Dec. 13, 1932. J. CONSORTI 1,890,455

LAUNDRY APPARATUS

Filed April 16, 1931 2 Sheets-Sheet 1

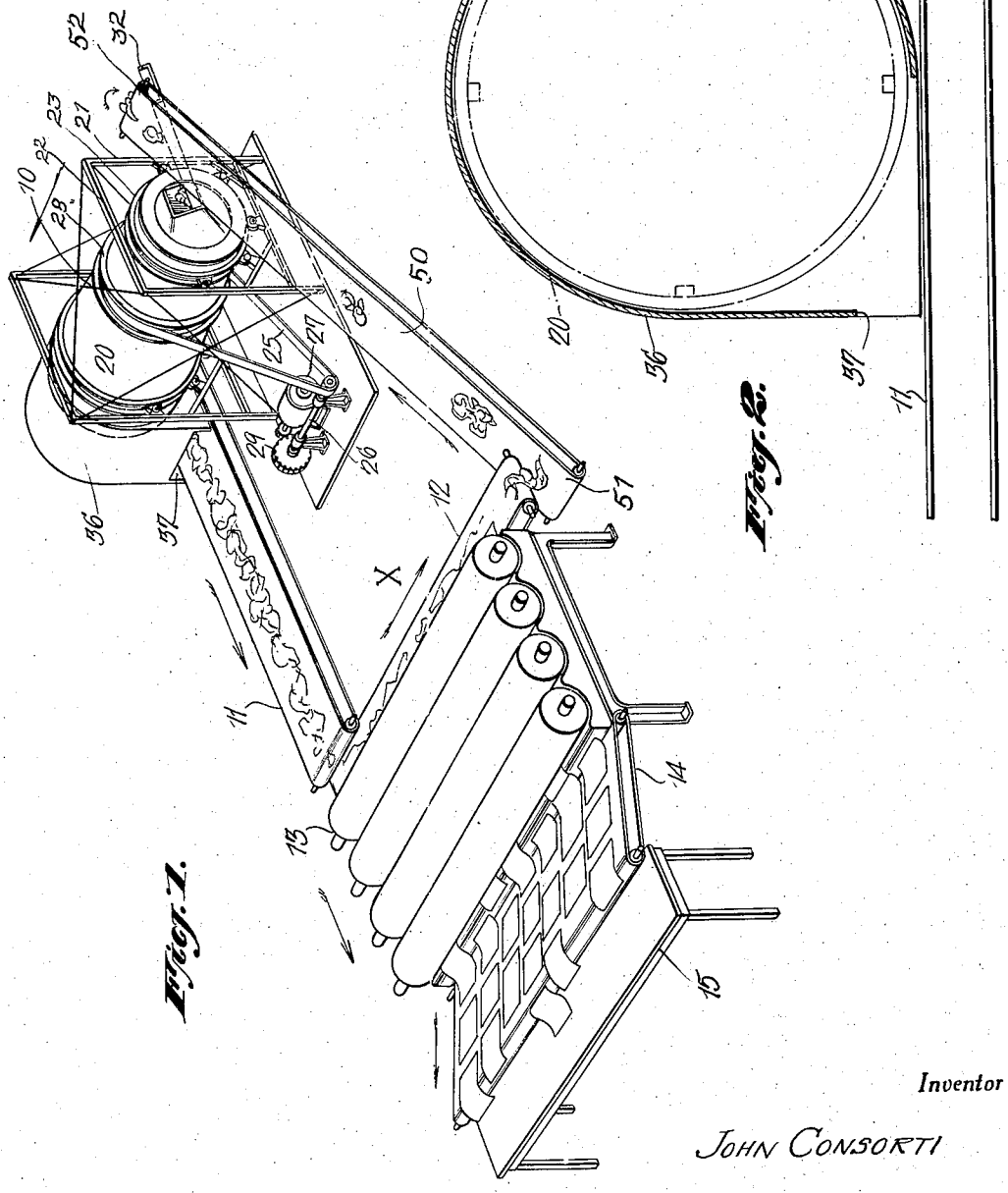


Fig. 1.

Fig. 2.

Inventor

JOHN CONSORTI

By Clarence A. O'Brien

Attorney

Dec. 13, 1932. J. CONSORTI 1,890,455

LAUNDRY APPARATUS

Filed April 16, 1931 2 Sheets-Sheet 2

Fig. 3.

