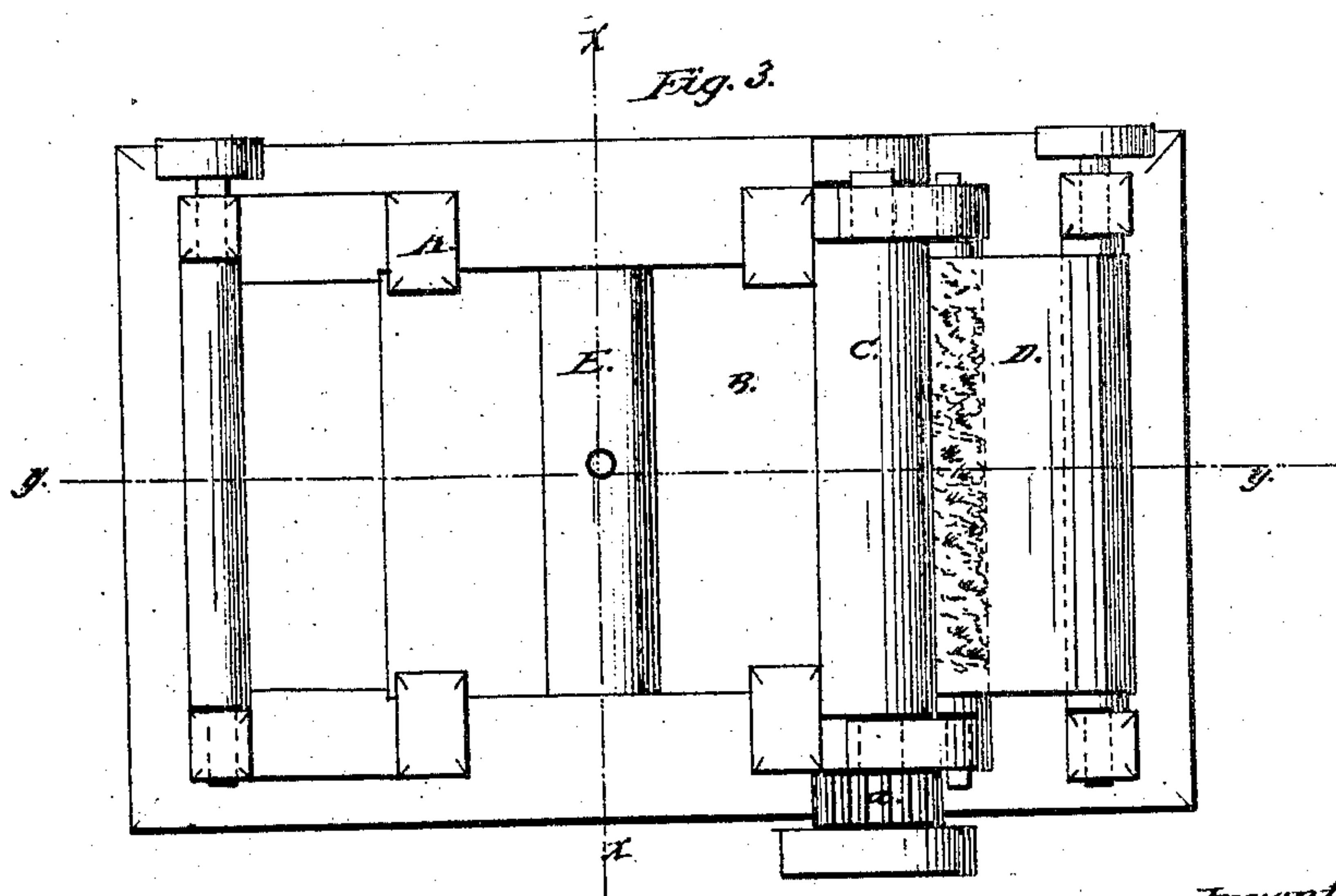
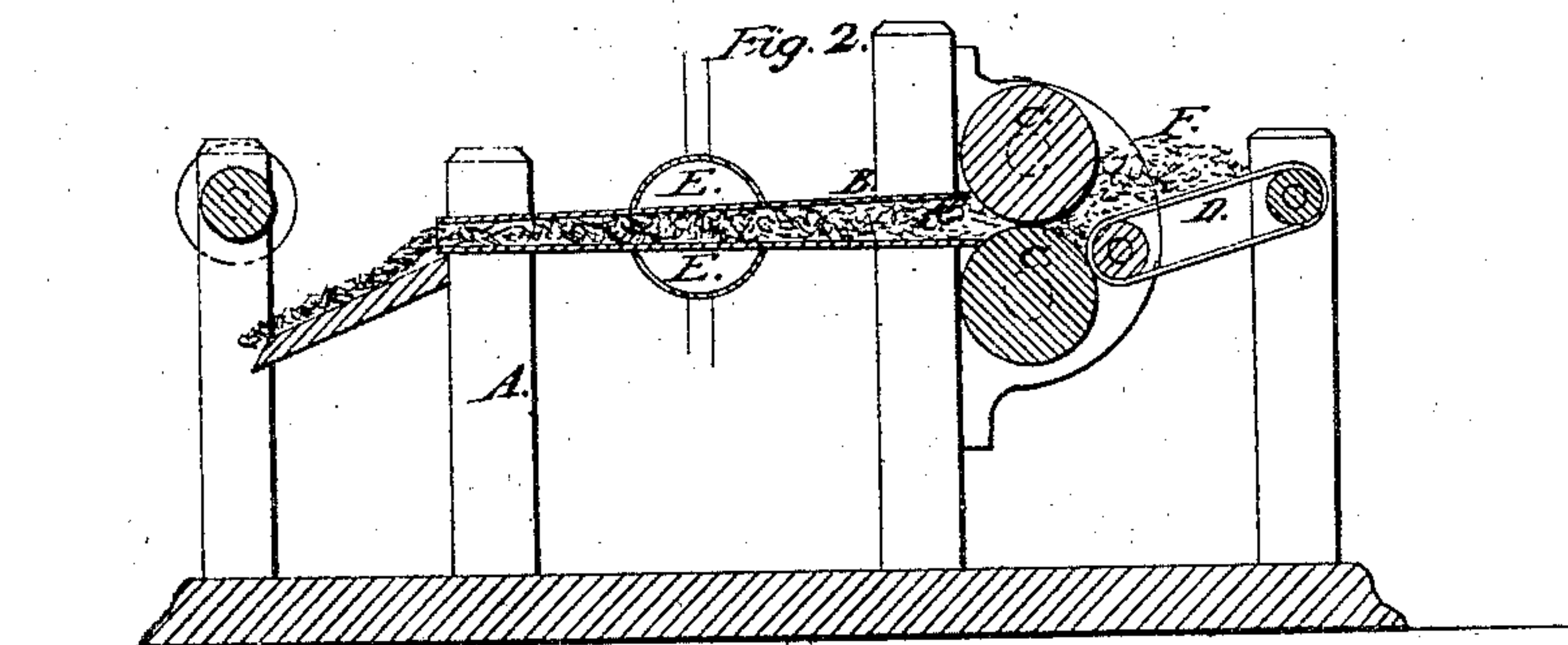
