

(No Model.)

3 Sheets—Sheet 1.

W. O. WEBBER.  
PORTABLE PUMPING ENGINE.

No. 395,933.

Patented Jan. 8, 1889.

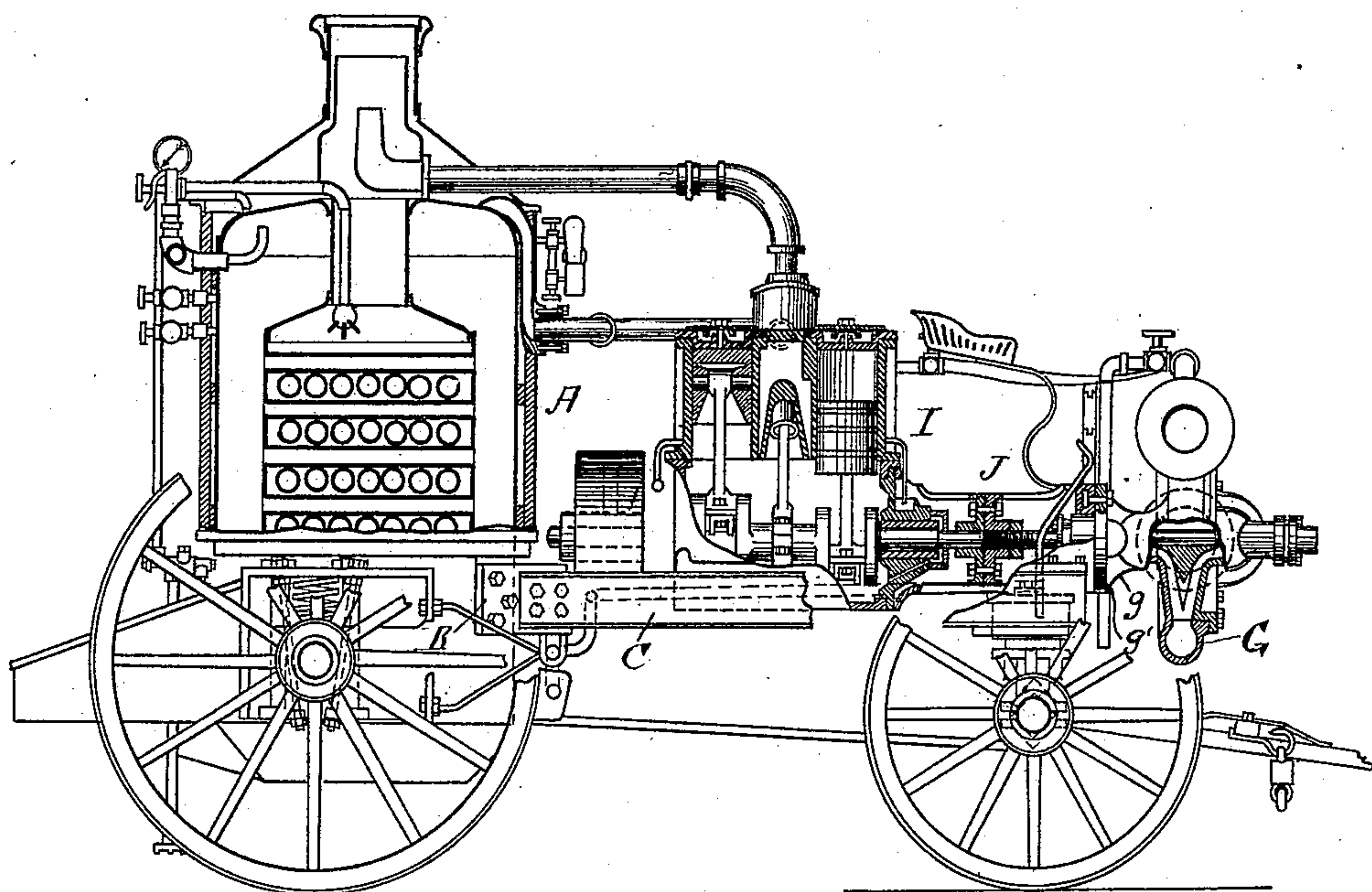


Fig. 1.