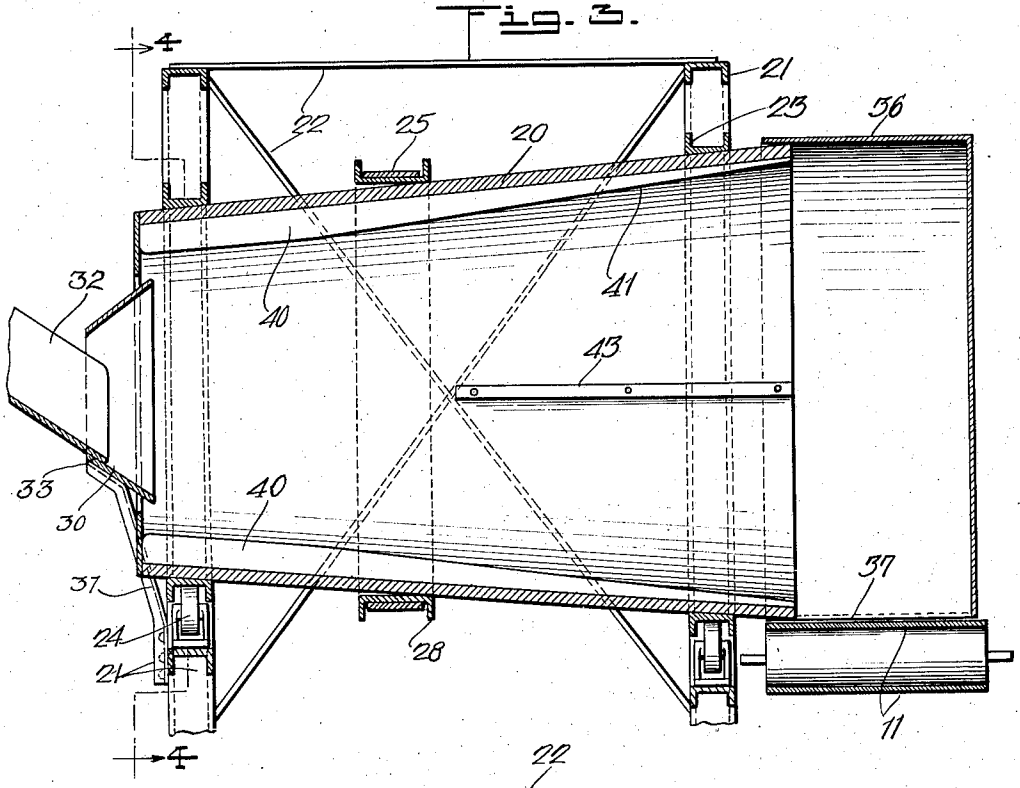
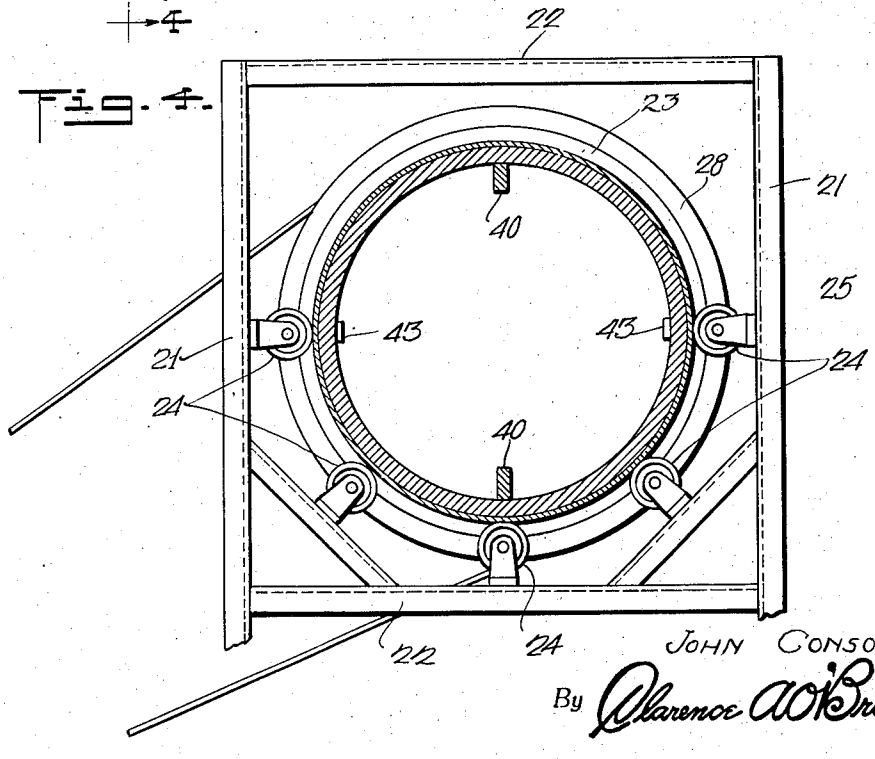


Fig. 4.



