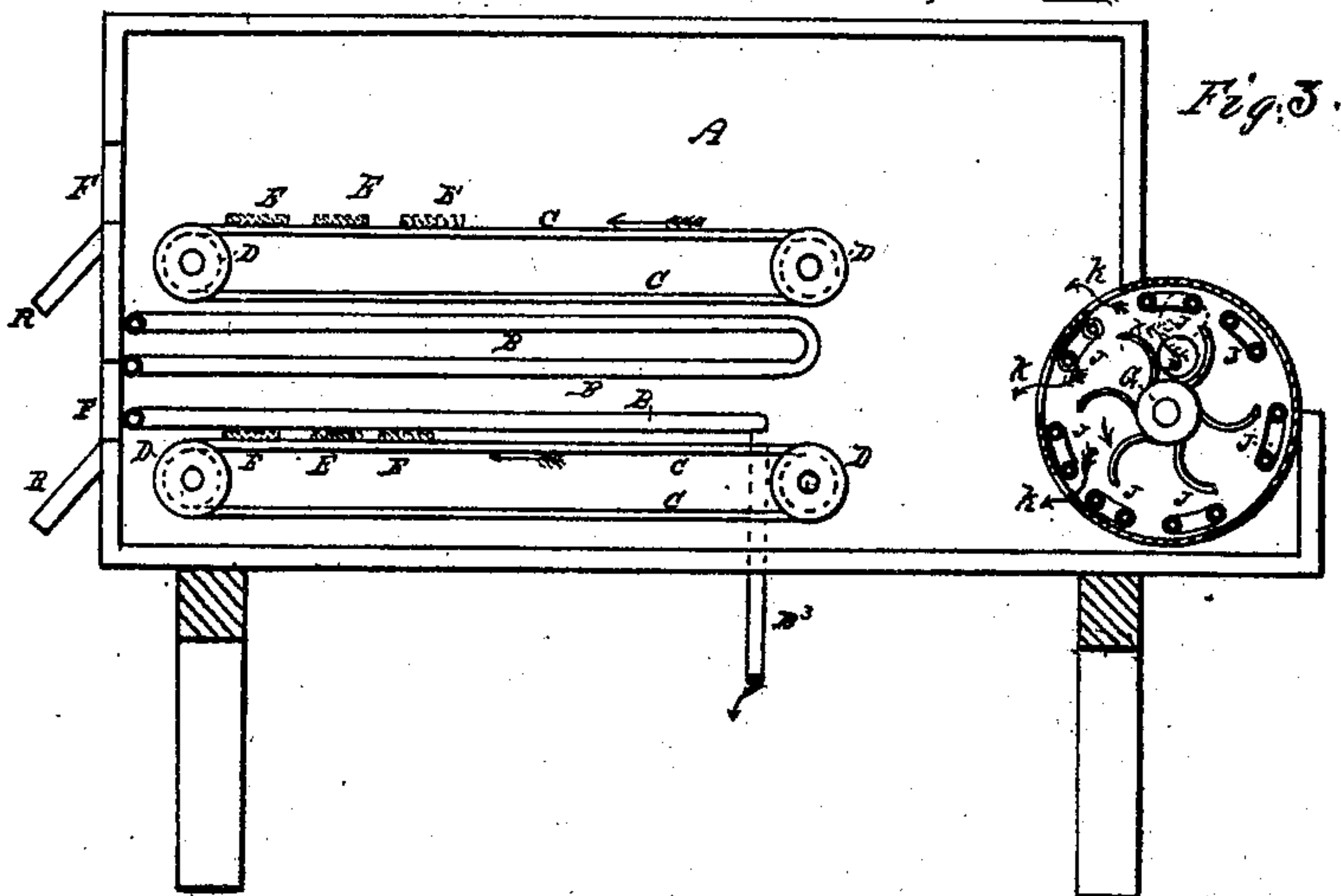
