W. Stoddard,

Cutting Shingles,

No. 11,950, Patented Nov. 14, 1854.

Fig 4

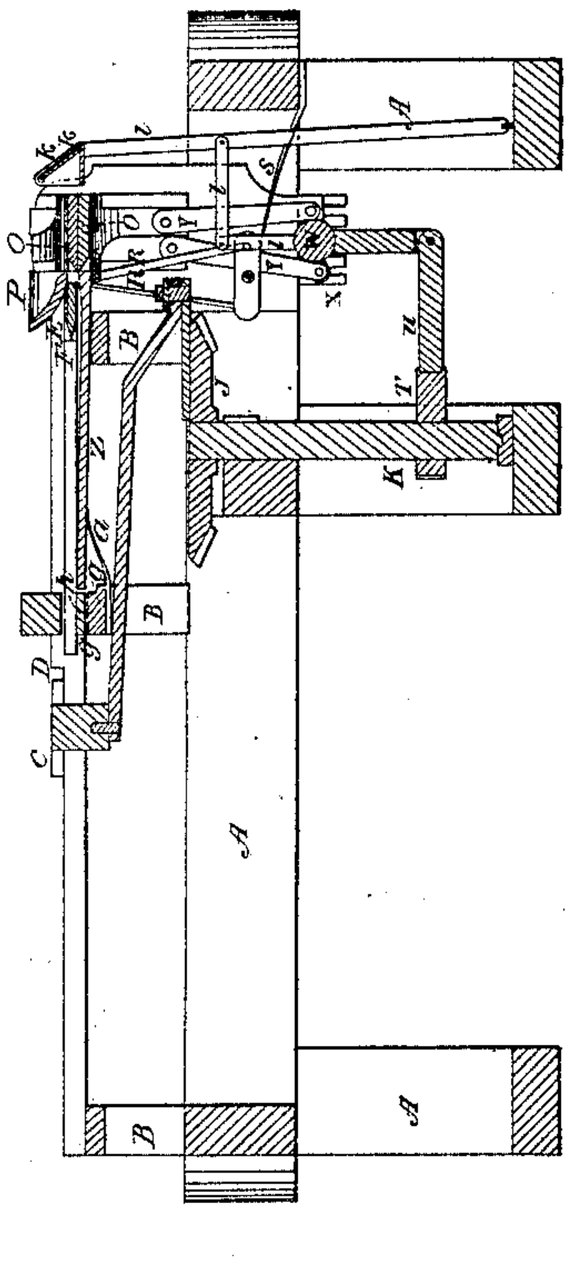


Fig 3