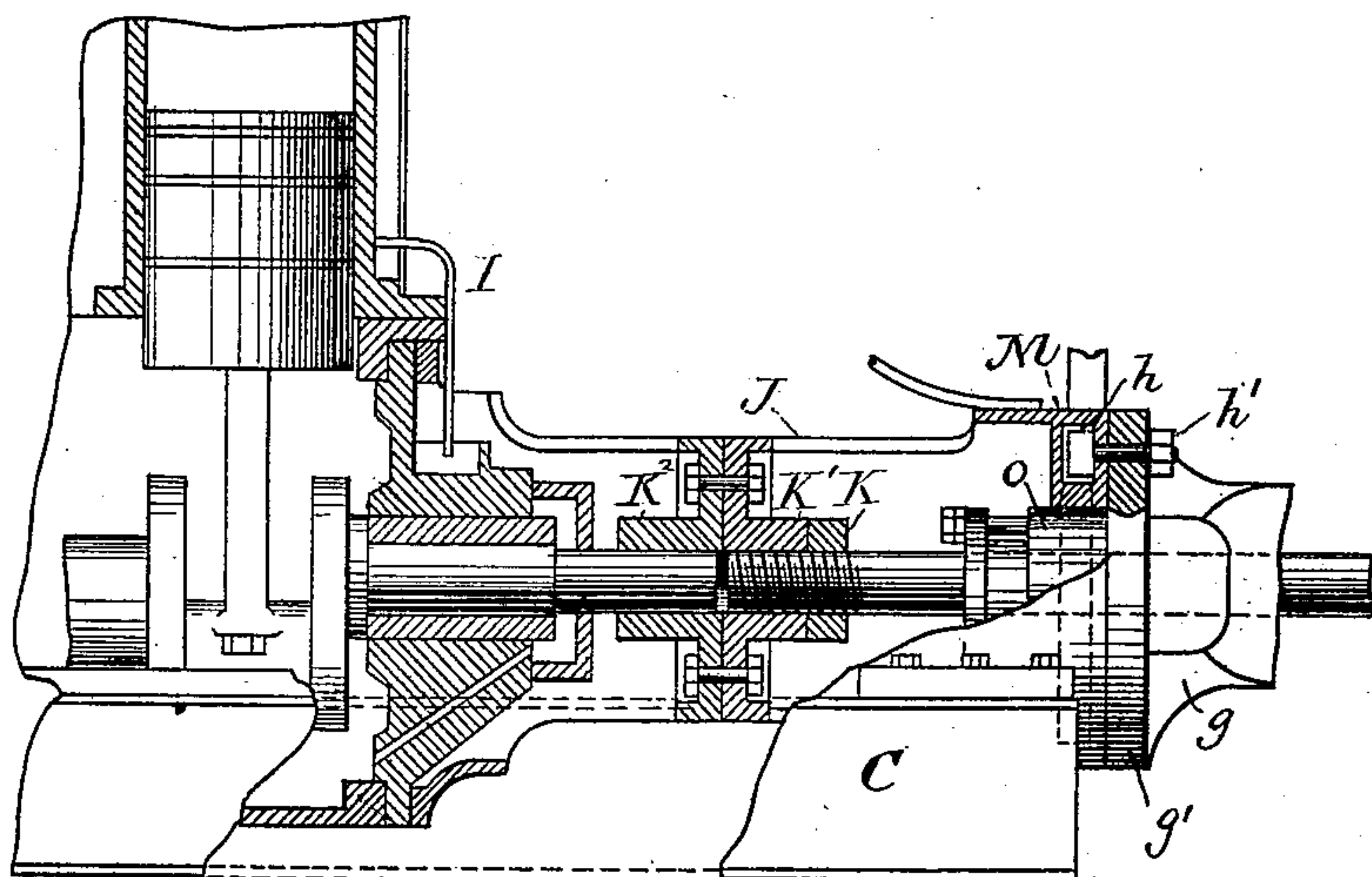


Fig. 5.

WITNESSES.

J. M. Dolan.

Fred. B. Dolan.

INVENTOR.

Wm. O. Webber

by his attorney

Charles A. Raymond.

(No Model.)

