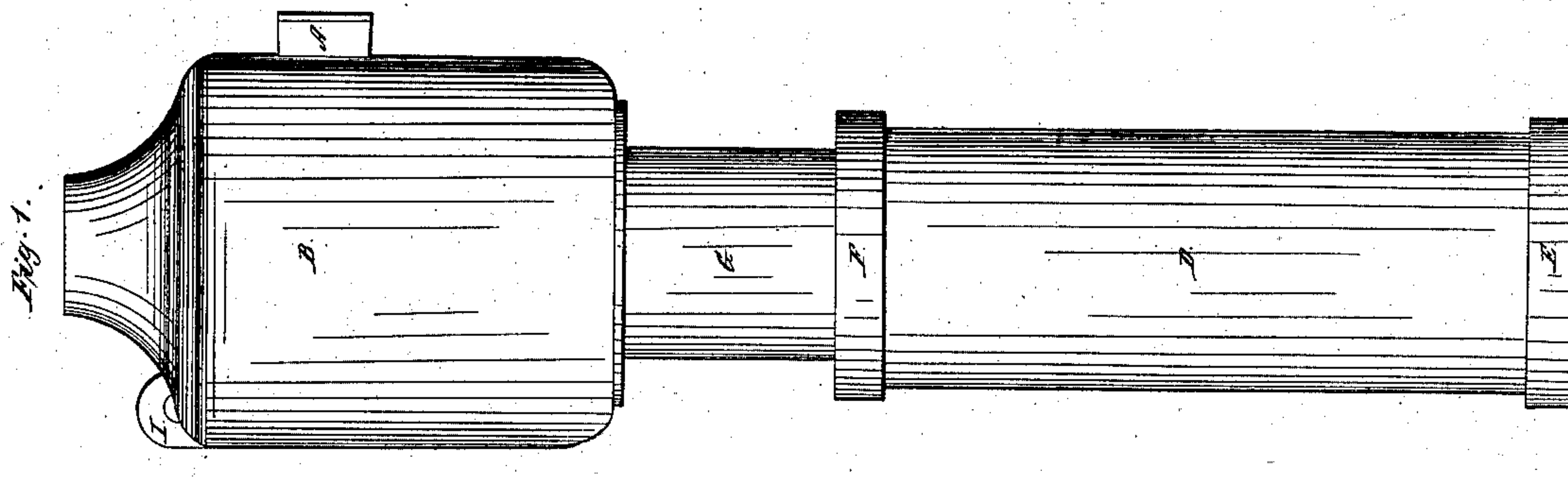
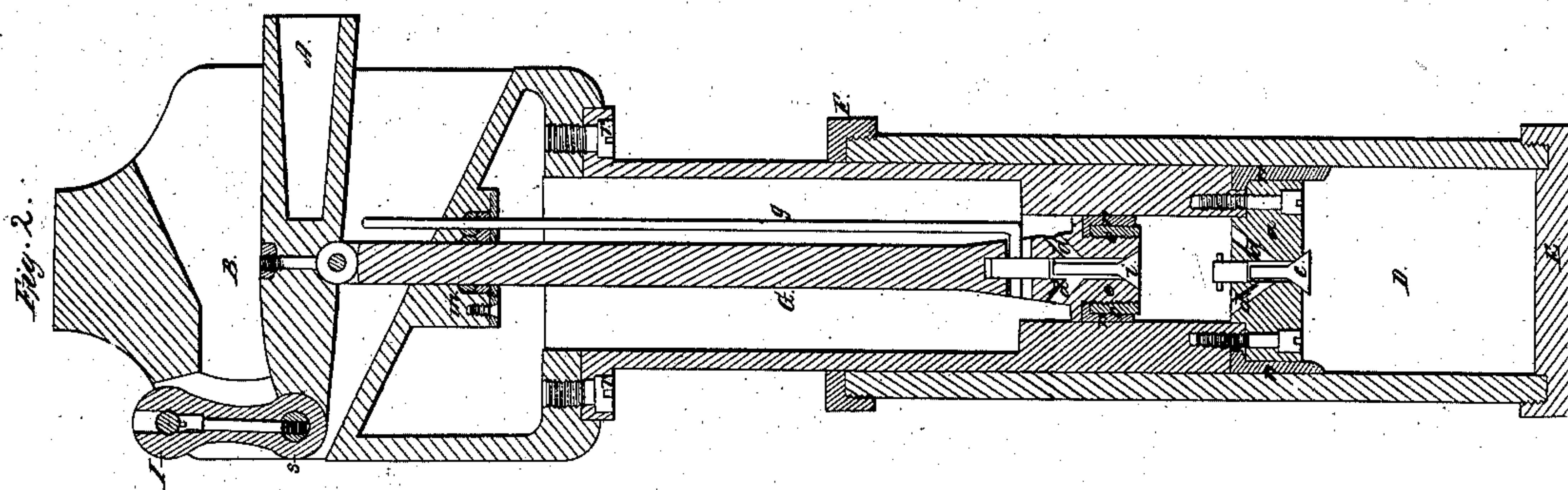


