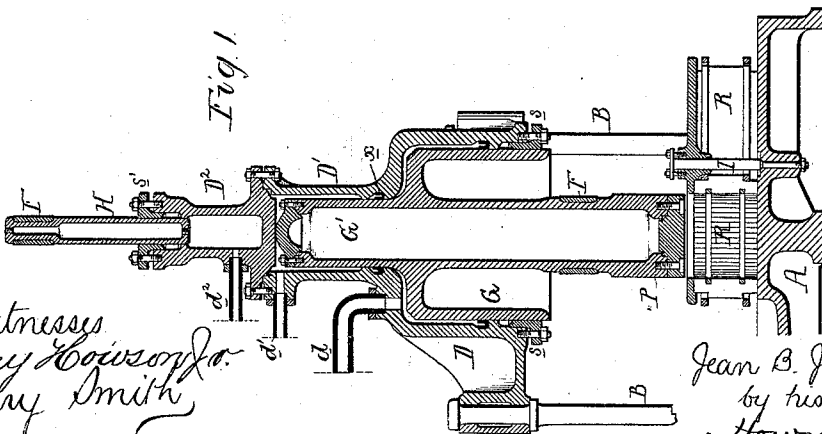
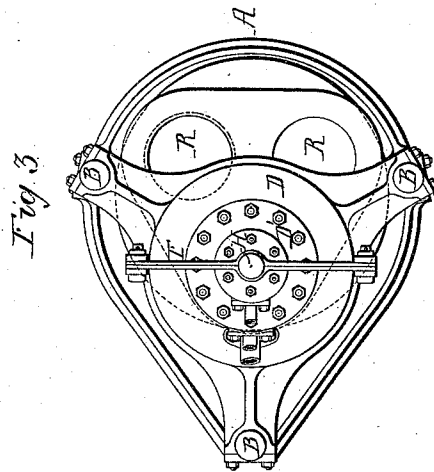
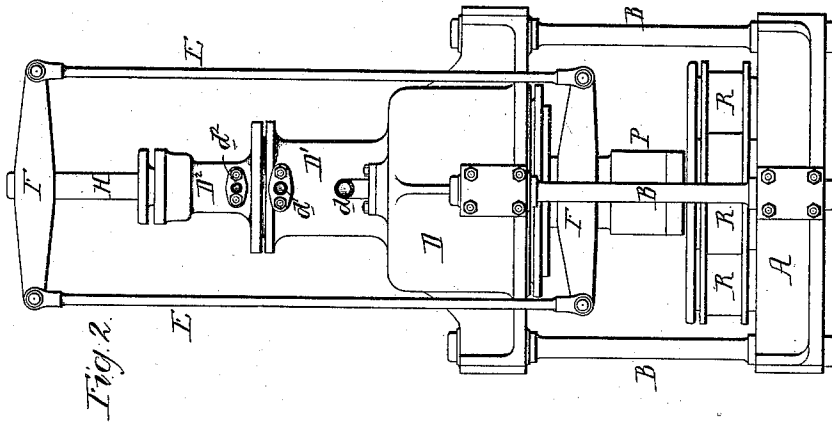


PRESS.

No. 177,871.

Patented May 23, 1876.



Witnesses
Harry Bowson Jr.
Harry Smith

Jean B. J. Mignon
by his Attorneys
Howson and Son.

UNITED STATES PATENT OFFICE.

JEAN B. J. MIGNON, OF PARIS, FRANCE.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. **177,871**, dated May 23, 1876; application filed April 17, 1876.

To all whom it may concern:

Be it known that I, JEAN BAPTISTE JAVA MIGNON, of Paris, France, have invented certain Improvements in Presses, of which the following is a specification:

The object of my invention is to so construct a steam or hydraulic press that an increasing pressure may be obtained in the machine itself; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of my improved press; Fig. 2, a front view of the press, and Fig. 3 a plan view of the same.

The frame D D' D'' of the press is supported by the standards B—three, in the present instance—secured to the base A. The portion D of the frame is in the form of a cylinder, in which works the piston G; and attached to, or forming part of, this piston is the plunger P of the press; while the upper portion of the piston G terminates in the piston G', which works in the cylinder D'. The piston G (and its cylinder) is considerably larger in diameter than the piston G', for a purpose explained hereafter.

A pipe, *d*, supplies the upper part of the cylinder D with the steam or compressed air, while the cylinder D' is supplied through the pipe *d'*, suitable cocks being provided to admit and shut off the supply of steam or water.

On the top of the cylinder D', and preferably forming part of the same, is a cylinder, D², through the upper end of which works the piston H, the said cylinder being supplied with the required steam or water through the pipe *d*².

The piston H is connected, by means of the cross-bars E E and vertical rods F, to the plunger P, so that one piston cannot move independently of the other.

Stuffing-boxes *s s'* are provided for the cylinders D and D², and a packing-ring, *x*, between the cylinders D and D' prevents the water or steam in one cylinder from having access to the other.

The receptacle in which the material to be pressed is placed is composed of a number of reservoirs, R—three, in the present instance—attached to the central pin I, and arranged to

turn with the latter on the base A. Each reservoir is composed of a series of vertical plates, placed side by side, and so bound together by suitable bands or hoops that the fluid extracted may escape between the plates without permitting the escape of the material which has been pressed.

I have found this machine very efficacious in pressing the pulp of sugar-canes which have been passed through the crushing-mill or cutting-machine.

When the material to be pressed has been placed in one of the reservoirs, and the latter brought directly beneath the plunger, steam, water, or compressed air is admitted to the cylinder D' until the plunger has descended, say, two-thirds of the distance. The cock in pipe *d'* is then closed, and the cock in the pipe *d* opened, the cylinder D having been previously supplied with only sufficient water or steam to fill the vacuum created.

The power being thus admitted to the cylinder having a much larger diameter, an increased pressure is obtained, and this pressure may be still further increased by admitting the water or steam to both cylinders at once.

It will thus be seen that an increasing pressure is obtained from the press itself, without resorting to outside means.

The plunger and cylinders are raised again by closing the cocks in the pipes *d* and *d'*, and admitting the power to the cylinders D², thus raising the piston H, and, consequently, the plunger and pistons G and G'; or the latter may be raised by creating a vacuum in the cylinders D D'.

I claim as my invention—

1. In a power-press, the combination of the cylinder D' and the cylinder D, larger in diameter, with their pistons G and G', to which the plunger is attached, as set forth.

2. The combination of the plunger P and the pistons G G' with the piston H and the connecting-rods, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEAN BAPTISTE JAVA MIGNON.

Witnesses:

ALFRED COINY,
ROBT. M. HOOPER.