(No Model.)

T. S. POOLE, dec'd,

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Roller Mill for Grinding Grain, &c.

No. 238,000. **Patented Feb. 22, 1881.**

Fig. 1.

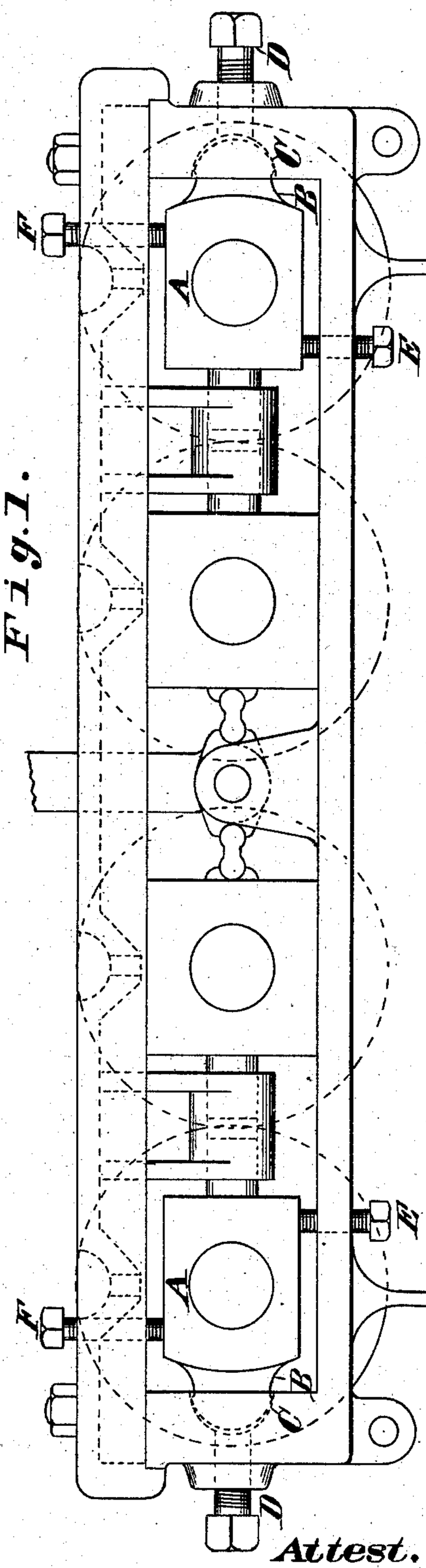


Fig. 2.

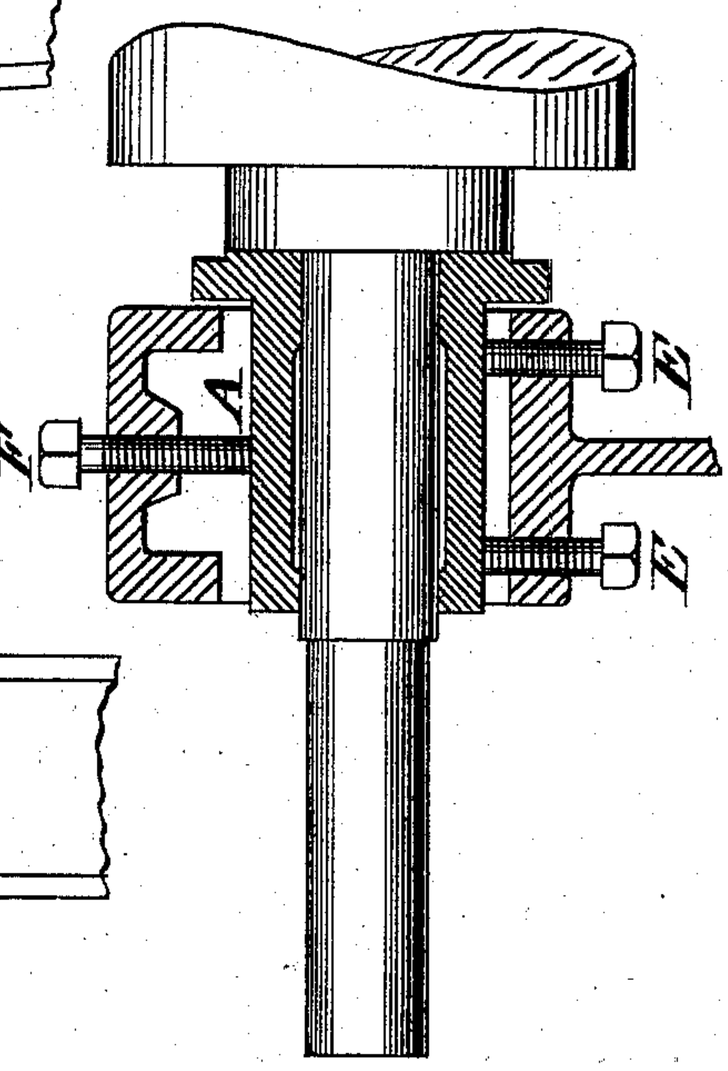
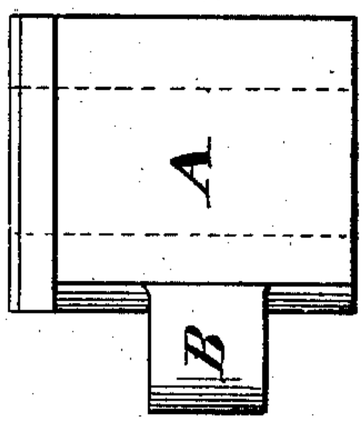


