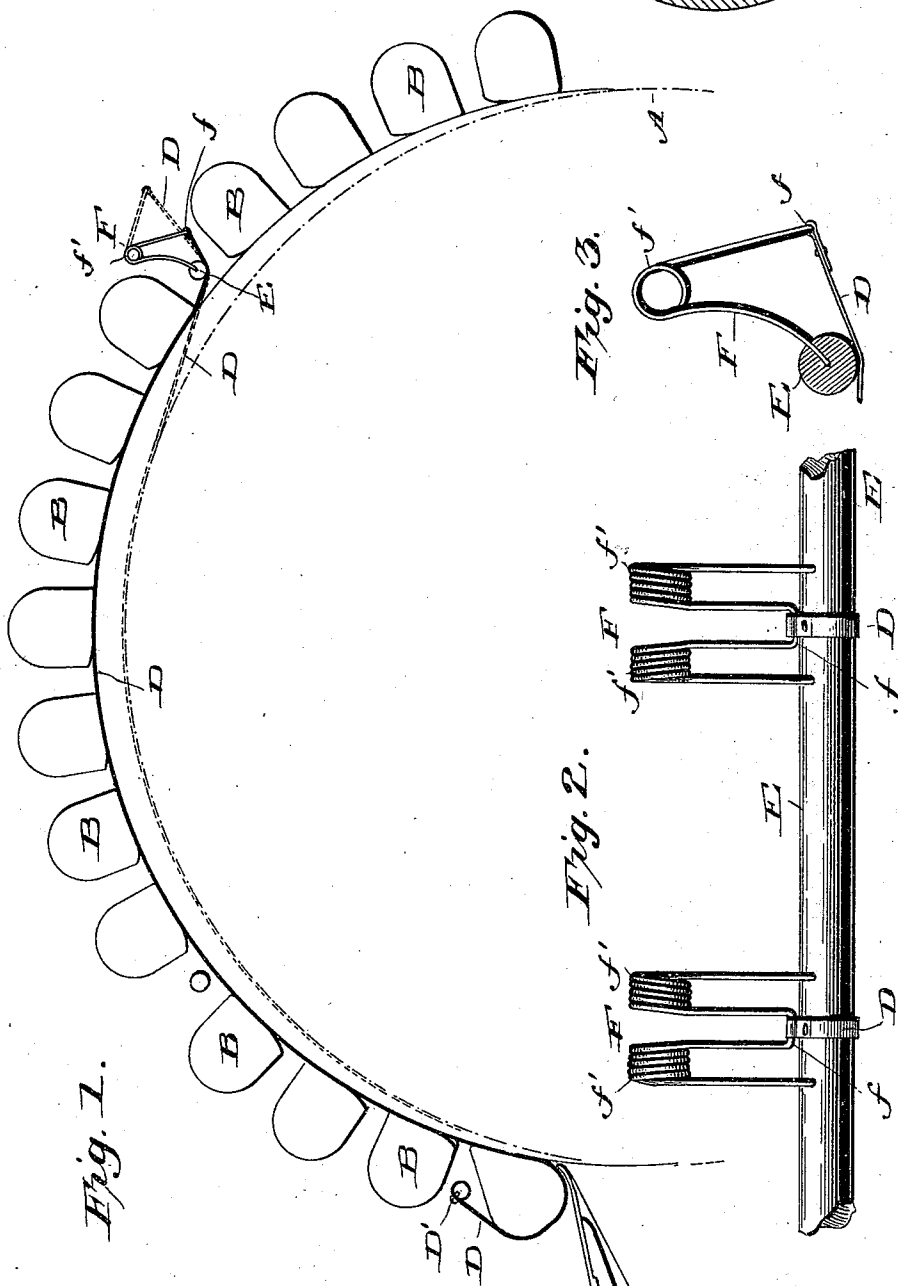


(No Model.)

A. CONKLING & T. S. WILES.
TAPE FOR LAUNDRY MACHINERY.

No. 553,669.

Patented Jan. 28, 1896.



Witnesses:
L. C. Hills,
C. A. Bond

Inventors:
Allen Conkling
Thomas S. Wiles
By E. B. Stocking
att'y.

UNITED STATES PATENT OFFICE.

ALLEN CONKLING, OF CHICAGO, ILLINOIS, AND THOMAS S. WILES, OF
ALBANY, NEW YORK.

TAPE FOR LAUNDRY MACHINERY.

SPECIFICATION forming part of Letters Patent No. 553,669, dated January 28, 1896.

Application filed August 7, 1894. Serial No. 519,674. (No model.) Patented in England October 2, 1894, No. 18,632; in France October 4, 1894, No. 241,838, and in Germany October 5, 1894, No. 80,524.

To all whom it may concern:

Be it known that we, ALLEN CONKLING, residing at Chicago, in the county of Cook and State of Illinois, and THOMAS S. WILES, residing at Albany, in the county of Albany and State of New York, citizens of the United States, have invented certain new and useful Improvements in Tapes for Laundry Machinery, (for which we have obtained Letters Patent in Great Britain, No. 18,632, dated October 2, 1894; in France, No. 241,838, dated October 4, 1894, and in Germany, No. 80,524, dated October 5, 1894,) of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a guiding-tape for ironing and other machines in which goods or material are passed from one to other portions of a machine, the tape serving the function of preventing the clogging or stoppage of the goods in transit.