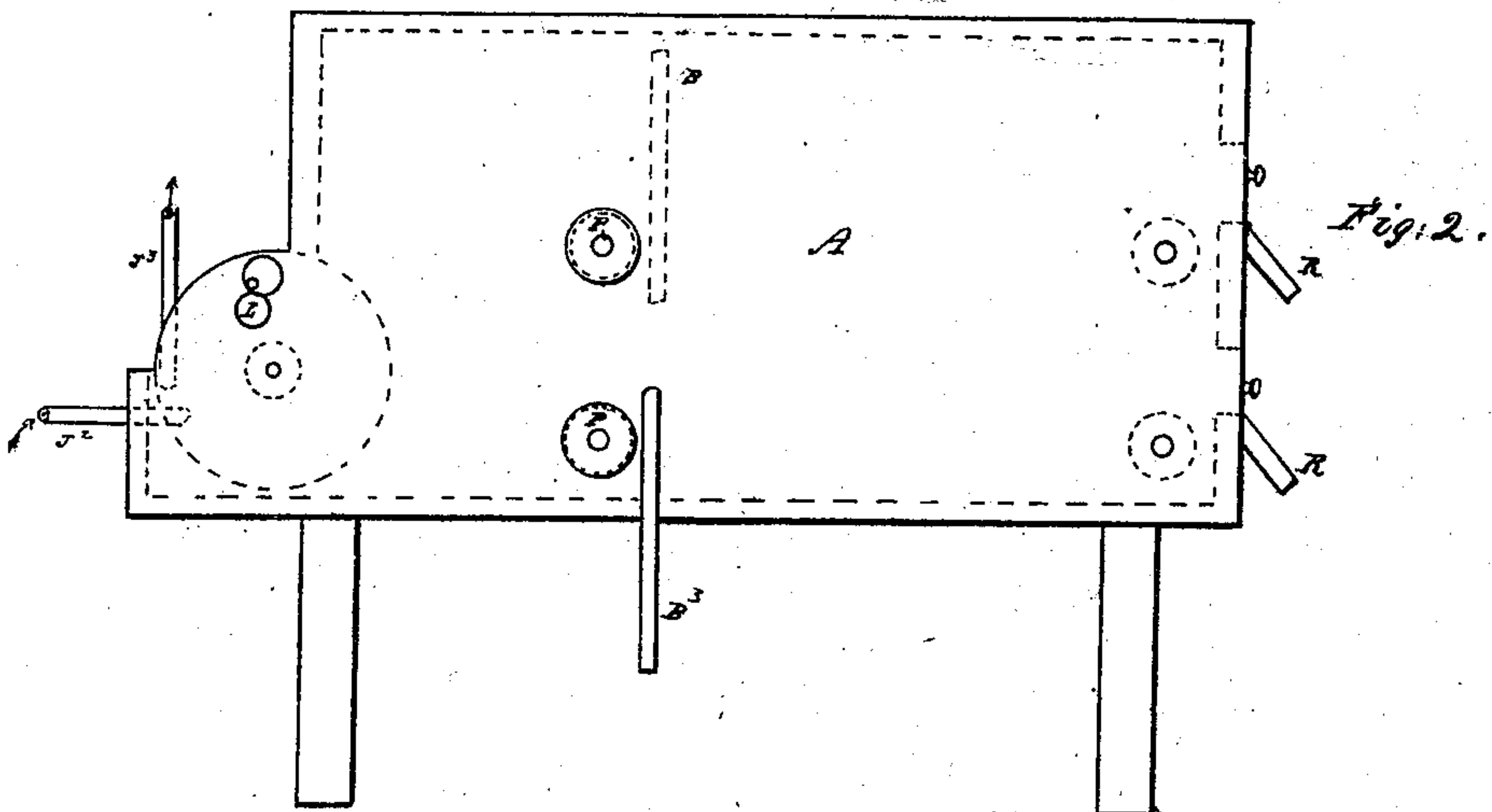
