

JOHN COOKE.

Improvement in Locomotives.

119,013.

Patented Sep. 19, 1871.

Inventor,
John Cooke
By J. D. Sedgwick

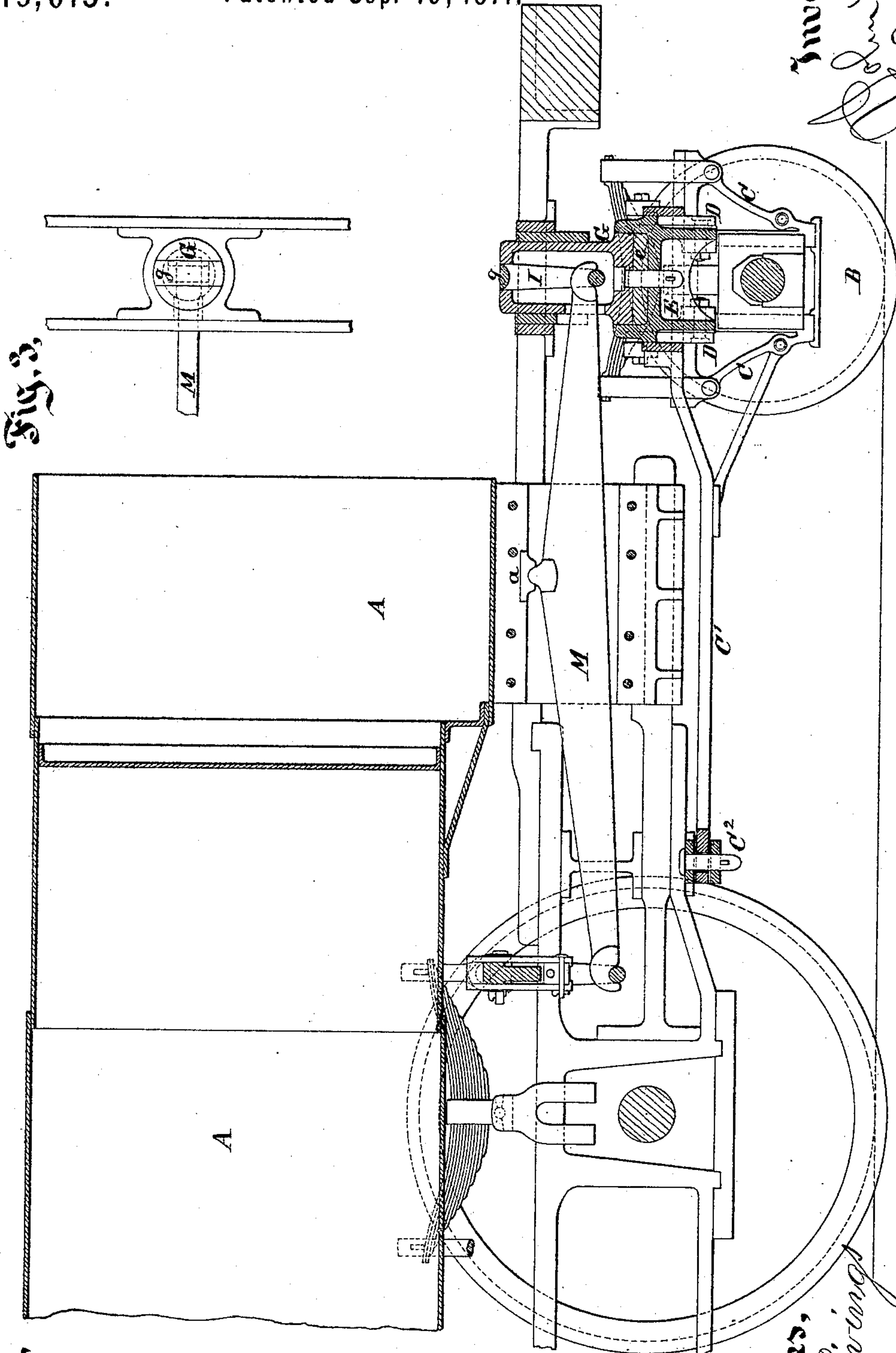


Fig. 2.

