No. 611,853. Patented Oct. 4, 1898.

F. O. BALL.

ENGINE.

(Application filed Jan. 8, 1898.)

(No Model.) 2 Sheets—Sheet 1.

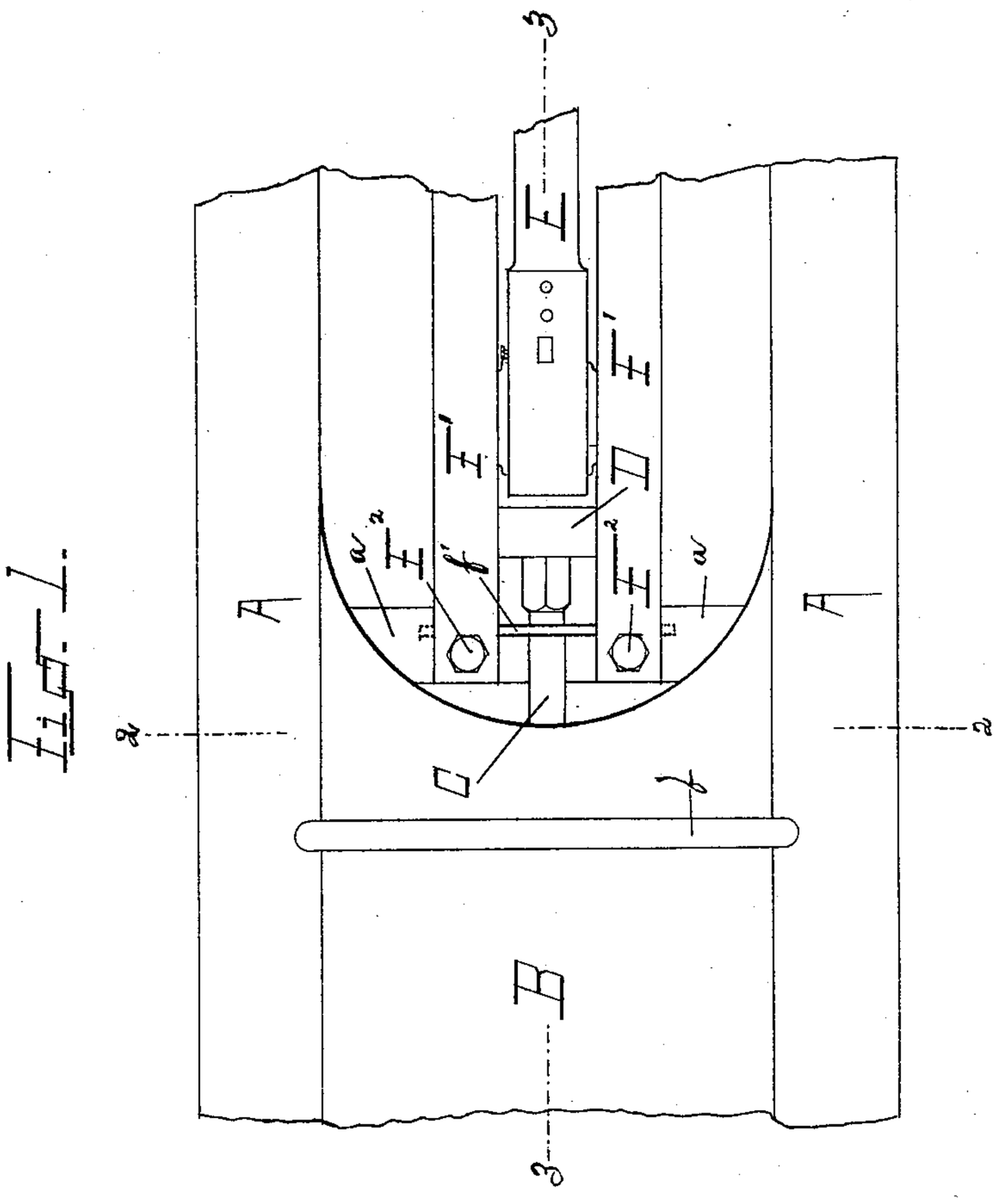

Fig. 1.

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Fig. 1.

