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E. R. AMMON
SORTING HOLDER MEANS FOR HOSIERY
Filed Nov. 24, 1939

2,279,897

2 Sheets-Sheet 1

Fig. 1.

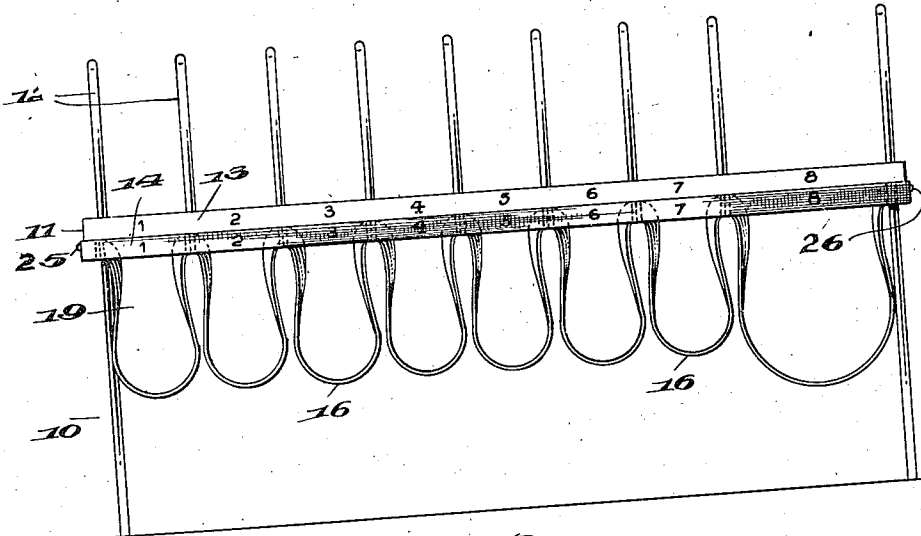


Fig. 2.

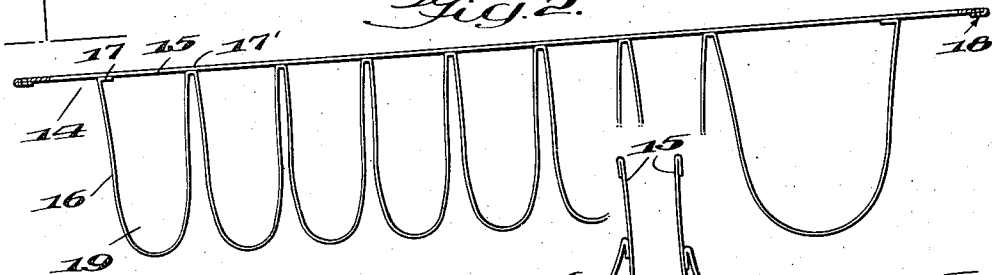
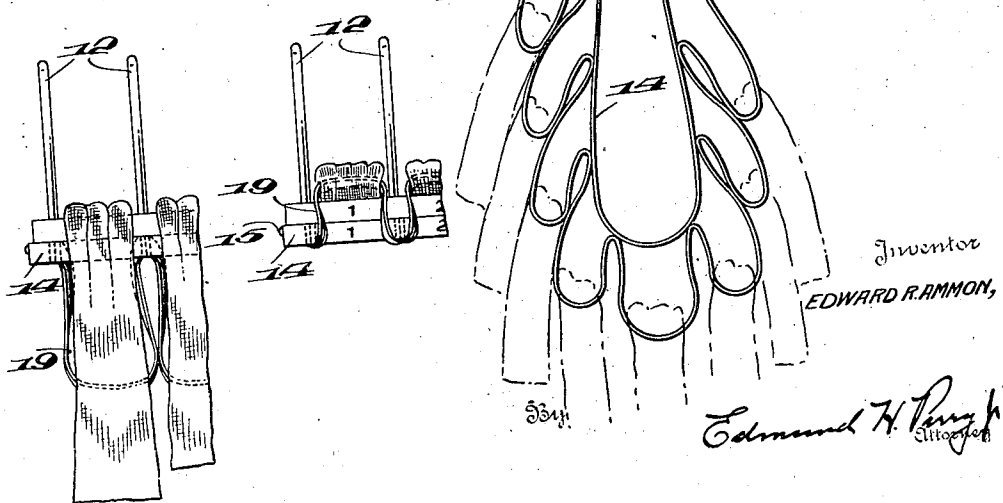


Fig. 3.

Fig. 4.

Fig. 5.