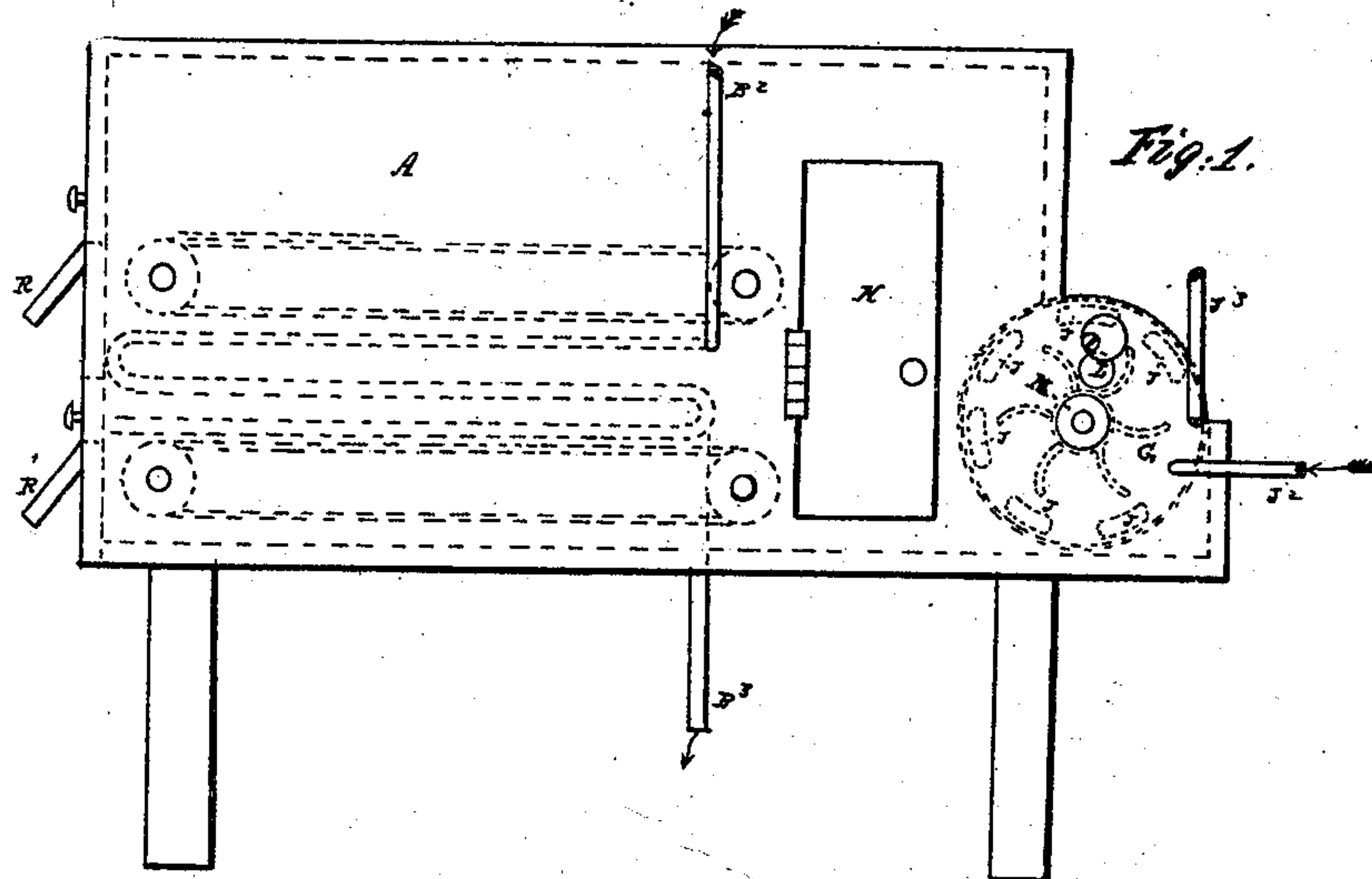


