

(No Model.)

A. E. PARSONS.
CONNECTION FOR STEAM ENGINES.

No. 454,814.

Patented June 23, 1891.

Fig 1.

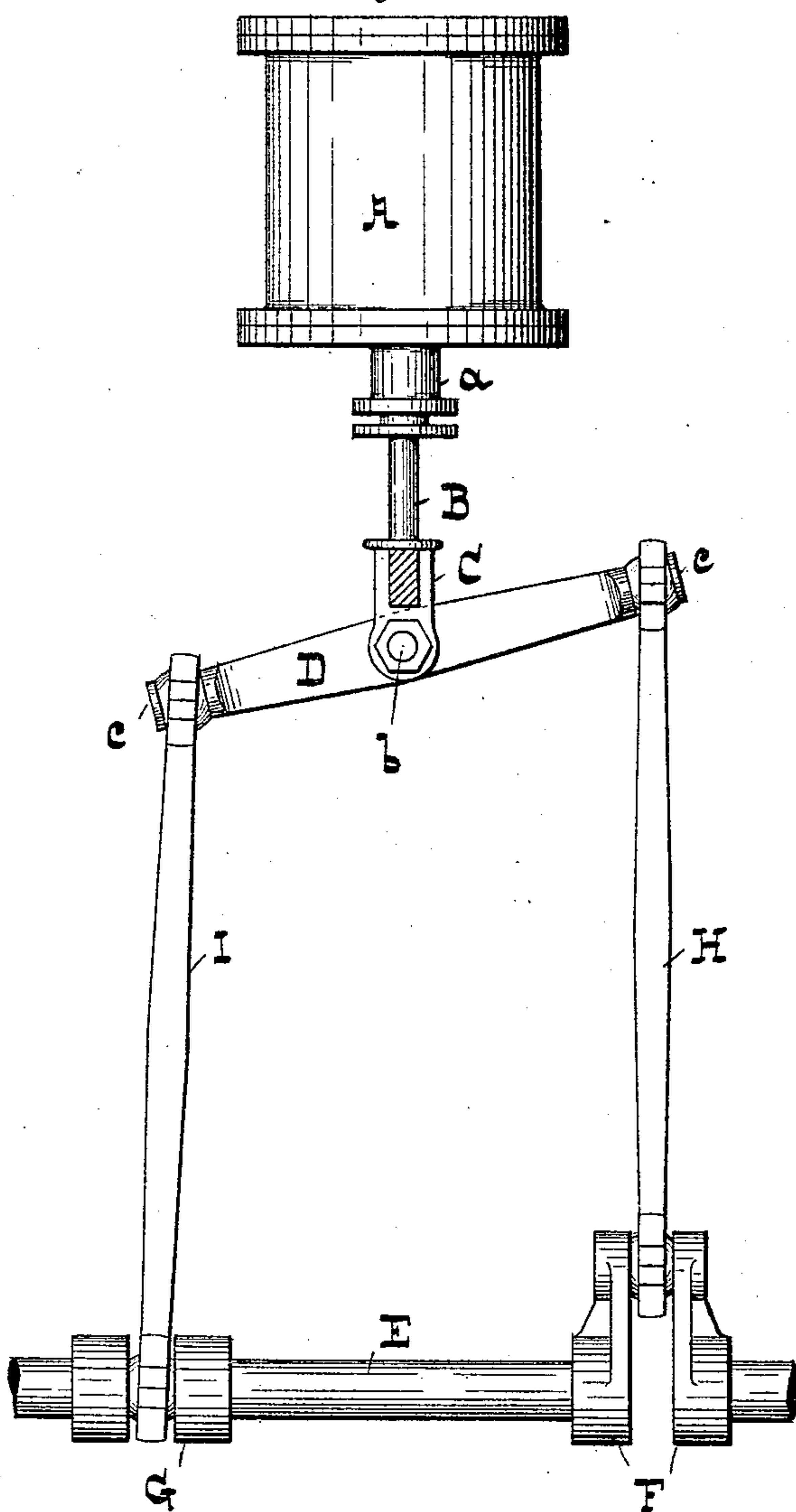
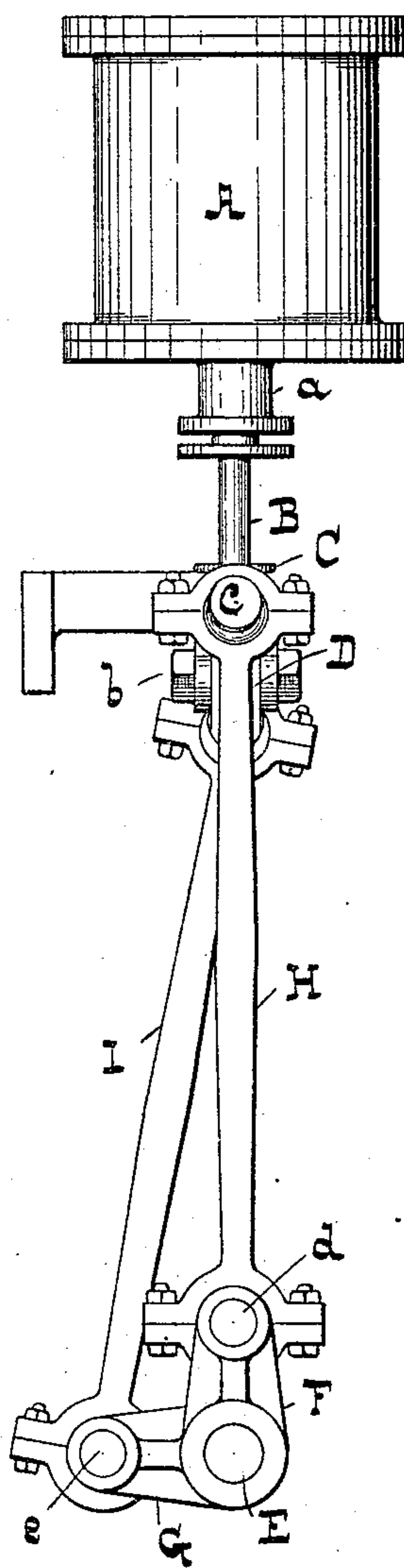