Inventor

JOHN CONSORTI

By Clarence A. O'Brien

Attorney

Patented Dec. 13, 1932

1,890,455

UNITED STATES PATENT OFFICE

JOHN CONSORTI, OF BROOKLYN, NEW YORK, ASSIGNOR OF SIXTY ONE-HUNDREDTHS TO LOUIS GORDON, OF BROOKLYN, NEW YORK

LAUNDRY APPARATUS

Application filed April 16, 1931. Serial No. 530,674.

This invention relates to improvements in laundry machinery, and more particularly it pertains to a novel machine and arrangement of devices for use in laundry plants in connection with ironing machines employed therein.

It is the general practice in laundry plants, and particularly in such plants as employ so-called flat work ironers, to deliver the pieces to the flat work ironer in large lots in which the individual pieces are damp, and are rolled or in balled or bunched condition. Before introduction into the flat work ironer, the pieces must be individually manipulated to straighten them out and to remove the major folds and wrinkles therefrom. This requires several operatives in attendance at the ironer to maintain capacity operation thereof and thus renders the laundry operation needlessly expensive.

It is one of the objects of the present invention to provide a means whereby the damp partially folded and bunched articles may be operated upon to remove the major folds or wrinkles independently of operatives.

It is another object of the invention to provide means for receiving the partially unfolded articles and deliver them to a flat work ironing machine.

Other features of the invention relate to certain novel and improved constructions, arrangements and combinations of parts hereinafter described and particularly pointed out in the claims, the advantages of which will be readily understood and appreciated by those skilled in the art.

The invention will be clearly understood from the accompanying drawings illustrating the invention in its preferred forms and the following detailed description of the constructions therein shown.

In the drawings:

Figure 1 is a perspective view of a laundry apparatus constructed in accordance with the present invention,

Figure 2 is a transverse sectional view of that portion of the apparatus which serves to unfold the articles to be ironed,

Figure 3 is a longitudinal sectional view of the unfolding device, and;

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 3.

Referring again to the drawings, and particularly to Figure 1, the device comprises a tumbling barrel or the like 10 which is adapted to receive the articles to be unfolded and tumble them about until the major folds and wrinkles are removed therefrom. From this device, the articles are delivered onto a conveyor 11, which in turn delivers to a conveyor 12 which extends parallel with the axis or substantially so of the rolls of a flat work ironer 13. The flat work ironer delivers to a conveyor or the like 14 the several articles after they have been ironed thereby, and this conveyor delivers the ironed articles to a table or other suitable device 15 from which they are taken by operatives and folded in any desired form.

In the operation of the apparatus thus far described, a number of operatives stand at the point marked X in Figure 1 and feed the flat work ironer 13 with the various articles to be ironed thereby the operatives first removing the articles to be delivered to the ironer so that they may be fed therethrough in the proper shape.

The tumbling device 10 of the apparatus consists of a barrel like member 20 which in the present illustration of the invention is mounted in a suitable frame work which consists of frame members 21 connected together by suitable braces 22. The barrel has two track like members 23 and rests upon rollers or the like 24 which in turn are carried in the circular members 21 of the frame. The tracks 23 are preferably channel shape in cross section and thus prevent longitudinal movement of the barrel like member 20 in the supporting frame thereof.

In the present embodiment of the invention, the barrel like member 20 is rotated by means of a belt 25 driven from a shaft 26 which in turn is operated by an electric motor 27. The belt 26 passes around a pulley 28 which in turn surrounds the barrel like member 20 as best illustrated in Figure 3.

Thus it will be apparent that as the motor 27 drives the shaft 26 through the medium of the gearing designated 29 in Figure 1, the belt

25 will rotate the barrel like member 20 in the frame work within which it is supported.

Means is provided to feed the several articles to be operated upon to the interior of the tumbler and in the present embodiment of the invention, this means comprises a hood like member 30 supported by a bracket or the like 31. The hood like member 30 is fed by means of an inclined chute 32 which leads thereinto as at 33 in Figure 3. The hood 30 is of such shape that articles fed into the chute 32 will be discharged from the hood directly to the interior of the tumbler.

