P. W. HART.

Machines for Sawing Laths.

No. 152,632. Patented June 30, 1874.

Fig. 1

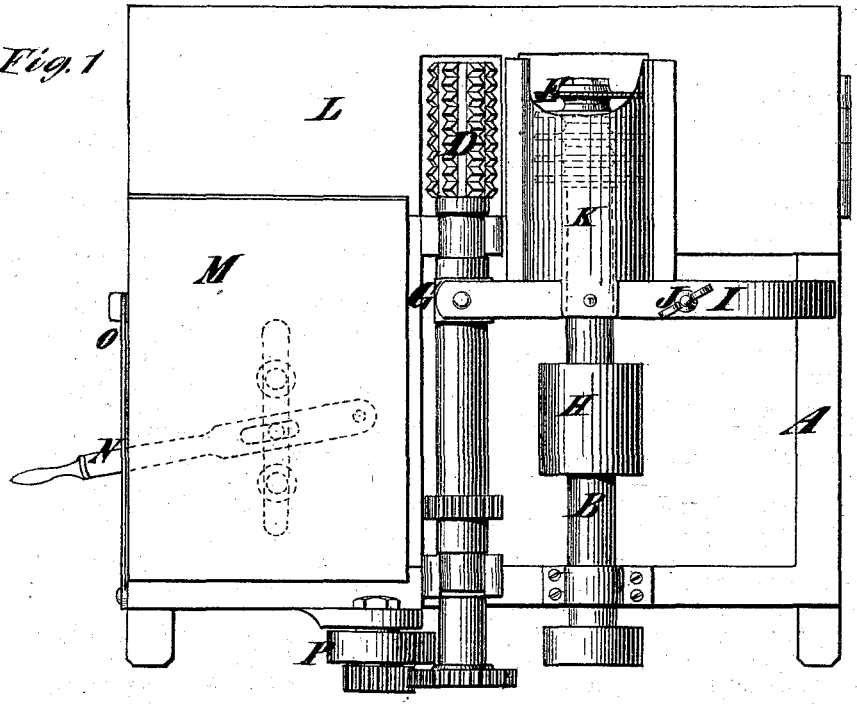


Fig. 3

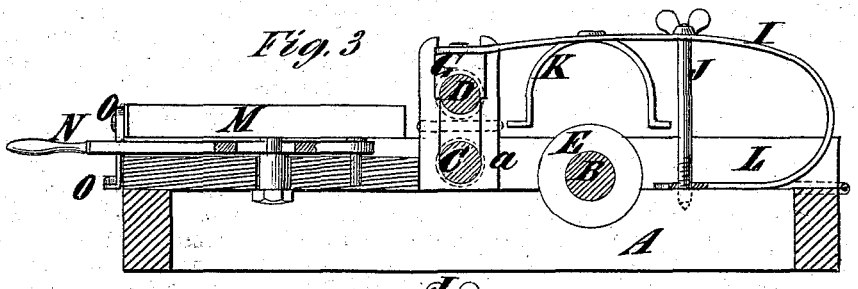
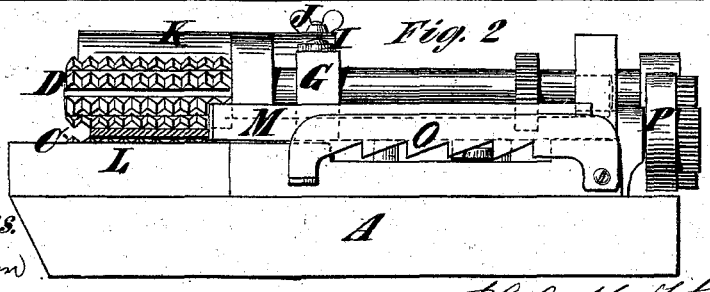


Fig. 2



Witnesses.

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PHILO W. HART, OF CAMDEN, NEW YORK.

IMPROVEMENT IN MACHINES FOR SAWING LATHS.

Specification forming part of Letters Patent No. **152,632**, dated June 30, 1874; application filed February 26, 1874.

To all whom it may concern:

Be it known that I, PHILO W. HART, of Camden, in the county of Oneida and State of New York, have invented an Improved Machine for Sawing Lath, of which the following is a specification:

This invention consists in certain means of applying a saw-guard and a cap-bearing in combination with a gang of circular saws and their shaft, whereby facility is afforded for access to or the removal of the saws for sharpening.

Figure 1, in the accompanying drawing, is a plan or top view of the machine. Fig. 2 is a side view of the same, and Fig. 3 is a vertical section thereof, taken transversely to the feed rollers and saw-arbor.

Similar letters of reference indicate corresponding parts throughout the several figures.

