

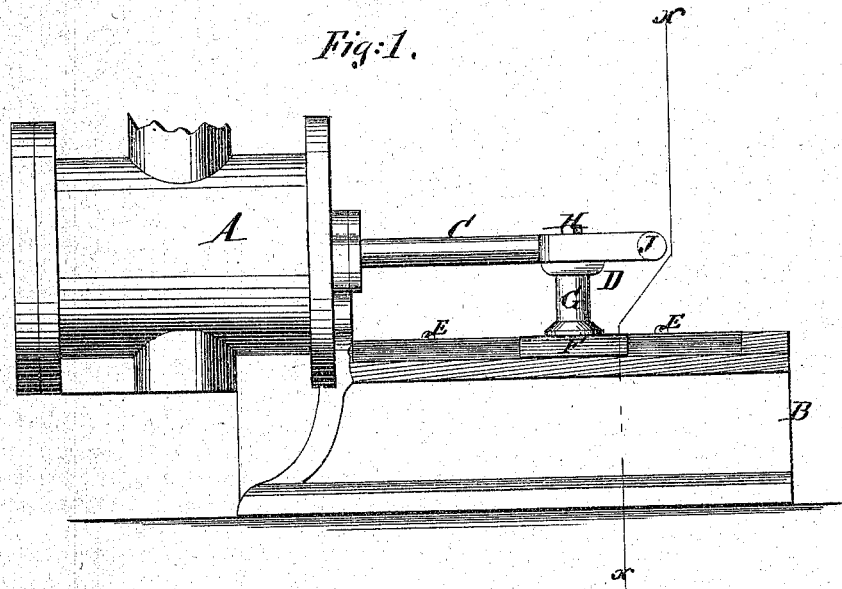
P. L. WEIMER.

Improvement in Steam Engines.

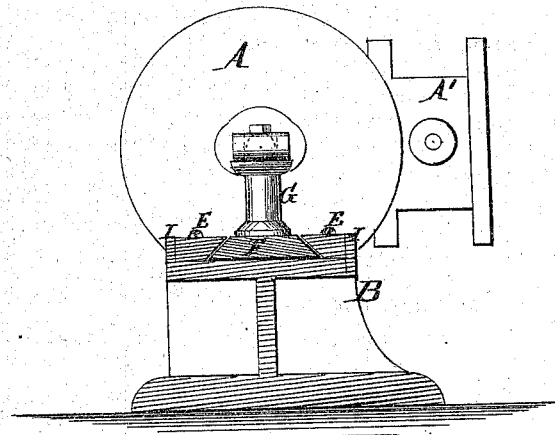
No. 115,400.

Patented May 30, 1871.

*Fig:1.*



*Fig:2.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

PETER L. WEIMER, OF LEBANON, PENNSYLVANIA, ASSIGNOR TO HIMSELF  
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## IMPROVEMENT IN STEAM-ENGINES.

Specification forming part of Letters Patent No. 115,400, dated May 30, 1871.

*To all whom it may concern:*

Be it known that I, PETER L. WEIMER, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Improvement in Steam-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification.

This invention relates to a new and useful improvement in reciprocating steam-engines; and consists in the cross-head, and in guides, and the combination and arrangement of part of the engine, as hereinafter described.

In the accompanying drawing, Figure 1 represents a side elevation of the engine, shown partly in section. Fig. 2 is a vertical cross-section taken on the line *xx* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the cylinder; A', the steam-chest; B, the bed, to the end of which the front end of the cylinder is attached. The cylinder projects back from the end of the bed, but is supported by a strong rib which extends from the center of the bed, as seen in Fig. 1. C is the piston-rod. D is the cross-head. E E are the guides. The cross-head rests on the bed, which is planed true to correspond with the cylinder and line of motion. The guides are adjustably at-

tached to the bed and confine the cross-head laterally to the central line. The cross-head consists of the bed-piece or slide F and the stud G. The piston-rod rests upon the top of the stud, where it is fastened by the bolt H, and may be adjusted vertically by means of paper or other thin material placed beneath it. Wear may thus be compensated for. The guides are confined within the flanges I I of the bed, and wear may be compensated by introducing thin strips of paper or other material between the flanges and the back of the guides. The connecting-rod from the crank of the main shaft is attached to the end of the piston-rod direct. J is the wrist for that purpose.

By this arrangement the wearing-surfaces are kept properly lubricated with perfect ease, the cross-head is kept in line, and the construction of the steam-engine greatly simplified.

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

1. The cross-head D and guides E E, constructed, arranged, and applied together, as and for the purpose specified.

2. The arrangement of the bed B, cylinder A, cross-head D, guides E E, piston-rod C, (with the wrist J,) substantially as and for the purposes described.

Witnesses: PETER L. WEIMER.  
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