J. H. LONGBOTHAM.

MACHINE FOR DRYING BOOKBINDERS' BOARDS.

No. 10,375.

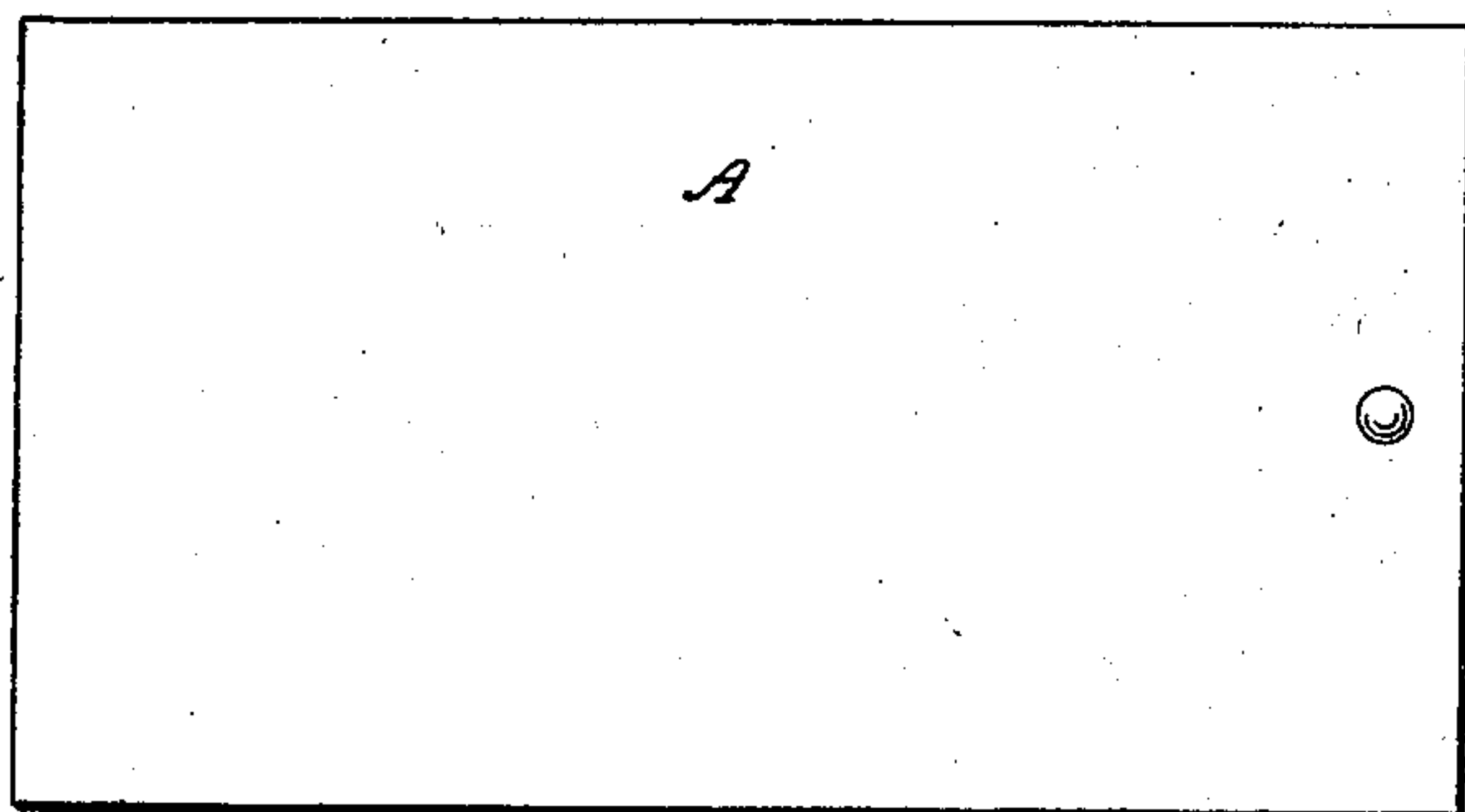
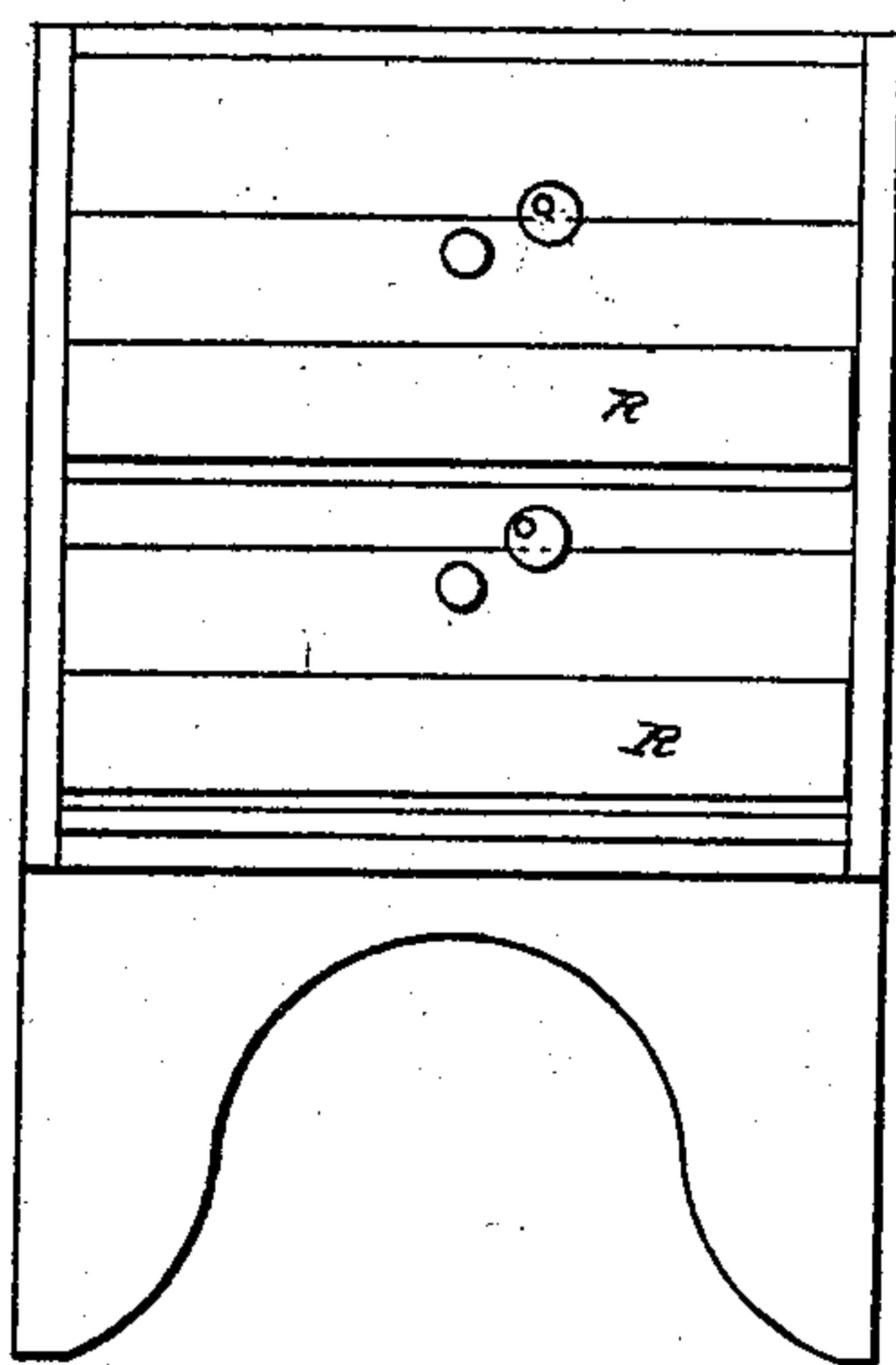
