D. L. Miller,

Cotton Press.

No. 21,079. Patented Aug. 3, 1858.

Fig. 2.

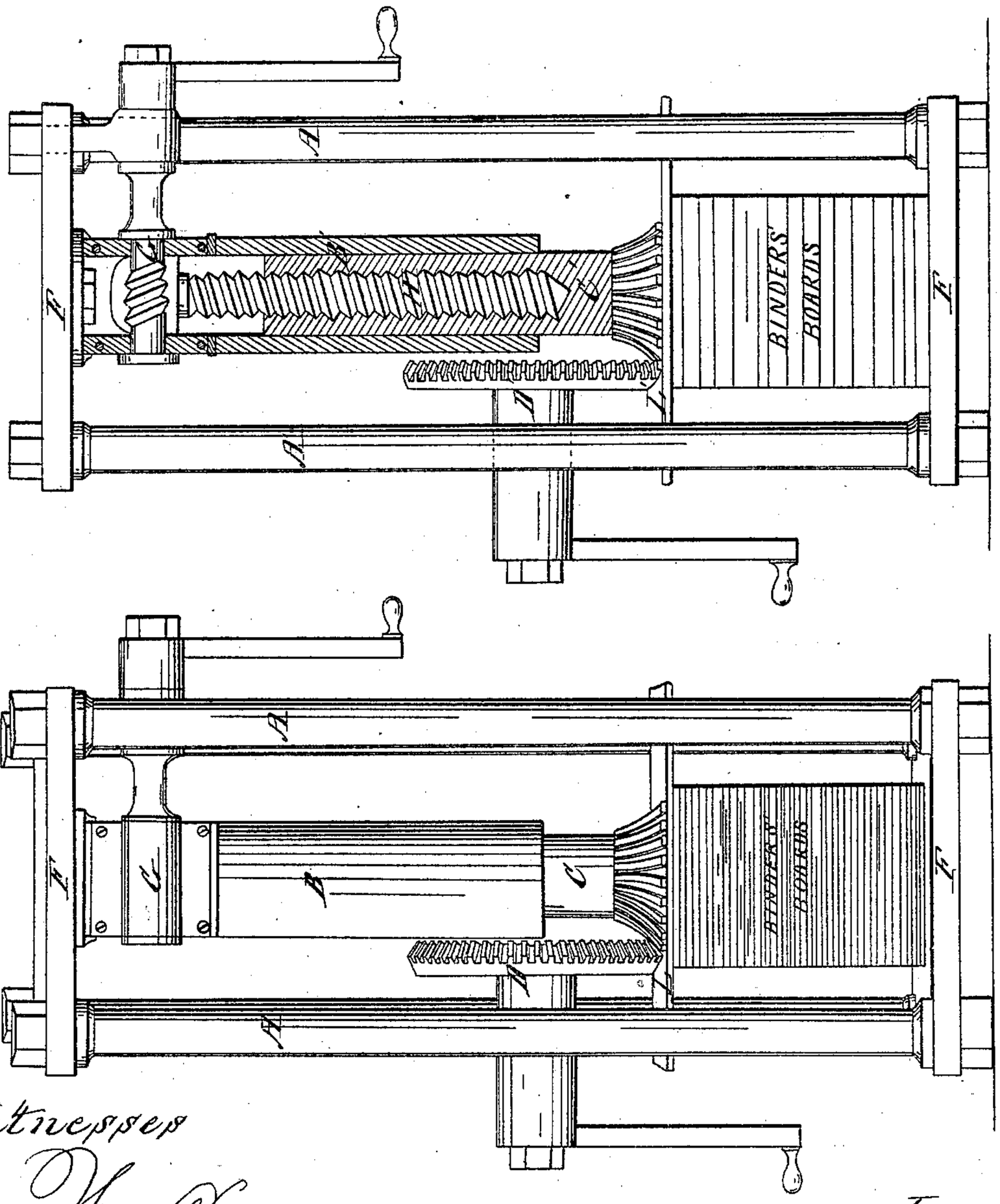

Fig. 1.

Witnesses

Jas. Dyer

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DAVID L. MILLER, OF MADISON, NEW JERSEY.

IMPROVEMENT IN MODES OF OPERATING PRESSES.

Specification forming part of Letters Patent No. **21,079**, dated August 3, 1858.

To all whom it may concern:

Be it known that I, DAVID L. MILLER, of Madison, in the county of Morris and State of New Jersey, have invented certain novel and useful Improvements in the Mode of Operating Presses used for Pressing Cotton, Hay, or other Purposes; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which correspond with and form a part of the specification.

In order that the public may fully understand the nature of my invention, and those skilled in the art be enabled to construct and operate the same, I will describe it as follows:

Figure 1 is a perspective view of my press. Letters A A, A A are four round columns or standards secured at their tops and bottoms by two plates, F F, and nuts *i i*. Letter B is a stationary barrel which is secured to the top plate, F, and forms the box G, in which the endless screw-gearing operates. C is an inner screw-chamber or cylindric nut in which the main or lifting screw operates when turned by the small crank and gearing G, but the nut C revolves around the prime motor or main screw, which is held stationary by means of the screw-gearing G when the press is operated by the large bevel-gear D. Letter L is the movable or press plate, which is provided with a hole in its center to receive the lower end of the movable cylindric nut C, which is also provided with a short shaft or bearing at its lower end, upon which it revolves when turned by the large crank D.

Fig. 2 is a sectional view of my double-acting press, showing the standards A′ A′, top and bottom plates, F F, and a vertical section of the stationary barrel B, the revolving nut C, the main or lifting screw H, the endless screw-gearing G′, and the bevel-gearing D.

The superiority of the above arrangement is, that I am enabled to work with greater capacity and pressure than by any other press ever used excepting the hydraulic press, inasmuch that by the bevel-gearing D and cylinder C, I get a quick action or pressure upon the plate F, but when a heavy pressure is required—such as pressing cotton, book-binding, &c.—I turn the small crank or gearing G, that revolves the main screw H, and not the cylindric nut C, but simply forces the nut C down with a tremendous pressure by means of an independent power from the large gear D, which power requires eleven revolutions of the crank to carry the plate L through the same space that it would pass through by one revolution of the crank D, but the power of gearing G is equivalent to twenty times (more or less) to that of the gearing D, hence the application of two distinct acting powers or gearings applied to operating presses after the above plan I believe to be novel and useful. I do not confine myself to any number of those gearings for operating presses, as one or more sets may be applied to a press successfully.

I do not pretend to claim the individual or separate parts of the above-described apparatus for operating presses, as my patent on "lifting-jacks" covers both the gearings, outer cylinder, B, and inner cylinder, C; but

What I claim as novel, and what I wish to secure by Letters Patent of the United States, is—

The application of two distinct actions by means of the bevel-gearing D, endless screw-gear G, barrel B, cylindric nut C, arranged and operated substantially as described, and shown in the drawings.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

DAVID L. MILLER.

Witnesses:

JAMES P. MCLEAN,

WM. DIXEY.