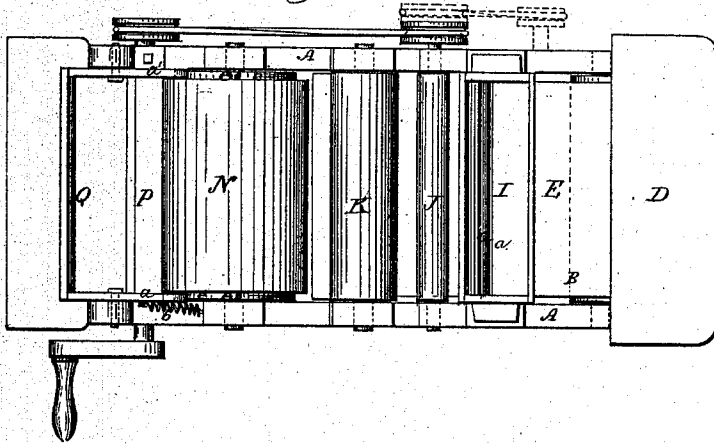
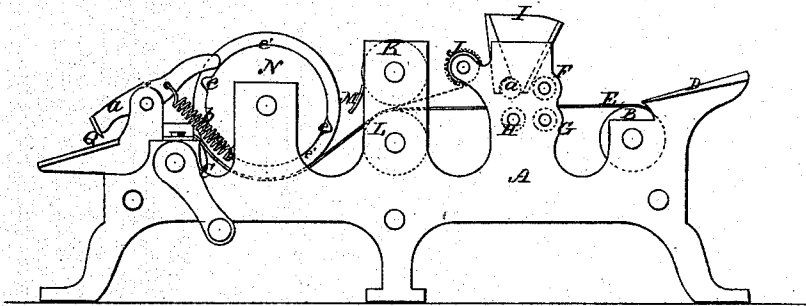


**M. FITZGIBBONS.**  
**MACHINE FOR ATTACHING THIN PAPER TO STRAW BOARDS.**  
 No. 103,319. Patented May 24, 1870.

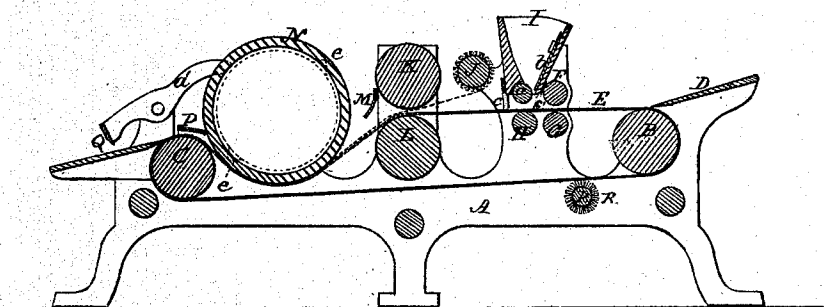
*Figure 1.*



*Figure 2.*



*Figure 3.*



*Witnesses.*

*William B. Combs*  
*Wm. Balmain*

*Inventor.*

*Maurice Fitzgibbons.*

# UNITED STATES PATENT OFFICE.

MAURICE FITZGIBBONS, OF BROOKLYN, NEW YORK.

## IMPROVED MACHINE FOR ATTACHING THIN PAPER TO STRAW-BOARDS.

Specification forming part of Letters Patent No. 103,319, dated May 24, 1870.

*To all whom it may concern:*

Be it known that I, MAURICE FITZGIBBONS, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful machine for pasting and gluing light or thin paper, or other material, upon heavy straw or other paper board used in the manufacture of paper boxes or other articles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of the specifications, and to the letters of reference marked thereon.

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a vertical longitudinal section of the machine.

To enable others skilled in the art to make my invention or machine, I proceed to describe its construction and operation.

I construct the frame A of the machine either of wood or metal, in such form and of such design, ornamental or otherwise, adapted to the several parts of the machine, as hereinafter described.

I construct the machine in part of two rollers, B and C, over which is passed an endless apron, E, of woven or other fabrics, the power being applied to roller C. D is the feed-board, upon which the material is placed, in connection with the feed-rollers F and G, and these press upon each other, the upper roller F being adjustable so as to give the amount of pressure required to carry the material forward. H is another roller, over which the endless apron E passes to sustain the material under the fountain I, which contains the paste or glue to be used. The fountain is constructed of the several parts, to wit: *a* is a distributing-roller; *b* is an adjustable gage to regulate the flow of the paste, glue, or other glutinous substance; *c* and *c'* are brushes, made of hair or other material, attached to each side of the bottom of the fountain so as to distribute the paste, glue, or other glutinous material evenly over the surface of the board or paper after passing through the feed-rollers. J is a roller, so arranged that it can be removed at pleasure, upon which the light or thin paper is wound or rolled in a continuous length, from

which it is drawn, and passes through the two next succeeding rollers.

The roller J is adjustable by the necessary appliances to give the paper the proper tension so as to spread it evenly upon the pasted or glued surface of the straw-board.

K and L are two rollers, the upper roller being adjustable so as to regulate the amount of pressure desired. The two rollers thus arranged press the thin or light paper firmly upon the straw or other board. M is a metallic apron or guide to pass the material, after being pressed, under the drying-cylinder. N is a hollow metallic cylinder, constructed to be heated from the inside either by gas or steam, between which and the endless apron E the material is passed out in a dried state. P is a metallic or other guide to pass the material under the cutter. Q is a cutter, which cuts off the paper at the end of each board as it passes through the machine. *a* and *a'* are levers, the cutter-knife being attached to the outer end of each, the other end resting upon the metallic cylinder, to which are attached adjustable cams *e* for operating the cutter. *b* are metallic springs for raising the cutter from the platform. R is a revolving brush placed against the lower side of the endless apron for removing the paste or other glutinous material.

The diameter of the drying-cylinder N must be such, in relation to the feed of the endless belt E and the disposition of the cams *e*, that the cutters Q will be held up out of the way of the delivery of the covered boards until each piece has just passed the cutter, when the latter will be brought down by the positive action of the cams *e* on the cylinder, and thus sever the connection of the thin covering-paper with each piece of board as it is delivered from the machine. The springs *b* tend constantly to hold the inner ends of the arms of the cutter upon a circular seat, *e'*, on each end of the cylinder, while the cams *e* act as lifters to said ends of the arms, and thus depress the cutter carried by their opposite ends.

In the instance represented in the drawings, the cams *e* are disposed upon the cylinder diametrically opposite each other, and, therefore, each half-revolution of the cylinder will operate the cutter so that the circumference of the

cylinder must be equal, or thereabout, to the length of two pieces of straw-boards.

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

1. The combination of a revolving cleaning-brush, R, or its equivalent, with an endless revolving apron, E, for the purpose of removing the paste or material from said apron, so that it will always present a clean surface to receive the straw or other boards, and thus prevent them from sticking and insure their

proper delivery, substantially as before described.

2. The combination of the drying-cylinder N, constructed with cams *e* and cylindrical bearings *e'* for the cutter-arms, with the reciprocating cutter Q, operated at proper intervals by the direct and positive action of the cams and springs *b*, substantially as before described.

MAURICE FITZGIBBONS.

Witnesses:

W. S. HORNFAGER,  
H. BALEN WALKER.