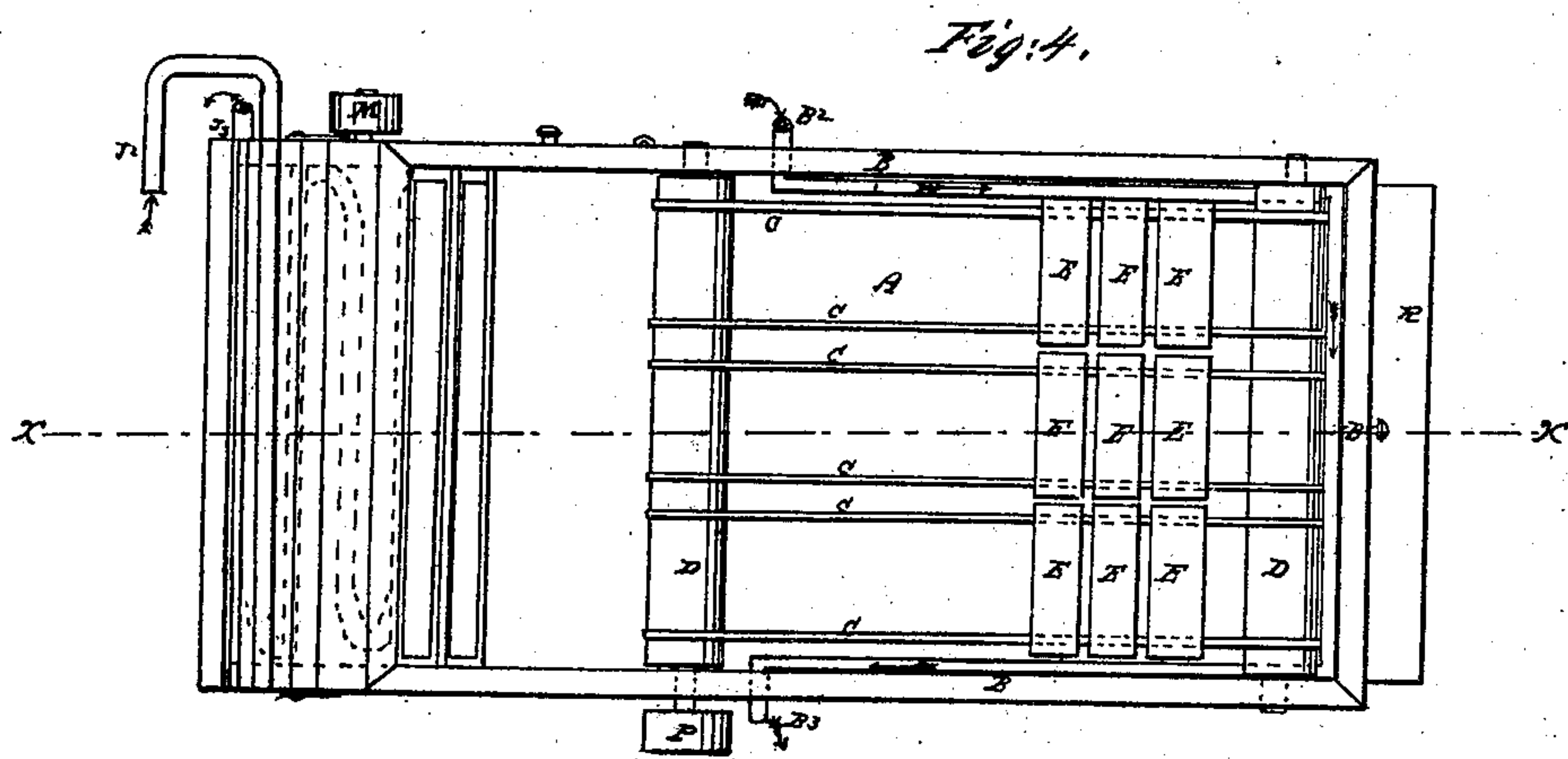
Patented Jan. 3, 1854.



