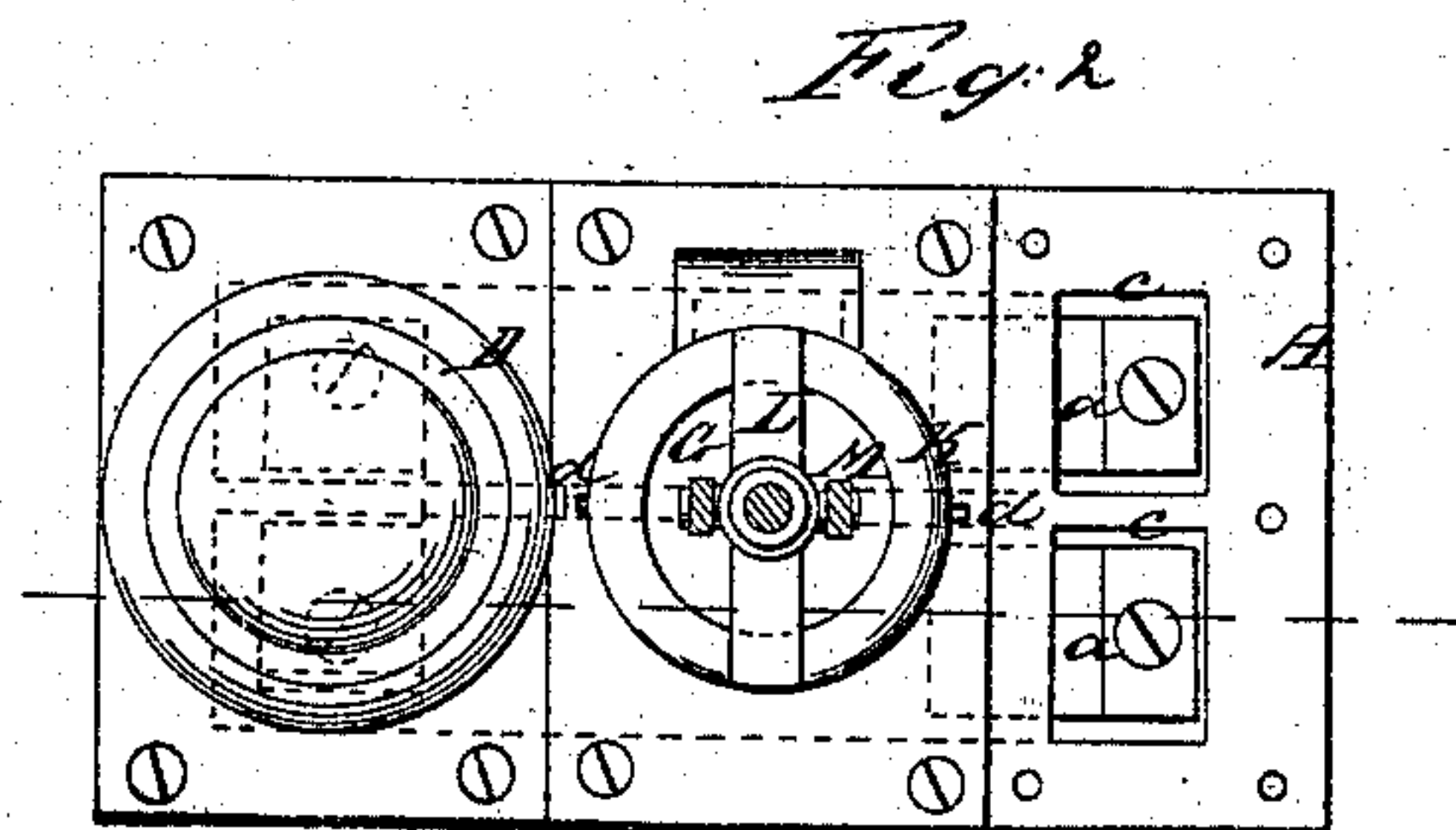
