

T. C. LUTHER.
MACHINE FOR MAKING BOXES.

No. 44,690.

Patented Oct. 11, 1864.

Fig. 1

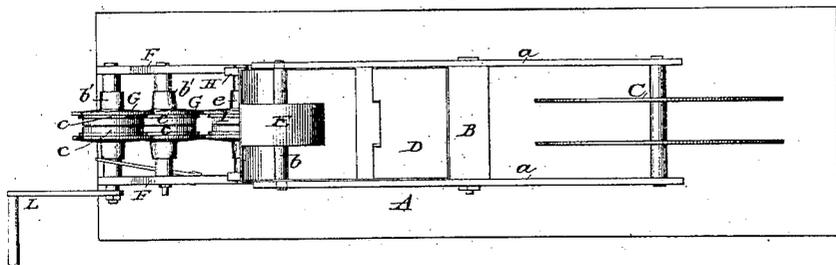
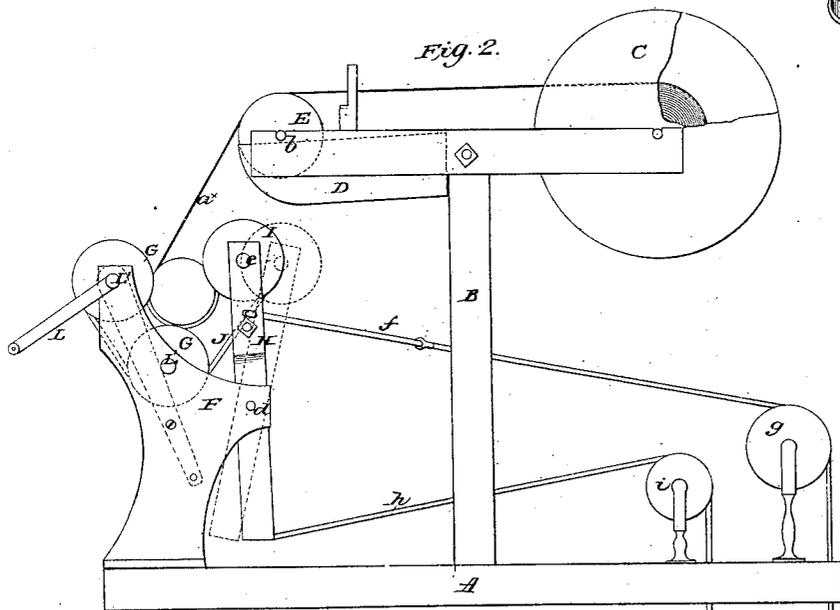


Fig. 3



Fig. 2



Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MACHINES FOR MAKING BOXES.

Specification forming part of Letters Patent No. 41,690, dated October 11, 1864.

To all whom it may concern:

Be it known that I, THOS. C. LUTHER, of Lee, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Machine for Manufacturing Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable any person skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a side view of the same; Fig. 3, a perspective view of a box.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is more especially designed for putting the covering or external paper band on cylindrical paper boxes for the purpose of securing the top and bottom to the body of the box. It may, however, be used for covering wooden or sheet-metal cylindrical boxes.

The invention consists in the employment or use of pressure-rollers in connection with a sizing or paste box and a belt, all arranged to operate as hereinafter set forth.

A represents a base-plate, to which an upright, B, is attached, the latter having two horizontal bars, *a a*, secured to it, one at each side, between which a drum, C, is inserted at one side of the upright, and a cup or paste-box, D, inserted between them at the opposite side of the upright.

E is a roller the axle *b* of which has its bearings in the bars *a a*, the roller E being partly submerged in the paste or size in the box D.

F F are two standards, in which the journals of two horizontal shafts, *b' b'*, are placed, one being some distance above the other and both having a roller, G, upon them, each of which is provided at its periphery with a deep groove having a ledge or projection, *c*, at each side, as shown clearly in Fig. 1. The two rollers G G are not movable—that is to say, they rotate but do not change the position in which they rotate; but between the two standards F F there is fitted a frame, H, which is suspended on a shaft, *d*, so that it may turn, oscillate, or swing thereon. In the upper part

of this frame H there is fitted a shaft, *e*, on which a roller, I, is placed precisely similar to G G, and around the three rollers I G G a belt, J, of india-rubber, leather, or other suitable material, is placed, said belt being of such a width as to fit snugly between the ledges *c c*.

To the upper part of the frame H there is attached a chain or cord, *f*, which passes over a pulley, *g*, and has a weight, K, at its lower end, and to the lower end of the frame H there is attached a chain or cord, *h*, which passes over a pulley, *i*, and is connected at its lower end to a treadle. The weight K has a tendency to draw the upper part of the frame H, and consequently the roller I, out from the upper roller, G, as indicated in red in Fig. 2, while a pressure on the treadle to which the chain or cord *h* is attached will have a tendency to press the roller I toward the upper roller, G. The paper band *a^x*, with which the boxes are covered, is wound upon the drum C and passes over the roller E, as shown in Fig. 2. The parts of the box—to wit, the body and top and bottom—are held in contact by the operator, a cylindrical block being within them, and said parts are then fitted on the belt J between the rollers I G G and the end of the paper applied to them, and the foot of the operator is applied to the treadle, so as to cause the belt to press snugly on the box. The shaft of the upper roller, G, is then rotated by means of a crank, L, at one end of it, and the paper band *a^x* is wound around the box and secures the top and bottom of the latter to its body or main portion. The paper band *a^x* is pasted in passing over the roller E, and it is somewhat wider than the depth of the boxes in order that its edges may be lapped over the edges of the top and bottom of the box, as indicated in Fig. 3. When the band *a^x* is wound around the box, the requisite length of the band having been severed by hand or other suitable means, the treadle is relieved from the foot of the operator and the weight K draws back the upper part of the frame H, so as to release the box and admit of it being removed from between the rollers.

I would remark that the rollers I G G may be made in two parts, and one part adjustable so as to operate upon boxes of different depths,

and that a cutter may be applied to one of the rollers in order to cut the boxes into two parts circumferentially. These features, however, form no part of the claim.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The stationary rollers G G, in connection with the movable or adjustable roller I and belt J, all arranged to operate in the manner

substantially as and for the purpose herein set forth.

2. The box D and roller E, in connection with the drum C and the rollers I G G, all arranged to operate substantially as and for the purpose herein set forth.

THOS. C. LUTHER.

Witnesses:

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JNO. W. HILL.