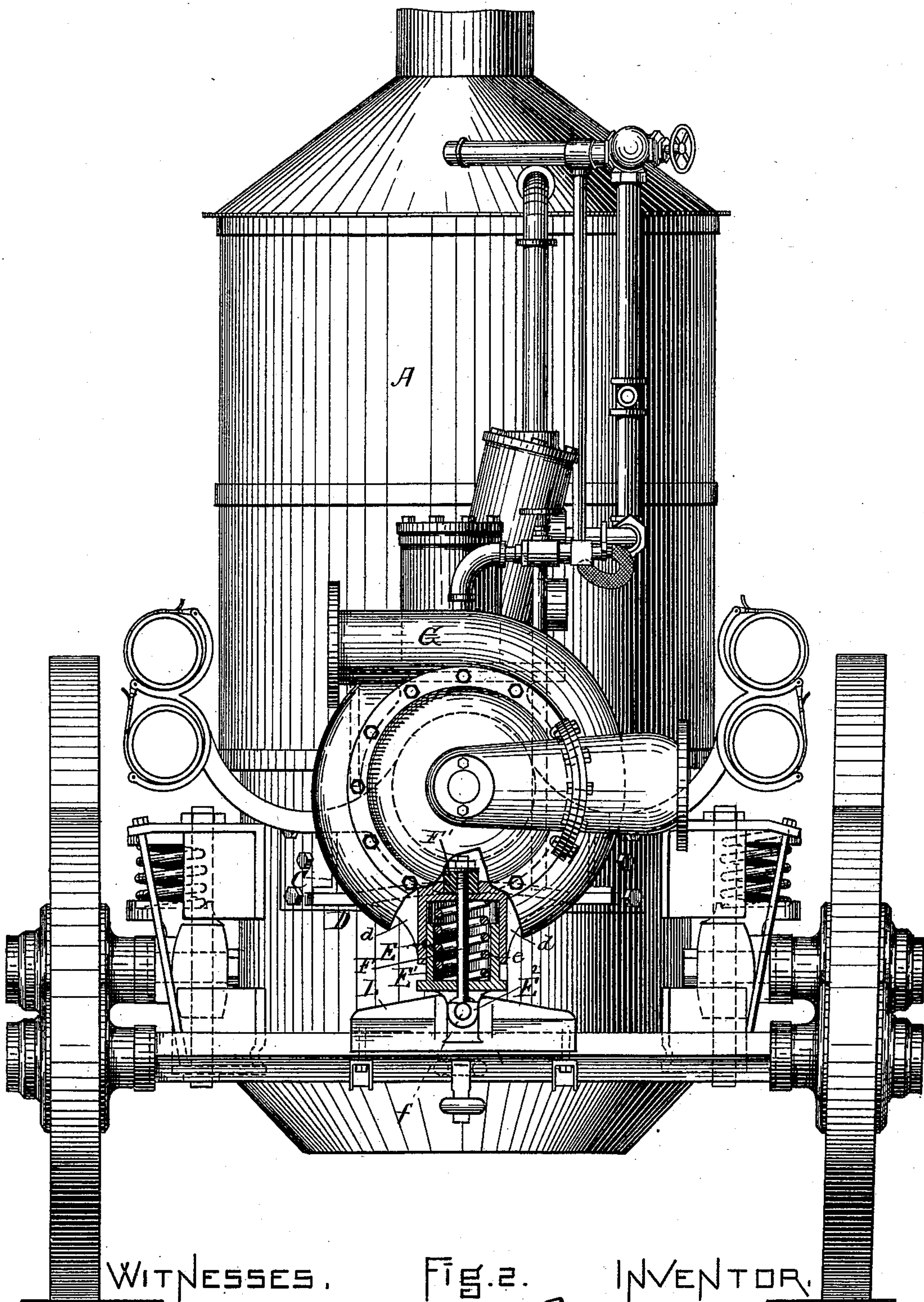
3 Sheets—Sheet 2.

W. O. WEBBER.

PORTABLE PUMPING ENGINE.

No. 395,933.

Patented Jan. 8, 1889.



WITNESSES.

FIG. 2.

INVENTOR.

