44.81	2,007	14,700	7.30
30	108,000	47.62	2,268	16,200	7.14
35	126,000	50.13	2,510	17,700	7.05
40	144,000	52.41	2,746	19,200	6.99
45	162,000	54.51	2,970	20,700	6.97
48	172,800	55.70	3,102	21,600	6.95
50	180,000	56.46	3,192	22,200	6.96
55	198,000	58.29	3,399	23,700	6.98
60	216,000	60.00	3,600	25,200	7.00
65	234,000	61.62	3,795	26,700	7.04

$S/V^{2/3}$=surface per unit of volume.

TABLE 6.—*Condition 5, varying ca when k=5 the ratio a:ka:ca=15:3:5=150: 30:50*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	22,500	28.25	795.2	10,800	13.6
10	45,000	35.57	1,267	12,600	9.95
15	67,500	40.80	1,665	14,400	8.65
20	90,000	44.81	2,007	16,200	8.05
25	112,500	48.20	2,323	18,000	7.74
30	135,000	51.30	2,632	19,800	7.54
35	157,500	54.01	2,916	21,600	7.43
40	180,000	56.46	3,192	23,400	7.34
45	202,500	58.80	3,451	25,200	7.30
50	225,000	60.82	3,710	27,000	7.28
55	247,500	62.85	3,956	28,800	7.30
60	270,000	64.63	4,173	30,600	7.34
65	292,500	66.49	4,422	32,400	7.34
70	305,000	67.31	4,529	34,200	7.53
75	327,500	68.97	4,761	36,000	7.56

$S/V^{2/3}$=surface per unit of volume.

TABLE 7.—*Condition 6, varying ca when k=½ the ratio a:ka:ca=3:6:4=15: 30:20*

ca	V	$V^{1/3}$	$V^{2/3}$	S	$S/V^{2/3}$
5	2,250	13.11	171.6	1,350	7.88
10	4,500	16.51	272.3	1,800	6.62
15	6,750	18.92	357.2	2,250	6.33
20	9,000	20.80	432.6	2,700	6.25
25	11,250	22.41	501.8	3,150	6.28
30	13,500	23.83	566.4	3,600	6.36

$S/V^{2/3}$=surface per unit of volume.

WASHINGTON, February 25, 1924.