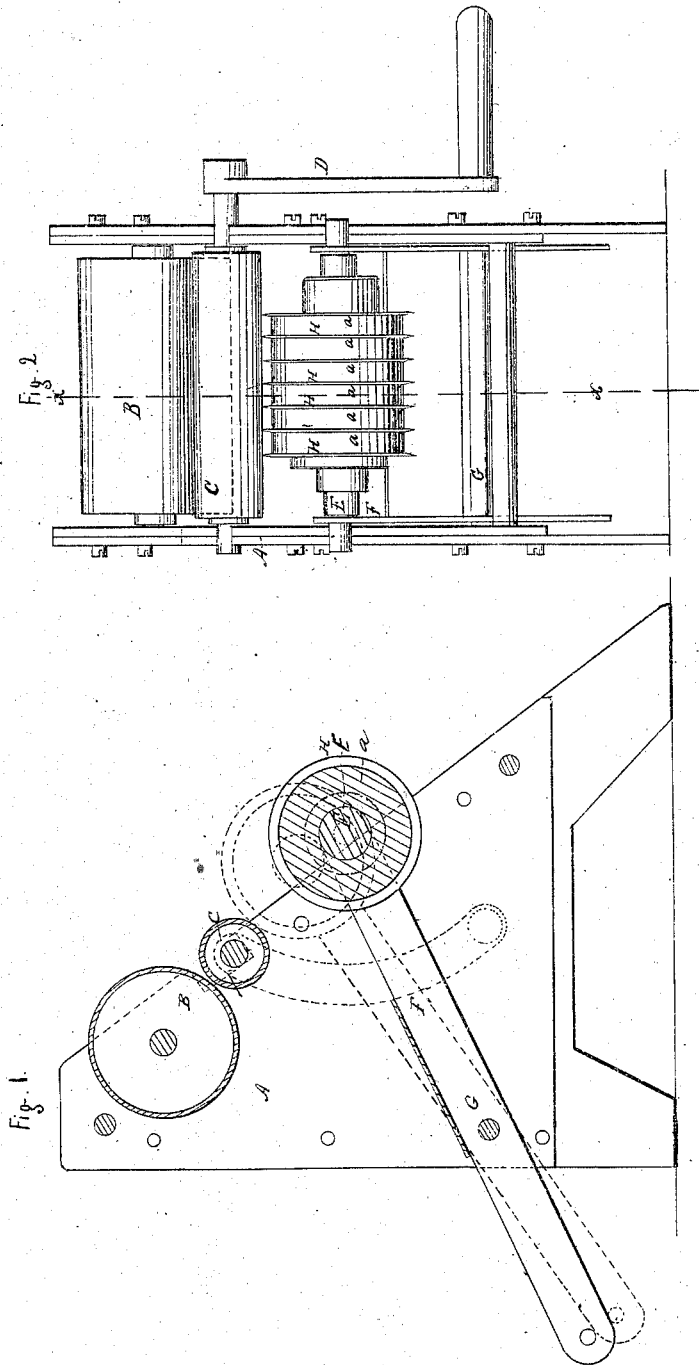


T. C. Luther
Paper Box Mach

No 48400-

Patented Jun. 27 1865.



Witnesses.
Thos Lusk
Jm O'Brien

Inventor.
J. C. Luther
per Messrs. & Co.
attys

UNITED STATES PATENT OFFICE.

T. C. LUTHER, OF WATERBURY, CONNECTICUT, ASSIGNOR TO HIMSELF AND AMERICAN FLASK AND CAP COMPANY, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR MAKING PAPER BOXES.

Specification forming part of Letters Patent No. 48,490, dated June 27, 1865.

To all whom it may concern:

Be it known that I, T. C. LUTHER, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and Improved Machine for Manufacturing Paper Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a front elevation of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and useful machine for facilitating the manufacture of paper boxes; and it consists in combining a series of cutters with a pair of pressure-rollers, on one of which the paper cylinder is formed; all being arranged in such a manner that the cylinders may be formed and cut into pieces of requisite length at one operation.

The invention is designed for manufacturing small paper boxes, such as are used for holding percussion-caps, &c., and are of circular form.

Hitherto the bodies or main portions of these boxes have been formed by rolling paper around a cylinder so as to form a tube of requisite thickness, and then cutting said tube into pieces of requisite length after being withdrawn from the cylinder, two separate operations being required to perform the work which by my improvement is done at one operation.

A represents a frame, in which a roller, B, is fitted and works in fixed bearings, and C is a roller smaller than B, having a diameter corresponding to that designed for the interior of the paper cylinders or tubes to be formed upon it. The roller C does not work in fixed bearings, and is therefore movable, so that the

paper, when wound upon it, may be pressed against the roller B. The roller C is provided with a crank, D, at one end for the purpose of turning it.

E represents a shaft, which is fitted in a frame, F, the latter being placed loosely on a shaft, G, in the frame A. The shaft E has a series of circular cutters, H, upon it, which are secured at suitable distances apart by placing circular blocks or washers *a* between them. The shaft E is allowed to rotate freely in the frame F, and by depressing the end of frame F which is opposite to the end in which the shaft E is placed the cutters may be brought in contact with the paper cylinder on the roller C, as shown in red in Fig. 1.

The operation is as follows: The paper is wound upon the roller C, and compressed while being wound upon it by pressing it against the roller B, the end of the paper being pasted to prevent the tube or cylinder from unwinding. After the paper cylinder or tube is thus formed, which is the common mode now practiced, the cutters H are pressed against it and the cylinder or tube will be cut into pieces of a length corresponding to the spaces between the cutters, which is the length required for the boxes. Thus it will be seen that by this simple means I am enabled to form the paper cylinders or tubes and cut them into pieces of the required length at one and the same operation.

I do not claim the rollers B C separately, for they have been previously used; but

I claim as new and desire to secure by Letters Patent—

The cutters H, in combination with the rollers B C, arranged to operate in the manner substantially as and for the purpose specified.

T. C. LUTHER.

Witnesses:

W. H. VAN GIESON,
J. W. WEBSTER.