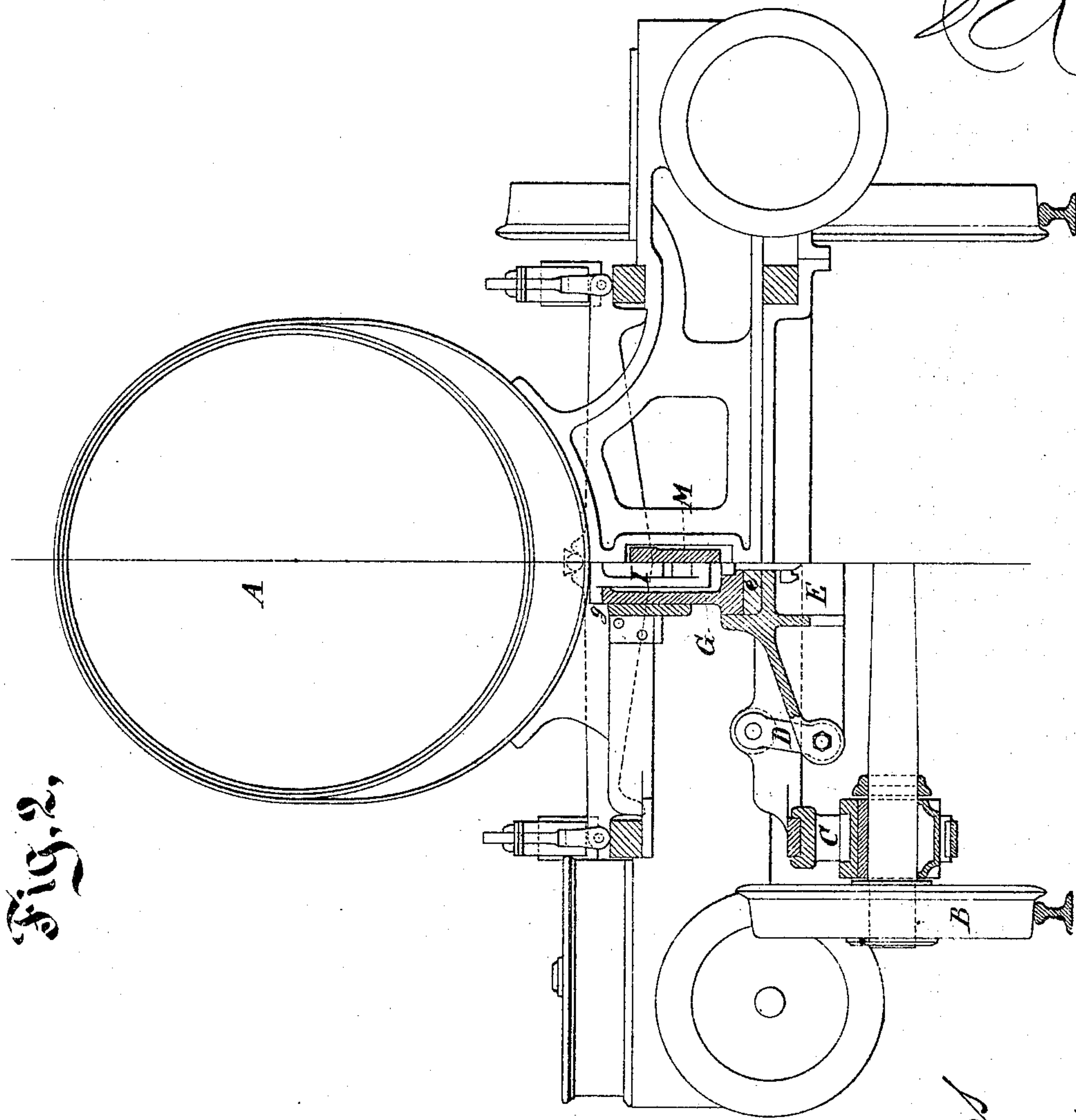
Fig. 1.

