

# R. B. JEWELL'S LATERAL MOTION CENTERPIN

No. 119,150.

Patented Sep.-19, 1871.

[20.]

Fig. 1.

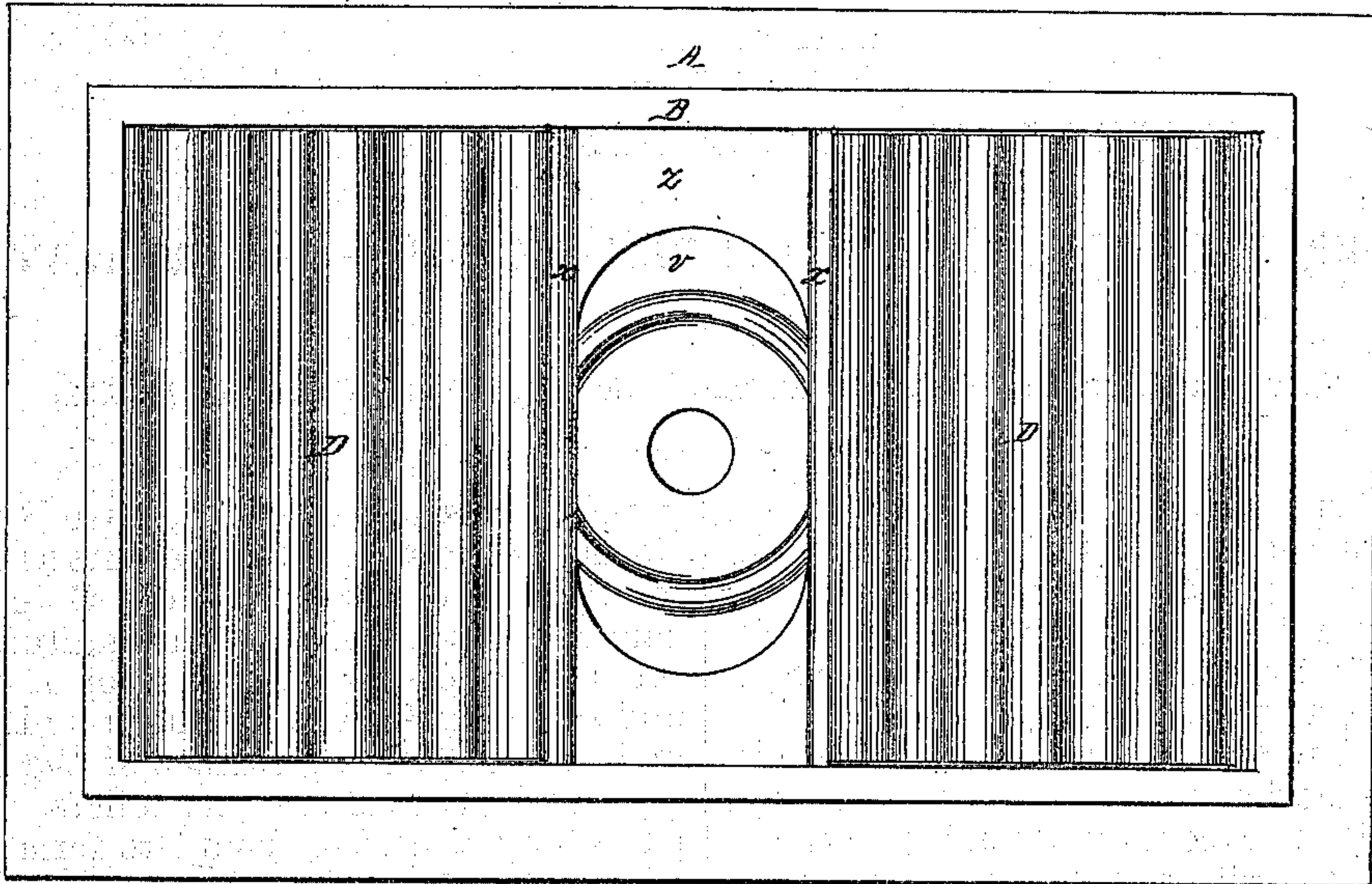


Fig. 2.

