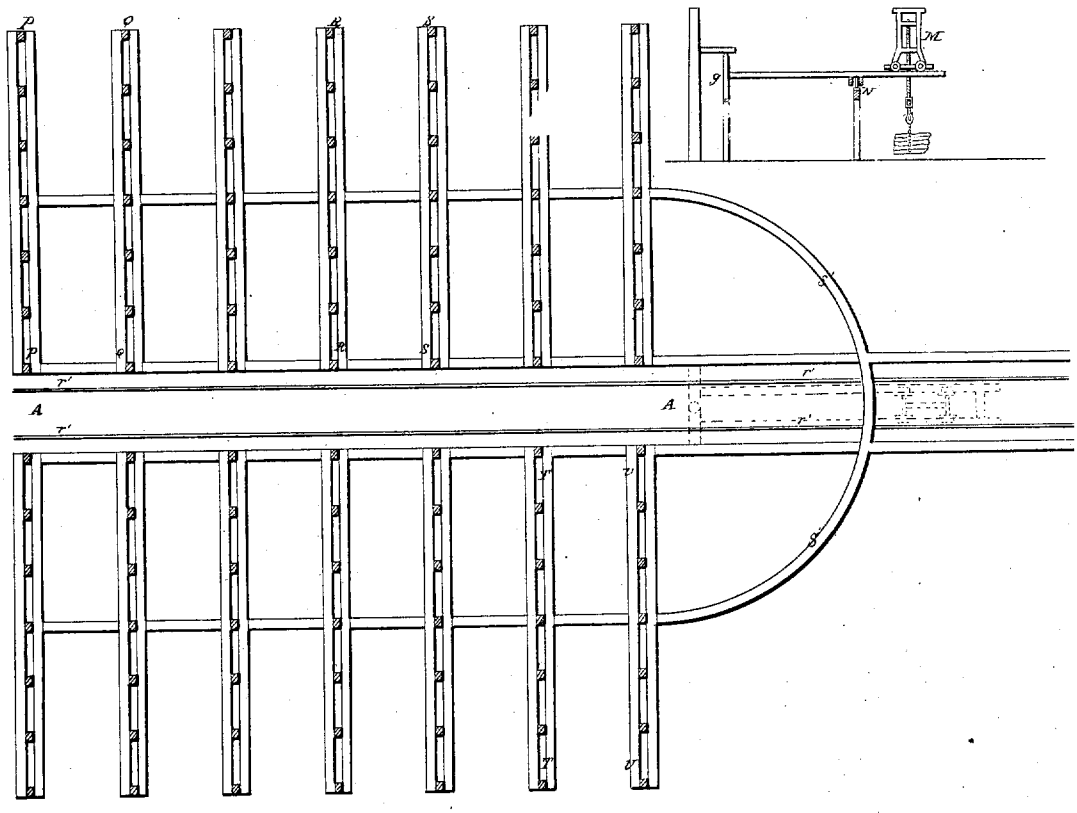
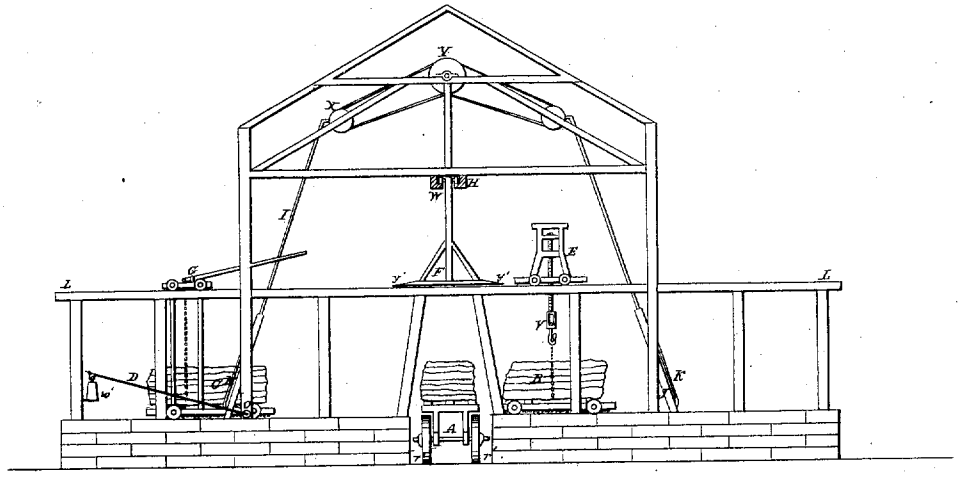
J. L. Dutton,

8833X

Sawing Stone.