Witnesses,
C. C. Savings
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Witness
A. J. Johnson



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UNITED STATES PATENT OFFICE.

JOHN COOKE, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN LOCOMOTIVES.

Specification forming part of Letters Patent No. 119,013, dated September 19, 1871.

To all whom it may concern:

Be it known that I, JOHN COOKE, of Paterson, Passaic county, State of New Jersey, have invented certain new and useful Improvements in Locomotives, of which the following is a specification:

The invention relates to the construction of the bearing or pintle at the front and the parts adjacent thereto.

I make the pintle larger than usual, and provide therein a sufficient cavity to allow a pendent part or link to swing therein, being supported at the upper end by a cross-bolt. A longitudinal equalizing-lever, which extends along the central line of this part of the locomotive, enters through a large mortise or rectangular opening in the back side of the enlarged pintle and bears upon this link. The bearing is free to swing to adjust itself, in the first place, to the easiest position of the parts, and afterward to allow for the slight rocking or tilting of the lever as the locomotive passes over inequalities in the road.

I will proceed to describe what I consider the best means of carrying out the invention. The accompanying drawing forms a part of this specification.

Figure 1 is a central longitudinal section through the front end of the locomotive. Fig. 2 is a front elevation, partially in cross-section; and Fig. 3 is a plan view of a portion.

The drawing represents the novel parts, with so much of the other parts as is necessary to indicate their relations thereto.

A is the boiler, smoke-box, frame, and other fixed parts of the locomotive; and *a* a saddle, which forms the bearing by which the weight of the forward end is transmitted to a single longitudinal equalizing-lever, M, which stands and rocks slightly in a capacious mortise or cavity formed in the castings at that point and bearing on a cross-equalizer at the back end, which is supported on the springs of the forward drivers, as will be readily understood. The single pair of small supporting-wheels B at the front are mounted in a frame-work, C, which is swiveled to a point in the fixed frame-work by means of a long rigid arm or tail, C¹, which connects it to the fixed center C². The whole forms what is known quite generally as a Bissell truck, or, perhaps, more exactly as a half Bissell. The links

D, by which the truck is made to bear its due proportion of the weight, and is allowed to move to the right or left in traversing curves, are described in patents as improvements on the Bissell, and will be readily understood by those accustomed to locomotives of this class. These parts, as also the saddle or casting E, which turns or swivels with the truck without moving laterally, the bed *e*, preferably of vulcanized India rubber, on which the pintle bears, and the parts adjacent to the pintle above, may be all of the ordinary or any suitable construction; but it is important that they allow for a sufficient size of the pintle to accommodate the swinging link in its interior. The pintle G is of a size somewhat larger than usual. It is nicely fitted on its exterior to swivel slightly around as the truck turns in its movements to one side or the other on the truck. It is cast hollow, as represented, and with a rectangular opening in its rear face, in which opening the front end of the equalizing-lever M is introduced. The top or upper face of the pintle is formed with suitable cavities to properly support the cross-bolt *g* or corresponding arms forged in one with the rectangular strap or link I, which receives the entire load of the front end of the lever M and swings freely to a sufficient extent to accommodate its motion.

In the applying of the parts together, and in the subsequent loading or changing of the several forces which affect the locomotive, the link I is free to swing forward or backward within the limited space provided in the hollow pintle G, and its bearing is always exactly central in the recesses provided at the top. When in active use on a road with ordinary or extraordinary irregularities in the track, the lever M tilts irregularly to small extent constantly. The link G swings as required to allow these motions.

I claim—

The link I, mounted within the hollow pintle G in the center of the front of the locomotive, and supporting the equalizer M and allowing it to swing while always bearing in the center of the pintle, as herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

JOHN COOKE.

Witnesses:

THOMAS D. STETSON,
C. C. LIVINGS.