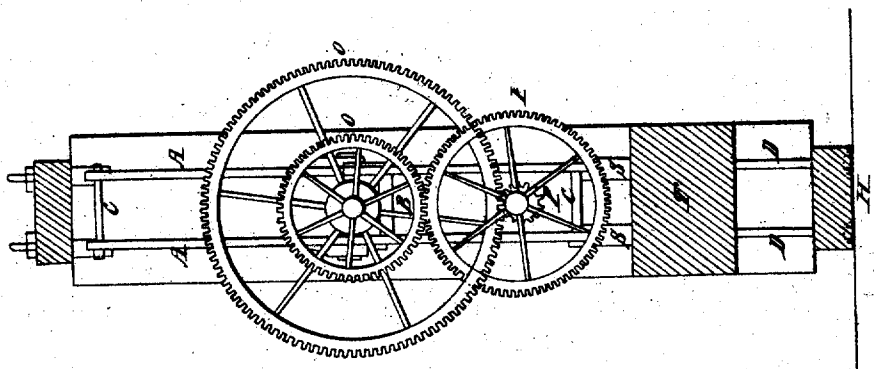
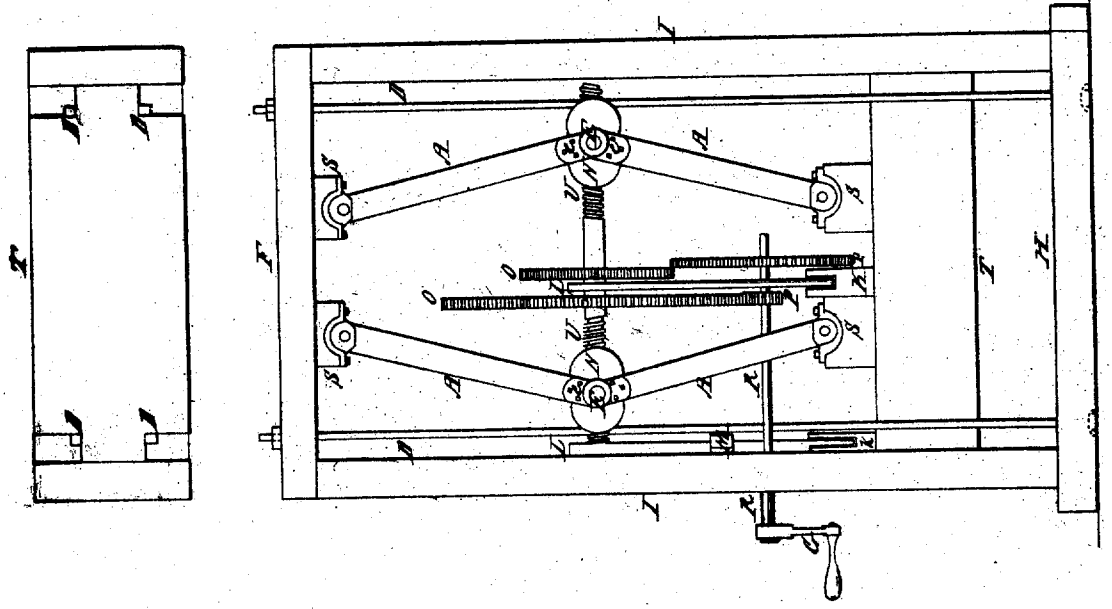
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L. Hale,

Cotton Press.

Patented Dec. 12, 1831.





Dec 12 1831

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163.

Luke Hale of Hollis State of New Hampshire

Letters Patent

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Luke Hale himself of his improvement in the standing Press called the "Toggle joint screw Press"

To all persons to whom these presents shall come.

Luke Hale of Hollis County of Hillsborough and State of New Hampshire, Machinist sendg greeting.

Be it known that I Luke Hale have invented constructed made and applied to use a new and useful improvement in the standing Press, called the "Toggle joint screw press" which I specify and describe in my own words viz.

The said Press for common use is about eight feet high, four and a half feet wide, and one and a half feet deep; the bed piece about twelve inches, and the posts four and a half inches thick, the posts are framed into the bed piece and beam, by double tenons well fitted to double mortises, made in the bed piece and beam; into which mortises the tenons are forced and there confined by four iron bolts passing up through the bed piece and beam having strong heads on the lower end, and strong nuts screwed on the upper end of each bolt. These bolts bind the Press firmly together. The platten is in length and breadth equal to the width and depth of the frame, and about one foot thick. It has a tenon on each end equally fitted to slide up and down between the said iron bolts which serve for guides to the platten as well as for efficient supports to resist the power of the press.

There are four boxes having half round grooves to receive the heads of the toggles two of which are made fast to the under side of the beam, and the upper two to the upper side of the platten. They are placed at such distances from the ends as to render the power of the toggle as equal as possible on every part of the beam and platten.

On the left hand side on the platten is a flange rising about three or four inches high to guide the lower end of a sling to be described. Each box has a cap with half round groove matching the groove in the box, the caps are made fast to the boxes by bolts or screws. ——— Four toggle joints in upright positions between the beam and platten, they are made wide with double bars. The bars are connected at

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the extreme ends by a round bolt or pivot fitted to the said boxes by which the toggle are connected with and suspended to the beam with all their appendages. Within about three inches of the centre joints of the toggles the side bars have another union by a square bar extending from one side to the other. The inner ends of the side bars are excavated about one third part of a circle fitted to play on pivots to be mentioned hereafter, on the outside of each side bar is a flat hinge which holds the excavated faces of the side bars of the toggles to the above mentioned pivots. These pivots are formed one on each opposite edge of a strong nut of an oblong spheroid form placed in the centre of each toggle. The nuts are well fitted on a screw about five and a half inches in diameter, and just long enough to reach from the inside of one foot to the inside of the other. The screw is the grand moving principle. It is made with a square thread right-handed, at one end and left handed at the other end, so that the toggle joints may approach to or recede from each other as the screw is made to revolve, one way or the other. On the centre of this screw is made fast a dentated wheel about eighteen inches in diameter, on the right-hand of which and close to it is made fast another dentated wheel nearly three feet in diameter, and on the left hand side of which is swivelled the upper end of a flat sling extending down to the platform, when it is raised to its highest point there entering the above mentioned flange or hollow stud which rises so high as to retain the end of the sling below the platform at its lowest point. On the right hand end of the said screw and beneath the right foot is swivelled another sling extending downwards, the lower end of which passes through a staple or bridge screwed to the foot. The crank arbor with its appendages is placed directly below and parallel to the said screw, on the right hand end is a pivot long enough to reach through the pivot hole in the lower end of the sling, through the foot mortice for that purpose, and receive a crank on the end. At the other end it has a long pivot which plays in a pivot hole in the lower end of the left hand sling; and it has so much end shake, that it may at option be slid one way and the other about five or three inches for the purpose of shifting the gearing. Close to the shoulder of the pivot on the left hand end of the arbor is made fast a small wheel, so calibered as to mesh into the smaller wheel on the said screw, about five or three inches to the right of said small wheel on the same arbor is made fast a small pinion of eight or ten leaves calibered to mesh into the larger wheel on on the said screw, by which

means the operator can apply a smaller or greater power, or operate with a greater or less speed at option.

What I claim as my invention and improvement, is the application of the right and left handed screw by which the toggle joints are put into action, all other parts being common.

In testimony that the above is a true specification of my said improvement I hereunto set my hand and seal this 29th day of November in the year of our Lord one thousand eight hundred and thirty one

Witnesses,
John Dwight
Augustus Peabody

Luke Hale,

1190 rds

Ex
Chg'd