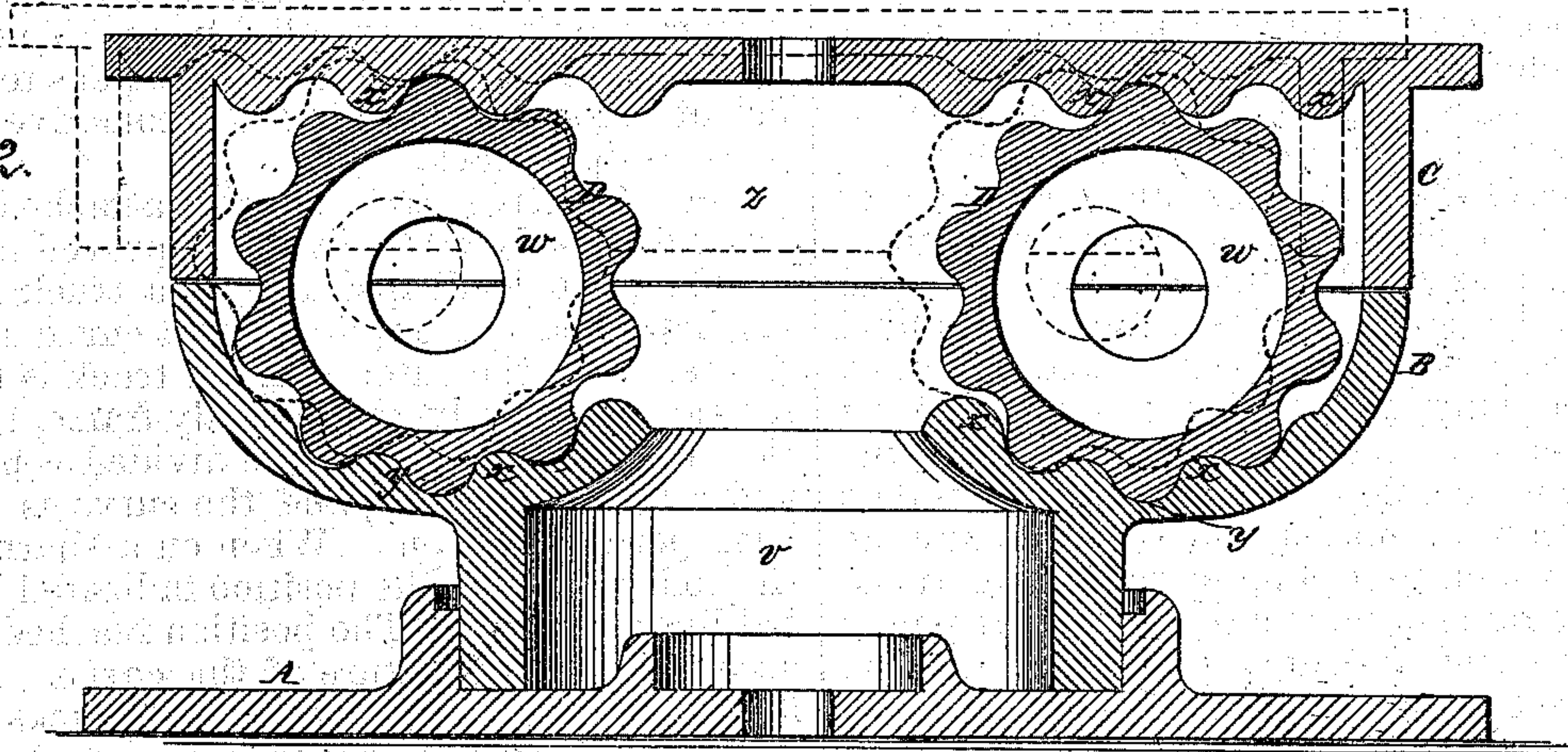
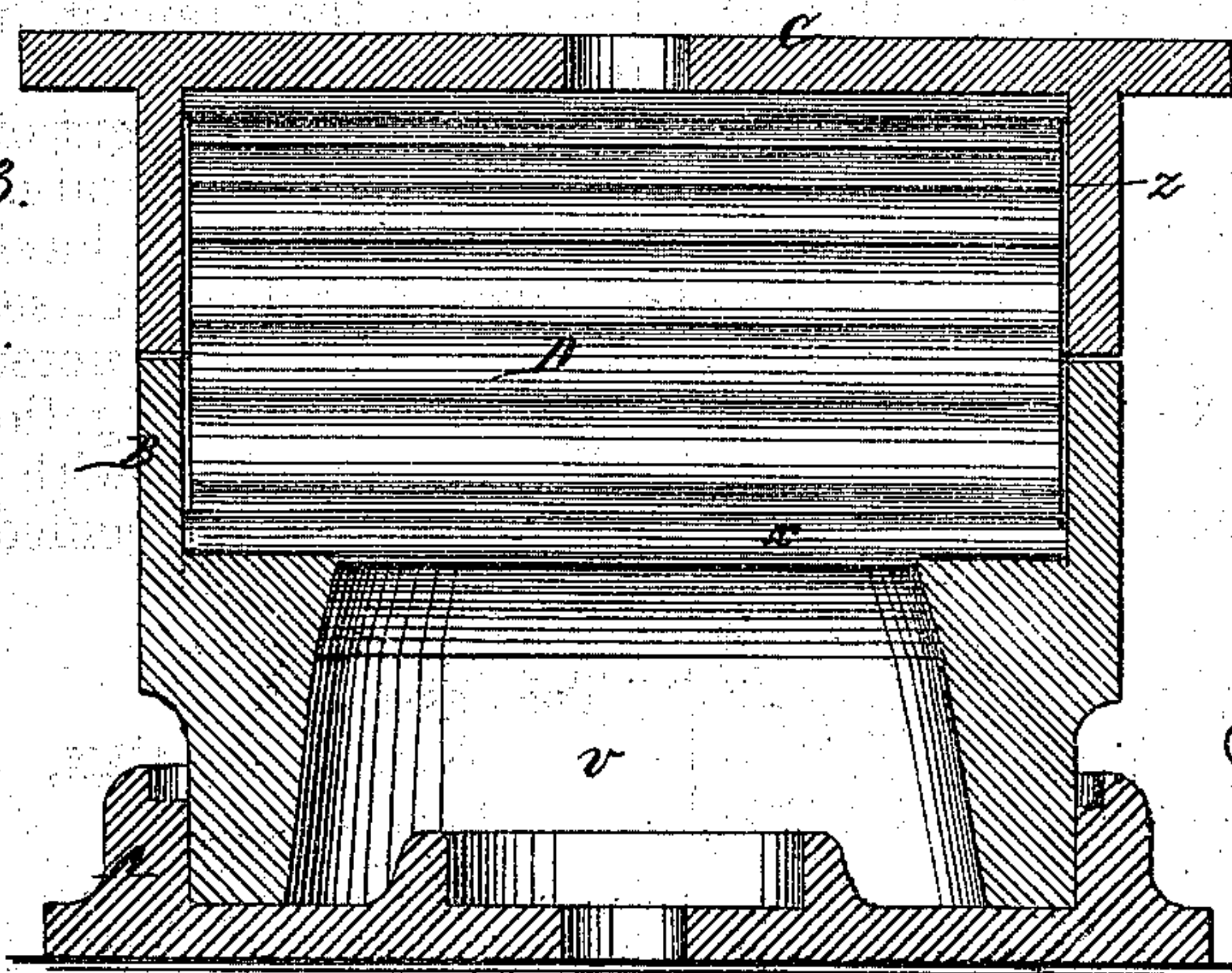


