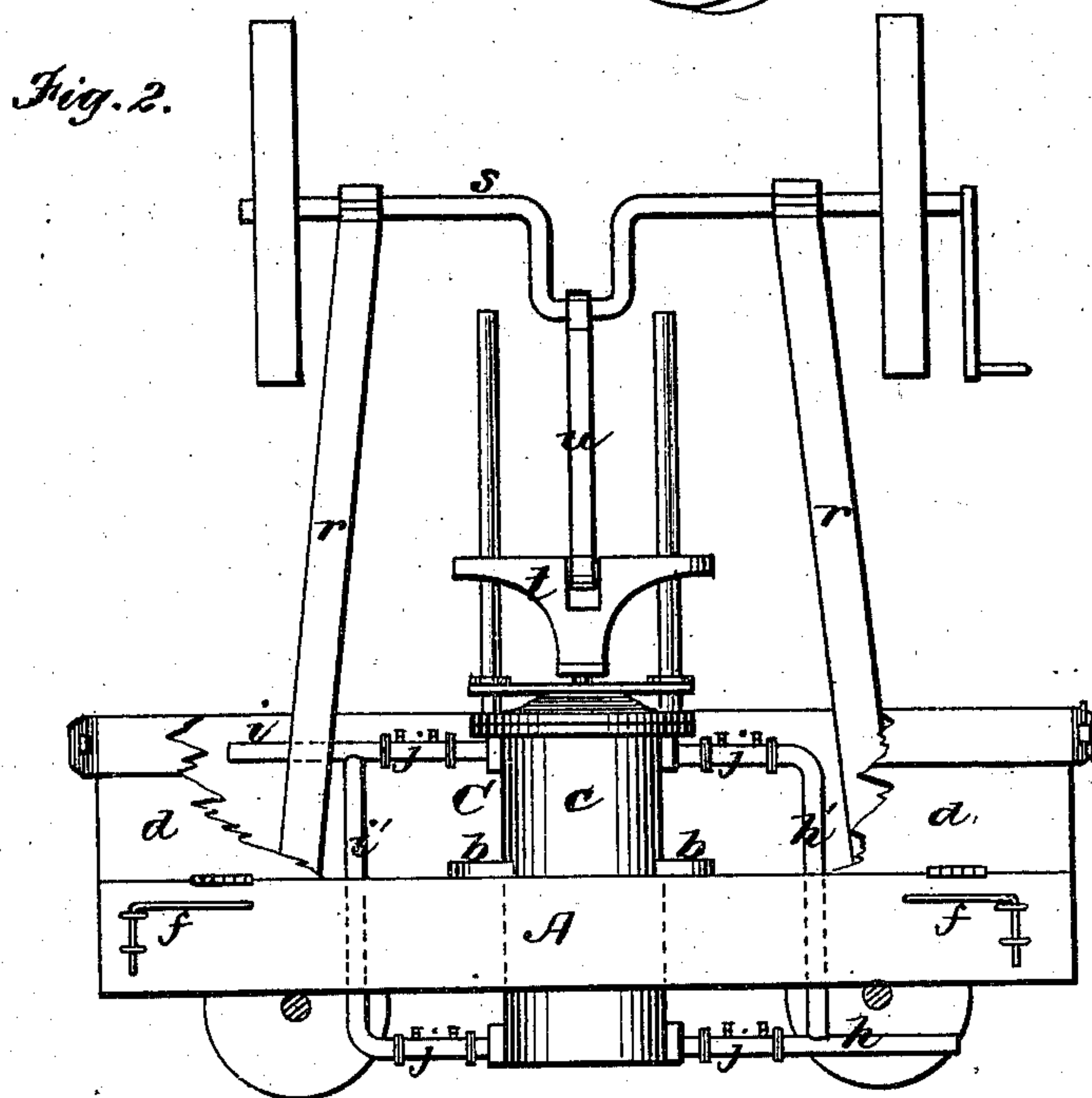