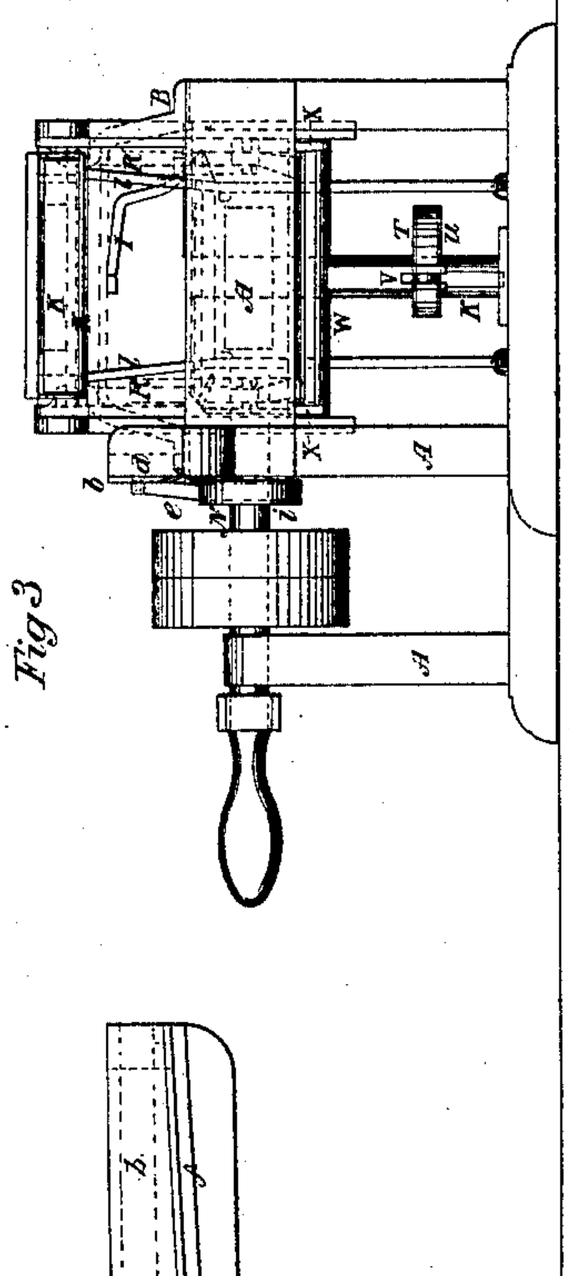


Fig 1

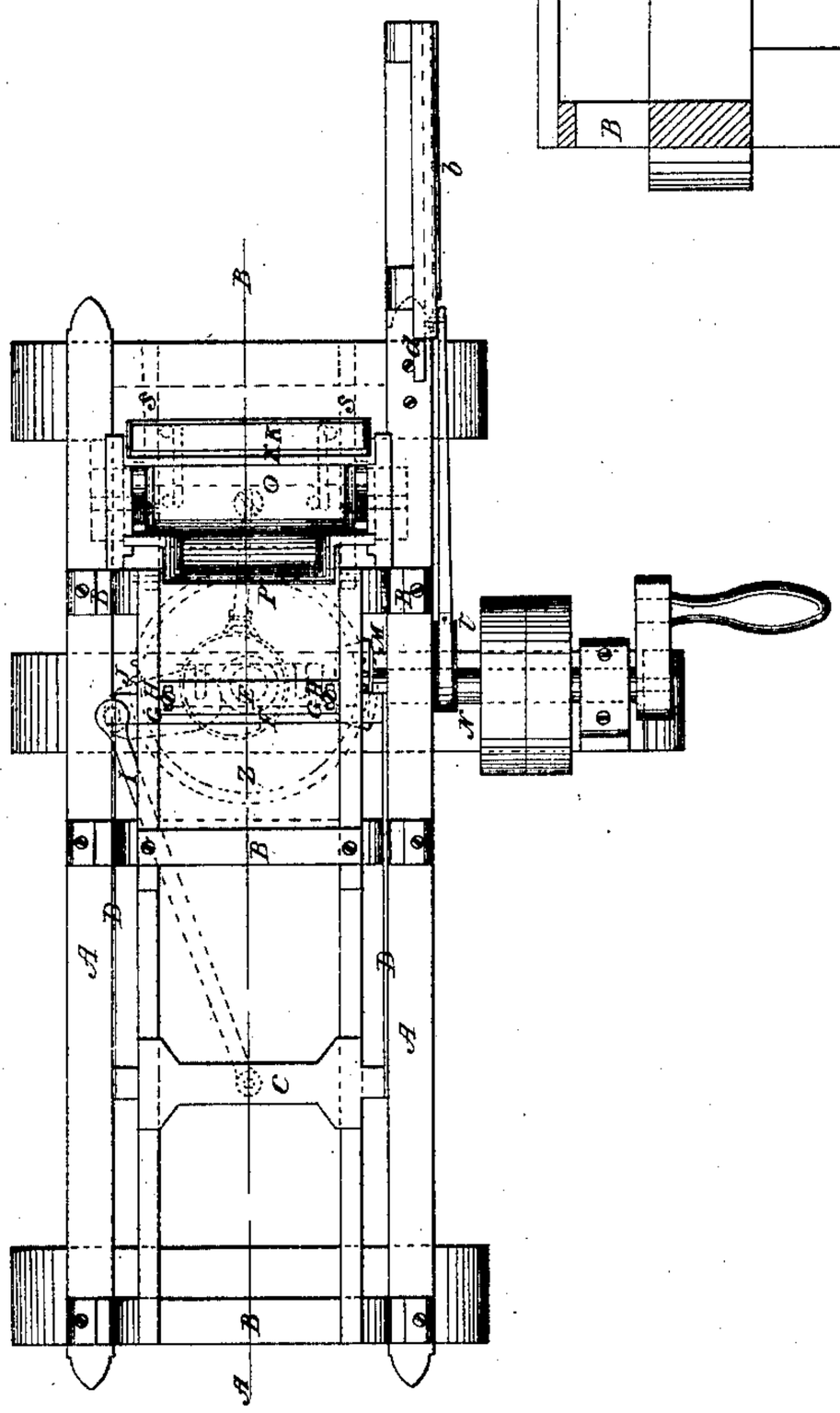
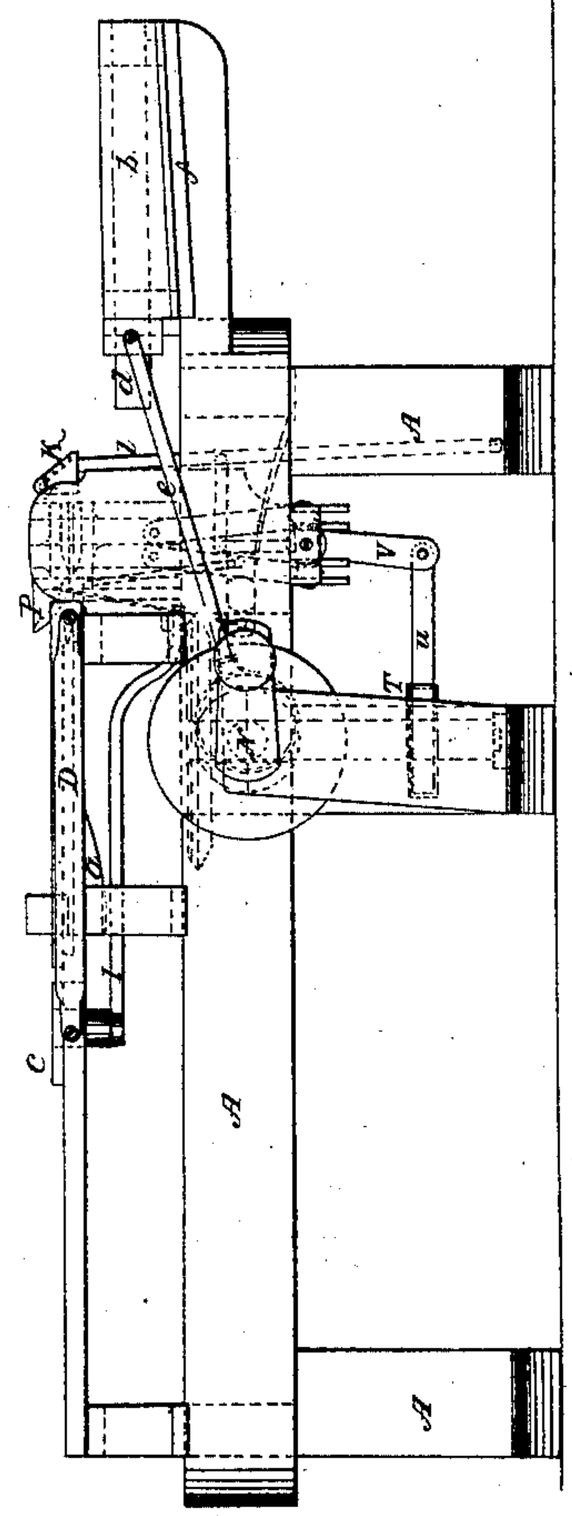