J. M. Dolan.  
Fred. B. Dolan.

W. O. Webber  
by his atty Clark & Raymond.



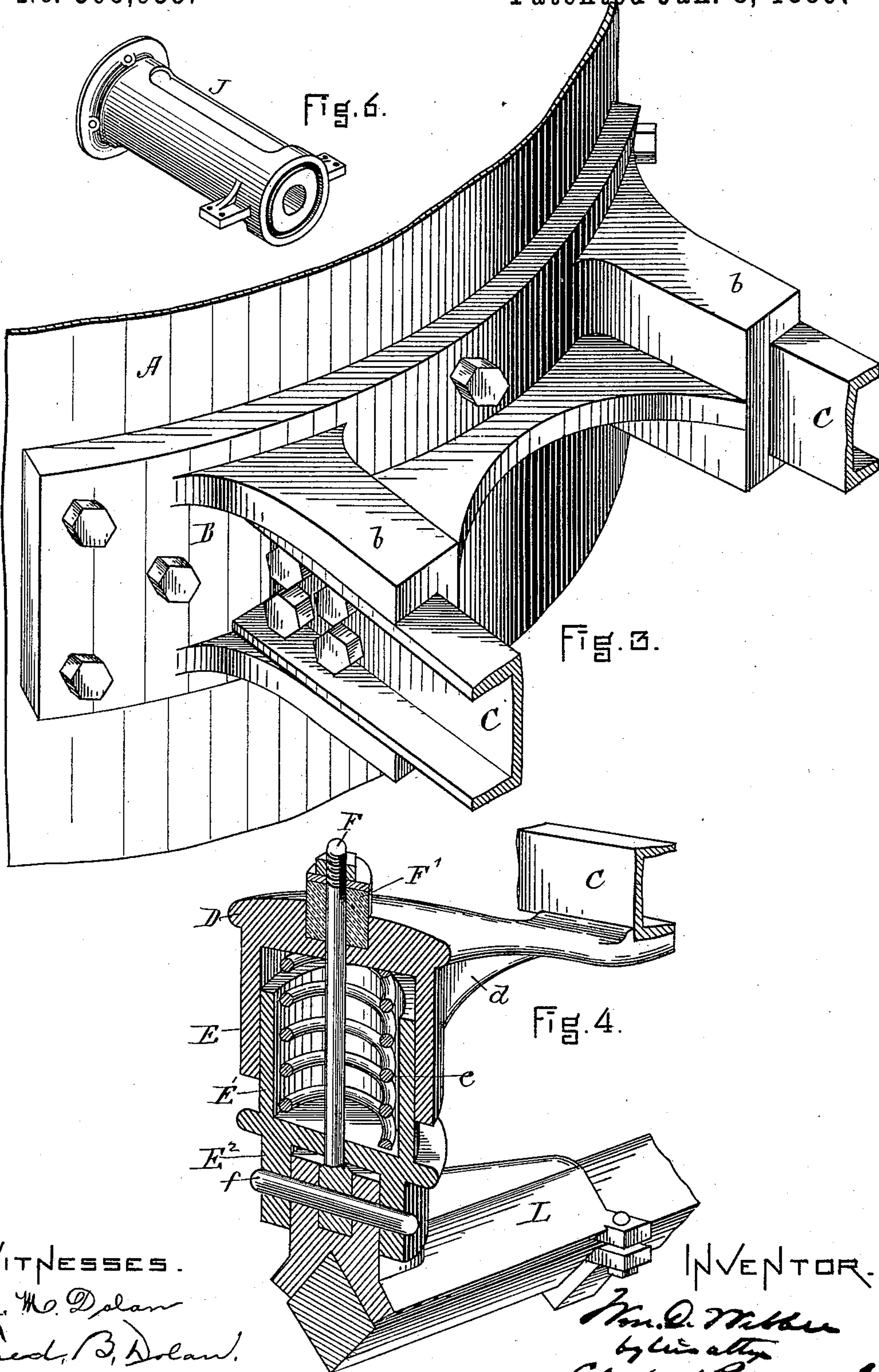
(No Model.)

3 Sheets—Sheet 3.

W. O. WEBBER.  
PORTABLE PUMPING ENGINE.

No. 395,933.

Patented Jan. 8, 1889.



WITNESSES.

J. M. Dolan  
Fred. B. Dolan.

INVENTOR.

Wm. O. Webber  
by his attys  
Clarke & Raymond.



# UNITED STATES PATENT OFFICE.

WILLIAM O. WEBBER, OF LAWRENCE, MASSACHUSETTS.

## PORTABLE PUMPING-ENGINE.

SPECIFICATION forming part of Letters Patent No. 395,933, dated January 8, 1889.

Application filed March 14, 1887. Serial No. 230,833½. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM O. WEBBER, of Lawrence, in the county of Essex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Portable Pumping-Engines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

This improvement relates to the frame of the engine, the connection of the same with the wheels, and the connection of the shell of the pump with the frame and the shaft of the pump with the shaft of the engine.

In the drawings, Figure 1 is a longitudinal vertical section of the engine to which these improvements are applied. Fig. 2 is a front elevation of the same. Fig. 3 is a detail of the saddle-piece B by which the frame of the engine is attached to the boiler. Fig. 4 is a detail of the spring-rocker by which the frame is connected with the front wheels. Fig. 5 is an enlarged view, in section, illustrating a portion of the frame of the engine and the connections between the crank and pump-shaft. Fig. 6 is a view in perspective of a portion of the neck or frame represented in Fig. 5.