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UNITED STATES PATENT OFFICE.

JAMES H. LONGBOTHAM, OF BROOKLYN, NEW YORK.

DRYING BOOKBINDERS' BOARDS.

Specification of Letters Patent No. 10,375, dated January 3, 1854.

To all whom it may concern:

Be it known that I, JAMES H. LONGBOTHAM, of Brooklyn, Kings county, and State of New York, have invented a new and Improved Machine for Drying Bookbinders' Boards and for other Purposes; and I do hereby declare the following to be a full description of the same.

The nature of my invention consists in making a closed chamber of suitable size for the purposes required, and arranging around the sides of it a series of steam or hot air or gas pipes, for the purpose of introducing or circulating through them and of radiating heat from them into the chamber, also in arranging in one end of the drying chamber a revolving fan, and surrounding it with a series of coils of pipe, through which heated steam or air or gas circulates, and from the radiations of which the air in the fan blower case is heated and in which condition it is forced into the drying chamber, producing thereby a circulation of drying heated air throughout the chamber to dry the boards or other paper as it passes or is carried from end to end of the machine on the endless bands running over rollers arranged transversely in the drying chamber for that purpose. But to describe my invention more particularly I will refer to the accompanying drawings forming a part of this schedule, the same letters of reference wherever they occur referring to the same parts.

Figure 1 is a view of the right side elevation of the machine. Fig. 2 is a view of the left side elevation of the machine. Fig. 3 is a cut section of the machine, through the red dotted line x, x , Fig. 4. Fig. 4 is a plan view of the machine having the top removed. Fig. 5 is a view of the front or discharging end of the machine. Fig. 6 is a plan view of the top of the chamber.

Letter A, is the chamber, which may be made of any suitable material and size for the purposes required, and should it be deemed material may be lined on the inside with some non conducting substance to keep the heat more perfectly, or with some reflecting substance or material to reflect the heat back upon the paper boards as they are drying. In this chamber are arranged in any convenient way a series of steam pipes, B, B, &c., and communicating as at B², with some steam generator for a current of heated

steam to pass through the coils of pipe, and to be discharged at B³, into the air or any suitable reservoir as may be desired. The object of these pipes is to heat the interior of the drying chamber, and as they are arranged parallel with the endless bands C, C, &c., running over the rollers D, D, &c., placed transversely across the interior of the chamber, the heat radiating from them acts constantly upon the moving paper boards E, E, E, &c., to dry them, before being discharged from the machine through the openings F, F, Fig. 3, but represented as being closed up in the other drawings.

In combination with the foregoing drying arrangement, is a revolving fan blower G, arranged in a case H, transversely across one end of the drying chamber. Around the interior of the blower case is arranged a series of coils of steam pipes J, J, &c., having at J², communication with a steam generator, and at J³, exhausting in the air or any desirable reservoir, so that by the passage of the steam through the pipes, a constant radiation will take place and rarefy the air as it is carried into the chamber in the direction of the arrows k, k , in Fig. 3, by the rotary motion of the fan. The object of this blowing of heated air into the chamber is to cause a circulation of air in the chamber, and take up as far as possible the moisture evaporated by the paper boards, and thereby facilitate the drying process. Letters L, L, two openings in the sides of the blower case for admitting the cold air.

M, is a pulley on the blower shaft for rotating it.

Letter N, is the door or man hole to the chamber, through which the attendant takes the wet boards to place them upon the endless bands to dry. To avoid the direct action of the heated air from the blower on the legs of the attendant, it is intended to make suitable mouth pieces to discharge the air past him instead of against his legs as would appear to be the case in the model.

Letters P, P, are two pulleys, on the ends of the endless belt rollers.

R, R, are slide or drop boards to carry the boards as they are discharged from the ports F, clear of the machine.

Having now described my invention I will proceed to state what I claim and desire to secure by Letters Patent of the United States.

What I claim therefore is—

The use of the drying box or chamber,
endless belts for carrying the paper boards,
coil of pipes, arranged therein, in combina-
5 tion with a blower and case, having a se-
ries of coils of pipes therein for rarefying
currents of air for drying book binders'

paper boards, and other substances, sub-
stantially as hereinbefore set forth.

JAS. H. LONGBOTHAM.

In presence of—

LEWIS T. VOIGT,

CHARLES L. BARRITT.