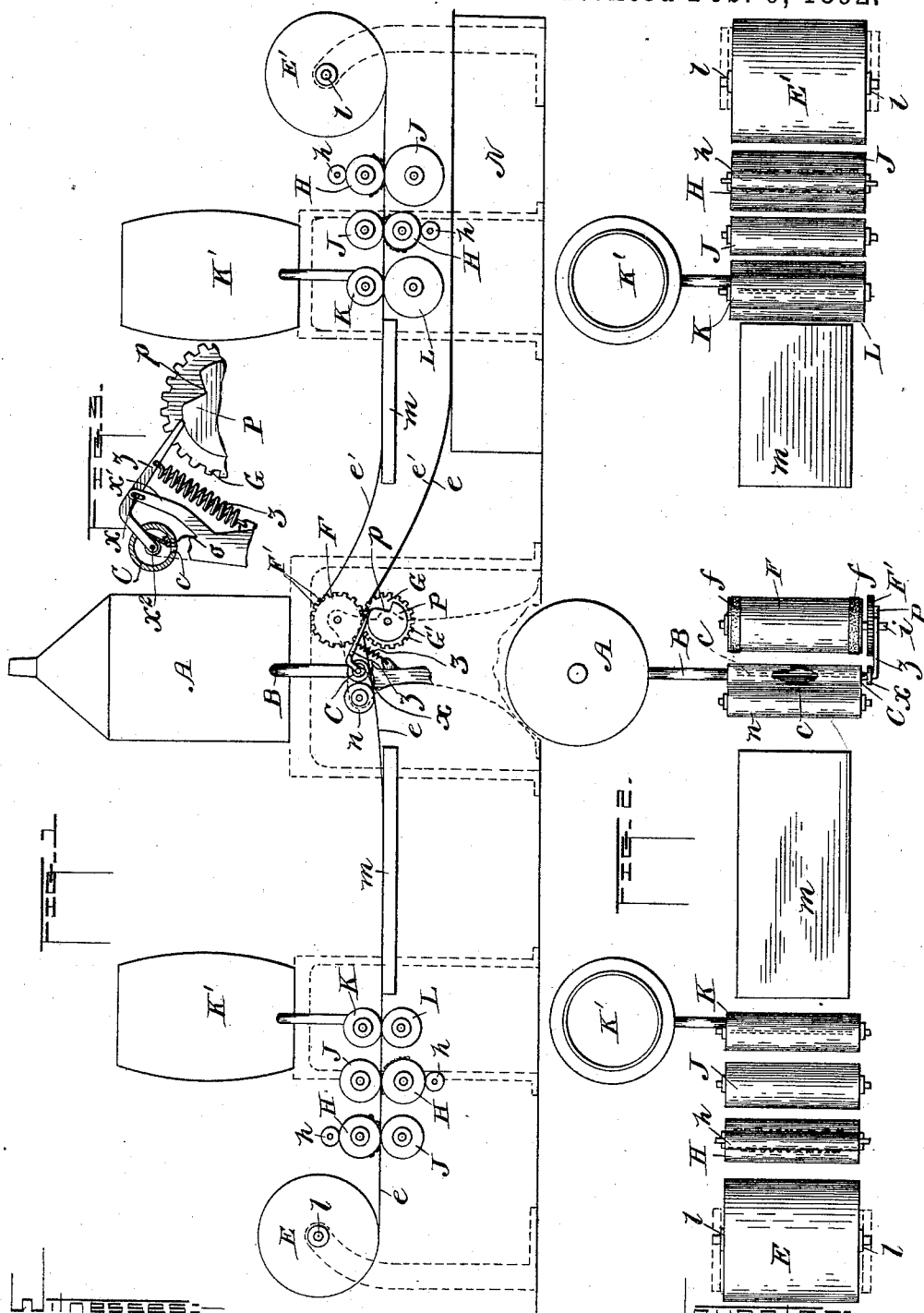


(No Model.)

F. B. CLAGGETT.
MACHINE FOR MAKING FLY PAPER.

No. 468,641.

Patented Feb. 9, 1892.



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J Boyd Dexter

Frank B. Claggett
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E. J. French

UNITED STATES PATENT OFFICE.

FRANK B. CLAGGETT, OF OSHKOSH, WISCONSIN.

MACHINE FOR MAKING FLY-PAPER.

SPECIFICATION forming part of Letters Patent No. 468,641, dated February 9, 1892.

Application filed June 19, 1891. Serial No. 396,853. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. CLAGGETT, a citizen of the United States, residing at the city of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Machines for Making Fly-Paper; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates, principally, to the manufacture of sticky fly-paper, to the means for distributing the sticky substance upon the paper, and to the manner of preparing the paper prior to spreading the sticky substance thereon.