The frame A of the machine is square, as shown in Fig. 1. The saw-arbor B is supported in bearings thereon, beyond which the gang of saws E E are arranged. Feed-rollers C and D are arranged in proximity to them to feed forward the stuff to be cut. The lower of the two is supported in bearings *a*, furnished for its reception on the frame A. Their caps are shaped to constitute the bearings for the upper roller D, which is held down in them by a spring, I, acting on it through the medium of a single cap, G, arranged between the two. Motion is imparted to the saw-arbor by a belt fitting on a pulley, H, with which it is furnished, and the lower feed-roller is driven from it by a belt acting on a pulley, P, that works on a fixed stud on the side of the frame, and transmits power to the said feed-roller by gear-wheels. The upper feed-wheel roller is geared with its fellow, and derives its motion from it. The spring I, before alluded to, is bow-shaped, and one end bears on the frame A, and is retained in place by a screw-bolt, J, whose end passes through it, and screws into the adjacent portion of the frame, and the other bent-over end extends forward to the cap G of the upper feed-roller, and exerts a pressure thereon to cause it to press sufficiently on the stuff to bite on it, and feed it forward. This pressure may be regulated by manipulating the bolt J, whose head bears on the bent-over portion of the spring. The single spring being arranged to act on the shaft between the feed-roller and the gears serves the additional purpose of keeping the upper roller-shaft in gear with the lower one, no matter how much or little the upper roller may be raised by the thickness of the stuff passing under it. A guard, K, is arranged over the saws. It is of semi-cylindric form, with turned-up edges, and is elevated slightly from the work-table L to permit the stuff being cut to pass under it. The table L extends only across the frame at one side, and is of sufficient width to accommodate any work that can be cut by the saws. It is hinged at the rear end to the frame, so that it may be swung up out of the way to enable the saws to be conveniently sharpened by swaging. An opening is provided in it for the saws, and another for the lower feed-roller C. A sliding gage, M, is arranged at one end of the frame in such position that it may slide across the forward end of the table to guide the stuff properly to the saws. A lever, N, pivoted at one end to the frame underneath the gage, is slotted a short distance from the end to receive a pin arranged on the under side of the gage, and upon the application of power to its outer end the gage is shifted back or forth. A pair of studs or pins on the gage fit into a slot provided below it in the frame A, and thereby guide the gage in a straight course. The gage may be locked in various positions by means of a catch, O, pivoted to the front of the frame in proximity to the gage. It is provided with numerous notches, made somewhat like ratchet-teeth, which, one at a time, engage with the handle of the lever N, and by locking it prevent the gage from sliding back.

When desirable to move the gage back the catch is raised by a handle on its outer end to disengage it from the lever.

The slabs commonly used for making laths, fence-pickets, and the like, being of irregular shape, contain many portions which are unfit for the purpose that the main portion is put to; consequently, power expended in cutting them up is wasted.

The gage affords a means of obviating such waste, and, therefore, enables the cutting of the available material to be performed much quicker than when the machine is hampered

with unnecessary work. It effects this end as follows: The slabs, one at a time, are placed on the table, and the gage is slid out till it adjusts the slab thereon so that the valueless projections extend beyond the outer saw, wherefore, of course, they are merely cut off by this saw, instead of being cut up into fine pieces, and the saws which perform the cutting are only those individual saws at the outer end of the gang to which the available part of the slab is fed.

Another purpose which the gage serves is to limit the amount of work which the machine performs to the amount of power which is available; and this feature is of the utmost importance where a stream of water is the motive power, for, at different seasons of the year, and even at different periods in a day, as the water stored up by the dam becomes spent the power derived from it varies so much that it is not capable of constantly performing a given amount of work. This regulating of the work to suit the power the gage is made to effect by shifting the slabs outwardly so far that they are presented only to one or more of the saws at the extreme outer end of the gang, and, therefore, only one or more laths will be cut from the slab at each feed.

This machine is exceedingly light, weighing about one-fifth as much as the machines of its kind in common use, and moreover it is very simple, and can be used on any lathe-bed, or on an ordinary circular-saw bench.

Owing to the provision for regulating the performance of work the machine may be operated by foot-power, applied through the medium of a treadle.

When it is necessary to sharpen the saws the gage is slid back from off the work-table, and the screw-bolt J is removed from the frame to permit the removal of the saw-guard, which is carried by the spring I that the bolt secures in place. By the removal of the spring, also, the upper feed-roller is left free to be removed.

The table may now be swung back, and then the saws can be easily sharpened by swaging, as before mentioned. After the sharpening is finished the table is let down again, the feed-roller, guard, and spring are applied, and the gage may then be manipulated as before.

What I claim as my invention is—

The combination of the saw-guard K, the spring I, the cap-bearing G of the upper roller-shaft and the screw-bolt J, substantially as herein described, whereby the said screw and spring secure both the saw-guard and the cap-bearing.

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