Inventor
EDWARD R. AMMON,

Edmund H. Perry
Attorney

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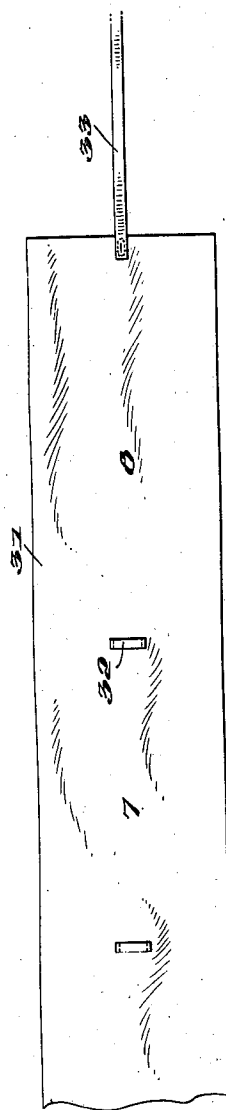
E. R. AMMON

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SORTING HOLDER MEANS FOR HOSIERY

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2 Sheets-Sheet 2



Inventor

EDWARD R. AMMON,

Edmund H. Perry Jr
Attorney

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SORTING HOLDER MEANS FOR HOSIERY

Edward R. Ammon, Reading, Pa.

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10 Claims. (Cl. 211-10)

This invention is concerned with the classification of fabric articles, particularly hosiery. It is directed to holder means which facilitates the sorting of such articles into different groups, permits the different groups to be bundled together, and transported from one place to another without mixing, provides for quick identification as to the contents of the different article groups at all times, and later enables the different groups to be separated from one another, and the individual articles of each group separately removed, quickly and with a minimum of effort.

The invention is particularly useful in the manufacture of hosiery. After hosiery is knitted and seamed it is inspected for defects on an inspection form such as disclosed in prior patents issued to me, for example: No. 1,727,498, dated September 10, 1929, No. 2,010,172, dated August 6, 1935, No. 2,023,946, dated December 10, 1935, and No. 2,090,883, dated August 24, 1937. Each stocking is examined on the form, and upon being withdrawn is placed by the operator in separate piles according to whether it is perfect or has one or another of different types of defects. Stockings having defects in the fabric, in the seaming, toe looping, heel looping, etc., are placed in individual piles. Thereafter they are transported from the inspection department to another department which segregates all perfect stockings and distributes stockings having different types of defects to still other departments as the nature of the defects requires.

Heretofore stockings after being inspected and segregated were tied by the inspector into individual bundles which had to be individually labeled with a tag or other identifying means to indicate which bundles contained perfect stockings and which contained defective stockings. Such procedure entailed considerable effort and time on the part of the inspector.

The present invention eliminates the difficulties of the prior practice just referred, by providing a sorting holder in detachable association with a sorting rack in which different groups of sorted articles may be easily secured while in the rack and then with the holder removed all together without danger of mixing one group with another. The nature of the invention will be understood from the various embodiments shown in the drawing and hereafter explained in detail.

In the drawings:

Figure 1 is a side elevation of one embodiment of my sorting and holding means, which includes a sorting rack and a sorting holder detachably associated with the rack;

Fig. 2 is a somewhat enlarged view of the holder shown in Figure 1;

Fig. 3 is a fragmentary view of a portion of the device shown in Figure 1 showing articles in position in several compartments of the rack;

Fig. 4 is a view corresponding to Figure 3 and showing the articles after being looped through the detachable holder;

Fig. 5 is a more or less diagrammatic view of the holder after being removed from the rack, and with different groups of articles separately held thereby;

Fig. 6 is a perspective view of a modified form of sorting holder employed in a special rack in a different relationship than in Fig. 1;

Fig. 7 is a side elevation of a still further form of sorting holder arranged in a sorting rack; and

Fig. 8 is a fragmentary plan view of the sorting holder of Fig. 7.

In Figure 1 is shown a sorting rack 10 including a platform 11 having a series of partitions 12 dividing the same into a series of compartments. Such rack is placed on a table located back of a hosiery inspection form (not shown) so that as the inspector withdraws each stocking from the inspection form she may place the same in the proper compartment of the rack. The front edge 13 of the platform 11 bears numbers opposite each compartment of the rack. All stockings having one type of defect will be placed in compartment 1. Perfect stockings may be placed in compartment 8, and stockings having other defects will be placed in the other compartments according to their nature.

A detachable holder formed of fabric stripping is arranged along the front edge of the rack. As best shown in Figure 2, such holder, 14, may be formed of a piece of tape 15 having connecting means at the ends thereof for detachably connecting the same to the rack. Pins 25 and 26 are provided at the opposite ends of the rack platform to support the tape 15 through apertures 18 in the respective tape ends.

