

Quality Knitting of Hosiery

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To improve the quality of the knitting production, it is advisable to establish either a good work bonus, or a bad work penalty. Both of these systems will require a leg and foot examining department. This article will take up only the penalty system.

If defects are found, the stockings are taken back to the knitters for examination and explanation as to the defects, and standard penalties are placed upon them, collectible in new legs, or footed legs, by the head of the examining department. In order to make the entire plan clear, we will start with the leg examining department, and refer continually to Figure "A," which shows the layout of the entire system.

defective stockings are found they are gathered from each knitter and taken to the legging machines, where they are inspected by the knitter. Here the head of the leg examining department selects at least one leg for every bad one, and a penalty if the legs are bad for established reasons within the control of the knitter. The bad legs are then taken, with the good legs from the knitter, into the examining department again. Here the collected legs are used to fill up the bag shortages, and the excess good legs will go into the good leg storage. Those which are bad will be taken to a mender, where they are reclaimed; those that are reclaimed will go into good leg storage, and the balance into bad leg storage, where they are

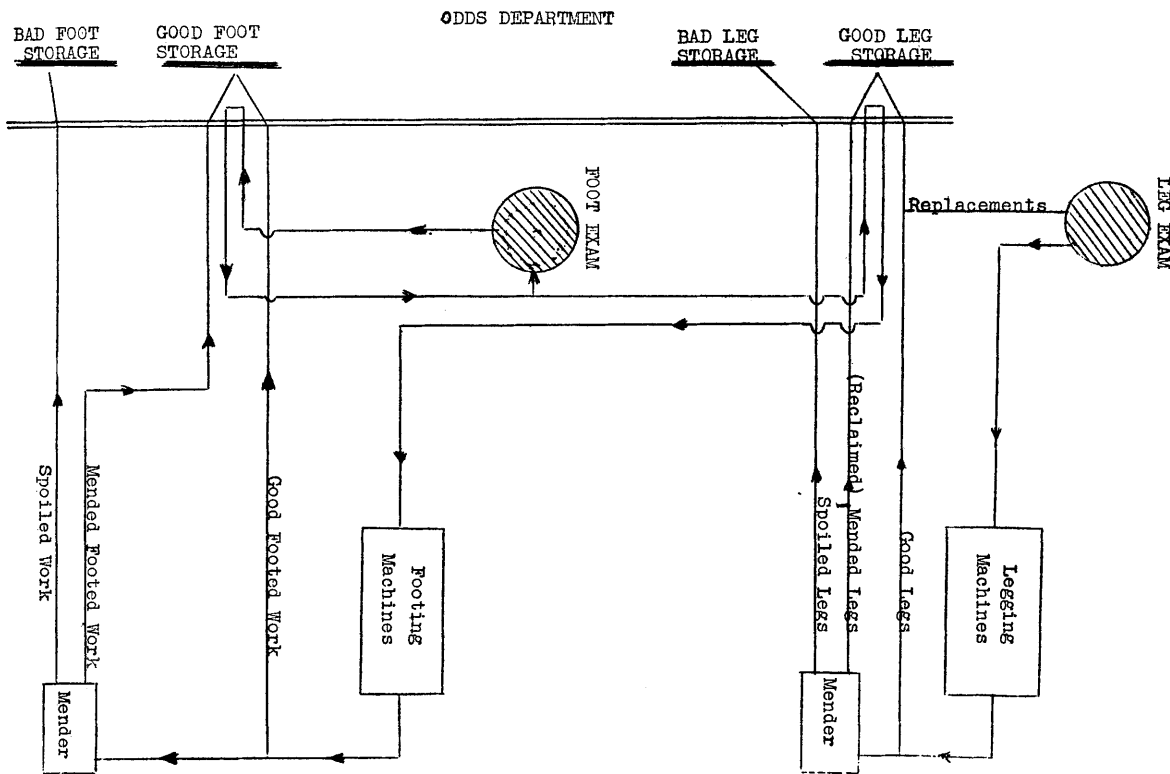


Figure A. Layout of System

Leg Examining Department

Starting at the leg examining circle, we examine every dozen manufactured, and if

either topped on or if necessary back-wound.

This entire system is controlled by three forms: Figure "B", which is composed of

three parts, takes care not only of the records for the leg examining department, but also the pay-roll records. This form will show the number of dozens examined, and the number of stockings found to be bad. On the back of the card there will be tabulated the reasons why these stockings were bad. This tabulation is gathered together by the planning department each week, and a report sent to the various executives, which analyzes quite plainly the reasons why the bad legs were made.

This form (Figure "B") is composed of two

that could be mended. On the front will appear the number of bad stockings found, which is marked by the original punch, and on the other side will be punched the number that could be reclaimed.

