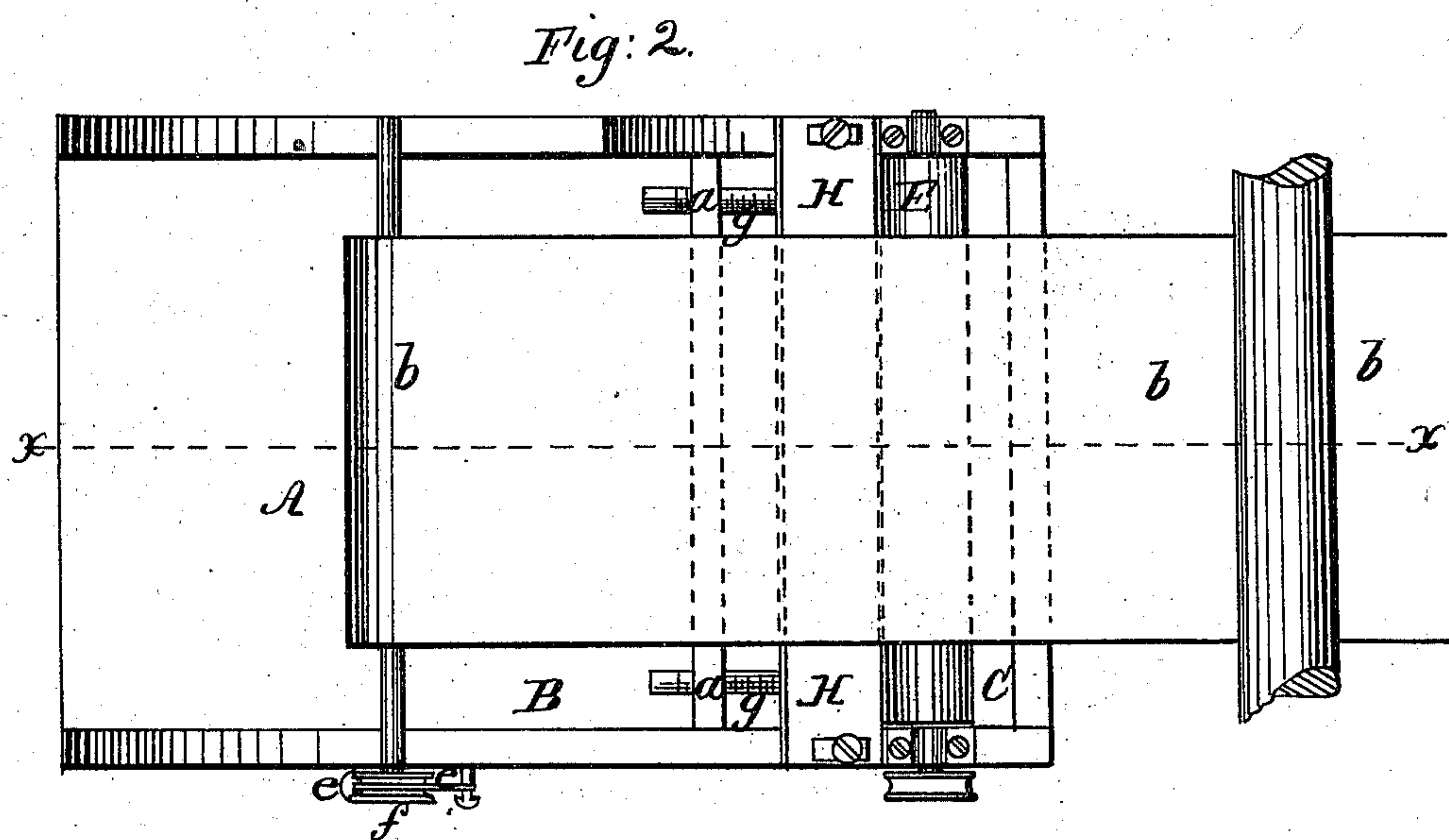
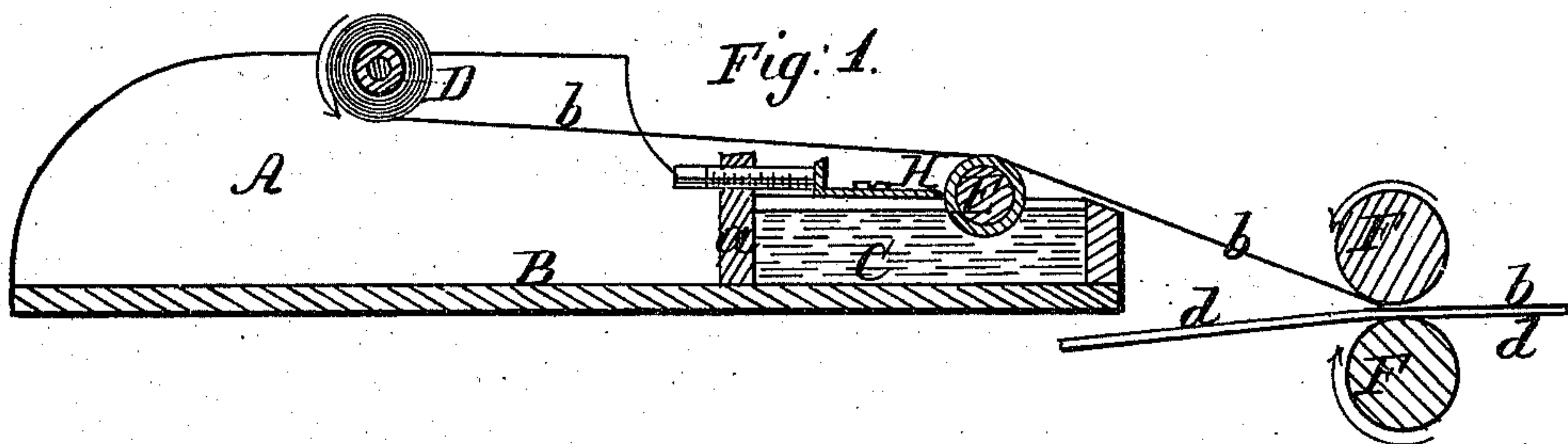


