

No. 622,425.

Patented Apr. 4, 1899.

P. J. HALLORAN.
REVERSING LINK FOR ENGINES.

(Application filed Mar. 30, 1898.)

(No Model.)

Fig. 1.

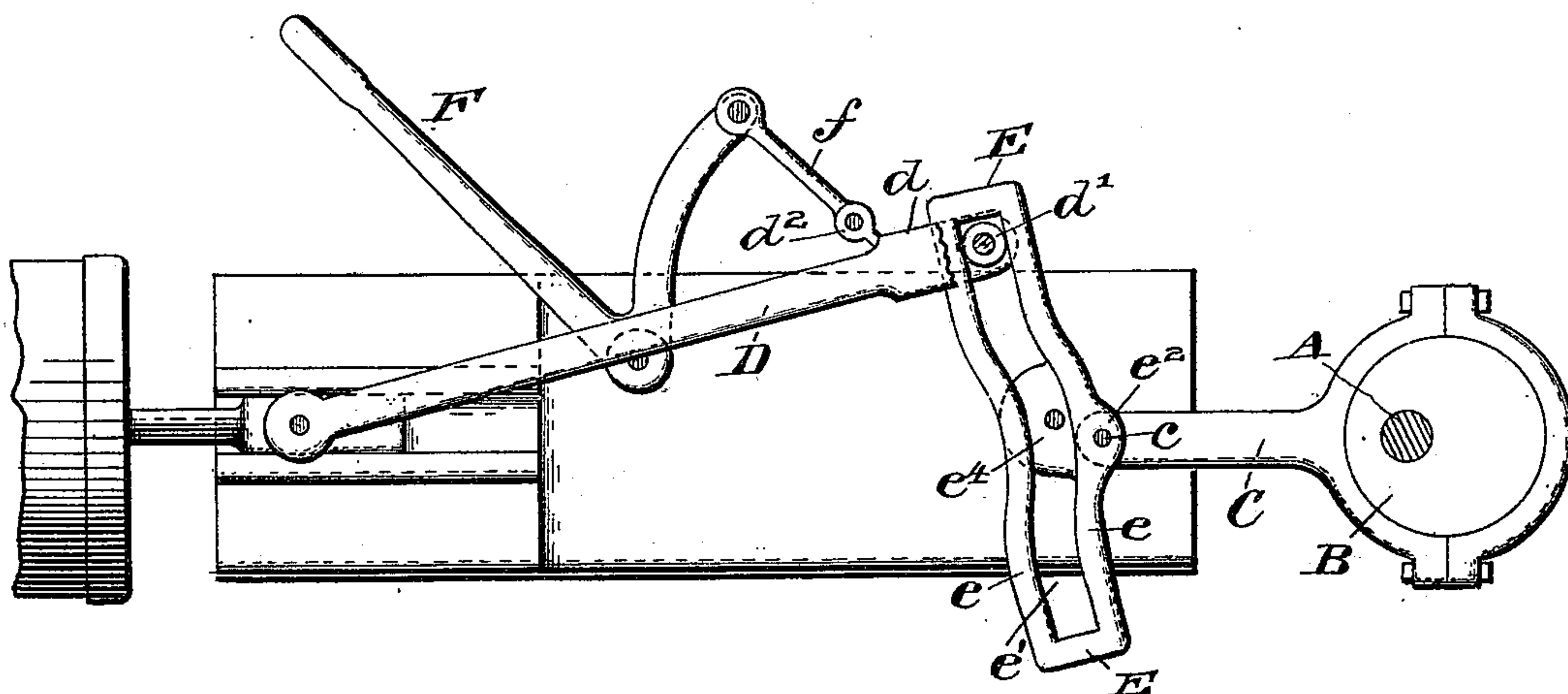
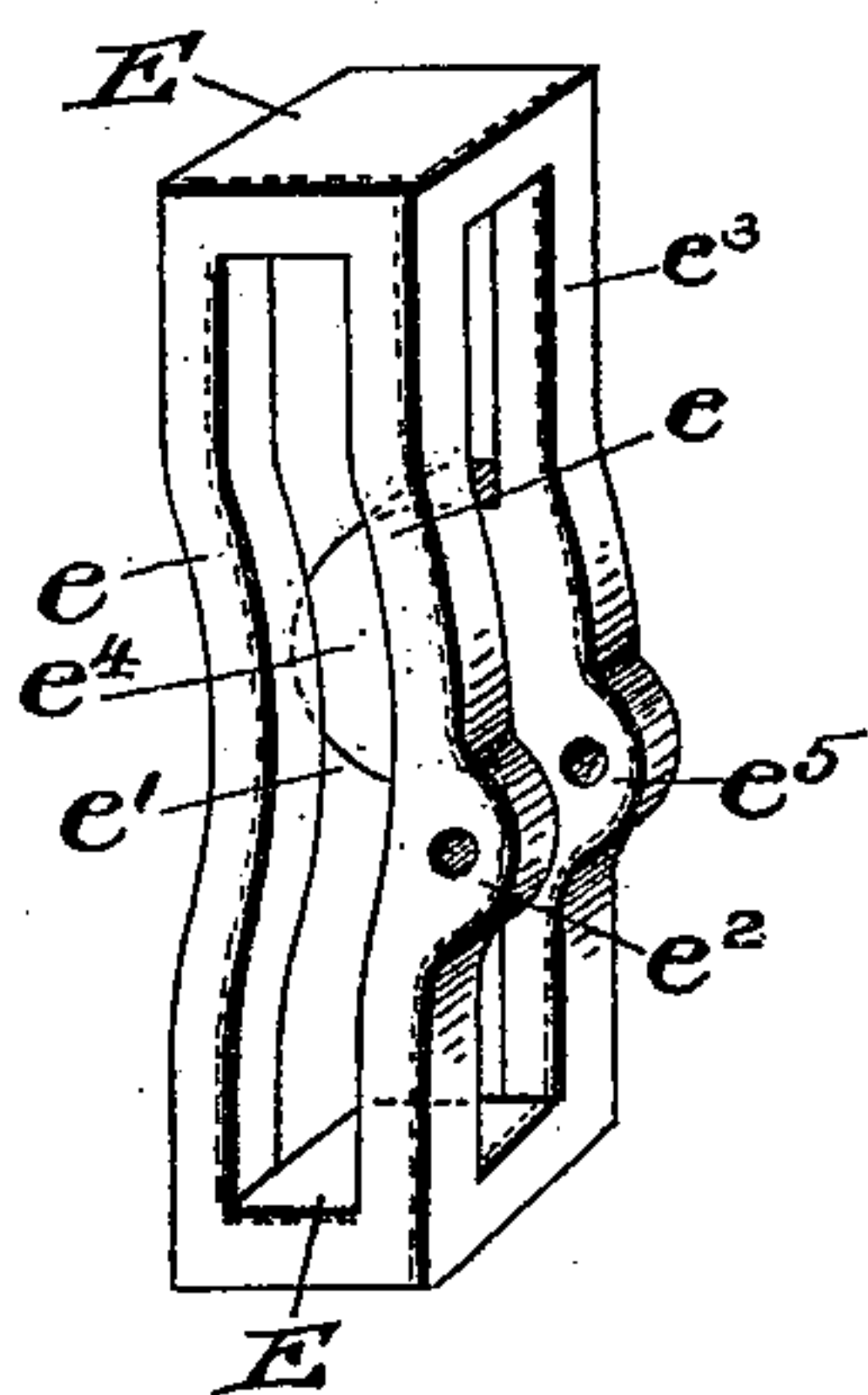