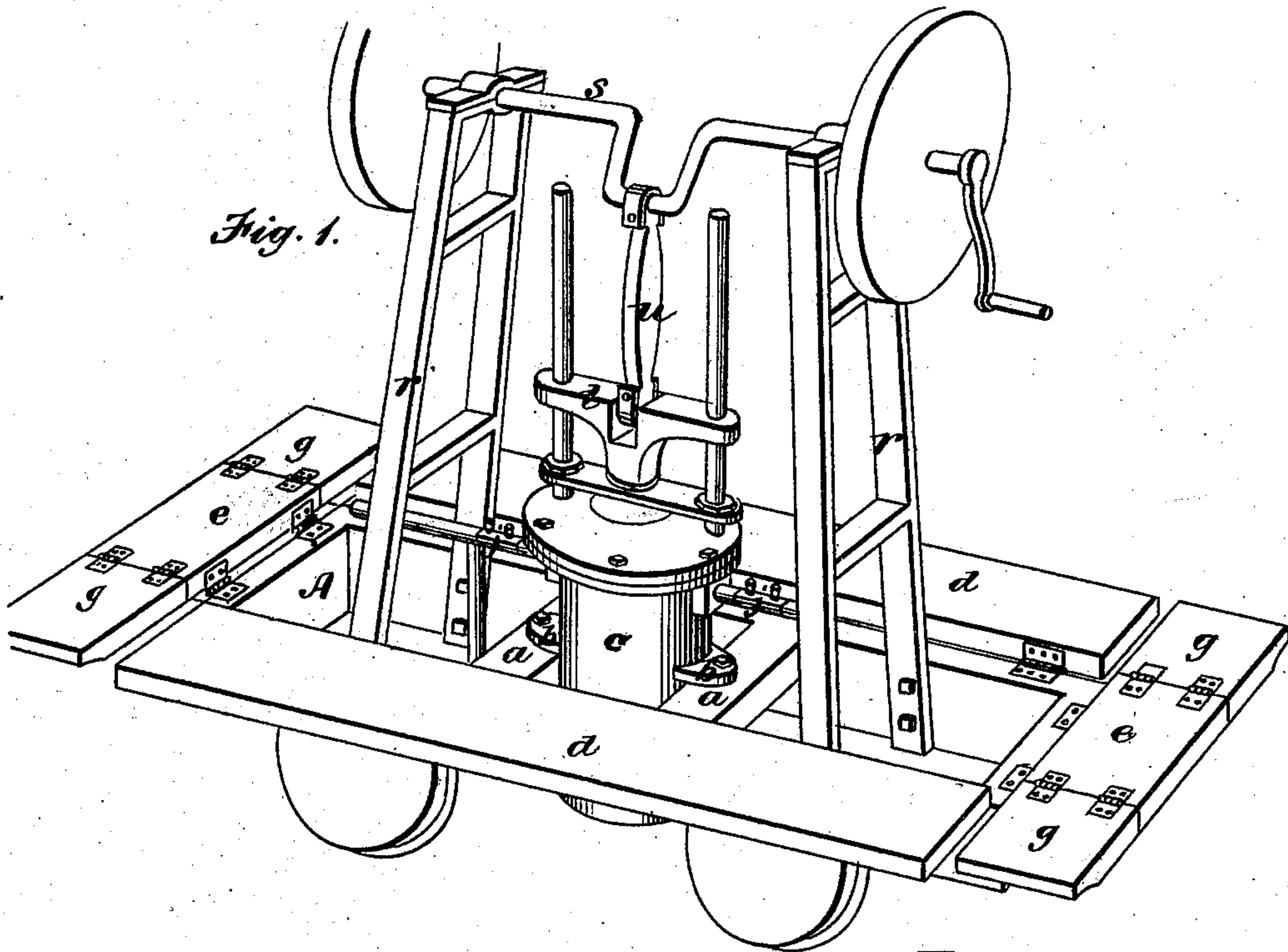