The objects of my invention are, first, to provide a simpler, cheaper, and more uniform means for distributing the sticky substance; second, to provide a means of printing the name, trade-mark, or other printed matter, and of also sizing the paper by one general process or system of machinery.

I am aware that devices have heretofore been used for applying the adhesive compound by means of rollers immersed in the liquid, and revolving said rollers over the surfaces of the strips of paper, and finally pressing the coated surfaces of the two strips together; but in such devices the sticky substance drying upon the rollers unevenly soon causes uneven distribution of the substance upon the paper and uncleanness and necessitates the frequent cleaning of the rollers and machinery.

I provide an improved mechanism for distributing the sticky substance by means of a tank supplying the sticky substance to the inside of a tube which is provided with a longitudinal slot for egress of the fluid, said slot being closed by an automatically-operating cut-off. I thereby absolutely control the supply of the sticky substance. I further improve upon former devices by coating only one sheet or strip of the paper and covering it with a similar sheet of dry paper, thereby

accomplishing the same result with less material and mechanism.

In the accompanying drawings, Figure 1 is a side view, and Fig. 2 a plan view, of my invention. Fig. 3 is a detail view of the delivery-tube and automatic cut-off.

A is the tank containing the liquid sticky substance, which is kept at the required temperature for proper flowing by a heating device underneath.

B is the outlet-pipe conveying the liquid to the tube C, which latter is provided with a longitudinal slot *c* upon the under side for the exudation of the fluid. This tube C is hung in and supported by two standards secured at opposite sides of the machine and having their upper ends slotted to allow the tube to move vertically up and down and prevent the tube from turning, thereby keeping the slit directly over the paper, the outlet-pipe B connecting the supply-reservoir and the distributing-tube having flexible connections to permit the said movement of the distributing-tube.

E E' are rolls of paper pivoted at 1 1 and adapted to be unrolled and the paper drawn therefrom by means of the rolls F and G—that is to say, said rolls F and G engage each other at each end only where the clear margin of paper is provided—and may be provided with the rubber bands *f f*, which engage the paper and pull it from the rolls E and E' as the rolls F and G revolve. The power to operate the machine is applied to the shaft *i*, extending from the roller G, and the roller G is revolved toward the paper-roller E'. The cog-wheel G', attached to the roller G, engages the cog-wheel F', attached to the roller F, and revolves it in the opposite direction.

H H H H are printing-rollers provided with rubber-type facing to print the desired matter, and J J J J are corresponding pressure-rollers operating therewith.

h h h h are inking-rollers.

K K are sizing-tubes supplied from the tanks K' K', and L L corresponding pressure-rollers. The sizing is spread upon the paper in the same manner as the sticky substance hereinbefore described—viz., through a slot in the bottom of each tube, as shown

in dotted lines in Fig. 2. The sizing is necessary to prevent the sticky fluid from being absorbed by the paper. *m m* are drying-boxes, over which the paper is passed before coming under the tube C, and *n* is a guide-roller.

In operating the machine the paper is first drawn from the rollers E and E' between the several printing and sizing rollers and their corresponding pressure-rollers and over the drying-boxes *m m*, *e* representing the paper from the roll E, and *e'* the paper from the roll E'. The paper *e* then passes under the guide-roller *n* under the tube C, when it receives the sticky fluid, which exudes from the slot *c* as the paper passes along, and is then drawn upward between the rollers F and G. The paper *e'* is drawn over the roller F as it revolves, and is not coated with the sticky substance until it is pressed by the rollers against the coated surface of the paper *e*. The double sheet then passes down upon the table N to a cutting-machine, which cuts it at the proper place for packing. In the manufacture of such sticky fly-paper it is necessary that the outside margin of the sticky sheet should not be coated with the adhesive material. It is therefore necessary in coating the continuous strip of paper to provide intervals where the paper is not coated. For this purpose I provide a cut-off or gate *o*, extending within the tube C to close the slot *c*, and operated automatically by means of the pawl *z*, traveling upon the wheel P, which is provided with a drop or notch *p* to lower the pawl and close the gate—that is to say, as the wheel P revolves the pawl *z* follows the circumference until it drops into the notch *p* and lowers the cut-off connected therewith to cover the slot *c*. When the pawl is carried up the incline to the circumference of the wheel, the gate or cut-off is again opened. A spring 3 is provided to press or pull the pawl *z* downward, and by means of the pivotal connection of the arms at *x* the tube C is raised slightly from the paper at the moment the cut-off operates. The pawl *z* is in the form of an angular lever, pivoted near its center in a slotted standard *x'*, and its outer bent end pivoted at *x²* to the end of the distributing-tube. Extending downward from this bent end is a short arm connected to the gate or slide *o* of the distributing-tube. The other end of the pawl moves on the periphery of the wheel P, and works in the notch *p* in the manner heretofore described. The pawl being pivoted to the slotted standard *x'* and at *x²*, and traveling on the wheel P, when the pawl is first pulled down by the spring 3 into the notch *p* it swings forward, and when it is on the circle P it swings backward. When in the former position, the spring has brought the pivot *x* to the bottom of the slot in the standard *x'*, and as the pawl cannot descend any further in notch *p* the power of the spring is exerted to lift the tube and cut-off together bodily and raise the tube from the sheet of paper. The cut-