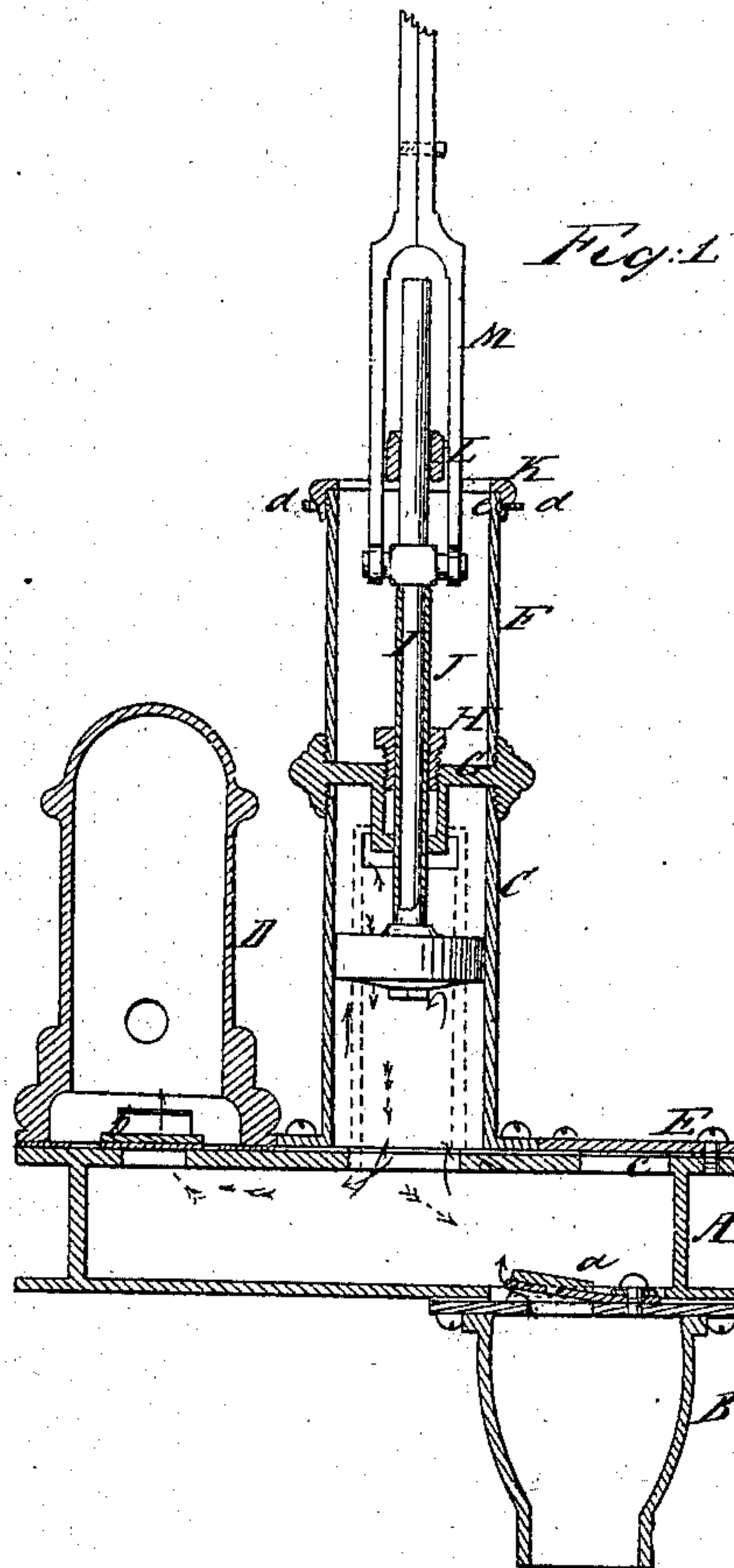