With these records, you will now have the following information: The number of dozens examined; the number of stockings found to be bad, and the reasons why they are bad; the number of stockings collected as replacement and penalty work; the number of stockings that could be mended. As this merchandise

Form 283 3M 5-30 Shugert
Grey Leg Examiners Record

Bag No.	Date		
Style	Size		
Amt. Good Wk		Amt. Menders	Total
Legger			
Footer			

TYPE OF BAD WORK		Quantity
Bad Welt		
Welt Mender		
Lead up in Welt		
Mender in Picot		
Narrowing Mender		
Narrowing Pull Threads		
Bad Leg Salvage		
Bad Heel Salvage		
Pull Thread		
Leg Load Up		
Heel Load Up		
Slugs		
End Out Splicing		
End Out Heel		
Heel Loose Course		
Rocker Tight in Splicing		
Rocker Tight in Heel		
Raveled Heel		
Slacker-Up		
Pulled Thread-Welt		

RECLAIMED WORK		Bag No.
Mender		
Style		
1	2 3 4	1-24 2-24 3-24 4-24
6-24	7-24 8-24 9-24 10-24 11-24 12-24	13-24 14-24
15-24	16-24 17-24 18-24 19-24 20-24 21-24 22-24	23-24

PENALTY WORK COLLECTED		Bag No.
From Legger		
Style		
1	2 3 4	1-24 2-24 3-24 4-24
6-24	7-24 8-24 9-24 10-24 11-24 12-24	13-24 14-24
15-24	16-24 17-24 18-24 19-24 20-24 21-24 22-24	23-24

EXAMINER		Style No.	Bag No.
1	2 3 4	1-24 2-24 3-24 4-24	5-24
6-24	7-24 8-24 9-24 10-24 11-24 12-24	13-24 14-24	15-24
15-24	16-24 17-24 18-24 19-24 20-24 21-24 22-24	23-24	

LEGGER FOOTER		Style No.	Bag No.
b	2 3 4	1-24 2-24 3-24 4-24	5-24
6-24	7-24 8-24 9-24 10-24 11-24 12-24	13-24 14-24	15-24
15-24	16-24 17-24 18-24 19-24 20-24 21-24 22-24	23-24	

Figure B

Back

Front

coupons and an original; the coupons are folded at the perforation, and punched to show the number of bad stockings found. The bottom coupon, which has been marked "X", has a place on the reverse side to punch the number of legs collected from the knitter, which amount includes the replacement and penalty legs. The second coupon, which we have marked "Y," shows the number of stockings

passes into the leg storage department, a receipt is issued for the number of good legs, shown by Figure "C", and another receipt is issued for the number of spoiled legs, shown by Figure "D".

All of the forms used are made of a light cardboard, in different colors, and are perforated between the coupons so they can be folded over and punched.

From these records each week, you can prove the movement of the merchandise in this department by taking the number of penalty stockings collected, which is on the back of the coupon marked "X," shown in Figure "B,"

for every bad stocking, the head of the department receives a good one. These good stockings are taken back to the foot examining department, and put in the lots to complete the bundles. In other words, the head of the de-

Form 298 5M 7-30 Shugert

Penalty Leg Work

No.	Date
Style	Amt.

Form 299 5M 7-30 Shugert

Bad Leg Work

No.	Date
Style	Amt.

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
10	20	30	40	1-24	2-24	3-24	4-24	5-24
1	2	3	4	5	6	7	8	9

FROM LEG EXAM.
Receipt

Style

Receipt
TO GOOD LEG STORAGE
Style

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Figure C

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
10	20	30	40	1-24	2-24	3-24	4-24	5-24
1	2	3	4	5	6	7	8	9

FROM LEG EXAM.
Receipt

Style

Receipt
TO BAD LEG STORAGE
Style

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Figure D.

and comparing it with the total of the punches on forms "C," and "D."

Foot Examining Department

We will now take up the foot examining department, which is slightly more complicated on account of the fact that we cannot collect defective feet. They have to be put on legs before a collection can be made.

We will start as usual with the foot examining circle. The footed work is examined, and if a defective stocking is found, they are bunched together from each knitter, and taken to the good foot storage department. Here,

department borrows the same number as the bad stockings found upon examination, so that he can make an immediate replacement, and not hold up the movement of the merchandise.

He now has the bad stockings, and continues on to the good leg storage. Before he reaches there, he decides how many he will need for every bad stocking. (One for replacement, and also possibly an additional one for the penalty, depending upon the cause of the bad work.) His determination as to how many he will have to take back to the knitter is made by an established standard, set up by the management.

Then he collects as many legs from the good

leg storage department, less the amount that could be re-footed from the bad work, giving them a receipt for it, as will be explained later

same time he turns over to the mender at the examining department all bad work that cannot be re-footed, and the mender reclaims as many as possible. The work that cannot be salvaged goes into the spoiled work, and that which can be salvaged goes into the good foot storage.

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
N ^o	2	3	4	1-24	2-24	3-24	4-24	5-24

Footer Style No.

Coupon For Replenishment

1	2	3	4	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Good Legs Withdrawn

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
1	2	3	4	1-24	2-24	3-24	4-24	5-24

Footer Style Bag No.