W. E. HALE.
MANUFACTURE OF PASTEBOARD.

No. 87,407.

Patented Mar. 2, 1869.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM E. HALE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN THE MANUFACTURE OF PASTEBOARD.

Specification forming part of Letters Patent No. 87,407, dated March 2, 1869; antedated October 6, 1868.

To all whom it may concern:

Be it known that I, WILLIAM E. HALE, of the city of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Lining Straw-Board and Other Thick Paper; and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of my invention taken in the line *x x*, Fig. 2, and Fig. 2 is a top or plan view of the same.

Similar letters of reference indicate like parts.

My invention has for its object to cover continuous sheets of binder's board as it is made on the machine with continuous strips of thin white or other paper. Hitherto such board has been made in sheets and covered or lined with thin paper by hand. By my improved method the board can be made and covered in one strip of any desired length at one operation, thereby avoiding the necessity of first making the board in comparatively small sheets and then covering it by hand, as in the ordinary manner. The paper can, moreover, be laid upon the board with greater regularity, as both are pressed evenly together at all points as they pass through the machine.

The invention consists, first, in covering binder's board with continuous strips of thin paper; and, second, in the construction of the machine for producing this result.

In the drawings, A represents a frame or box adapted to be arranged in a convenient position over the drying-cylinders of an ordinary paper or straw board machine. The box is of rectangular or other suitable shape, and is divided into two compartments, B C, by the partition *a*. In the compartment B the transverse roller D is hung, adapted to receive a continuous roll of thin paper *b* for lining. This paper passes to the front of the machine over the paste-roller E, which is hung trans-

versely in the compartment C containing a quantity of paste. From the roll E the paper receives a coating of paste, and passes thence to the straw-board or heavy paper *d*, which is fed to the drying-cylinders of the paper-machine by any suitable mechanism. The lining is pressed upon the board (the paste causing the two to adhere together) by the rollers F F, arranged upon suitable supports in front of the box A. The rollers F may also serve as drawing-rollers for the paper *b*, the tension of the latter being regulated by the weight and cord *e* passing over the friction-roller *f*, affixed outside the frame to the journal of the roller D. The method of regulating the tension of the paper is, however, immaterial. The covered or lined board after leaving the rollers F F is conducted to the drying-cylinders of the paper-machine, upon which it is thoroughly dried preparatory to being used.

H represents a horizontal scraper adjusted in the paste-compartment C by means of the screws *g g* in the partition *a*, to regulate the quantity of paste to be supplied to the lining by the roller E.

From the above description it will be readily understood that the straw or other thick paper will be lined in the most complete and effective manner, and with great rapidity and economy.

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

1. Lining continuous strips of straw or other thick paper, as it is made, with thin continuous strips of white or colored paper, substantially as described, for the purpose specified.

2. The combination of the paper-roll D, paste-roll E, and adjustable scraper H with the box A B C, substantially as described, for the purpose specified.

WILLIAM E. HALE.

Witnesses:

F. T. WHEELER,
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