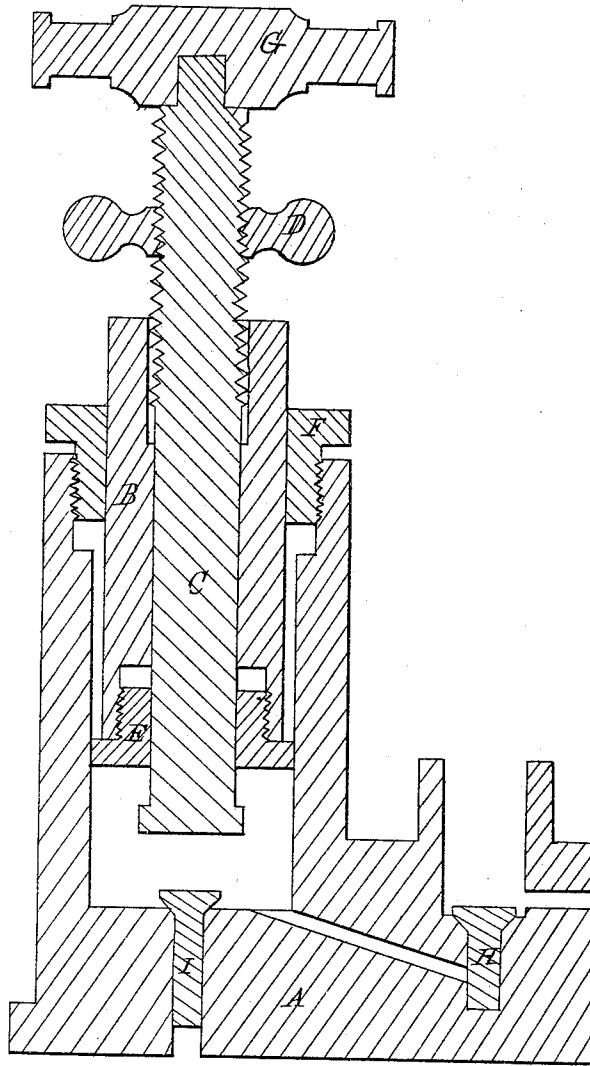


G. LINDSAY.
DOUBLE PUMP FOR HYDRAULIC PRESSES.

No. 28,090.

Patented May 1, 1860.



Witnesses

Robert Crawford
George Cameron

Inventor

George Lindsay

UNITED STATES PATENT OFFICE.

GEO. LINDSAY, OF PETERSBURG, VIRGINIA.

PUMP.

Specification of Letters Patent No. 28,090, dated May 1, 1860.

To all whom it may concern:

Be it known that I, GEORGE LINDSAY, of the city of Petersburg, in the county of Dinwiddie, in the State of Virginia, have invented a new and useful and Improved Pump for a Hydraulic Press; and I do hereby declare the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification, in which the figure represents a vertical section of my improvement, the plane of section being through the center of piston and valves H and I.

My invention consists in the arrangement of two pistons, the small one working through the center or inside of the large one, whereby there can be either speed or power gained as desired, by alternately connecting or disconnecting them by means of the hand wheel.

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

A represents a cylindrical pump with valves H and I fitted therein, and chambered out for the large piston B, and the gland F, which is screwed in the top.

B represents the large piston or plunger fitted in gland F and working in pump chamber, with gland E screwed in the lower end, for the small piston C to work therein.

C represents a small piston or plunger fitted in gland E, and working in chamber of large piston, the upper end is screwed to fit hand wheel D, and the cross head G is secured on top.

The operation will be readily understood. By operating the piston C by means of the cross head G, when the hand wheel is screwed against piston B, it will operate the large piston B, and pump with more speed and less power, than by running up hand wheel D, and operating small piston C. The large plunger will then be at rest, and less resistance will be the consequence; therefore the small piston will move freely.

The above pump is extremely simple, and answers the same purpose as two pumps, it operates well, and can be constructed at less cost than its equivalent to do the same work.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is,

The pump barrel in combination with the large piston or plunger B, the small piston C, and the hand wheel or its equivalent for connecting and disconnecting the pistons, the whole being constructed and operated in the manner and for the purpose set forth.

GEORGE LINDSAY.

Witnesses:

ROBERT CRAWFORD,
GEORGE CAMERON.