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APPARATUS FOR FACILITATING THE INSPECTION OF LAUNDRIED ARTICLES OR THE LIKE.

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1,245,242. Patented Nov. 6, 1917.

Fig. 1.

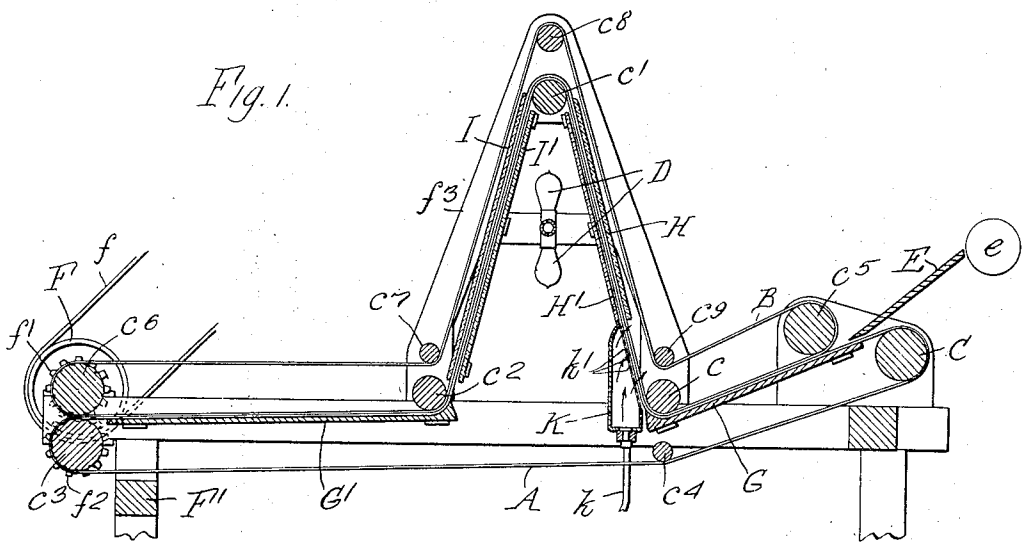
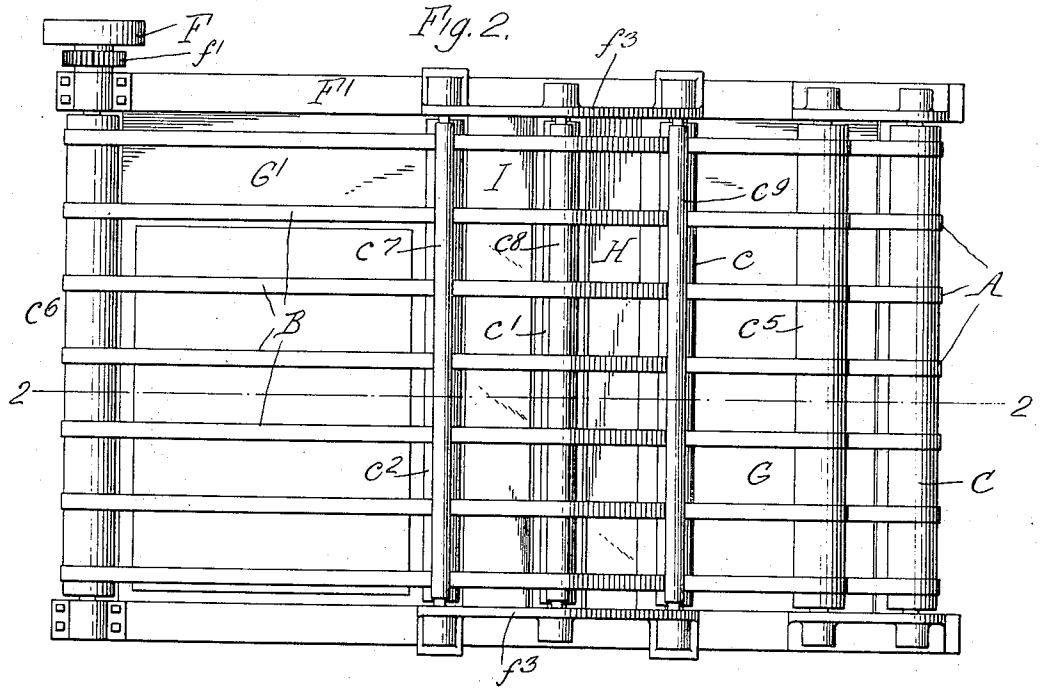


Fig. 2.



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APPARATUS FOR FACILITATING THE INSPECTION OF LAUNDRIED ARTICLES OR THE LIKE.

1,245,242. Specification of Letters Patent. Patented Nov. 6, 1917.

