UNITED STATES PATENT OFFICE.

WM. MULHOLLAND, OF BROOKLYN, NEW YORK.

LAMP.

Specification of Letters Patent No. 21,617, dated September 28, 1858.

To all whom it may concern:

Be it known that I, W. Mulholland, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Lamp for Burning Rosin-Oil and other Fluids that are Rich in Carbon; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, said drawing being a vertical central section of my invention.

This invention consists in having a central air tube placed within the lamp and a wick tube placed at each side of its upper end and a register at its lower end the above parts being used in connection with a perforated cylindrical cap, provided with deflectors at the center of its top plate whereby the flame may be supplied with a large volume or amount of oxygen and the same regulated as occasion may require.

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

A, represents the body of a lamp which may be of any suitable form and B, is a tube which passes vertically and centrally through the lamp, the lower end of the tube communicating with a hollow neck *a* which connects the base *b*, with the body A. The tube B, is of flat form and extends a suitable distance above the top of the body A, and has a short tube *c*, attached to it, one at each side in which wicks *d*, *d*, are placed. The neck *a*, is perforated and a perforated band *e*, encompasses the neck forming a register C, as plainly shown in the drawing, and the neck *a*, has a perforated plate a^x, fitted horizontally within it.

D, is a perforated cylindrical cap, which is attached to the upper end of the body A. This cap has a solid plate or top e', the center of which is slotted to allow the upper end of the tube B, and wick tubes *c*, *c*, to pass through. The slot is encompassed by inclined plates *f*, which project upward nearly to the top of the tubes B, *c*, *c*, said plates having their upper edges inclined toward the tubes and at an angle of about 45°. An ordinary glass chimney is attached to the upper end of the plate e'.

The operation is as follows:—The body or fountain A, is supplied with the oil or other fluid, and the flame E, is supplied with oxygen through the tube B, the latter throwing the air into the body of the flame, and the flame is supplied with air externally through the cap D, the deflectors *f*, throwing the air upon the base of the flame E. A powerful draft is created in the tube B, because its upper end communicates directly with the center of the flame and it ejects into the flame a large supply of oxygen, while the rarefaction of the air in the lower part of the chimney encompassing the flame, induces a draft through the cap D, the air that passes through said cap being deflected against the exterior of the base of the flame by the deflectors *f*, *f*. The perforated cap D, distributes the air that passes through it so that it will pass up evenly or all around the tubes B, *c*, *c*, to the flame serving as an equalizer, and the plate a^x, in the neck *a*, performs the same function.

I am aware that air tubes have been placed centrally in the bodies of lamps in order to supply the flame with air or oxygen, but so far as I am aware such lamps have all been provided with buttons in order to throw the air down upon the flame and also to spread the flame. In my invention the button is entirely dispensed with, an upright flame obtained and the supply of oxygen regulated as occasion may require by adjusting the register C. I am also aware that perforated plates have been used for distributing the air equally all around the flame, but I am not aware that a perforated cap has been used arranged as shown, with deflectors *f*, to admit the air directly upon the external surface of the base of the flame. I disclaim therefore broadly, separably and irrespective of construction and arrangement the employment or use of a central air tube and a perforated plate to serve as an air distributer. but,

I do claim as new and desire to secure by Letters Patent,

The arrangement of the central air-tube B, extending through the body A, of the lamp and communicating at its lower end with the neck *a*, provided with a register C, and perforated plate a^x, with the wick tubes *c*, *c*, placed at opposite sides of the air tube B, and the perforated cap D, provided with the deflector *f*, the whole being constructed and operating as and for the purpose set forth.

WM. MULHOLLAND.

Witnesses:

J. W. Coombs,

Wm. Tusch.

J. H. Nelson,

Wood Molding Machine,

No. 21,618, Patented Sep. 28, 1858.

Fig. 2.