Patented May 22, 1835.





AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

May 22. 1895

3

Joseph L. Dutton

8833X

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 Joseph L. Dutton himself of his improvement in Stone Sawing Mills

---

To all to whom these presents shall come: Be it known that I Joseph L. Dutton of the City of Philadelphia in the County of Philadelphia and State of Pennsylvania have invented new and useful improvements in Mills for Sawing Stone and that the within is a full and exact description of the construction and operation of said mill as improved by me.

Specification of an improved saw mill invented by Joseph L. Dutton of Philadelphia. The improvements are as follows. Instead of placing the floor of the Mill on a level with the ground as usual I raise it so far above as to be on a line with the bed of the log or marble teams by which means most of the expense incurred by unloading and reloading is saved on this elevated floor are placed several short transverse railways upon which run the cars B & C, to which the blocks of Stone are transferred immediately from the common teams and by which they are supported during the operation of sawing. In the plan P.P. and Q.Q. represent one set of railways and R.R., S.S. &c other sets. The removing the blocks from the teams to the railway cars B. & C. is effected by means of an endless screw turned by proper cranks and pinion work framed on a car E. which traverses the elevated rails H.H. &c placed directly over those on which the block cars run. At the lower end of the screw is a swivel V which allows the block to be turned round horizontally: only one screw car is necessary for all the sets of railway being carried from one to another on the suspended frame W. along which it may be pushed from one end of the building to the other on the rollers U.U. The lower part of this suspended frame plays a few inches vertically on a pivot at W. which allows either end V. V. required to come into contact with the floor I.I. so as to form an inclined plane for greater ease in running the frame F on it. J.J. show the saw slides in which the saws move in a nearly vertical direction

8833X

direction (which motion has already been patented and has been found a great deal preferable to the horizontal owing to the ease of supplying the saws and also of the diminished friction on the saw blades which are delivered from the weight of the block as it separates into slabs) I. is the pitman through which motion is communicated to the saws by the wheel G and bands X.Y. which are operated on by any convenient prime mover. The block of stone C is kept constantly pressed against the saw by means of the lever D. at the end of which is hung a weight W. of proper size for the purpose which may be moved backwards and forwards as on a common steel yard. Near the other end is a catch at which permits the lever to be raised without causing the pinion O. to revolve, but which in descending catches the teeth of the pinion which in turn engages those of a rack bar placed under the centre of the block car and thus maintains a continual pressure of the block against the saw blade. To prevent this pressure from becoming at any time too great each saw slide is furnished with a strong wooden spring K. which by yielding when the weight W. operates too strongly prevents a proper degree of pressure. The stiffness of this spring must of course be capable of adjustment. For ease of moving blocks and commanding a large space of yard I employ a crane whose turning point may be at C as usual but whose stay traverses either by means of rollers at N. or in any other manner convenience may direct) railways of semicircular form which may be arranged as shown in plan by S.S. and by the dotted lines or otherwise. On the top of the crane travels a screw car (like that at B) for lifting blocks from the ground and placing them either in another part of the yard upon a railway car by which they may be carried into or out of the mill on the railway R.R. of common construction. By this crane any portion of yard may be commanded. What I claim as new and for which I claim an exclusive right are the raising of the mill floor as above described. the traversing car F. the application of the upper car E to saw mills. the car G. The crane or shifter applied to saw mills or for any other purpose and the regulating spring of the saw slides

Witnesses
Simeon Mason
William Milnor

Joseph L. Dutton

(Drawing)

915 W

E.a
C.M.W.