

June 6, 1950

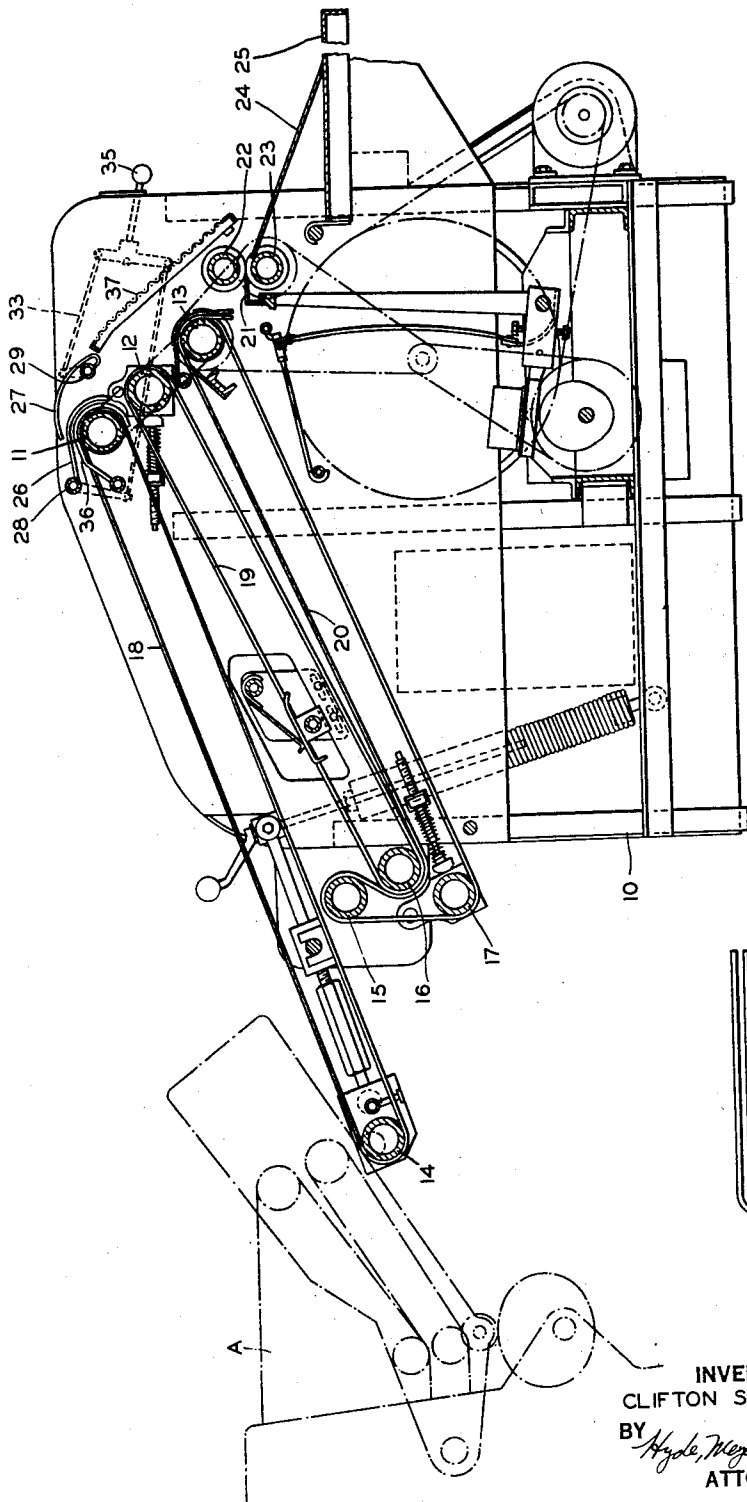
C. S. MALOTT, JR

2,510,185

BY-PASS MECHANISM FOR FOLDING MACHINES

Filed June 17, 1946

2 Sheets-Sheet 1



INVENTOR
CLIFTON S. MALOTT JR.
BY *Hyde, Meyer, Bellwin and Seran*
ATTORNEYS

June 6, 1950

C. S. MALOTT, JR

2,510,185

BY-PASS MECHANISM FOR FOLDING MACHINES

Filed June 17, 1946

2 Sheets-Sheet 2

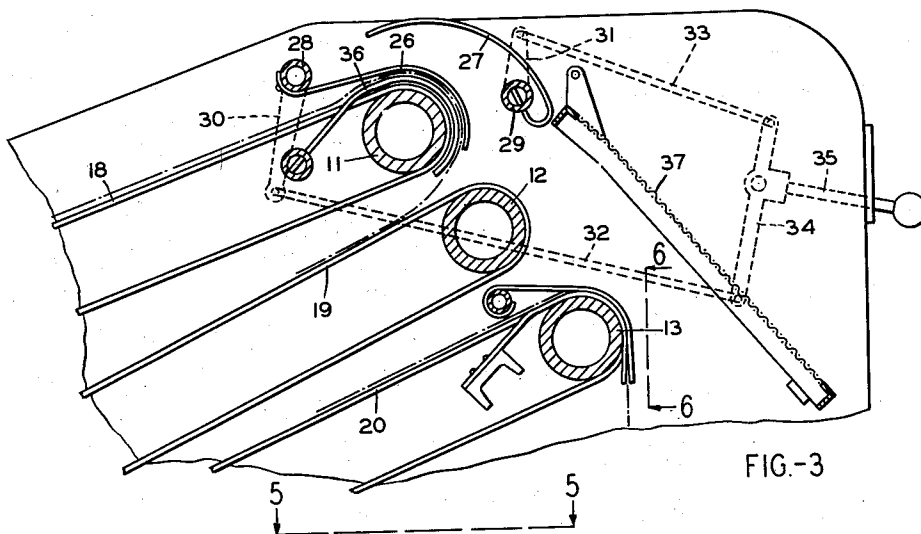


FIG-3

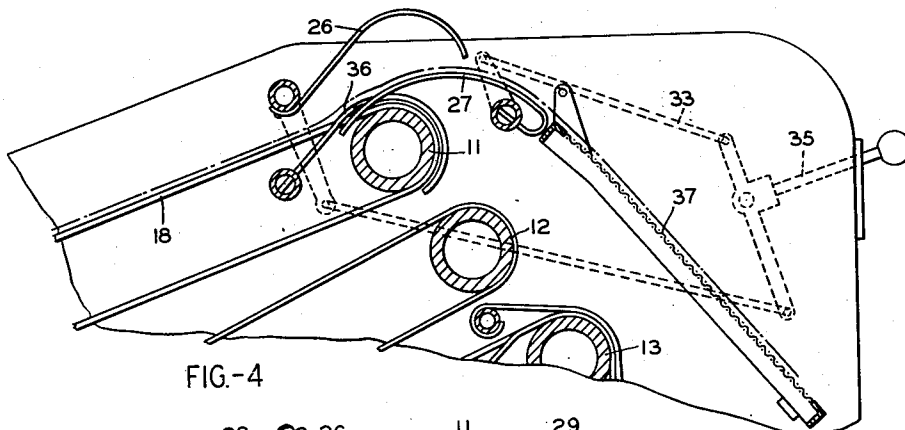


FIG-4

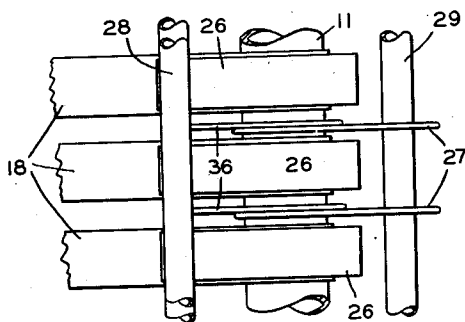


FIG-5

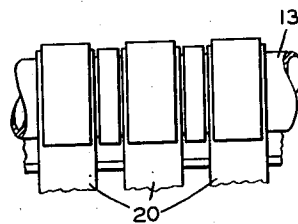


FIG-6

INVENTOR
CLIFTON S. MALOTT JR.

BY *Hyde, Meyer, Baldwin and Soran*
ATTORNEYS

UNITED STATES PATENT OFFICE

2,510,185

BY-PASS MECHANISM FOR FOLDING MACHINES

Clifton S. Malott, Jr., Cincinnati, Ohio, assignor
to The American Laundry Machinery Company,
Cincinnati, Ohio, a corporation of Ohio

Application June 17, 1946, Serial No. 677,368

2 Claims. (Cl. 214-11)

1

This invention relates to folding machines, such as are used for folding flat articles made of textile fabrics, for example, sheets, pillow cases, towels, table cloths and the like. The machine is of that type in which an article to be folded is fed by endless traveling tapes to a vibratory blade upon which it is laid or draped and by which it is advanced to the bite between folding rollers.

One object of the invention is to provide improved means for guiding the article either to the folding devices or around them, at will, to either fold it or not, as desired.

A further object is to provide improved by-pass means of simple form and capable of actuation at will by the receiving operator to whom the work is discharged.

Still another object is to by-pass the chosen article not only around the folding devices but also around certain of the endless feeding tapes.

Another object is to provide improved means for guiding the article during its movement around one of the tape carrying rollers in such manner as to prevent it from being stretched or lifted off from the tapes.

