

GEORGE BRODIE.

Improvement in Baling Presses.

Fig. 1

Fig. 2

119,009.

Patented Sep. 19, 1871.

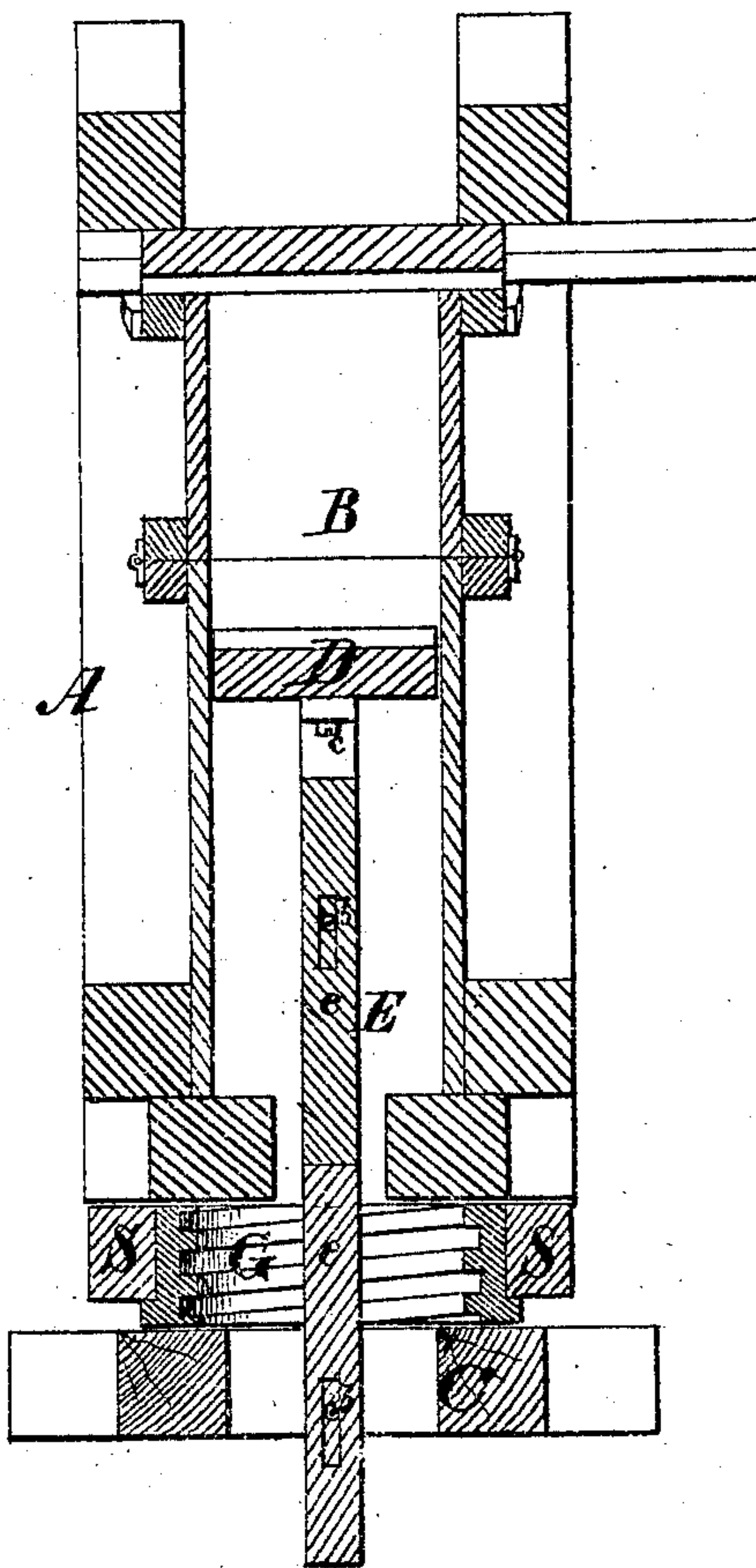
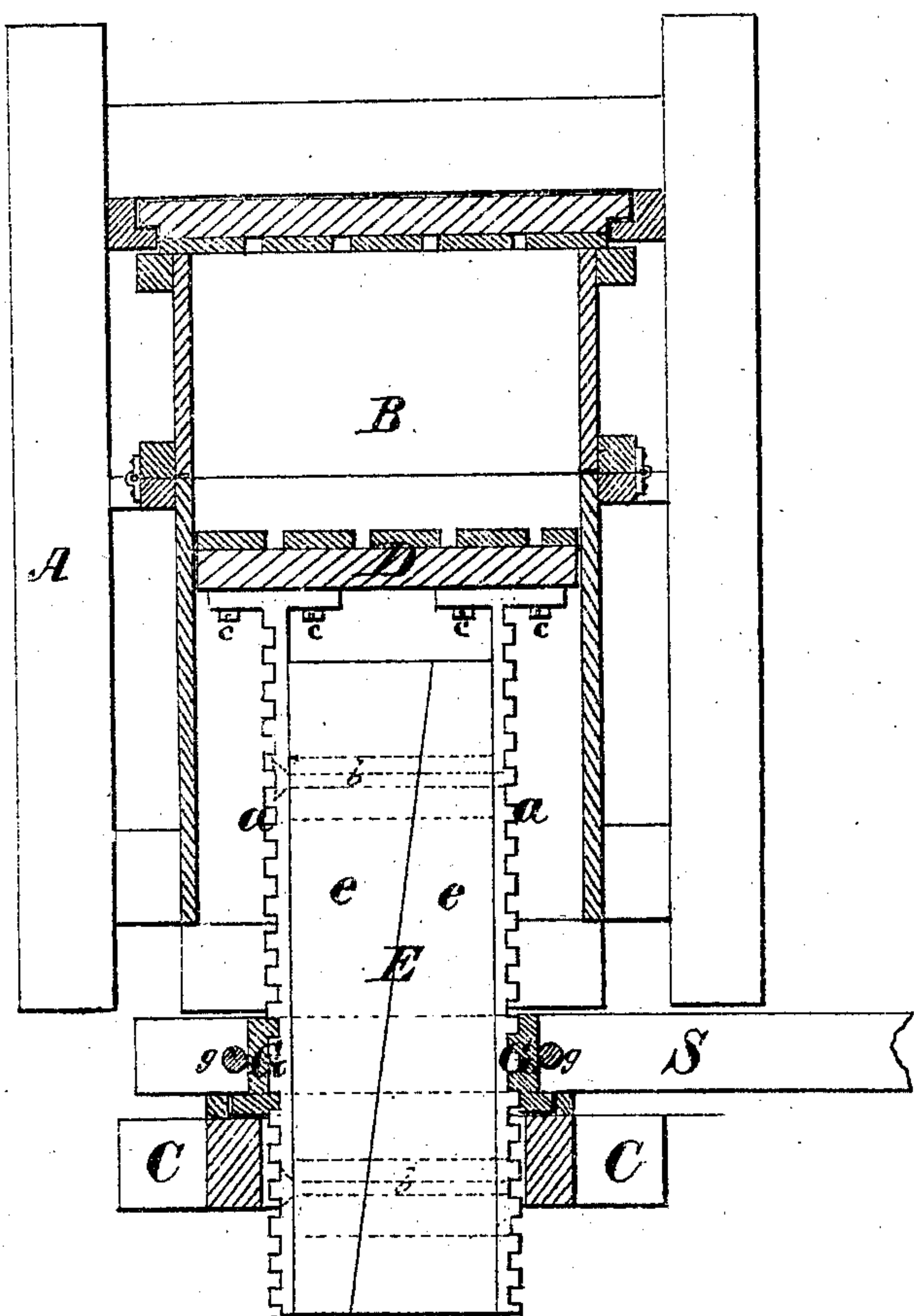
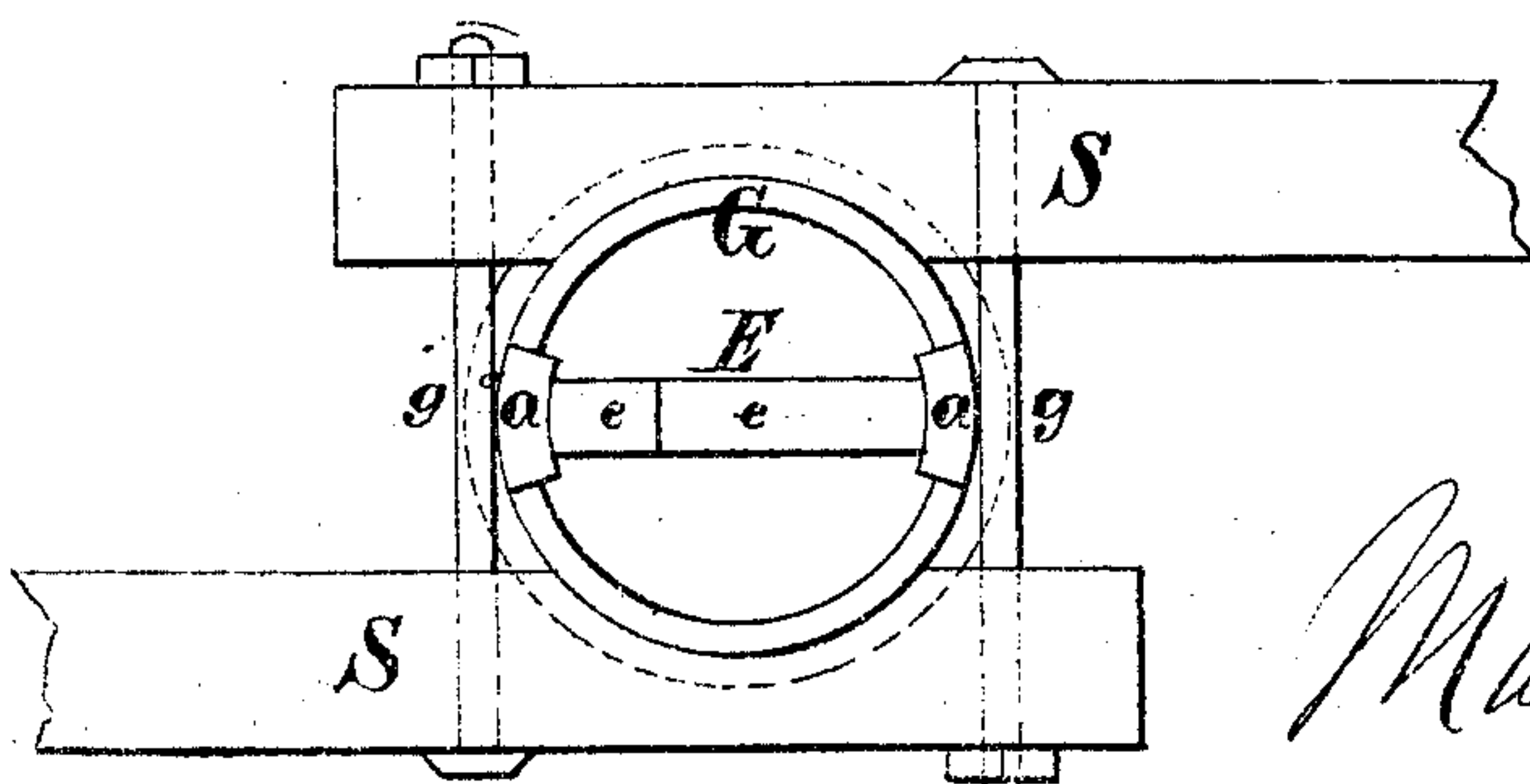


