

J. B. WITHEE.
Millstone Balancing Device.

No. 229,787.

Patented July 6, 1880.

Fig. 1

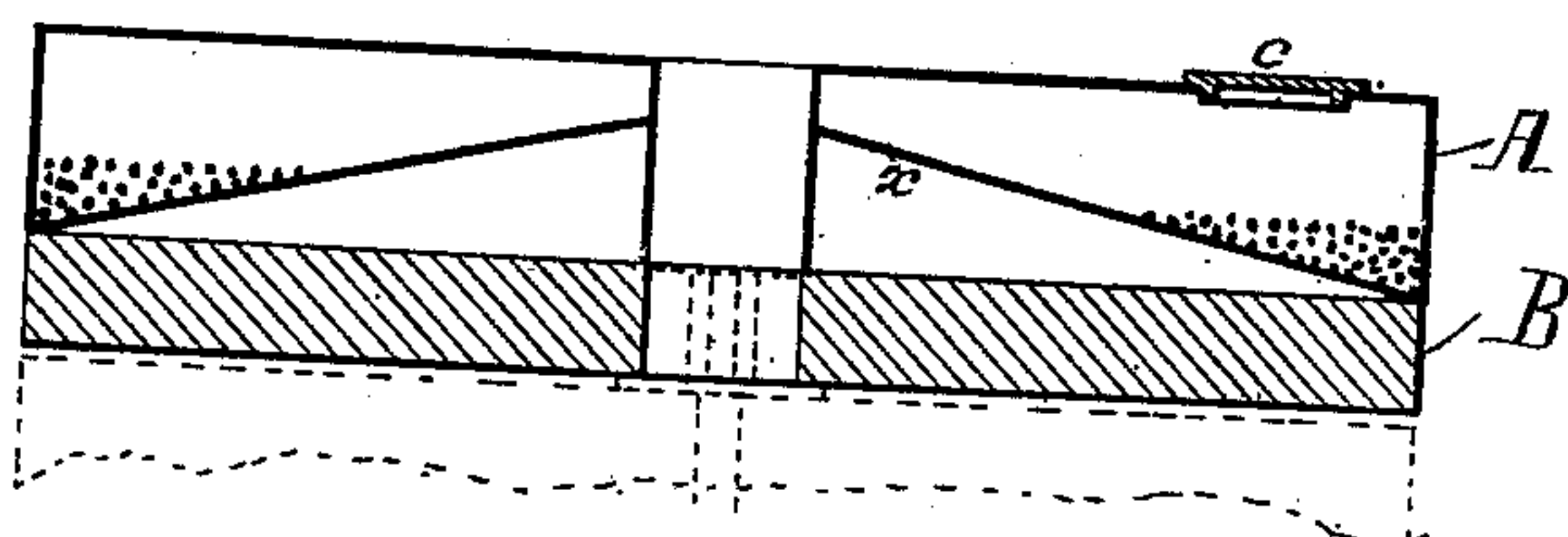
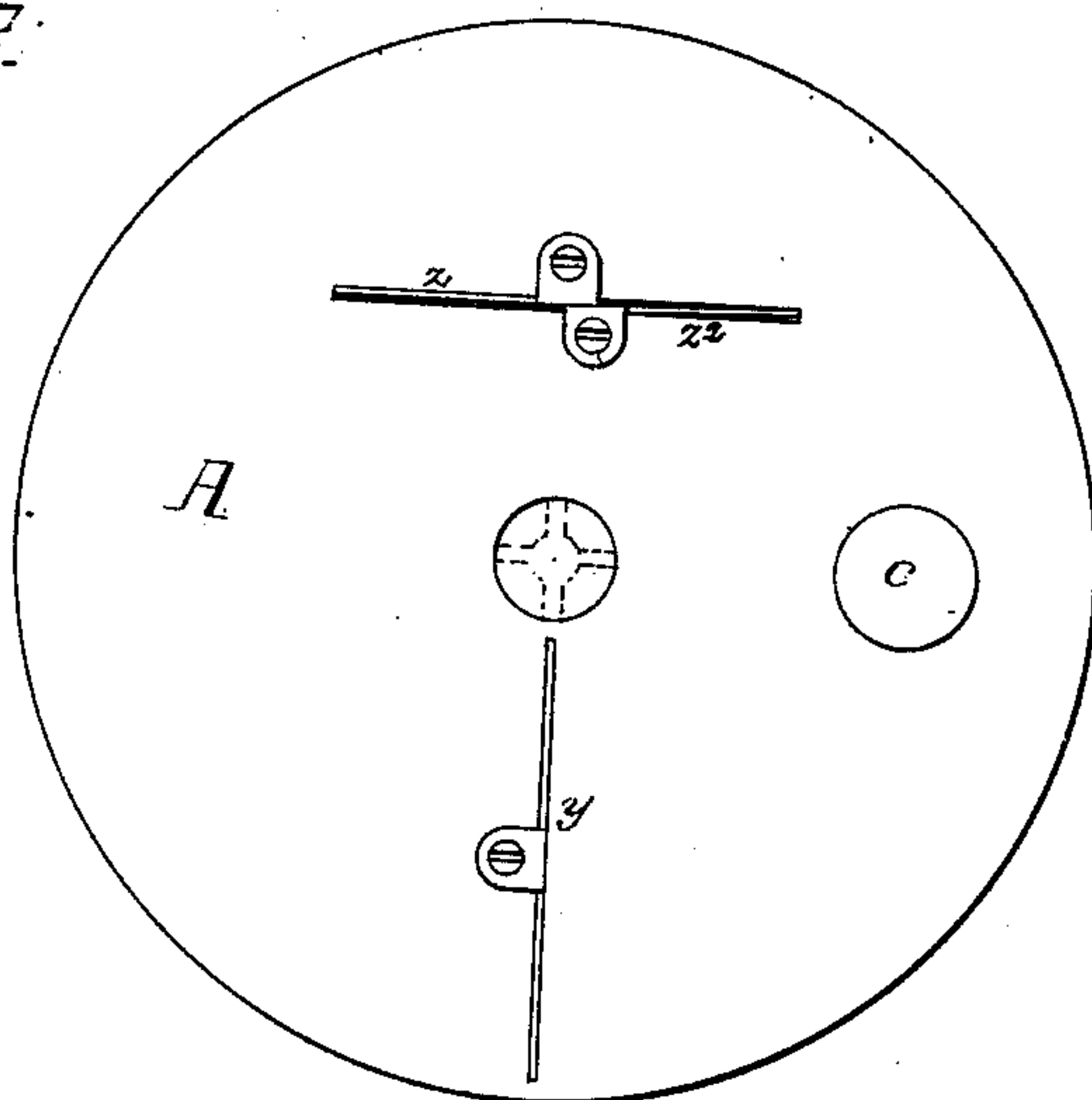