Further objects of the invention in part are obvious and in part will appear more in detail hereinafter.

In the drawings, which represent one suitable embodiment of the invention, Fig. 1 is a longitudinal sectional elevation;

Fig. 2 is an end view of a folded article;

Fig. 3 is a detail sectional elevation, corresponding to Fig. 1, but on a larger scale, showing the by-pass device in inoperative position;

Fig. 4 is a similar view, showing certain of the parts in operative position;

Fig. 5 is a detail plan view, taken on the line 5-5, Fig. 4; and

Fig. 6 is a detail elevation on the line 6-6, Fig. 3.

The folding machine of the present invention may be used, either alone with the work fed thereto by hand, or in conjunction with an ironing machine which delivers directly to the folding machine, a typical ironer for the purpose being conventionally indicated in dot-dash lines at A, Fig. 1.

The folding machine includes a suitable frame 10 in which are mounted rolls 11, 12, 13, 14, 15, 16 and 17 over which travel several sets, three being shown, of endless tapes or belts 18, 19, 20. Ironed work to be folded is discharged from the ironing machine upon tapes 18, which carry it up and over roller 11 and deliver it to tapes 19, which carry it around roller 16 to tapes 29, the latter

2

discharging it over roller 13. The discharged work descends behind a blade 21, upon which it is draped by rearward motion of said blade, and the blade then advances the work into the bite between folding rollers 22, 23 to an apron 24 down which it slides to a table 25. All these parts, and others requiring no description, operate in the manner more fully described in my copending applications, Serial Numbers 677,366 and now Patent No. 2,464,823 granted March 22, 1949 for Folding machine and 677,367 for Adjustable apron for folding machines, filed of even date herewith, to which reference may be had if necessary or desirable.

The by-pass device of the present invention includes two sets of curved fingers 26, 27 mounted respectively upon rods 28, 29, said rods having arms 30, 31 connected by links 32, 33 to the arms of a two armed lever 34 having an operating handle 35 extending outwardly from the front of the machine above table 25, where it is accessible to an operator working at said table. By means of said handle either set of fingers 26 or 27 may be swung into operative position.

Fig. 3 shows the parts in normal position. Handle 35 is depressed; fingers 27 are raised out of the way; and fingers 26 are lowered close to and extend part way around roll 11. These fingers 26 are wide bands and lie over the several tapes and guide the work to travel with the tapes down around roll 11 for delivery to tapes 19.

When operating handle 35 is elevated to the position shown in Fig. 4, the fingers 26 are raised out of the way, while fingers 27 are lowered into operating position. These fingers 27 are strong, stiff curved wires, the free ends of which fit into the spaces between the tapes or ribbons behind roll 11, thereby intersecting or crossing the path of travel of the work. Another fixed set of wire fingers 36 cooperates with fingers 27 to form a bridge, over which the work now travels to an inclined apron 37 and down it to delivery table 25.

Consequently, by adjusting handle 35 to either of its two positions shown the work may be caused to flow either to the folding devices and through them to the delivery table, or around the folding devices, without folding, directly to the delivery table.

Stationary fingers 36 also perform another function. They always raise the article slightly above the tapes when passing around roll 11 to continue to the folding devices. This is necessary, because ribbons 18 travel somewhat faster than those of the ironer, the work piece slipping on ribbons 18 as it ascends with them. Fingers

36 prevent any possibility of a long article being stretched and lifted, as it would be if there were positive driving contact with the work by the belts at the roll 11.

What I claim is:

1. In a machine of the character described, work feeding mechanism, comprising an endless apron adapted to receive and advance the work, a roller supporting the discharge end of said apron and over and around which the apron discharges the work for movement along a path, and means operatable at will by the operator for directing work discharged by said apron either to and along said path or to one side of said path, said means including two sets of fingers movable selectively and alternatively into operating position with respect to said roll, one set into a position paralleling said path and the other into a position intersecting it.

2. In a machine of the character described, work feeding mechanism, comprising an endless apron adapted to receive and advance the work, a roller supporting the discharge end of said apron

and over and around which the apron discharges the work for movement along a path, means operatable at will by the operator for directing work discharged by said apron either to and along said path or to one side of said path, said means including two sets of fingers movable selectively and alternatively into operating position with respect to said roll, one set into a position paralleling said path and the other into a position intersecting it, and a single operating device for actuating both sets of fingers.

CLIFTON S. MALOTT, Jr.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,766,791	Mayer	June 24, 1930
2,275,964	Johnson	Mar. 10, 1942
2,294,649	Baker	Sept. 1, 1942
2,315,003	Martin et al.	Mar. 30, 1943