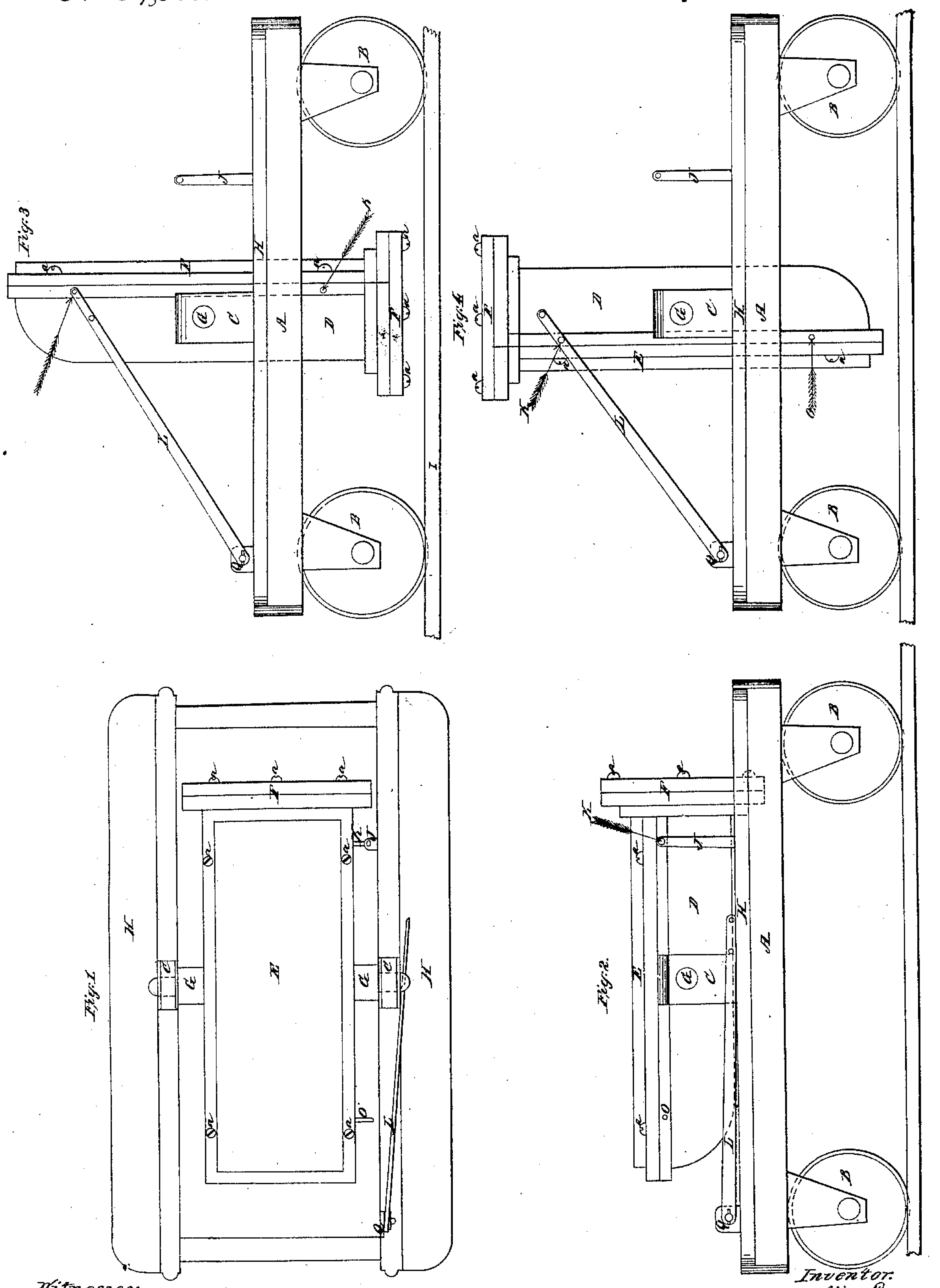
A. Pevey,

Casting Gas Retorts, &c.

No. 34,980. Patented Apr. 15, 1862.