Fig. 3



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GEORGE BRODIE, OF PLUM BAYOU, ARKANSAS.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 119,009, dated September 19, 1871.

To all whom it may concern:

Be it known that I, GEORGE BRODIE, of Plum Bayou, in the county of Jefferson and State of Arkansas, have invented certain Improvements in Baling-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a section taken through a press in a vertical plane on one side of the follower-rod. Fig. 2 is a section taken vertically and transversely through the press. Fig. 3 is a top view of the follower-rod and its nut.

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

This invention relates to improvements in the construction of the follower-rods of screw-presses. In this class of presses it has been the practice hitherto to employ a single screw-rod in the center of the follower, or to employ two screw-rods, or two racks arranged near the ends of the follower. The objection attending the presses is that the rods are liable to bend and break during the pressing operation in consequence of unequal strain on the extremities of the follower, which causes the latter to tilt more or less. If it was practicable to pack the material into the bale-box equally then a central follower-rod might work very well; but it is well known that there is always more or less of the material at one end of the press-box than at the other. The object of my invention is to so construct a single follower-rod that will operate with equal force on both ends of the follower and prevent the latter from tilting during the pressing operation; also, to provide for expanding such rod to compensate for the wearing away of its teeth and the thread of the nut which moves it, as will be hereinafter explained.

The following is a description of my invention: In the accompanying drawing, A represents the frame of a baling-press of the upright kind. B is the press-box; C, a substantial sill or foundation for the press; and D is a follower, which is arranged to move up and down in the press-box. The follower D has secured to it a follower-rod, E, which passes down through and engages with a nut, G, to which the lever or sweeps S S are confined by bolts *g*. The nut G is located at the lower end of the press-box B, beneath solid timbers, and it is supported upon

the sill-timbers C between suitable guides, which keep it in place but allow it to be turned freely about its axis. The follower-rod is nearly as wide as the length of the follower D, but it is considerably less in thickness than the width of the follower. To the two edges of the central portions *e e* of the follower-rod toothed racks *a a* are bolted, the upper ends of which are rigidly secured to the follower. The racks are segments of a screw and their teeth correspond to the groove between the thread of the nut G. The central portions *e e* of the follower-rod are wedge-shaped and are bolted together by the same bolts, *b b*, which secure in place the racks *a a*. The central portion of the follower-rod consists of two or more wedge-shaped or tapering pieces for the purpose of expanding the rod and thereby compensating for the wearing away of the rack-teeth *a a*. This I effect by passing the bolts *b b* through oblong holes and securing the upper ends of the racks *a a* to the follower by means of screws *c c* which pass through oblong holes.

By loosening the bolts and screws and sliding the pieces *e e* on one another the rod can be expanded, after which the whole can be secured rigidly together again.

It will be seen from the above description that during the pressing operation separate and distinct parts of the flattened screw operate at each end of the follower at the same time; and if there is more material beneath one end of the follower than beneath the other end thereof one side of the rod will only be subjected to a greater strain than the other side, but there can be no side thrust or effort to bend the rod.

The rod is made partly of wood and partly of metal, so that it is very light and cheap and at the same time strong and durable.

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

1. The flattened follower-rod E, obliquely divided, as described, and toothed racks or screw segments *a a*, in combination with the nut G, substantially as described.
2. The screw follower-rod E, composed of adjustable sections for expanding it, substantially as described.

Witnesses:

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