Fig 2.



- WITNESSES -

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-INVENTOR-

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UNITED STATES PATENT OFFICE.

AMBROSE EVERETT PARSONS, OF NEW BERNE, NORTH CAROLINA, ASSIGNOR
OF ONE-HALF TO CHARLES R. F. EDWARDS, OF SAME PLACE.

CONNECTION FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 454,814, dated June 23, 1891.

Application filed July 31, 1890. Serial No. 360,466. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE EVERETT PARSONS, of the city of New Berne, in the county of Craven and State of North Carolina, have
5 invented certain Improvements in Connections for Steam-Engines, of which the following is a specification.

The object of this invention is to obviate the dead-centers in a single-cylinder engine;
10 and it consists in employing, with a single cylinder, a double crank-shaft with its cranks at a right angle and in attaching to the cross-head a pivoted rocker or beam and connecting the ends of the said rocker to the crank-
15 pins by means of rods having universal or knuckle joints.

In the further description of the said invention which follows reference is made to the accompanying drawings, forming a part here-
20 of, and in which—

Figure 1 is a partly-sectional side view of the elements of the engine above alluded to, and Fig. 2 an end view of the same.

Similar letters of reference indicate similar
25 parts in both figures.

In the said drawings, A is a steam-cylinder, and B the piston-rod, which passes through a stuffing-box *a*.

C is a cross-head, into which the lower end
30 of the piston-rod is secured. The ends of the cross-head are adapted to bear against suitable guides, which, together with the frame of the engine which supports them, are not shown.

D is the rocker or beam pivoted to the cross- 35 head C by means of a bolt *b*. The ends of the rocker terminate in pins *c*.

E is a double crank-shaft, the cranks of which are denoted by F and G. The rocker is directly over the shaft E and extends lon- 40 gitudinally of it. In other words, in the vibration of the rocker its ends are all times over the shaft.

The crank-pins *d* and *e* are connected to the pins *c* of the rocker by means of rods H and 45 I, and the boxes are of the universal-joint description in order that the rods may vibrate in different directions. Through the medium of the pivoted rocker one crank will help the other over the dead-center, and any irregular- 50 ity in motion will be taken up by the vibrating rocker.

I claim as my invention—

In combination with a steam-cylinder and a shaft having two cranks, a cross-head, a 55 rocker pivoted within the said cross-head, extending longitudinally of the said shaft, and connecting-rods with ball-joints at both ends, which unite the said cranks with the ends of the said rocker, substantially as and for the 60 purpose specified.

AMBROSE EVERETT PARSONS.

Witnesses:

JNO. T. MADDOX,
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