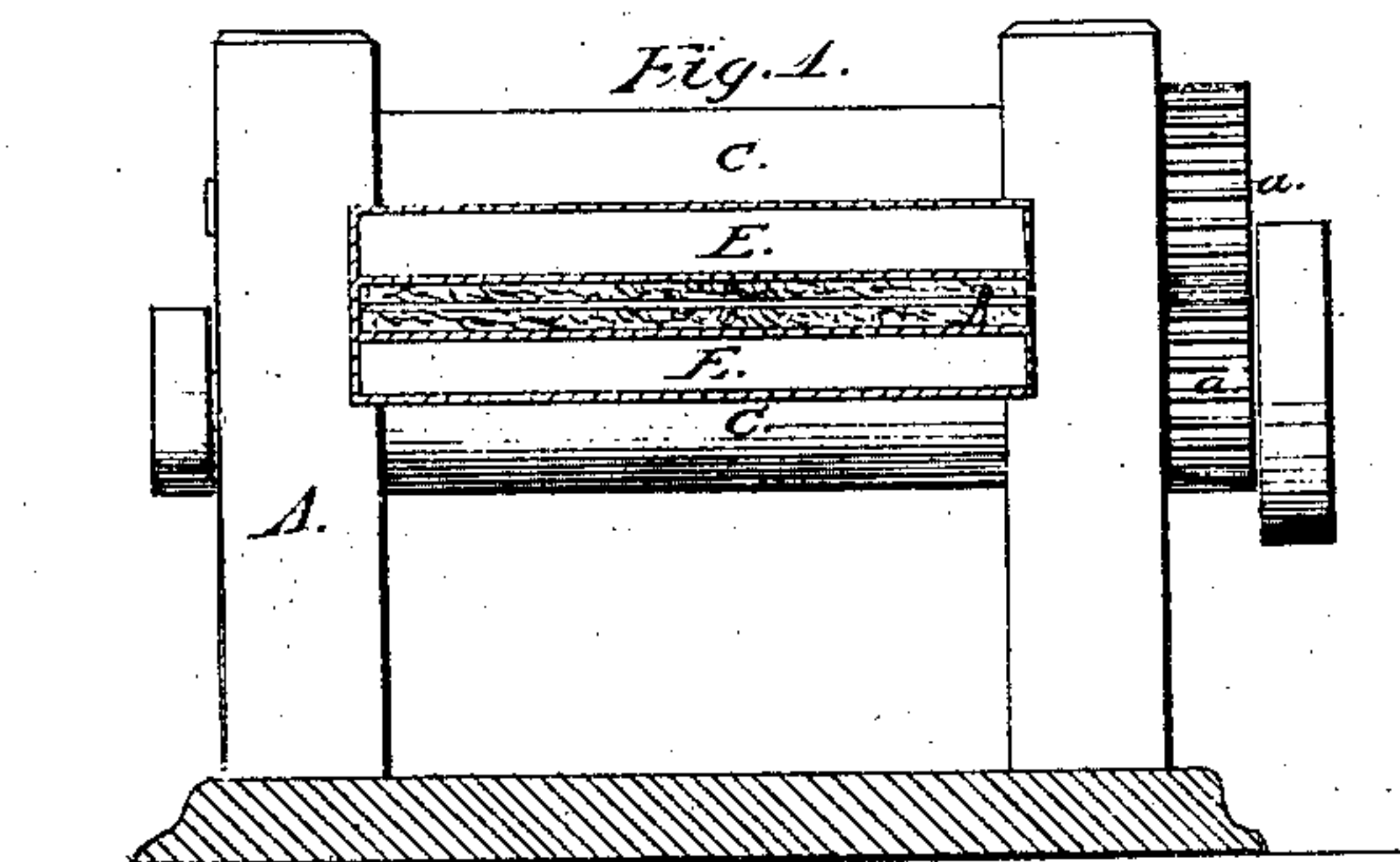