Application filed July 5, 1916. Serial No. 107,720.

To all whom it may concern:

Be it known that I, LEO M. KOHN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Apparatus for Facilitating the Inspection of Laundried Articles or the like, of which the following is a specification.

This invention relates to apparatus for use in inspecting sheets of textile or analogous material, and is more particularly intended for use in laundries to facilitate the inspection of articles before or after they leave the mangle, ironing machine or analogous apparatus.

The objects of the invention are to produce an apparatus of this kind which will facilitate the inspection of laundried articles for the purpose of finding spots, holes or other defects in the articles; also to provide an apparatus of this kind with means to remove steam or moisture from the articles as they leave the ironing machine or mangle to prevent the steam from interfering with the inspection of the articles; also to improve apparatus of this kind in other respects hereinafter specified.

In the accompanying drawings:

Figure 1 is a longitudinal sectional elevation on line 1—1, Fig. 2, of an inspecting apparatus embodying the invention.

Fig. 2 is a top plan view thereof.

Briefly stated, the apparatus shown in the drawings comprises a plurality of traveling tapes or cords which are arranged with their receiving ends in operative relation to an ironing machine or other device from which the laundried articles are discharged and which convey the articles between the inspector and a source of light so that any defects in the articles are plainly visible. The apparatus also includes a device for removing steam or moisture from the articles so that no steam will rise from the articles to interfere with the proper inspection thereof.

A and B represent two sets of endless traveling tapes, cords or conveyers which are so arranged with regard to each other that an article entering between the tapes will be conveyed from the receiving end of the machine to the discharge end thereof, the articles resting on the tapes A and being held in contact therewith by the tapes B, which engage the upper faces of the articles. The tapes or cords may be made of any desired material, being preferably made of canvas, and are comparatively narrow so as not to hide the articles from view. The receiving run of the lower tapes A extends from a roll C arranged at the receiving end of the machine to a roll c which is preferably arranged below the level of the roll C to cause this run of the tapes to incline downwardly to insure the proper entering of an article between the tapes. From the roll c, the adjacent runs of the tapes A and B preferably pass upwardly and over a roll c' and then downwardly and under a roll c^2 and to the discharge end of the machine. The rolls c c' and c^2 are preferably so arranged with reference to each other that the article will be carried upwardly by the tapes at one side of the roll c', then over the roll c' and then downwardly on the other side of this roll, and a suitable source of light, such for example as electric lights D D, is arranged between these upwardly and downwardly extending runs of the tapes. By means of this arrangement the articles can be inspected from either end of the machine and by arranging the lights at or about the level of the eye of the observer, the inspection of the articles is greatly facilitated. The tapes A pass downwardly over a roll c^3 at the discharge end of the machine and to the roll C at the receiving end of the machine, an idler roll c^4 being employed if necessary to properly guide the tapes. The upper tapes B pass over a roll c^5 at the receiving end of the machine, which is positioned somewhat rearwardly of the roll C so that the incoming articles can drop upon the receiving run of tapes A. The tapes B, after leaving the rolls c c' c^2 pass upwardly over a roll c^6 at the discharge end of the machine and the return runs of these tapes pass over rolls c^7, c^8 and c^9, which are preferably so arranged as to guide the return runs of the tapes B into close proximity to the runs of tapes A and B engaging the article, so that the return runs of the tapes B will not interfere with the inspection of the articles to a greater extent than do the runs of the tapes which are in actual engagement with the articles. The tapes A and B are arranged in pairs, and the two tapes of each pair are substantially in verti-

cal alinement with each other so as to interfere as little as possible with the view of the articles passing through the apparatus.

The articles may be fed to the receiving runs of the tapes A in any suitable manner, for example by means of an inclined plane or table E, which receives the articles from the discharge roll *e* of an ironing machine or other device. The discharge end of the plane E is so arranged over the receiving portion of the traveling tapes A that these tapes take the articles and convey the same without requiring any attention on the part of the operator.

Movement may be imparted to the tapes in any desired manner, for example by means of a belt *f* and a pulley F which is mounted on the roll c^6. The roll c^6 is connected with the roll c^3 by means of gears f' and f^2 mounted on the rolls c^6 and c^3 respectively. The parts of the machine may be mounted on any suitable frame or supporting means F', that shown having upwardly extending portions f^3 which support the rolls c' c^3 and the lights D.

In order to prevent the edges of an article which extend beyond the supporting tapes from dropping out of alinement with the remainder of the article, suitable supporting plates are provided on which the edges not supported by the tapes can slide as the article passes through the apparatus. For this purpose plates G and G' are preferably arranged at the receiving and discharge ends of the machine. Between the rolls *c* and *c'* the articles are supported by means of two plates H and H' of glass or other transparent material, which are arranged at opposite sides of the tapes, and similar plates I and I' are provided between the rolls *c'* and c^2. All of these plates are preferably made of smooth or polished material along which the articles can easily slide. Other means for holding the articles in proper position while passing through the apparatus may be employed.