Fig. 2.



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PATRICK J. HALLORAN, OF OIL CITY, PENNSYLVANIA.

REVERSING-LINK FOR ENGINES.

SPECIFICATION forming part of Letters Patent No. 622,425, dated April 4, 1899.

Application filed March 30, 1898. Serial No. 675,753. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. HALLORAN, a citizen of the United States, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented a certain new and useful Improvement in Reversing-Links for Engines, of which the following is a specification.

My invention relates to links and reversing-rods in engines, and has for its object to provide a simple, cheap, but durable link with which only one eccentric and one eccentric-rod are necessary. This object I accomplish in the manner and by the means hereinafter fully described in detail, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which like reference-letters indicate like parts in both figures.

Figure 1 is a front elevation of my invention. Fig. 2 is a perspective view of the link.

A represents the axle; B, the eccentric; C, the eccentric-rod, and D the valve-rod.

My invention consists of two square plates E, of suitable material, preferably steel, connected in front by two straps *e*, having an open space *e'* between them, the straps *e* curved slightly backward in the center and the rear strap *e* having on its rear side, a little to one side of the center, a perforated lug *e*². The plates E are joined at their inward rear corners by a strap *e*³, which has projecting toward the front, at its center, a circular perforated lug *e*⁴ and toward the rear, on a line with lug *e*², a perforated lug *e*⁵. The end of the eccentric-rod C is inserted between the lugs *e*² and *e*⁵ and a bolt *c* passed through said lugs *e*² and *e*⁵ and the end of said eccentric-rod C and pivotally secured there. The end of the valve-rod D is forked and the fork *d* put over the front strap *e* and a roller *d'* pivotally secured between the ends of said fork *d* inside said strap *e*. To the upper side of the valve-rod D, just at the crown of the fork *d*, an eye *d*² is placed, to which eye *d*² the reversing-lever F is pivotally attached. The reversing-lever F may be a bell-crank lever mounted in such a manner that one arm may be connected by the arm *f* to the eye *d*² and the other arm of the bell-crank lever placed so that the engineer can operate it.

The operation of my invention is as follows: The one eccentric-rod C imparts an oscilla-

tory motion to the link formed of plates E, straps *e* and *e*³, which is secured to the bed-plate through the lug *e*⁴ and which operates a slide-valve through the valve-rod D, and to reverse or regulate the valve movements the valve-rod D is slid along the front strap *e*.

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

1. A link having square projecting ends, an arm connecting said ends, said arm provided with a perforated lug outside the center in line with a similar lug on one side said link, said lugs adapted to receive the end of the eccentric-rod, and means for securing said link to the bed-plate, substantially as shown and described.

2. In an engine, a link having square projecting ends, an arm connecting said ends and provided at the center with a perforated lug through which said link is secured to the bed-plate, an eccentric, an eccentric-rod pivotally secured outside the center in the slot between said arm and one side of said link, a valve-rod sliding in said link, and a reversing-lever pivotally connected with an eye in the end of the valve-rod just outside the link, substantially as shown and described.

3. In combination with an eccentric, eccentric-rod and valve-rod, a link having square projecting ends, an arm connecting said ends, said arm provided at the center with a perforated lug adapted for fastening said link to the bed-plate, and means for pivotally securing said eccentric-rod outside the center between said arm and said link, substantially as shown and described.

4. In an engine, a link having square projecting ends, an arm connecting said ends provided at its center with a perforated lug, an eccentric, an eccentric-rod pivotally secured outside the center between said arm and said link, a valve-rod sliding in said link and a reversing-lever pivotally connected with an eye in the end of the valve-rod just outside the slot, substantially as shown and described.

In testimony whereof I hereto affix my signature in the presence of two witnesses.

PATRICK J. HALLORAN.

Witnesses:

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