W. E. SIDNEY.
Portable Pumps for Mines:

No. 143,724.

Patented Oct. 14, 1873.



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Fig. 3.

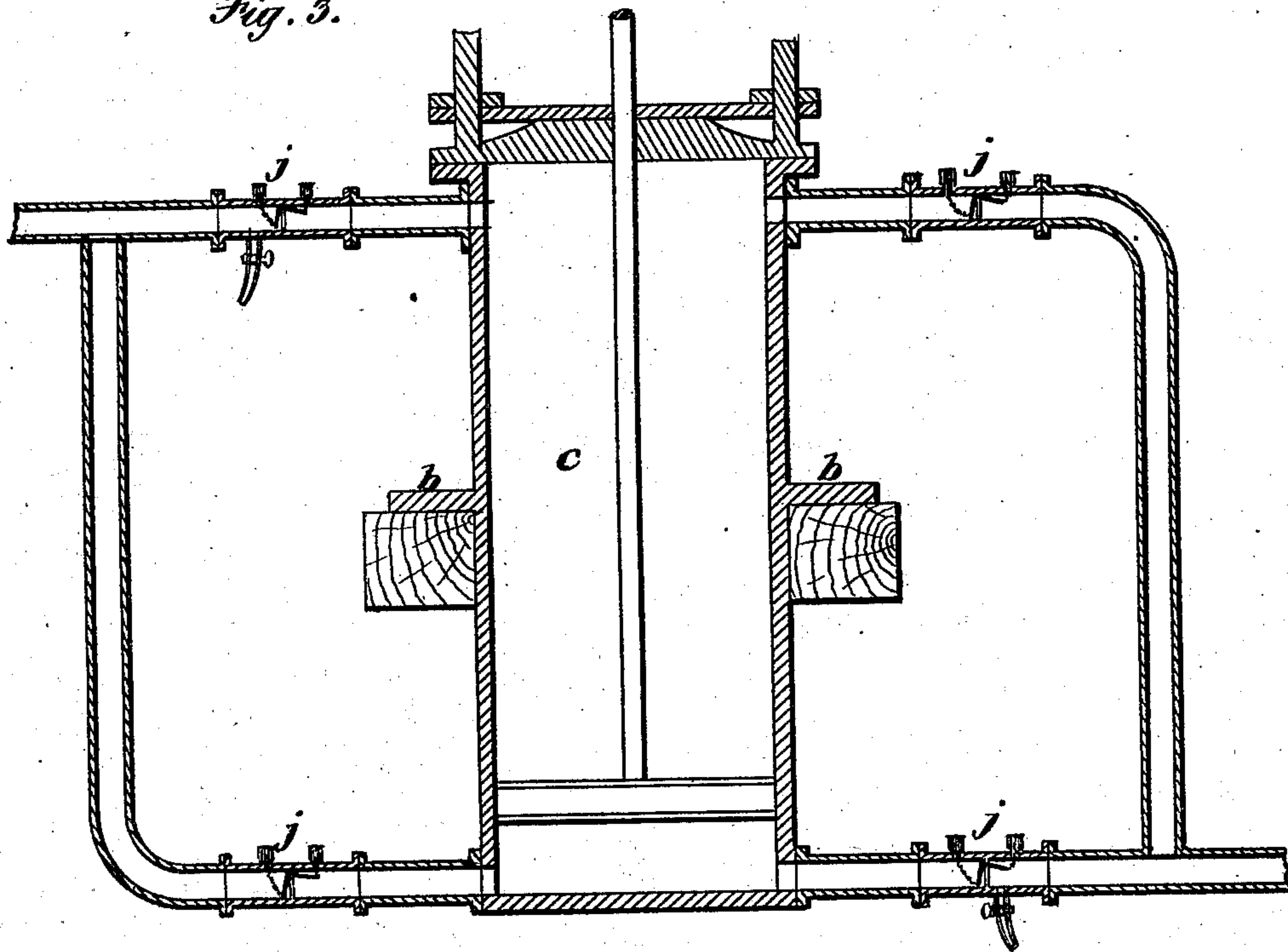
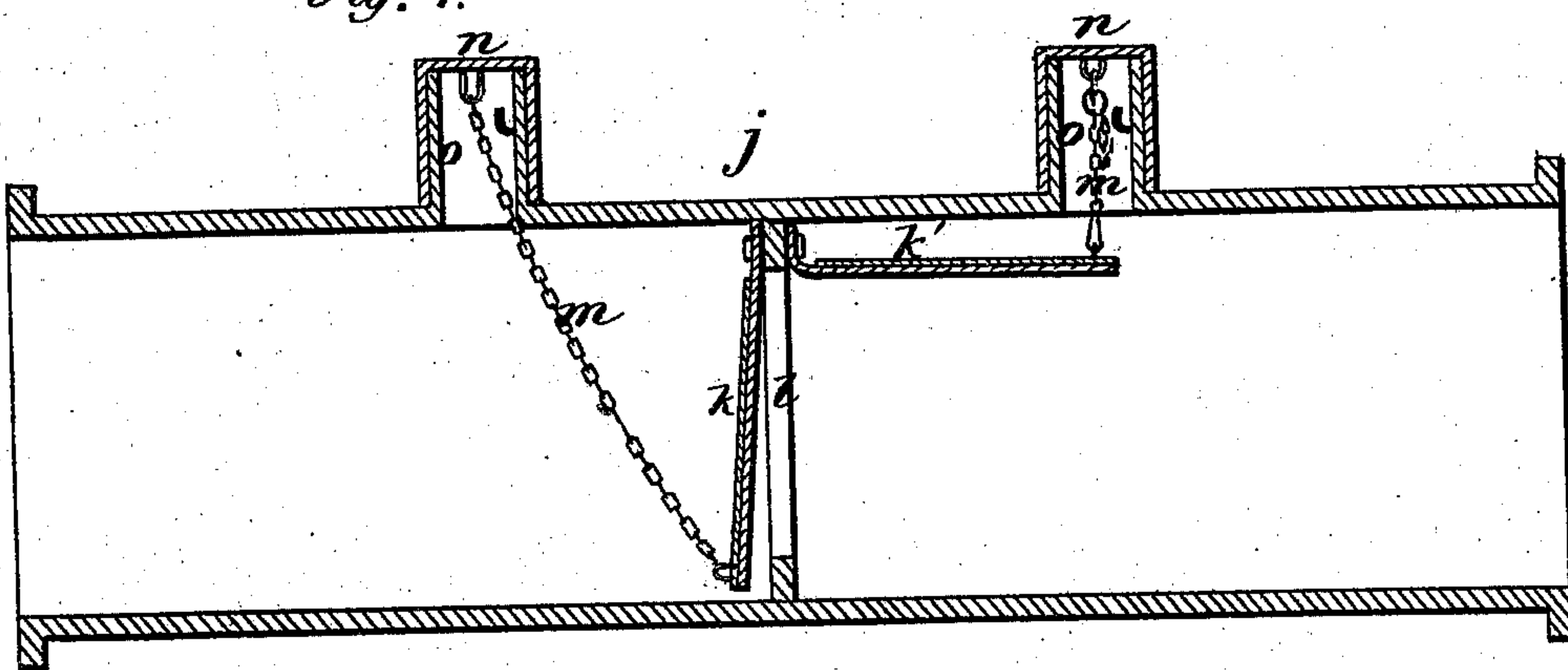