J F Cowing,

Force Pump.

N^o 15,922.

Patented Oct 21, 1856.



UNITED STATES PATENT OFFICE.

JOHN P. COWING, OF SENECA FALLS, NEW YORK.

PUMP.

Specification of Letters Patent No. 15,922, dated October 21, 1856.

To all whom it may concern:

Be it known that I, JOHN P. COWING, of Seneca Falls, in the county of Seneca and State of New York, have invented certain
5 new and useful Improvements in Reciprocating Pumps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a
10 part of this specification, in which—

Figure 1, is a vertical section of my improvement, the plane of section being through the center. Fig. 2, is a plan or top view of ditto.

15 Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

20 A, represents a rectangular box which I term a water chest.

B, is the suction or induction pipe attached to the under side of the box A, and communicating with it at one end, as shown
25 in Fig. 1.

The box A is divided longitudinally into two compartments by a partition, and a valve (a) is placed in the bottom of the box A, in each compartment, both valves
30 being over the suction pipe B. See dotted lines Fig. 1.

C, represents the pump cylinder which is attached to the upper part of the box A, and D, is an air chamber also attached to the upper part of said box the air chamber communicating with the box A, by valves (b) (b), a valve being over each compartment of the box A.

On the upper part of the box A, a plate
40 E, is secured by screws. This plate is directly over the valves (a) (a), and holes or apertures (c) (c) are made through the top of the box underneath the plate E, as shown clearly in Fig. 1. In Fig. 2 this
45 plate is removed.

F, represents a cylinder which is secured to the upper part of the pump cylinder C, the lower end of the cylinder F, being screwed into the head G, of the pump cylinder C.
50

H, is a stuffing box in the head G, through which the piston rod I, works. The cylinder F, is supplied with oil or water which should extend above the stuffing box. The

piston rod I, is formed of iron, and the part 55 of it that works through the stuffing box H, is encompassed by a brass tube J. See Fig. 1.

K, represents a ring which is placed upon the upper end of the cylinder F. This ring 60 is allowed to turn or rotate thereon and is secured in proper place by set screws (d) (d), which pass horizontally through the ring, the inner ends of the screws fitting in a groove (e), made in the upper edge of the 65 cylinder F. This is plainly shown in Fig. 1.

L, is a guide plate secured to the ring K, said plate being placed at the center of the ring, the piston rod I, passing through its center. 70

M, is a forked connecting rod attached to the piston rod I, the guide plate L, passing through or between the prongs of the fork.

The ring K, may be turned around in any 75 position on the cylinder F, by loosening the set screws (d) (d), and the guide plate L, may be so turned that the connecting rod M, may be made to work with any crank whatever its relative position may be with 80 the pump. By this improvement the pump may be operated by machinery already erected in a manufactory without any alteration of its machinery.

The cylinder F, placed on the top of the 85 pump cylinder C, forms a bearing or support for the ring and guide plate, and also forms an oil or water chamber, by which the piston rod is kept perfectly lubricated, and the pump cylinder C, also kept perfectly 90 air tight, for the air cannot work through the oil or water in the cylinder F, through the stuffing box G.

By having the piston rod I, encompassed by a brass tube J, the piston rod is kept 95 free from rust and will not be liable to wear uneven, all the advantages of a brass rod is obtained, with the economy of an iron one.

By having the plate E, secured on the upper part of the box A, the valves (a) (a) 100 are made accessible and may be repaired without difficulty by merely detaching said plate.

I do not claim an oil or water chamber for keeping the pump cylinder air tight, 105 irrespective of the arrangement of the same, neither do I claim as new the air chamber, valves, and water passages for they are es-

sentially the same as in many other pumps in use, but,

What I do claim as new and desire to secure by Letters Patent is,

- 6 The auxiliary cylinder placed on top of the pump-cylinder and so arranged as to form a reservoir for oil or water around the stuffing box and piston, and at the same

time to support a guide for the piston, which may be turned in any desired position. 10

JOHN P. COWING.

Witnesses:

PHILO COWING,
NATHAN BAKER.