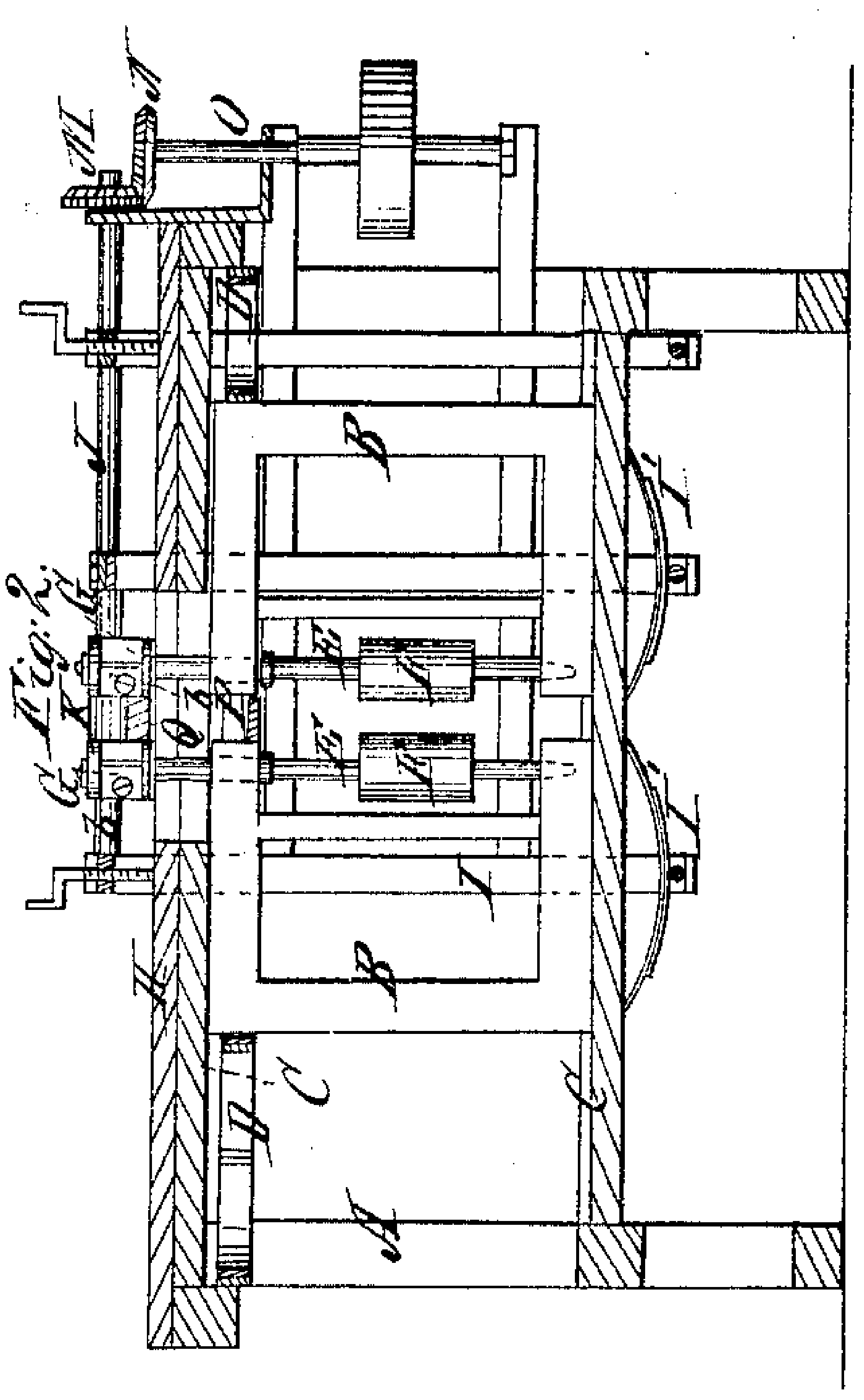


Fig. 1.