If the inspecting apparatus is arranged to receive the articles while still hot, for example, from an ironing machine, it is desirable to provide means to prevent the steam, which rises from the articles after leaving the ironing machine, from interfering with the proper inspection of the articles. In the construction shown for this purpose, a chamber or analogous device K is provided which extends into close proximity to the articles and which is connected by means of a pipe *k* with a supply of air or with means for exhausting air from the chamber K. This chamber is provided with a plurality of small openings or orifices *k'* adjacent to the path of movement of the articles, so that the articles before passing to the point at which they are inspected, are subjected either to jets of air for removing the steam therefrom or to suction which draws the steam into the chamber K. Cold air is preferably employed for removing the steam and cooling the articles to prevent steaming of same while passing through the apparatus. Other means for removing the steam from the articles may be employed if desired.

By means of the apparatus described, the inspection of the articles is greatly facilitated. The apparatus requires only a small amount of floor space owing to the fact that articles are in a substantially upright position while being inspected, and since the articles are automatically fed to the apparatus, by the ironing machine or analogous device, no handling of the articles is necessary while they are being inspected.

I claim as my invention:

1. In an apparatus for facilitating the inspection of laundried articles or the like, the combination with means for delivering the articles to the apparatus, of a source of light, and means for continuously moving the articles through the apparatus and in front of said source of light, said means including a part arranged at an angle to the horizontal and over which the articles are passed in operative relation to said source of light.

2. In an apparatus for facilitating the inspection of laundried articles or the like, the combination of a source of light, means for taking the articles as they are passed to the apparatus and for moving said articles upwardly on one side of said source of light and downwardly on the other side thereof to place the articles in front of said source of light.

3. In an apparatus for facilitating the inspection of laundried articles or the like, the combination with means for delivering the articles to the apparatus, of a source of light, and two endless conveyers each comprising a plurality of relatively narrow cords arranged in pairs at intervals, the articles being carried between adjacent runs of said conveyers into a position in front of said source of light.

4. The combination of a pair of endless conveyers, each consisting of a plurality of endless cords, a cord of one conveyer being arranged in operative relation to a cord of the other conveyer, means for feeding an article between said conveyers, a source of light, and means for guiding said conveyers to carry an article in front of said source of light.

5. The combination of a conveyer adapted to receive an article, a source of light, rolls over which said conveyer passes and which are arranged to guide the conveyer upwardly on one side of said source of light and downwardly on the other side thereof, whereby the article passes in front of the source of light.

6. The combination of a conveyer adapted to receive an article, a source of light, means for guiding said conveyer to bring the article into operative relation to said source of light, and means for removing steam from the articles as they are carried by the conveyer.

7. The combination of a conveyer adapted to receive an article, a source of light, means for guiding said conveyer to bring the article into operative relation to said source of light, and a device for passing air through the articles as they are carried to said source of light to remove steam therefrom.

8. The combination of a pair of endless conveyers, each consisting of a plurality of endless cords, a cord of one conveyer being arranged in operative relation to a cord of the other conveyer, means for feeding an article between said conveyer, a source of light, means for guiding said conveyers to carry an article in front of said source of light, and means adjacent to said conveyer to cause air to pass between the cords of said conveyer to remove moisture from the articles while they are passing to said source of light.

9. In an apparatus for facilitating the inspection of laundried articles, the combination of a pair of endless traveling conveyers, each consisting of a plurality of endless cords spaced at intervals and adapted to receive the articles, a source of light, said conveyer having inclined portions which carry the articles into operative relation to said source of light, and supporting plates arranged below said conveyer to support the parts of the articles which extend beyond said cords.

10. In an apparatus for facilitating the inspection of laundried articles, the combination of a pair of endless traveling conveyers, each consisting of a plurality of endless cords spaced at intervals and adapted to receive the articles, a source of light, said conveyer having inclined portions which carry the articles into operative relation to said source of light, and supporting plates arranged below said conveyer to support the parts of the articles which are not supported by said cords, the supporting plates for the inclined parts of said conveyers being made of transparent material.

11. In an apparatus for facilitating the inspection of laundried articles or the like, the combination with means for delivering the articles to the apparatus, of a source of light, means for continuously moving the articles through the apparatus and in front of said source of light, and stationary transparent plates for supporting said articles as they pass in front of said source of light.

Witness my hand, this 3rd day of July, 1916.

LEO M. KOHN.

Witnesses:
M. J. PITMAN,
A. L. MCGEE.