By our invention we discard entirely the use of textile or woven tapes or wires, and we employ bands of metal of a width approximating that of woven tapes and of a thickness which shall render the bands sufficiently flexible to conform to the surfaces with which they are to co-operate in the act of guiding and feeding the goods. Any suitable metal may be employed. In cases where the metallic tape or band is not to be subjected to an exposure to moisture corrosive metals may be employed, but in such cases any non-corrosive metal which is not liable to excessive stretching may be used.

When our metallic bands are to be employed in connection with ironing-machines we have found by experiments that phosphor-bronze is particularly satisfactory in that it takes on a clean polished surface which cannot discolor or damage the goods with which it comes in contact. It also offers the least possible resistance to the passage of starched goods, which are perhaps more liable to adhere to woven tapes than other goods.

Other particulars and advantages of our invention will hereinafter be set forth and particularly pointed out in the claims.

The invention is shown in this instance in connection with an ironing-machine, and so

applied is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a diagrammatic view showing the application of the invention. Fig. 2 is an elevation on an enlarged scale of the rod and take-up for the tapes. Fig. 3 is a cross-section through Fig. 2.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the periphery of drum, which is clothed, and B the ironing-bars of known construction—such, for instance, as are illustrated in the patent, No. 473,804, issued to T. S. Wiles and M. E. Wendell, and dated April 26, 1892.

C is a feed-table, also of known construction.

D are the tapes, of which there may be as many as may be required, dependent upon the character and size of the machine upon which they are used. Each comprises a metallic band in one or more pieces with one end held to a rod D' extended parallel with the axis of the drum, and after passing beneath the ironing-bars the other end is passed under the rod E and connected with the loop *f* of the spring take-up F, which in this instance is shown as consisting of a spring-wire bent at its center to form the said loop and with coils *f'* of any required number, the ends of the wire being extended substantially parallel with the sides of the loop and held in the said rod in any suitable manner. The loop is thrown out in a different plane from the ends of the wire, as shown best in Fig. 3, and the end of the tape is shown as looped around the cross-bar of the loop. The rods D' and E may be supported at their ends in any suitable manner. In this instance they are fixedly held at their ends so as to at all times maintain the same relation relative to the drum and ironing devices.

Any suitable metal may be used for the tape. As hereinbefore stated, where the tapes are to be employed in connection with machines where they are liable to exposure to moisture phosphor-bronze has proven by experience to be particularly satisfactory. We may, how-

ever, use tapes of other materials, even where they are liable to exposure to moisture.

The full lines in Fig. 1 illustrate the position of the parts when the drum is in its uppermost position. The dotted lines represent the drum in its depressed position. The spring take-ups compensate for any inequality of endwise movement of the tapes and keep them from buckling. Other forms of take-up may be employed in connection with a metallic tape, and a weight would be considered the equivalent of the spring in this connection.

Other modifications in details may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

Having thus described what we at present consider the preferable form of our invention, what we claim as new is—

1. The combination of a clothed drum, a series of cooperating ironing devices and an interposed series of flat metallic tapes each fixedly secured at one end and independently movably secured at its opposite end, substantially as specified.

2. The combination of a clothed drum, a series of cooperating ironing devices and an interposed series of flat metallic tapes each fixedly secured at one end and connected at its opposite end to an independently-operating take-up, substantially as described.

3. The combination with a flat metallic guide and feed tape, of a rod or bar located between the ends of the tape and upon the under side of which said tape is free to bear and a spring take-up with its ends secured to said rod or bar and provided with a loop to which one end of said tape is connected and a coil between said loop and the ends of the wire forming the take-up, substantially as shown and described.

4. The combination with a series of flat tapes, of a series of independent spring take-ups each having a loop to which one end of a tape is connected, said spring take-ups having their ends attached to a bar beneath which said tape passes and upon which it is free to bear, whereby the take-up of each tape acts independently of the others and the slack of the tape is automatically taken up as it occurs, substantially as specified.

5. The combination of a series of flat metal-

lic feed tapes each having one end fixedly held, of a bar located between the ends of the tapes and upon the under side of which said tapes are free to bear, and a spring take-up for each tape having its ends secured to said bar and having a loop to which one end of the tape is connected and a coil between said loop and the ends of the wire forming the take-up, each take-up mounted for action independently of the others, substantially as specified.

6. The combination of a bar, the clothed drum and a series of ironing devices, of feed tapes each having one end fixedly secured to said bar, an independent bar fixedly held, a spring take-up for each tape mounted independent of each other in the last-mentioned bar and having a spring portion to which the end of the tape is connected after passing under said bar, substantially as shown and described.

7. In a machine of the class described, a series of tapes each firmly held at one end and at the other having an independent take-up, substantially as described.

8. The combination with a drum and a series of ironing devices, of a series of independent tapes each having independent connection at one end to a fixed bar, a fixed bar near the other end of the tapes, and a series of independent spring takeups mounted on the last mentioned bar and each takeup comprising a spring having substantially parallel vertical portions connected to said bar and intermediate substantially vertical and parallel portions connected by a cross bar to which one end of a tape is connected and each spring takeup having coils at the upper junction of said vertical portions, substantially as herein shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALLEN CONKLING.
THOMAS S. WILES.

Witnesses as to the signature of Allen Conkling:

J. E. BLOOD,
H. ELMER GEARY.

Witnesses as to the signature of Thomas S. Wiles:

BERTHA HELENA WILES,
JOHN MOLL.