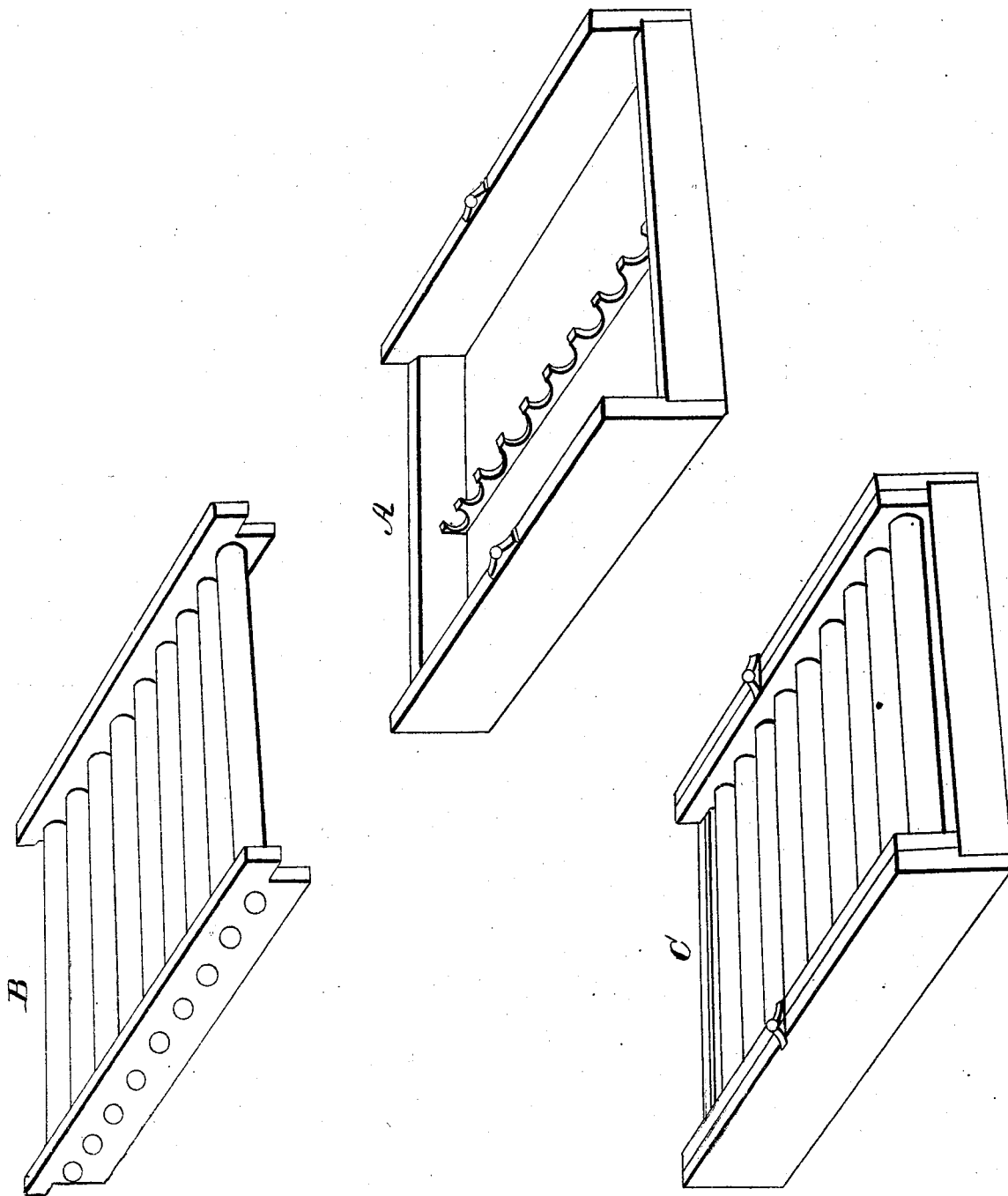


W. Bishop.
Pulp Strainer.

N^o 4,341.

Patented Dec. 31, 1845.



UNITED STATES PATENT OFFICE.

WILLIAM BISHOP, OF COVENTRY, CONNECTICUT.

MACHINERY FOR SEPARATING SAND, &c., FROM PULP IN THE MANUFACTURE OF PAPER.

Specification of Letters Patent No. 4,341, dated December 31, 1845.

To all whom it may concern:

Be it known that I, WILLIAM BISHOP, of the town of Coventry, in the county of Tolland and State of Connecticut, have invented a new and useful Improvement in Machines for Manufacturing Paper, which improvement I call a Pulp Sand-Strainer; and I do hereby declare that the following is a full, clear, and accurate description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Said pulp sand-strainer consists of a water-tight box, represented by Figure A in the accompanying drawings, varying in length and width, with the machine, in connection with which it is to be used, with bars fixed across the same, which bars I have usually constructed about one inch in diameter, about one sixteenth of an inch apart, and have also so placed as to leave a clear space between the lower side of said bars and the bottom of said box of about three eighths of an inch; but the diameter of said bars, and the distance at which they are placed from each other, and from the bottom of the box, may be varied at pleasure. Said bars at each end may be conveniently inserted in a cross-piece of wood, or other material, thereby forming a frame, represented by Fig. B, which frame fits into the aforesaid box, and for the purpose of clearing the box may be removed from it, and replaced at pleasure. Said pulp-strainer may be constructed of wood or other substance, and should be so placed that the pulp in traveling from the cistern to the apron of the machine will pass, or flow over and along the said strainer

and across the bars thereof, and also so that the fall along the same will be as little as possible.

Fig. C represents a pulp sand-strainer, as I have constructed them, when ready to be connected with a paper machine.

When used in connection with the Four-drainer machine, the pulp sand-strainer may be placed either directly before or directly after the knotting screen. I have placed it after the knotting screen, in which case, it has taken the place of the vat and the agitator, which are thereby dispensed with. The bars of the sand-strainer produce a ripple in the pulp as it flows across them, thereby liberating from it the particles of sand, gravel, metallic and all heavy substances, which thereupon fall between the bars, and settle at the bottom of the box. The pulp, by being cleared of these particles, forms a paper which is whiter and better both for the purposes of writing and printing, and the calender rolls of the machine upon which it is manufactured are saved from much injurious wear.

What I claim as my invention and desire to secure by Letters Patent is—

The mode of clearing pulp to be used in the manufacture of paper, from sand, gravel, metallic and other hard and injurious substances by means of the above described pulp sand-strainer.

Hartford August 13th 1845.

WILLIAM BISHOP,

Witnesses:

WILLIAM N. MATSON,
HENRY FRANCIS,