The holder 14 of the present embodiment is formed with a series of permanent article-receiving loops which may readily be made by securing to tape 15 by stitching or other connecting means a second tape 16 of greater length at a series of points 17 and 17' to provide a plurality of loops 19. As shown in Figure 1, such loops will hang below each of the rack compartments. Identifying numbers are stamped on tape 15 for each tape loop, such numbers being identical with the numbers of the respective rack compartments. Stockings after being inspected are placed in

the appropriate compartments of the rack as shown in Figure 3. After one or more batches of hosiery have been inspected, the stockings in each rack compartment will be quickly drawn by the inspector through the appropriate loop 19 of the holder aligned therewith and then temporarily thrown back into the rack compartment as shown in Figure 4. After the stockings contained in each rack compartment have been inserted through the tape loops, the holder 14 is removed from the edge of the rack. Each group of stockings will be separately supported by the holder as shown in Figure 5. Since the holder is made of flexible fabric tape, it together with the different groups of stockings held thereby may be rolled into a bundle and transported to another department. As aforementioned each tape loop bears an identifying number so that all departments will know the character of the stocking held by each tape loop. Each group of stockings may be quickly removed at the appropriate time from the holder and sent to the appropriate further department.

The operator in the inspecting department will, of course, be supplied with a plurality of the flexible holders 14, as shown in Figure 2, so that after one stocking batch has been inspected, sorted, secured to and removed with one holder, another holder may be quickly secured in position on the rack.

It is also contemplated to place an article-receiving holder directly in the compartments of the rack. While it is possible to use a holder as in Figures 1 to 5, the article-receiving loops of the holder are likely to be in the way when the operator places the articles in the rack compartments, unless the loops of the holder are made of considerable size. In such arrangement I therefore prefer to employ a holder having a portion adapted to nest in the series of rack compartments, and a second portion which will be out of the way of the compartments when the articles are placed therein and which can quickly be detachably and adjustably connected to the first holder portion to complete the loops therein after all articles have been placed in the various rack compartments.

One form of holder, and a preferred rack construction for use therewith is illustrated in Figure 6. The first portion 21 of the holder is constructed of fabric strip material, preferably narrow for reasons which will hereafter appear, and the same after being secured at one end of the rack by means of a pin 22 or other suitable connection is draped in the various rack compartments as shown. The second portion 23 of the holder is also constructed of narrow fabric strip material, and until after the articles have been placed in the rack compartments is maintained out of the way of the rack compartments as by being draped over the second end of the rack as shown in dotted lines at the right of Figure 6. After a batch of sorted articles have been placed in the rack compartments, end 24 of the second portion of the holder is grasped by the operator and quickly threaded through the parts of the first portion of the holder at the tops of the partitions between the different rack compartments as indicated at point 25, thus forming a series of interlocks between the first and second portions of the holder. Thereafter portion 23 may be drawn tight so as to adjust the different loops 16 to proper size for the quantity of articles (not shown) in each compartment. The free part of the second holder portion adjacent end 24 will

then be secured to end 26 of the first portion, and the holder together with the articles contained therein will then be removed from the rack in the manner hereinbefore explained.

It will be observed in Figure 6 that the partitions between the different rack compartments are of appreciable width at their top and preferably provided with a central recess so as to facilitate the quick threading of end 24 of the second holder portion with parts 27 of the first holder portion which bridge the partition tops. Such arrangement is secured in the rack illustrated in Figure 6 by forming each partition, except the end partitions, with a pair of spaced double walls 28 and 29 of sheet metal or other suitable material. It will be understood, however, that the desired construction at the top of the partitions may be obtained in other ways.

A further holder adapted to be associated directly with the rack as in the case of Figure 6 is shown in Figures 7 and 8. In this case the first portion 31 of the article-receiving holder is provided with a series of spaced loop elements 32, preferably of some stiff material such as fiber board, metal, leather or heavy fabric, providing eyelets at the points of holder portion 31 at the tops of the partitions between the different rack compartments.

The first holder portion is draped in the rack compartments as shown in Figure 7 and is secured at one or both ends of the rack by means of buttons or other suitable fasteners 34 and 35. Secured to the right end of the first holder portion 31 is a second holder portion 33. After a batch of articles has been sorted in the different rack compartments, the free end 36 of the second holder portion 33 is quickly threaded through the different eyelet elements 32. The holder may then be removed from the rack with the articles from the different compartments held in loops 37 formed by the interconnections between portions 31 and 33 of the holder.

Any desired type of rack can be used with the holder just described. By making the eyelet elements 32 of stiff material, it is immaterial whether the partitions 38 between the rack compartments are narrow or wide at their tops. As a matter of convenience the second portion 33 of the holder will preferably be made of narrow fabric stripping, as in the case of the other embodiments. The first portion 31 may also be narrow, but if desired it may be made, as shown in Figure 8, of a wide strip of fabric, either of the same or a lesser width than the width of the compartments of the rack. Such arrangement has the advantage of holding the articles more or less extended when the holder is removed from the rack, and the holder together with the articles held by the loops thereof may be formed into a roll which is easy to handle during transportation.