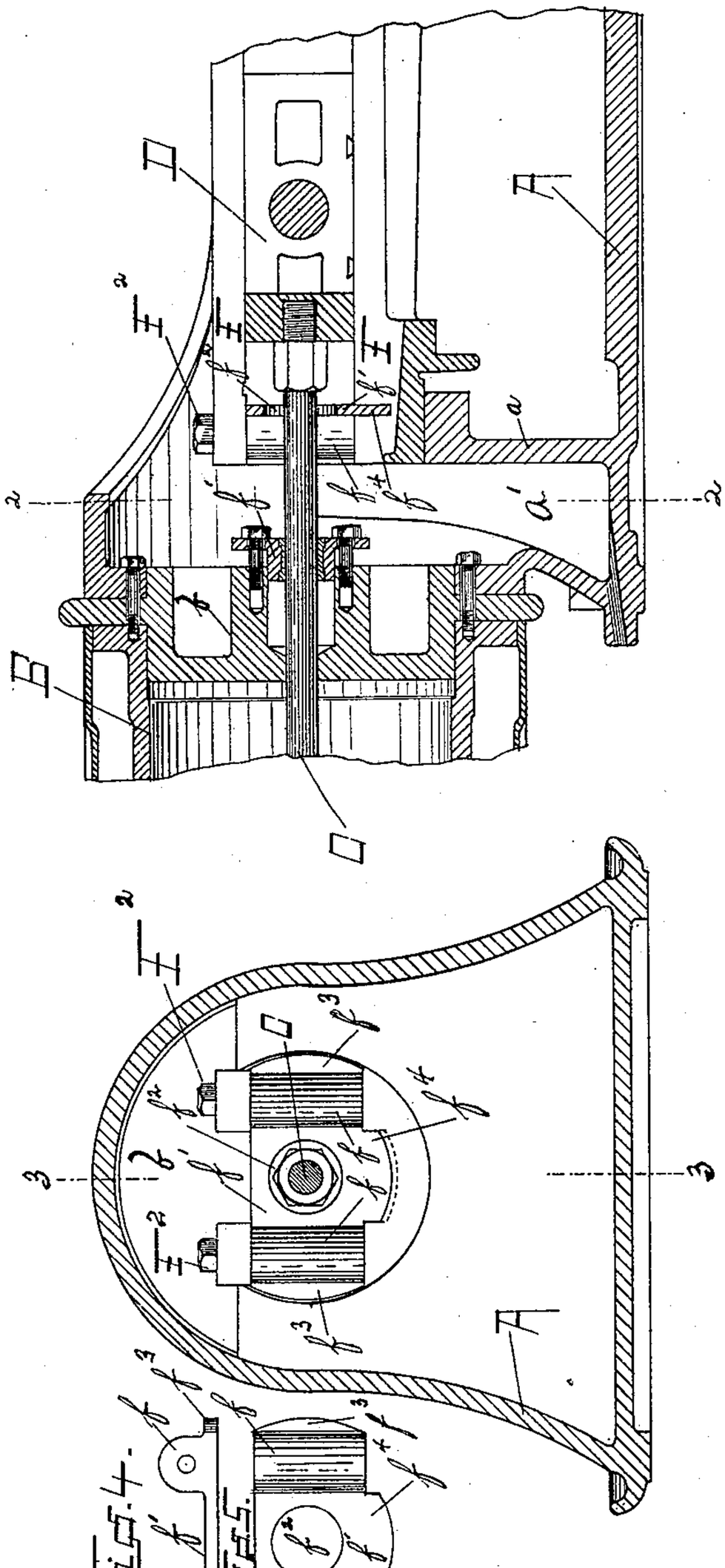

Fig. 2.

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

FREDERICK OSSIAN BALL, OF PLAINFIELD, NEW JERSEY.

ENGINE.

SPECIFICATION forming part of Letters Patent No. 611,853, dated October 4, 1898.

Application filed January 8, 1898. Serial No. 666,026. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK OSSIAN BALL, a citizen of the United States, residing at Plainfield, in the county of Somerset and State of New Jersey, have invented certain new and useful Improvements in Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to engines; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows a plan view of the part of the engine to which my invention relates. Fig. 2 shows a section on the lines 2 2 in Figs. 1 and 3. Fig. 3 shows a section on the lines 3 3 in Figs. 1 and 2. Figs. 4 and 5 are views of a removable partition, with guide-pillars, which is placed between the guides.

The drawings only show such parts of the engine as relate to my invention. The parts not shown can be readily supplied, however, by any one familiar with the art. As shown, A marks the engine-bed; B, the cylinder; *b*, the cylinder-head; C, the piston-rod; D, the cross-head; E, the pitman; F, the lower cross-head guides, and F′ the upper cross-head guides. The lower guides are placed on a bulkhead *a*, usually cast in the frame. This bulkhead usually extends upwardly at the sides of the guides, as shown in Fig. 2. The outer ends of the guides (not shown) may be arranged with any pillar-and-bolt mechanism desired. At the inner ends the pillars *f* are connected by a partition-plate *f*′. This partition-plate has the opening f^2 for the piston-rod and is preferably arranged with the extensions f^3 outside the pillars and the downwardly-projecting portion f^4, the object of which is to completely fill the space between the bulkhead *a* and the parts. The parts *f*′, f^3, and f^4 therefore form, with the bulkhead *a*, a complete partition in the engine-bed between the part *a*′ just in front of the cylinder and the outer part of the bed. The outer part of the bed is closed, as shown, and the oil from the bearings is collected in the bottom of the bed preparatory to its reconveyance to the different bearings. It is next to impossible to prevent a certain amount of drip from the stuffing-box *b*′. It is desirable to keep the oil separated from the water, and the bulkhead *a* has been employed for this purpose. I have found, however, that a considerable quantity of oil has been thrown from the different bearings into the part *a*′ and from this been carried away with the water. The partition *f*′ practically prevents this and at the same time adds rigidity to the guide-supports.

The usual guide-bolts F^2 are passed through the guides and pillars to secure the guides in place.

What I claim as new is—

1. In an engine, the combination with the frame; the cylinder; the piston-rod; the cross-head; and the cross-head guides; of guide-pillars, at the cylinder end of the guides, having a partition secured thereto and connecting said guide-pillars said partition extending between the guides and around the piston-rod.

2. In an engine, the combination with the frame having the bulkhead forming a partition in the engine-bed at the cylinder end of said bed; the cylinder; the piston-rod; the cross-head; and the cross-head guides; of guide-pillars at the cylinder end of the guides, having secured thereto and connecting said guide-pillars a partition, said partition extending between the guides and around the piston-rod.

3. In an engine, the combination with the frame; the cylinders; the piston-rod; the cross-head; and the cross-head guides; of guide-pillars, at the cylinder ends of the guides, having a partition secured thereto, and connecting said guide-pillars said partition extending outside the guides in conformity with the adjacent parts of the frame and between the guides and around the piston-rod.

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

FREDERICK OSSIAN BALL.

Witnesses:

A. M. BALL,

S. B. DAUGHERTY.