off being upon the inside of the tube and submerged in the liquid, never becomes clogged, as is the case where a cut-off or sliding sleeve is used on the outside of the tube. The slot *c* is not as long as the width of the strip of paper, so that a margin of clear paper is provided each side of the sticky substance. The double sheet is cut or folded for packing at the place where the cut-off has operated to prevent the coating of the sticky substance. If found necessary, the roller *n* may be made hollow and heated from within to assist in drying the paper and to afford additional warmth to the fluid within the tube C.

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

1. In a machine for making at one operation two sheets of sticky fly-paper, the combination of means for supporting and moving the paper, a distributing-tube provided with a longitudinal slit of less length than the width of the paper to be coated, an automatic cut-off arranged on the inside of the distributing-tube, and means for operating the same, substantially as and for the purpose described.

2. In a machine for coating a sheet of paper with an adhesive fly-catching substance which does not become solidified, the combination, with means for supporting and moving the paper, a distributing-tube provided with a slit at the line of contact with the paper, and with an automatic cut-off to close and open the slit, of means for moving an uncoated sheet of paper and pressing it upon the coated sheet and means for passing the two sheets thus united out of the machine, substantially as described.

3. In a machine for manufacturing sticky fly-paper, the combination of the longitudinally-slitted distributing-tube, an automatic cut-off for closing and opening the said slit at regular intervals, and means for operating the same, substantially as described.

4. In a machine for manufacturing at one operation two sheets of sticky fly-paper, the combination of a suitable supporting-frame, rollers for feeding the sheets of paper to the sizing-distributing tubes, tanks for holding and supplying a suitable sizing substance, sizing-distributing tubes for sizing the two sheets of paper before they are brought together, a tank for supplying a fly-catching substance to one of the sheets of paper, a tube for distributing the fly-catching substance, provided with a cut-off, rollers for feeding one of the sheets of paper to the distributing-tube and coating the same with a fly-catching substance which does not become solidified, rollers for bringing the other uncoated sheet of paper upon the coated sheet, and rollers for passing the two sheets thus united out of the machine, the two sheets being capable of being separated, and when separated forming two sized finished sheets of sticky fly-paper, substantially as described.

5. In a machine for manufacturing at one

operation two sheets of sticky fly-paper, the combination of a suitable supporting-frame, rollers for feeding the sheets of paper to printing devices, printing devices for printing any desired matter on the sheets before they are sized, rollers for feeding the sheets of paper to the sizing-distributing tubes, tanks for holding and supplying a suitable sizing substance, sizing-distributing tubes for sizing the two sheets of paper before they are brought together, a tank for supplying a fly-catching substance to one of the sheets of paper, a tube for distributing the fly-catching substance, provided with an automatic cut-off, rollers for feeding one of the sheets of paper to the distributing-tube and coating the same with a fly-catching substance which does not become solidified, rollers for bringing the other coated sheet of paper upon the coated sheet, and rollers for passing the two sheets thus united out of the machine, the two sheets being capable of being separated, and when separated forming two printed, sized, and finished sheets of sticky fly-paper, substantially as described.

6. In a machine for manufacturing at one operation two sheets of sticky fly-paper, the combination of a suitable supporting-frame, rollers for feeding the sheets of paper to suit-

able printing devices, printing devices for printing any desired matter on the sheets before they are sized, rollers for feeding the printed sheets to the sizing-distributing tubes, tanks for holding and supplying a suitable sizing substance, sizing-distributing tubes for sizing the two sheets before they are brought together, drying-boxes, a tank for holding and supplying a fly-catching substance to one of the sheets of paper, a slotted tube for distributing the fly-catching substance, provided with an automatic cut-off, rollers for feeding one of the sheets of paper to the distributing-tube and coating the same with a fly-catching substance which does not become solidified, rollers for bringing the coating and uncoated sheets together, and rollers for passing the two sheets thus united out of the machine, the two sheets being capable of being separated, and when separated forming two printed, sized, dried, and finished sheets of sticky fly-paper, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK B. CLAGGETT.

Witnesses:

EDWIN CLIFFORD,
HENRY G. HEIDER.