It will be obvious that the flexible holder may be constructed in a variety of ways, also the rack. Hence, the scope of the invention is to be determined according to the appended claims.

I claim:

1. Apparatus for sorting fabric articles comprising a sorting rack formed with a plurality of pockets arranged side by side and adapted to receive sorted fabric articles, and means for maintaining the sorted articles in separate groups after removal from the rack including a portable holder of a flexible fabric stripping detachably mounted on the rack and forming article-receiving loops for articles placed in the respective rack pockets.

2. Apparatus for sorting fabric articles comprising a sorting rack formed with a series of upstanding partitions dividing the rack into a row of pockets adapted to receive sorted articles, and a portable holder for transporting sorted fabric articles from the rack comprising a first length of fabric stripping detachably mounted across the rack forming a series of article-receiving loops aligned with the different rack pockets, and a second length of fabric stripping engaging with the first length of stripping between the different article-receiving loops.

3. Apparatus for sorting fabric articles comprising a sorting rack formed with a row of pockets adapted to receive sorted fabric articles, a portable holder of flexible strip material formed with article-receiving closed loops corresponding to the different rack pockets, and means detachably supporting the flexible holder along the edge of the rack with the loops of the strip aligned with the rack pockets for the transfer to the holder loops of sorted fabric articles placed in the rack pockets.

4. Apparatus for sorting fabric articles comprising a sorting rack formed with a series of upstanding partitions dividing the rack into a row of pockets adapted to receive sorted fabric articles, and a portable holder for transporting articles from the rack comprising a first length of fabric stripping extending across the tops of the rack partitions and forming open loops in the respective rack pockets adapted to receive articles placed in the rack pockets, and a second length of fabric stripping detachably engaging with the first length of fabric stripping between the loops and serving to close said loops.

5. Apparatus for sorting fabric articles comprising a sorting rack formed with a series of upstanding partitions dividing the rack into a row of pockets adapted to receive sorted articles, and a portable holder for transporting articles from the rack comprising a first length of fabric stripping extending across the tops of the rack partitions and forming open article-receiving holder loops in the respective rack pockets, and a second free length of fabric stripping secured to the first length of stripping at one end of the rack adapted to be threaded through the portions of the first length of fabric stripping supported by the rack partitions to close the article-receiving holder loops.

6. Apparatus for sorting fabric articles comprising a sorting rack formed with a series of upstanding partitions dividing the rack into a row of pockets adapted to receive sorted articles, and a portable holder for transporting articles from the rack comprising a first length of fabric stripping extending across the tops of the rack partitions and forming open article-receiving holder loops in the respective rack pockets, a second free

length of fabric stripping connected to the first length of stripping at one end of the rack adapted to be threaded through and interlooped with the portions of the first length of fabric stripping supported by the rack partitions to close the article-receiving holder loops, and recessed portions in the rack partitions underlying the first length of the fabric holder providing for the easy threading of the second length of the fabric holder through, and interlooping therewith, the partition-engaging portions of the first length of the fabric holder.

7. Apparatus for sorting fabric articles comprising a sorting rack formed with a series of upstanding partitions dividing the rack into a row of pockets adapted to receive sorted articles, and a portable holder for transporting articles from the rack comprising a first length of fabric stripping extending across the tops of the rack partitions and forming open article-receiving holder loops in the respective rack pockets, a series of spaced eyelet elements fixed to the partition-engaging portion of said holder stripping, and a second length of fabric stripping adapted to be threaded through said series of eyelet elements to close the article-receiving holder loops.

8. A portable holder for sorted fabric articles of flexible fabric stripping formed into an interconnected series of permanent loops of fixed size for receiving sorted groups of fabrics articles, and attaching means for securing the ends of the strip to a support during threading of articles through the strip loops.

9. A portable holder for sorted fabric articles consisting of a first length of fabric stripping forming the supporting portion of the holder, and a second length of fabric stripping of greater length than the first length formed into a series of article-receiving loops and secured at points between the loops to spaced points of the first length of stripping, the respective loops being adapted to receive fabric articles having different characteristics, said holder being flexible so that the holder together with groups of fabric articles received in different loops thereof may be formed into a compact bundle for transportation while the loops maintain the different groups of fabric articles against intermixture so that the individual groups of fabric articles subsequently may be separately removed from the holder.

10. A portable holder for sorted fabric articles comprising a wide length of fabric stripping, a series of spaced eyelets extending lengthwise thereof, and a narrow second length of material secured at one end of said wide fabric stripping and adapted to be threaded through the series of eyelets to form with said first length of material a series of closed article-receiving loops.

EDWARD R. AMMON.