The discharge end of the tumbler operates within a hood like member 36 the lower end of which is open as at 37, and operating beneath this hood 36 and passing through the opening 37, is the conveyor 11 heretofore mentioned. By this means, it will be obvious that the articles after having been operated upon by the tumbler will be delivered to the hood 36 and deposited upon the conveyor 11 for delivery thereby to the conveyor 12 heretofore mentioned.

As best illustrated in Figure 3 of the drawings, the interior of the barrel like member is enlarged in the direction of its discharge end and it is provided with a plurality of longitudinally extending ribs or the like 40 which extend from end to end of the tumbler. The outer edge of these ribs 40 is inclined and tapers near the discharge end of the tumbler as indicated at 41 in said figure to aid discharging of the articles and a movement thereof along the tumbler during operation thereof. Relatively shorter members 43 may be secured to the interior surface of the tumbler near its discharge end and extending inwardly thereof from the discharge end only as distinguished from the members 40 which extend throughout the length of the tumbler. The shorter members 43, which extend inwardly from the discharge end of the tumbler increase the number of impulses to the articles just before they leave the tumbler to more effectively remove the folds at this point.

Thus it will be apparent that as bunched or partially folded articles such as towels, napkins and similar pieces of goods are introduced into the tumbler, they will be tumbled about and in their movement through the same will become at least partially unfolded and the major folds or wrinkles removed therefrom after which they will be delivered upon the conveyor 11 for delivery to the conveyor 12 to be transferred to the flat work ironer.

It sometimes happens that the barrel like member will deliver articles to the conveyor 11 which in turn will deliver them to the conveyor 12 at a rate faster than they can be handled by the operatives which feed them to the flat work ironer and means is provided whereby any excess articles which are not removed from the conveyor 12, will be automatically returned to the barrel like member and again passed through the circuit to the flat work ironer or rather to the conveyor 12 where they may be introduced into the flat work ironer thus making it unnecessary for the operatives to remove every article from the conveyor 12 which is delivered to the position or location X in Figure 1. Such a construction has other advantages in that it permits the operatives to refuse articles which are not sufficiently unfolded for their purpose and permits that article to be returned to the barrel like member for further operation.

In the present embodiment of the invention, this means which returns the articles to the barrel like member 10 comprises a conveyor flight 50 the lower end 51 of which is positioned beneath one end of the conveyor 12 and the upper end of this conveyor flight 50, is positioned over the chute 32 heretofore mentioned as designated 52 in Figure 1.

Thus it will be apparent that any articles which are upon the conveyor 12 and have not been handled by the operatives at the location X in Figure 1 will be discharged from the end of the conveyor 12 onto the conveyor 50 and returned by said conveyor 50 to the chute 32 where they will again be fed into the barrel like member for further unfolding operation.

Thus it will be apparent that the present invention provides a new and novel laundry apparatus whereby the ironing operation of flat pieces may be greatly facilitated in that the major folds and wrinkles are removed therefrom before they are presented or offered to the operatives of the flat work ironer and that this operation is carried out in an automatic manner.

While the invention has been herein illustrated in a preferred form, it is to be understood that the invention is not limited to the specific constructions herein shown, and that it may be practiced in other forms without departing from the spirit thereof.

Having thus described the invention, what is claimed as new and what it is desired to secure by Letters Patent of the United States, is;

1. In a laundry apparatus, a tumbling barrel for removing major folds from articles to be ironed, comprising a rotating barrel increasing in diameter from its inlet end to its outlet end and a plurality of longitudinally extending ribs arranged upon the interior of the barrel and extending from the discharge end in the direction of its inlet end, certain of said ribs extending but approximately half the length of the barrel, and the remaining ribs extending through the effective length of the barrel.

2. In a laundry apparatus, a tumbling barrel for removing major folds from articles to

be ironed, comprising a rotating barrel increasing in diameter from its inlet end to its outlet end and a plurality of longitudinally extending ribs arranged upon the interior of the barrel and extending from the discharge end in the direction of its inlet end, certain of said ribs extending but approximately half the length of the barrel, and the remaining ribs extending through the effective length of the barrel, and said longer ribs being tapered in the direction of the discharge end of the barrel.

3. In a laundry apparatus, a tumbling barrel for removing major folds from articles to be ironed, said barrel being open at both ends for continuously receiving and discharging individual articles, belt means for conveying said articles from the outlet to the inlet of said barrel, said belt means together with said tumbling barrel forming a closed path for the articles and enclosing an area within which an operator may be positioned to remove selected articles from the belt means for the ironing treatment.

In testimony whereof I affix my signature.

JOHN CONSORTI.