1	2	3	4	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Form 301 10M 7-30 Shugert

Grey Foot Examiners Record

Bag No.	Date	
Style	Size	
Amt. Good Wk	Amt. Menders	Total
Legger		
Footer		

Foot Menders

1	2	3	4	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
1	2	3	4	1-24	2-24	3-24	4-24	5-24

Examiner Bag No.
Style No.
Front

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
1	2	3	4	1-24	2-24	3-24	4-24	5-24

Bag No.

Footer

GOOD LEGS FOR FOOTERS PENALTY

Bag No.

To Footer

FOOTER PENALTY WORK

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
1	2	3	4	1-24	2-24	3-24	4-24	5-24

TYPE OF BAD WORK	Quantity
Topper-Double Loop	
Broken Needle	
Lead up in Sole	
Mender in Gusset	
Narrowing Mender	
Narrowing Pull Threads	
Bad Foot Selvage	
Bad Inside Selvage-Toe Guard	
Pull Thread	
Instep Load Up	
Bad Inside Selvage-Sole	
Slugs	
End Out in Sole	
End Out in Toe	
Bad Matching Point for Point	
Rocker Tight in Sole	
Clipped by Helper	
Raveled Toe	
Slacker Up	
Broken or Weak Corners	
Cross Stitches in Toe	
Bad Matching-Courses Per Inch	

RECLAIMED WORK

Mender

Style Bag No.

1	2	3	4	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Figure E

on in the article. From there he goes to the footing machine, shows the footer the type of bad work, and leaves the legs with the footer to put on new feet. He collects a good footed leg for replacement, and as many penalty footed legs as have been decided upon. At the

The following records are kept for this department: First of all we will start with the foot examining. Here a form is used which is illustrated by Figure "E." This form is divided into six distinct parts, which will give you a record of the number of dozens exam-

ined, the number of stockings found to be bad, and on the back of the card will be the reasons for the bad work, tabulated as in the legging cards, and taken care of each week by the gray goods planning department, so that a report, showing an analysis of the causes of bad work can be given to the management. The number of stockings bad will be punched on the top part of the card when folded at the perforation, making three coupons and a fourth record.

We are now ready to proceed with the bad

good leg storage you take the second part of your coupon marked "P," and leave it there for a receipt, and you punch the back, which is also marked so that they will know how many stockings you received for the few bad ones you found, which you desired to have re-footed. This makes a record for the department and acts as a receipt.

You then continue on to the footing machine, where you punch the number of stockings that the footer replaces on the back of the coupon marked "R." With the replacement and penal-

Form 296 5M 7-30 Shugert

Penalty Foot Work

No.	Date
Style	Amt.

Form 297 5M 7-30 Shugert

Bad Foot Work

No.	Date
Style	Amt.

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
10	20	30	40	1-24	2-24	3-24	4-24	5-24
1	2	3	4	5	6	7	8	9

FROM FOOT EXAM.

Receipt

Style

Receipt
TO GOOD FOOT STORAGE

Style

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Figure F

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
10	20	30	40	1-24	2-24	3-24	4-24	5-24
1	2	3	4	5	6	7	8	9

FROM FOOT EXAM.

Style

Receipt
TO BAD FOOT STORAGE

Style

1	2	3	4	5	6	7	8	9
10	20	30	40	1-24	2-24	3-24	4-24	5-24
6-24	7-24	8-24	9-24	10-24	11-24	12-24	13-24	14-24
15-24	16-24	17-24	18-24	19-24	20-24	21-24	22-24	23-24

Figure G

work. You take this form (Figure "E") and apply at the good foot storage where you ask for replacement stockings for the bad ones found, and you give the section marked "O" as a receipt. Then you go back to the foot examining department to leave the replacement work there, and to make up the bundles, so that the merchandise can continue on its way. Into the

ty work you continue on to the menders, where you use the bottom section of the card, which has two more coupons on it. This coupon you punch after it is folded at the perforation, on the front to show how many stockings were bad, and on the other side, in the bottom section which is marked "S," to show how many were reclaimed. The difference between the two

will plainly show the amount of spoiled work.

Now, you take the good work that the menders have been able to mend, and get a receipt for this on form marked "F," and for the bad work you get a receipt on the form marked "G." Also any excess work that might have been collected as penalty goes back to the good footed odds department, and is marked in, on a receipt similar to Figure "F."

At the end of the week, in order to prove this record, you add the number of stockings found defective on the form shown in Figure "E," Section "R," on the front side, plus the rear side. This should equal the number of stockings turned over to the odds department, shown by the punching of the receipt on the

forms illustrated by Figures "F" and "G."

This entire system is in operation at the present time, and functions very successfully. It requires a great deal of clerical work, it is true, but nevertheless it gives you an absolute and complete record and inventory check which is essential in a well managed mill. Furthermore, by the analysis of the cards at the end of the week, a report can be made out which is very valuable for the management, and shows the causes of bad work, both in the legging and footing departments. It is also very easy to keep a record from these cards on each knitter's work, so that you can ascertain from time to time just who is making the bad work, and take measures for correction.