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R. DUDGEON.
PORTABLE HYDRAULIC PRESS.

No. 8,203.

Patented July 8, 1851.



Witnesses:
Charles Conrad
McHume

Inventor:
Richard Dudgeon

UNITED STATES PATENT OFFICE.

RICHARD DUDGEON, OF NEW YORK, N. Y.

PORTABLE HYDRAULIC PRESS.

Specification of Letters Patent No. 8,203, dated July 8, 1851.

To all whom it may concern:

Be it known that I, RICHARD DUDGEON, of the city of New York, State of New York, (84 Willet street, New York,) have invented a new and useful Hydraulic Press to do most of the work now performed by the screw.

This press is to the eye a simple cylinder of from three to five or more inches in diameter, according to the power desired, with an enlarged head, having an opening for the reception of the lever by which the piston of the pump is worked. This cylinder, with its enlargement, contains just so much of water or other fluid as is required to fill the vacancy caused by the raising of the interior shaft in the act of lifting, and when this is accomplished, the water is returned into its original recess by a valve operated by the lever that works the pump. The press is portable. And I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1. In this figure B is the head of the ram made of iron and hollow, so that its capacity together with the ram G, is equal to the cylinder D. E, is the bottom of the cylinder screwed on as seen in Fig. 2, and F, is the stuffing-box on the top of the cylinder to steady the ram G, and also to be an additional safeguard against any leak which might arise from imperfection in the cylinder D, and is screwed on in the same manner. A, is the end of the socket to receive the force-pump handle. I, is a small projection upon the head of the ram through which a pin passes, which forms one of the joints for the parallel motion of the force-pump-rod seen in Fig. 2.

Figure 2. The valve seat *a* is screwed on to the end of the ram G and also acts as a follower to keep the packing *n n* against the

end of the ram. The valve *c* allows the water to be forced through the passages *d d* into the cylinder and shuts when the pump piston *e* ascends and the valve *i*, in the pump piston is exactly the same, only that it has its passages *d d* larger to allow the pump to fill readily. Through its stem the rod *g* passes and, by depressing the handle A or socket A to its lowest limit it will be seen that it opens the valve *i* and it again opens the valve *c* and allows the water to return into the ram. The packing *n, n*, on the force-pump-piston is the same as on the end of the ram and is held to its place by the follower *o*. The center of the head through which the pump rod and rod to work the valves passes has a stuffing-box on the inside of the head as seen on Fig. 2. The joint *t* is an ordinary knuckle-joint to connect the pump rod with the socket to receive the handle and the joint at *s* is the same kind of joint. The head of the ram is fastened or secured to the ram by the screws *r, r*.

These portable hydraulic presses can be and are made of iron or any other metal.

What I claim as my invention and desire to secure by Letters Patent is—

An hydraulic press quite portable in which the ram is hollow and serves as the reservoir to supply the cylinder with water or other liquid, while the force-pump and its appendages are contained within the ram, so that by working this force-pump the ram is forced up until the liquid in such ram is exhausted and by moving the handle of the pump down it will come in contact with a rod attached to a valve in the pump piston and the latter comes in contact with a valve in the end of the ram opening them both and allowing the water to return into the ram again through passages.

RICHARD DUDGEON.

Witnesses:

CHARLES EDWARDS,
THOMAS HINWOOD.