S. W. PUTNAM.

ENGINE FRAME.

No. 191,716. Patented June 5, 1877.

Fig. 1.

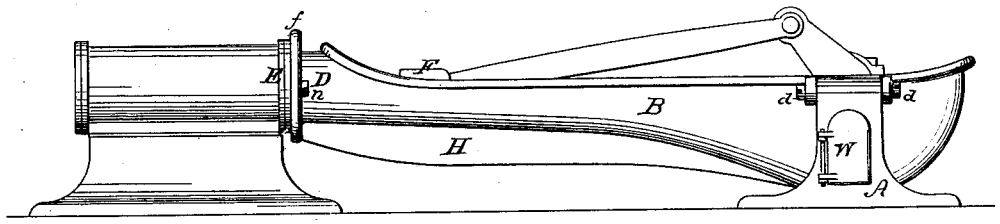


Fig. 2.

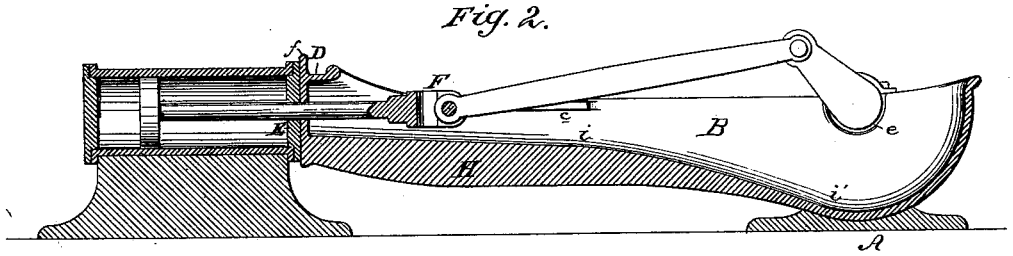
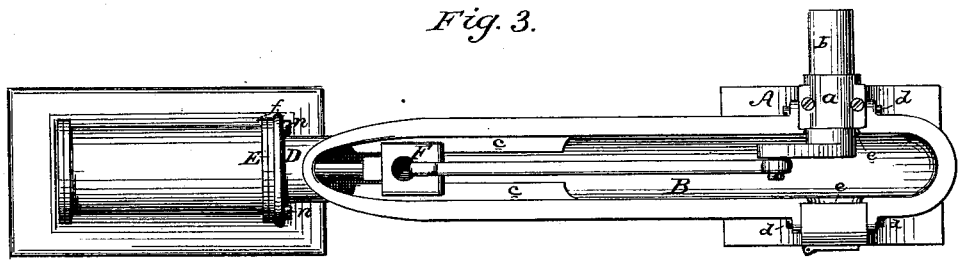


Fig. 3.



Witnesses.

Clarence Poole

A. H. Evans 88

Inventor:

S. W. Putnam

per atty.

A. H. Evans & Co.

UNITED STATES PATENT OFFICE.

SALMON W. PUTNAM, OF FITCHBURG, MASSACHUSETTS.

IMPROVEMENT IN ENGINE-FRAMES.

Specification forming part of Letters Patent No. **191,716**, dated June 5, 1877; application filed February 2, 1877.

To all whom it may concern:

Be it known that I, SALMON W. PUTNAM, of Fitchburg, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Steam-Engine Frames; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a longitudinal vertical section. Fig. 3 is a plan view.

My invention relates to that class of reversible engine-frames in which provision is made to prevent the drip-oil from the lubricated points from falling to the floor by means of casting the frame of a trough shape, having a low point beneath the crank into which the drip-oil settles.

My invention consists of a trough-shaped frame, made in one continuous piece, and provided with a strengthening-rib, in combination with a reversible pedestal, having its bottom cast to conform to the trough shape of the frame, all as hereinafter fully described.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the crank-pedestal, cast with a bearing, *a*, for the shaft *b* in such a way as to be reversed readily to run a right or left hand engine, and having its bottom cast so as to conform to the shape of an extension-trough, B, provided with bearings *c c* for the cross-head and bolt-holes for bolts *d d* to secure it to the pedestal. The said trough has on one or each side curved depressions *e e*, corresponding in conformation to the bearing *a*, so that whichever side the bearing is placed the trough accommodates itself to that position.

Beneath the crank the trough is made with a heavy descending curve on the line *i i*, to afford space for the operation of the crank and connecting-rod. At the end toward the cylinder the trough terminates in a short cylindrical portion, D, provided with a flange, *f*, through which pass bolts *n n* to attach it to the cylinder-head E, the piston-rod passing through the cylindrical portion D to the cross-head F.

In order to strengthen the trough B against the ordinary working strain, or any winding and twisting caused by an uneven foundation, I cast on it a longitudinal rib, H, on its lower side in a longitudinal central line. This rib may extend all the way from the lowest depression on the curve *i i* up to the point where the trough joins the cylinder.

I prefer to make the projections on each side of the pedestal the same size, which gives ample room on the side opposite the shaft-bearing for a locker, W, in which can be kept waste, &c.

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

The trough-shaped frame B, made in one continuous piece, and provided with the strengthening-rib H, in combination with the reversible pedestal A, having its bottom cast to conform to the trough shape of the frame, as and for the purpose set forth.

SALMON W. PUTNAM.

Witnesses:
H. J. HARRINGTON,
GEORGE A. WILSON.