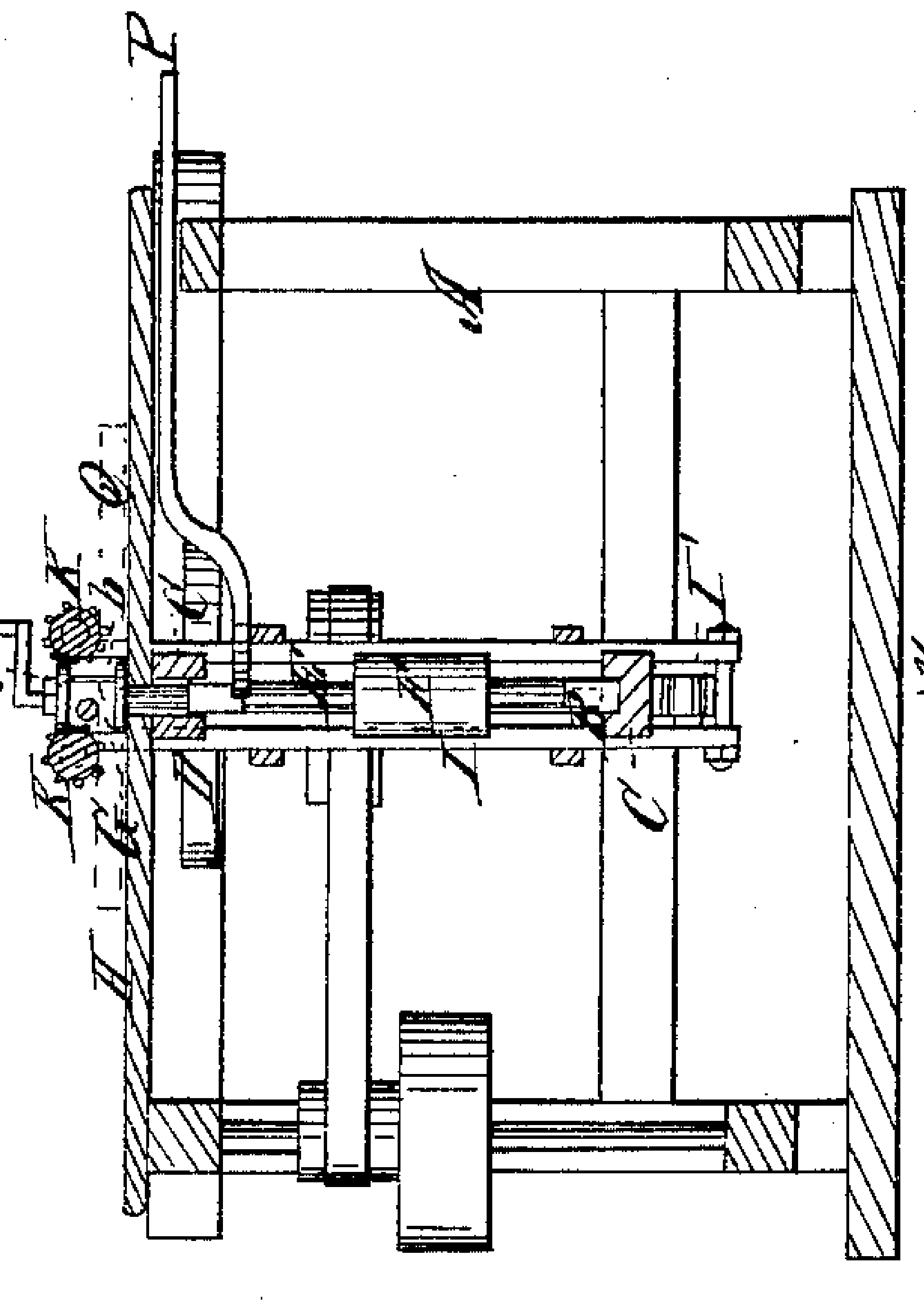
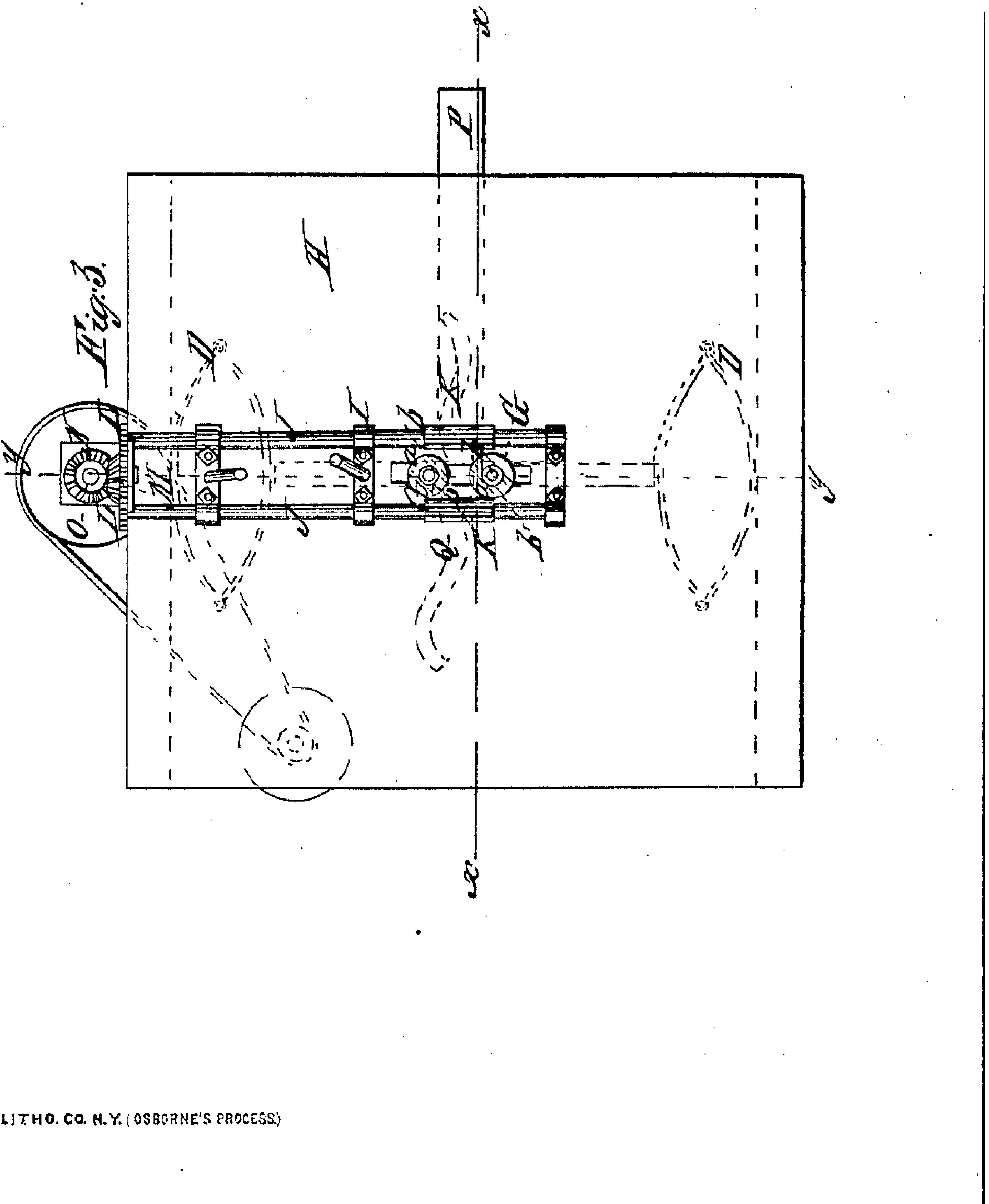


Fig. 3.



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