W. Fuzzard.
Making Wadding

N^o 30,058.

Patented Sept. 18, 1860.



Witnesses:
J. B. Smith
R. S. Jones

Inventor:
W. Fuzzard
per Munnell & Co.
attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM FUZZARD, OF CHARLESTOWN, MASSACHUSETTS.

MANUFACTURING SHEETS OF FIBROUS MATERIAL.

Specification of Letters Patent No. 30,058, dated September 18, 1860.

To all whom it may concern:

Be it known that I, W. FUZZARD, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented
5 a new and useful Device for Manufacturing Bats from Fibrous and other Substances for the Purposes of Roofing, Sheathing for Steam-Boilers, &c.; and I do hereby declare that the following is a full, clear, and ex-
10 act description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a transverse vertical section of my invention taken in the line x, x , Fig. 3. Fig. 2, a longitudinal vertical section of
15 the same, taken in the line y, y , Fig. 3. Fig. 3 a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

20 This invention is designed for manufacturing bats from those substances which do not readily felt or do not felt at all, and which consequently require other means to compact and cause the parts to adhere to-
25 gether in order to form sheets or bats. To this end I employ what may be termed a press box, a heating chamber or chambers and feed-rollers, arranged substantially as hereinafter fully shown and described,
30 whereby the substance of which the bats are composed is forced through the press box aforesaid and formed by compression, under heat, and with any suitable cement or
35 glutinous substance into proper bats or sheets.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

40 A, represents a framing in the upper part of which a shallow metal box B, is placed. This box may be placed about in a horizontal position: its eduction or discharge end is equal in area to that of a transverse section of the bat to be manufactured; from
45 the eduction or discharge end of the box the same may gradually but slightly increase in dimensions to its induction end. The box should increase in dimensions vertically if not laterally or in width. In Fig. 2, the
50 box is shown clearly as increasing in depth from its discharge end to its orifice. It is however represented as being of equal width in Fig. 3, as the lateral variation or difference in width of the box may be dispensed
55 with.

At the front or induction end of the box

B, there are placed two rollers C, C, one being over the other in the same plane. The bite of the rollers C, C, is in line with the box B, and the rollers are adjusted snugly
60 to the orifice of the box B, and are connected at one end by gears a, a . The rollers C, C, may work in permanent or fixed bearings. D, is an endless apron which is placed in front of the rollers C, in an inclined position
65 as shown clearly in Fig. 2.

At the center of the box B, and both at its upper and lower side there is placed a heating chamber E. These chambers may be
70 heated by steam, metal heaters, or other suitable means.

The operation is as follows: The rollers C, C, are rotated by any convenient power and the substance F, from which the bats are formed is placed in connection with pow-
75 dered rosin or any proper glutinous substance or cement on the apron D, which is operated from one of the rollers C. The apron D, conveys the substance F, to the rollers C, C, and the latter force it into and
80 through the box B, the substance in its passage through the box being compacted and cemented together, the heat from the chambers E, melting the rosin or other substance
85 which may be used and causing in connection with the pressure, the fibers or parts of the substance or stock to be formed into a perfect sheet or bat.

It will be seen from the above description that the taper form of the box B, when the
90 substance F, is forced into it with a suitable speed by the rollers C, will subject the substance to a certain pressure, the pressure being in proportion to the area of the discharge end of the box B, and the feeding
95 capacity of the rollers C, C.

The bat or sheet as it passes from the discharge end of the box B, may be wound on a roller or conducted into any proper receptacle.
100

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

The taper press box B, provided with the heating chambers E, E, one or more, in con-
105 nection with the feed rollers C, C, or their equivalents for the purpose specified.

WILLIAM FUZZARD.

Witnesses:

JAMES ALDEN,
JOHN H. BACON.