A is the boiler. To the front of the fire-box of said boiler is bolted a strong iron saddle, B, which has two forwardly-projecting lugs, *b*, for receiving the channel-bars C, which make the body of the frame to support the engine and pump. These two channel-bars C form what is substantially equivalent in duty to the perch of an ordinary wagon. They rest in the lugs *b*, attached to the boiler and on the rocker D, thus making the front part of the carriage quite narrow and giving the front wheels an opportunity to turn to a very large angle, so that the whole engine can be reversed in a comparatively small space. The rocker D is shaped transversely as shown in Fig. 2. A cup-shaped projection, E, extends downward from its center and is connected with the body of the rocker by two webs, *d*, thus giving a very strong form to this rocker, which carries a large part of the weight of the engine and pump. An upwardly-projecting cup, E', provided with two downwardly-pro-

jecting ears, E<sup>2</sup>, is fastened by a bolt, *f*, to the saddle L, and inside of this cup E' is the spring *e*, which is between the lower side of the rocker D and the bottom of the cup E'. This spring carries the load that is thrust upon the front axle. In order to prevent the jumping of this load sufficiently to disconnect the cups E E', an eyebolt, F, with a nut at its top, passes through the center of the spring *e*, and the nut at the top of this eyebolt is screwed down upon a rubber washer, F', compressing it, so that in case the engine dances on its spring the parts of the spring-case shall not be disconnected. This eyebolt F passes down into the center of the saddle L, and the transverse bolt *f* passes through the ears E<sup>2</sup> of the cup E' through the saddle L, and thus forms a horizontal hinge of the engine and its carriage over the center of the front axle, the transom-bolt below forming the vertical hinge of said carriage.

The body of the axle of the fore carriage is square and set with its diagonals vertically and horizontally.

The housing of the engine (represented at I) is described in another application, together with the bearing for the end of the engine-shaft.

A cylindrical housing, J, properly bolted to the engine-housing I and to the channel-bars C, extends forward to the end of the channel-bars, and there is terminated by the cap M, firmly fastened to the housing J. In this cap is made a circular slot, *h*. The neck *g* of the pump G terminates in a face-plate, *g'*, from the center of which is projected a trunnion, *o*, which is perforated for the shaft of the centrifugal pump. Bolts *h'*, with large heads each, fit the slot *h*, pass from the said slot *h* through the face-plate, and are fastened by nuts.

In case the position of the suction or delivery ends of the pump are not suitably arranged, by loosening these nuts on the bolts *h'* the whole pump can be rotated around its axis and the suction and delivery orifices placed in any desired position.

The coupling between the shaft of the engine and the shaft of the pump is inside of the housing J, and consists of an ordinary flanged hub, K<sup>2</sup>, splined onto the engine-shaft,



and of a flanged hub, K', and clamping-nut K, which are screwed onto the pump-shaft, and thus may be fastened very firmly together. The flanges of these two hubs are  
5 bolted together by ordinary bolts and nuts.

It will be observed that the frame of the engine is mounted upon two pairs of wheels, and that the steam-generator is placed over the axle of the rear wheels, and that the engine  
10 is placed upon the frame in advance thereof between the two axles of the engine, and that the shaft and frame are extended forward, so as to provide a support for the pump-frame and pump in front of the axle of the front  
15 pair of wheels. This construction is, I deem, essential for a pump of this character in order that it may bring the pump into a position to be readily attached to the suction-pipe and to the delivery-pipe, because it brings the  
20 pump-casing into a much more accessible position, and one which enables it to be moved or rotated upon its support or frame to bring its suction-inlet and discharge-outlet into any desired relation to the suction-pipe and dis-

charge-pipe, and this relation and arrangement of the parts to each other I consider to be of very material consequence. 25

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States— 30

1. In a portable steam-engine, the combination, with the boiler A, of the saddle B, secured thereto and provided with the forwardly-projecting lugs b, the channel-bars C, secured to the said lugs, and the spring-rocker D at the fore carriage, to which the forward ends of the said channel-bars are attached, substantially as set forth. 35

2. In a portable steam-engine, the combination, with the saddle L, of the rocker D, having cup-shaped housing E, the housing E', having the flange or portion E<sup>2</sup>, the spring e, the eyebolt F, the counter-spring F', and the transverse bolt f, substantially as set forth. 40

WILLIAM O. WEBBER.

In presence of—

F. F. RAYMOND, 2d,

FRED. B. DOLAN.