Witnesses:

Inventor:
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UNITED STATES PATENT OFFICE.

ABIEL PEVEY, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN CASTING GAS-RETORTS.

Specification forming part of Letters Patent No. **34,980,** dated April 15, 1862.

To all whom it may concern:

Be it known that I, ABIEL PEVEY, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Casting Gas-Retorts or Locomotive-Flasks; and I hereby declare that the following specification, in connection with the accompanying drawings and references thereon, constitutes a lucid, clear, and exact description of the construction and use of the same.

In referring to the said drawings, Figure 1 denotes a plan or top view; Fig. 2, a side elevation of the same with the flask horizontal or in position for loaming; Fig. 3, an elevation of the same with top of flask downward over a furnace for drying the mold; Fig. 4, an elevation with top or mouth of flask up to receive the core and then the melted iron for the retort or casting.

The nature of my invention of locomotive-flask consists in constructing the flask, substantially as described, with trunnions at or near its center of weight, and mounting this flask by its trunnions upon stands fixed to a truck-frame in order that the flask may have revolving motion, so as to turn a complete revolution on its trunnions, and at the same time have locomotion by means of the truck on which it is mounted, so that the entire work of making and drying the mold, setting the core, pouring and removing the casting may be performed while the flask is so mounted, thus constituting it a locomotive-flask, all as will be hereinafter seen.

To enable persons skilled in the art to which my invention appertains to construct and carry out my invention, I will proceed to describe it as follows:

I construct a carriage or truck frame, (seen at A,) the trucks of which are seen at B, and which run on tracks I. To this frame I secure two stands, (seen at C.) I then construct the retort-flask (seen at D) of cast-iron, and which is necessarily very heavy, and its cover E and cap F also of cast-iron, both being secured to the main part of the flask D by screw-bolts *a*. The flask D has two trunnions constructed on it, one on either side of it, positioned as seen in the drawings. These trunnions are fitted to stands C, erected on carriage, so as to freely turn and make complete revolutions therein. It is necessary to secure the flask in the various positions given it in forming the mold, drying it, setting the core, and pouring and removing the retort or casting after being poured. To effect this object I construct an arm, J, the lower end of which is secured to the inside of frame A, its upper end being perforated to receive pin K, which projects from the flask, and thus hold it in a horizontal position (seen at Fig. 2) for loaming. I also construct a brace (seen at L) hinged to the carriage A by stand Q, while its upper end will slide upon pin K, projecting from flask, to hold the top end of the flask up, as seen at Fig. 4, for setting the core and pouring, or to hold this same top end down for drying the mold by being slipped upon pin O, projecting from flask, as seen at Fig. 3. A platform, H, is secured to the top of frame A, on which the workmen stand to make the mold. It will be seen that by my invention the flask, when very heavy, can be easily and definitely moved to and secured in any desired position. This expedites the work, reduces the labor necessary in the old way of handling heavy flasks by cranes and tackle-blocks, besides producing more perfect casting by not subjecting the flask to jolts and jars in turning over, as in the old way.

The positions seen at Figs. 1 and 2 show the flask ready for loaming and forming the mold. Fig. 3 shows the flask with its top end over a furnace (not shown) to be dried, and Fig. 4 with the top end of flask up ready for setting of core and pouring of the casting, the flask being held in all these positions by arm J, pin K, brace L, and pin O. When the casting is poured and sufficiently cool, the cover E and cap F are unbolted and removed from the flask. Then it is tipped or revolved a few degrees and the casting drops out. Then the flask can be revolved into position (seen at Figs. 1 and 2) and moved from the hot casting by moving the truck-frame on which it is mounted, and then a new mold can be proceeded with at once, and so on indefinitely.

I claim—

The flask constructed as described, when combined with the carriage or truck, and its arm J and brace L, pins K and O, or their equivalents, in the manner described, for giving all the required movements and positions to the flask with the greatest ease and precision, for the purposes fully set forth.

ABIEL PEVEY.

Witnesses:

D. M. PARKER,

E. B. COLLINS.