Fig. 4.



WITNESSES

C. F. Brown
John R. Ellsworth

By

INVENTOR

W. E. Sidney

John R. Ellsworth
his Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM E. SIDNEY, OF KNIGHTSVILLE, INDIANA.

IMPROVEMENT IN PORTABLE PUMPS FOR MINES.

Specification forming part of Letters Patent No. 143,724, dated October 14, 1873; application filed August 20, 1873.

To all whom it may concern:

Be it known that I, WILLIAM E. SIDNEY, of Knightsville, in the county of Clay and State of Indiana, have invented a new and useful Portable Pump for Mines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a side elevation with a portion of the truck or car broken away. Fig. 3 is a sectional view of the pump; and Fig. 4, an enlarged sectional view of one of the valve-boxes.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention consists in the employment of a force-pump located on a portable truck, and provided with valves opening in opposite directions, by means of which the operation of the pump may be reversed, as hereinafter more fully set forth.

In the drawings, A represents the body of the car or truck, the same having the transverse parallel beams *a a* near its center, to which are bolted the flanges *b b* of the pump C. The truck A is mounted on wheels, and is rectangular in shape, its sides and ends being vertical. *d d e e* are side and end boards, hinged to the body A in such manner as to constitute a casing or inclosure around the pump, as shown in Fig. 2, or a horizontal platform, as shown in Fig. 1, the boards being supported in the latter case by swinging brackets *f* attached to the body A. The end boards *e* are provided with hinged wings *g*, which render the same extensible, as shown in Fig. 1. The cylinder *c* is so located that its lower end reaches nearly to the level of the surface on which the wheels run, the flanges *b* being about at its center. *h* is the suction, and *i* the discharge pipe, each communicating with the top and bottom of the cylinder at opposite sides by means of the branches *h' i'*, the main suction-pipe *h* entering the cylinder

at the bottom and the main discharge at the top. *jj* are the valve-boxes, the same being located in each of the pipes near the cylinder, as shown in Figs. 2 and 3. Each box is provided with a pair of valves, *k k'*, opening in opposite directions, and resting against a common seat, *l*. The valves *k k'* are connected by chains *m* to caps *n n*, which are screwed upon domes *o o* on the upper sides of the valve-boxes. By unscrewing one of the caps *n* the same can be raised from the dome, thereby opening the valve to which it is connected, as shown in Fig. 4, the valve being held in this position by engaging its chain with a hook in the dome. *pp* represent standards rising from the truck A, and having in their upper ends the bearing of the horizontal crank-shaft *s*, to which the cross-head *t* of the piston is connected by the pitman *u*.

It will be readily seen that by opening the valve *k'* of each box, as shown in Fig. 3, when the piston is operated the water enters the pipe *h*, and is discharged through the pipe *i*; but by reversing this arrangement, and opening the valve *k*, the operation is reversed, the pipe *i* becomes the suction, and *h* the discharge; the pump is thus adapted to operate from either side of the truck. The hinged sides and ends of the truck constitute a platform for the operators to stand on, or for other purposes, and when closed are out of the way and in compact form. The pipes *h i* have suitable hose connections for conducting the water.

Having thus described my invention, what I claim is—

1. A force-pump located on a portable truck, and provided with double valves, whereby its operation may be reversed, substantially as and for the purpose specified.

2. The valves *k k'* opening in opposite directions, and operated by the chains *m* and screw-caps *n*, substantially as described.

WILLIAM E. SIDNEY.

Witnesses:

CHARLES W. REED,
FRDEK. BRIEH.