Fig. 2



Attest

Courtney A. Cooper.

William Paxton.

Joseph B. Withee
By his attorney
Charles E. Foster.

UNITED STATES PATENT OFFICE.

JOSEPH B. WITHEE, OF DEDHAM, MAINE.

MILLSTONE-BALANCING DEVICE.

SPECIFICATION forming part of Letters Patent No. 229,787, dated July 6, 1880.

Application filed December 27, 1879.

To all whom it may concern:

Be it known that I, JOSEPH B. WITHEE, of Dedham, Hancock county, State of Maine, have invented an Improvement in Balances for Millstones, of which the following is a specification.

My invention relates to balancing horizontal millstones; and it consists in the combination, with the runner, of a horizontal case constructed with a conical bottom and partially filled with loose balancing material, whereby I am enabled to automatically effect and maintain a uniform distribution of weight in respect to the axis of motion by the joint action of gravity and centrifugal force.

In the drawings forming part of this specification, Figure 1 is a vertical section of an upper millstone illustrating my invention, and Fig. 2 is a plan view of the same.

A represents a metallic or other case secured horizontally upon an upper millstone, B, the latter being a runner, and said case having a chamber or receptacle concentric with the axis of motion and partially filled with a loose balancing material, such as shot, sand, or water, which is free to distribute itself under centrifugal force, which tends to cause the balancing material to collect at the lighter side of the stone until the whole is perfectly balanced.

In order to aid centrifugal force, so that the stone shall be quickly balanced when replaced after dressing, &c., and as driven at the ordinary speed, I construct the case A with a conical bottom, x , which causes the balancing material to gravitate to the perimeter of the case, where its balancing effect must be produced. In the final distribution of the balancing material around the perimeter the two forces cooperate. The case may also be provided with

one or more partition-plates, either radial, as shown at y , or in other positions, as shown at z z^2 , so as to confine the balancing material after it has been properly distributed by gravity and centrifugal force, said partitions being inserted through narrow slots in the case and secured by screws.

A screw-cap, c , provides, in the illustration, for introducing the balancing material.

The manner of combining the case with the runner admits of variation. It may, for example, be attached beneath the plaster back of an upper stone.

I am aware that it is not new to balance centrifugal machines by means of loose material distributed within a horizontal case by centrifugal force; but I do not know, and do not believe, that millstones, with their relatively low speed and frequent disturbances, have ever been so balanced; nor that the conical bottom by which I unite gravitation to centrifugal force in so applying the latter has ever before been used in any combination analogous to mine. Therefore,

I claim as new and desire to protect by Letters Patent—

As an improvement in balancing horizontal millstones, the combination, with the runner B, of a horizontal case, A, having a conical bottom and partially-filled with a loose material which is free to distribute itself under the combined action of gravity and centrifugal force, as herein specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH B. WITHEE.

Witnesses:

JOSIAH QUIMLY,
ADDERSON C. LITTLE.