Fig. 3.



Inventor.

Thomas S. Poole

By Charles Pickles

His Attorney.

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UNITED STATES PATENT OFFICE.

THOMAS S. POOLE, (E. TATNALL WARNER, ADMINISTRATOR,) OF WILMINGTON, DELAWARE.

ROLLER-MILL FOR GRINDING GRAIN, &c.

SPECIFICATION forming part of Letters Patent No. 238,000, dated February 22, 1881.

Application filed May 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. POOLE, residing at Wilmington, county of New Castle, State of Delaware, have invented certain new and useful Improvements in Roller Grinding-Mills, of which the following is the specification.

My invention relates to the construction and arrangement of the journal-boxes of the adjustable roller so that the rolls can be adjusted vertically as well as horizontally, thus keeping the surfaces of the rolls at their point of contact exactly in line.

It is well known by those using roller-mills that the rollers and their journal-bearings become worn quite uneven after using them for some time, whereby the rollers' surfaces will get out of line at their point of contact, and the machine will not do the desired work so effectively, and will finally get so badly out of line that it becomes wholly worthless. It is impossible to overcome this unevenness in the wearing of the rollers and their journal-bearings. Therefore, to avoid this difficulty I compensate for this wearing by having the journal-boxes of the adjustable rollers so arranged in the main frame that they can be raised vertically and lowered, as may be desired, as well as to move horizontally. To do this I have the flange of the journal-boxes made somewhat longer than the usual flange, and have the slides or sides of the slot in the frame so wide apart that the journal-boxes have room to be raised vertically or lowered by means of one or more adjusting-screws that pass through the frame and one or more on the top of said journal-boxes, so that by screwing up those underneath the boxes may be raised to any desired point, and then by tightening the screw on top the boxes will be held firmly. To provide for the horizontal adjustment I use a set-screw, which passes through the end of the main frame and in line with the center of the slot in which the boxes are held. One end of said set-screw comes in contact or bears against a lug projecting from the box. To move the boxes forward all that is necessary is to turn the screw. The backward movement is accomplished by means of a spring bearing against the opposite side of the box, said adjustment being done after first loosening the set-screw on top of the box.

In the drawings, Figure 1 is a side elevation of the main frame, the boxes shown in position; Fig. 2, cross-section of a box; Fig. 3, top plan of a box.

A represents the adjustable box, arranged in a suitable frame, said box being provided on one side with the lug B, fitting into a suitable socket, C, in the main frame, the purpose of said lug in socket being to hold the box in its proper position when the set-screws are loosened, and to prevent the box slipping in or out of the slot in which it is situated. The socket C serves as a support for the lug, as such would be required, as the set-screws are not one above the other.

D is the horizontal adjusting-screw, that passes through the frame, and, coming in contact with the lug, serves to move the box forward.

E E are the adjusting-screws passing through the bottom of the slot in the frame, and bearing against the under side of the box to raise the same when desired.

F is the adjusting or clamping screw passing through the top of the slot and bearing against the top of the box, thus serving to bind the box down tight against the set-screws E E and the under side of the lug B in the socket C, thus holding the box firmly in position, the clamping-screw F being at such a point between the socket C and the set-screws E E that there may be equal bearing at both points of contact of the box and lug.

I do not in this application lay any claim, in a grinding-mill provided with duplicate sets of rolls, the outermost rolls of each set being adjustable in the supporting-frame, to the combination, with the two inner rolls forced together by a spring-pressure against their journal-boxes, of the two double cams and connecting-links mounted upon the intermediately-journaled shaft provided with operating-lever and means for holding the same in fixed position, such matter being shown and claimed in an application for patent filed May

11, 1880, No. 9,448, in which applicant appears as one of two joint inventors.

What I claim is—

In a roller grinding-mill, the combination of the main-frame journal-box A, provided with lug B, fitting into socket C in the upper end of the main frame, and horizontal adjusting-screw D, passing through the end of said frame, with vertical adjusting-screws E and F, for the purpose as shown and described.

THOMAS S. POOLE.

In presence of—

JAMES M. WATSON,

DAVID J. WILSON.