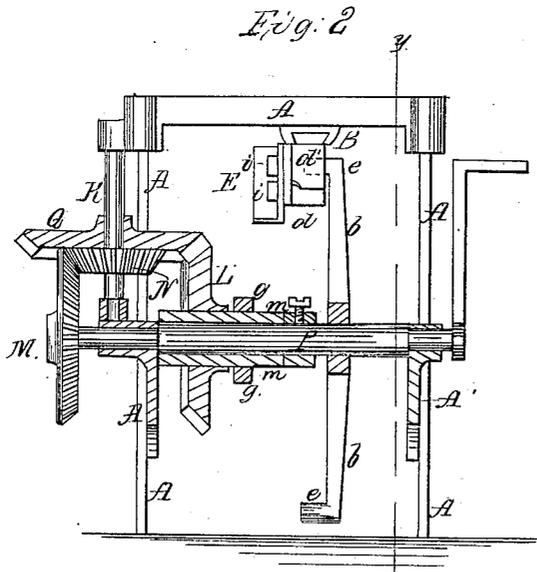
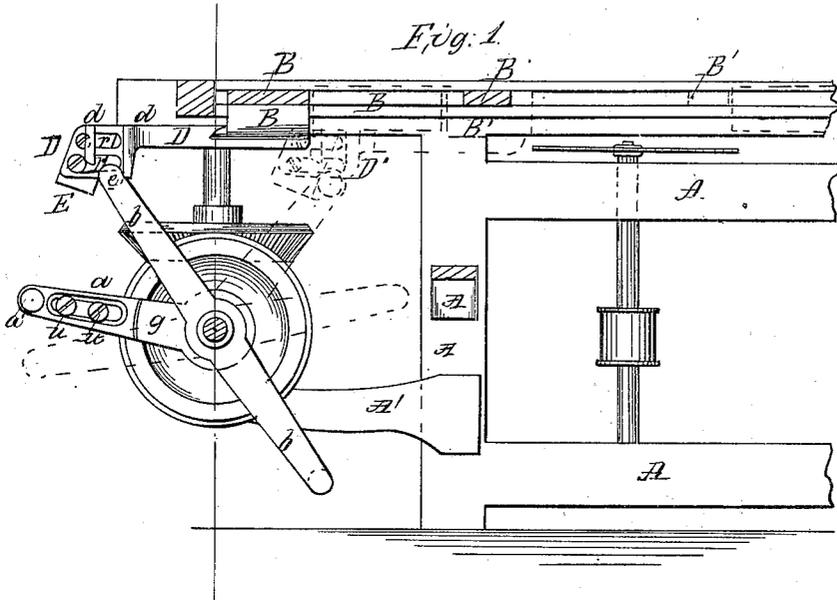


*L. H. Dodge,
Sawing Shingles.*

N^o 78,725.

Patented June 9, 1868.



*Witnesses;
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United States Patent Office.

LUTHER H. DODGE, OF OSHKOSH, WISCONSIN.

Letters Patent No. 78,725, dated June 9, 1868.

IMPROVEMENT IN SHINGLE-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LUTHER H. DODGE, of Oshkosh, in the county of Winnebago, and State of Wisconsin, have invented new and useful Improvements in Shingle-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a sectional view of that part of a shingle-machine having my improvements. The section is taken through the line *y y*, fig. 2.

Figure 2 is a cross-section of the same through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention refers to shingle-machines, and is more particularly designed as an improvement upon that known as the "Valentine shingle-machine," though it may be applicable to other machines having a sufficiently similar operation of the carriage. In Valentine's machine, the tables are operated to feed the bolt to the saw by means of right-angular arms, placed transversely through horizontal shafts at each end of the framing. As the arms revolve in opposite directions, the tables are brought together above the saw, working against the force of a bent spring between the tables. As soon as the arms clear the edges of the sliding tables, the latter are thrown back to their original position by the bent spring. By this construction the lumber is fed to the saw more rapidly during the first half of a cut, when the saw has the highest velocity, and slower during the latter half of the cut, in order to keep the saw constantly at a uniform velocity.

It consists in actuating the carriage holding the shingle-block back from the saw by the positive movement of a revolving arm, thus dispensing with the spring now used for that purpose, and obviating the disadvantages attending the use of such springs.

In the machine alluded to as being improved by my invention, the carriage is returned from the saw by the action of a spring, the use of which has the following objections:

First. The retrograde movement of the carriage is often irregular.

Second. The carriage is frequently sent back against the cross-bar or hurter with too forcible an impact, which jars and deteriorates the machine, often causing the same to get out of repair.

Third. On other occasions, when the lubricating-oil on the guides becomes gummed, the return of the carriage is too slow, which causes it to meet the feed arm at the wrong time.

Fourth. A large percentage of shingles is spoiled by the concussion of the carriage, when actuated by a spring as above stated, for such concussion dislocates the shingle-block from its proper position, and one shingle is cut before the block settles back to its correct position.

Fifth. The spring, also, is frequently broken, thus occasioning expense and loss of time in replacing it.

By my improvements the above-cited objections are obviated, and the machine is made to run uniformly, and with less consumption of lubricating-material. It is also more easily attended.

The improvements will, by reference to the drawings, be seen to consist of the arm *a*, and its gearing and other parts, all of which will hereinafter be more fully set forth.

A is the general frame of a shingle-machine, one end only being shown, as the saw works in the middle of the frame-end, the carriage and its feeding-mechanism being, in practice, duplicated at the other end.

A' is the horizontal saw, revolving upon the vertical shaft *A''*.

B is the carriage, which slides in guides to and fro before the saw, in the usual manner.

On the shaft *P*, which bears the usual feed-arms *b*, I place a loose sleeve, *m*, having keyed or otherwise affixed thereto the arm *g*, which bears a slotted-arm extension, *a*, adjustable, as shown, by set-screws *u*. This extension terminates in a stud or wiper, *a'*, similar to those shown at *e*, on the arms *b*.

The bevel-wheel *M* is keyed on the shaft *P*, as shown, and engages with the similar wheel *N*, keyed on the shaft *R*. A bevel-wheel, *Q*, keyed on the same shaft *R*, engages a bevel-wheel, *L*, keyed on the sleeve *m*, or cut thereon, as may be.

The shafts *P* and *R* have bearings, as shown, the extensions *A* furnishing one bearing for the shaft *R*.

The gearing, M, Q, N, and L, is so proportioned as to produce double the motion of the arm *a* to that of *b*. From the carriage B there projects an arm, D, the outer end of which terminates in plates *d'* *d*, as shown, and within which the stud *e* enters when feeding the block up to the saw.

The return of the carriage and block was heretofore produced by a spring, as above stated, but by my improvements the arm *a*, and its stud *a'* are employed, which, as the sleeve *m* revolves, produces the return of the carriage-block by the employing of the said stud *a'* upon a shoulder-plate, E, affixed by bolts and nuts *i* to the arm D, and on the side opposite to the plates *d'* *d*, as shown. The red outlines shown at D' B' exhibit the carriage in the act of being brought back by arm *a*, the latter being shown in red outlines also.

Thus the carriage bearing the shingle-block is returned from the saw with a regular and positive motion, that conduces to the perfect and economical working of the machine, as has been thoroughly established by the daily employment of a full-sized machine in practical use.

My improvements are of small comparative cost, and can be readily attached to the machines now in use without altering the general form of the same.

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

The combination of the shaft P, sleeve *m*, bevel-wheels M N Q L, the arms *a* *b*, arm D, and plate E of the carriage, substantially as described, for the purpose specified.

LUTHER H. DODGE.

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