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN LATERAL-MOTION CENTER-PINS FOR RAILWAY TRUCKS.

Specification forming part of Letters Patent No. 119,150, dated September 19, 1871.

*To all whom it may concern:*

Be it known that I, ROBERT B. JEWELL, of Dunkirk, in the county of Chautauqua, New York, have invented an Improved Lateral-Motion Center-Pin for Railway Trucks, of which the following is a specification:

My invention relates to provisions for permitting a lateral motion of the pilot-truck or the trucks of a railway locomotive, tender, or car in turning curves, in order to enable the same to be traversed with ease and safety. My special provision is primarily intended and adapted for locomotive pilot-trucks. It consists, in part, of a center-pin with a divided and recessed member, (preferably the upper or male part.) The opposing surfaces of the said recess are corrugated or toothed, and the lower is made to form two double-incline depressions, the whole being horizontal longitudinally and parallel with the longitudinal axis of the truck. A pair of corrugated or toothed rollers, occupying, in normal position, the lowest points in said depressions, and supporting the upper section, completes the device. The rollers permit the lateral motion, and, by ascending the inclines, to which they cling by the corrugations, take up the force of momentum and store power to return the truck to central position by gravity, the resistance incident to the construction serving to hold the head steady on a straight track in the case of a locomotive. Being inclosed, the rollers are protected from dust and may be readily kept lubricated.

Figure 1 is a plan of my improved center-pin with the cap or upper section removed. Fig. 2 is a vertical longitudinal section of the same complete, showing, by full and dotted lines, the normal positions of the parts and those they assume in turning a sharp curve. Fig. 3 is a vertical transverse section.

Like reference letters indicate corresponding parts in the several figures.

A represents an ordinary female center-pin. B is the base, and C the cap of a horizontally-divided male center-pin, fitted to and resting in the socket of the female part A. D D are corru-

gated rollers separating the base B and cap C of the male center-pin. *z* represents a recess formed jointly in the base B and cap C to receive the said rollers D; *yy*, a pair of longitudinal double-incline depressions in the floor of said recess; and *xx*, parallel corrugations in said depressions, and on the opposing surface of the cap C, to engage with those of the said rollers. The several parts may be cast of complete form of iron. In addition to the recesses *z* supplemental recesses *w v* are formed in the rollers D and center-pin proper or pivot, to secure lightness. The angles of the depressions *y* are so regulated as to be sufficient to keep the head of a locomotive steady on a straight track.

The respective parts may be attached to the truck and body-frame in any approved manner.

When the leading wheels of a truck having my improved center-pin enter a curve and the flanges press the outer rail, the truck is thrown laterally relatively to the body-frame, the motion being permitted by the divided center-pin and rollers or rockers, and the curve is passed with perfect freedom. When on a sharp curve the rollers assume the position indicated by dotted lines in Fig. 2. The position reached varies according to the nature of the curve. As the lateral pressure is removed by the trucks reaching straight track, the rollers return to their normal position—the lowest points in the depressions *y*—where they remain until another curve is reached.

I claim as my invention—

The improved lateral-motion center-pin herein shown and described, having a member composed of base B and cap C, separated by corrugated rollers D, and constructed with recess *z* with depressions *y* and corrugations *x* to receive the said rollers, or provided with an equivalent thereof, substantially as specified, for the purpose set forth.

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Witnesses:

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(20.)