Fig 2



UNITED STATES PATENT OFFICE.

WILLIAM STODDARD, OF LOWELL, MASSACHUSETTS.

SHINGLE-MACHINE.

Specification of Letters Patent No. 11,950, dated November 14, 1854.

To all whom it may concern:

Be it known that I, WILLIAM STODDARD, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Shingle-Machine; and I hereby declare that the following is a full, clear, and exact description of it, reference being had to the accompanying drawings, in which—

Figure 1 is a plan; Fig. 2, a side elevation; Fig. 3, an end elevation; Fig. 4, a longitudinal and vertical section at A, B, Fig. 1.

The nature of my invention consists of a machine hereafter fully detailed in which the back edge of the riving knife acts as a driver to drive the pieces of wood for the shingles between the dressing knives, and dresses them to the required taper without the use of a secondary driver, or sliding slotted arms, they having the riving knife attached to them.

To enable persons skilled in the art of making shingle machines to carry out my invention. I will describe the same as follows. I construct a frame of wood as seen at A, A, Figs. 1, 2, 3, and 4. On the top of this frame I attach three stands as seen at B Figs. 1, 2, 3 and 4, and on the top of these stands I place two railways or tracks *l* Figs. 2, 3 and 4 for the purpose of guiding the cross-head shown at C, Figs. 1 2 and 4, to each end of this cross-head I attach two connecting pieces as seen at D D Figs. 1 2 and 4, for the purpose of connecting the said cross-head to the riving knife, F. On the top of the said riving knife is placed a sliding cap as seen at E, Figs. 1 and 4, for the purpose of preventing the bolt or block of wood dropping down before the back edge of the riving knife, as it passes backward to the extent of the motion given it. It will readily be seen that this cap E slides on the top of the riving knife F as seen at Figs. 1 and 4, by means of the oblong slots in each end of it as seen at G Fig. 1 through which pass screws, and then into the knife as seen at H Fig. 1.

To the under side of the cross-head C I attach one end of the connecting rod as seen at I Figs. 1, 2, 3 and 4, and the other end of it is attached to a bevel gear J seen at Figs. 1 and 4, this gear should be firmly secured to a perpendicular shaft as seen at K, Figs. 3 and 4. Under the aforesaid gear J I place a pinion, seen at M, Fig. 1 which gears into it and is attached to one end of the driving shaft N Figs. 1, 2, and 3, and at the other end is placed the driving pulley; to which power may be applied by band from any of the known motors.

The dressing knives which smooth and taper the shingles, are shown at O Figs. 1, and 4, and directly back of them are shown the pressure bars P, Figs. 1, 2, and 4. These are for the purpose of steadying the shingles as they are being dressed, and the said bars are pressed together by means of the connecting pieces R Figs. 3 and 4, and the springs pressing against them as seen at S Figs. 1, 3 and 4.

The aforesaid dressing knives O, are drawn together and moved apart for the purposes above indicated, by means of the eccentric shown at T Figs. 2, 3 and 4, and which is secured to and revolves with perpendicular shaft K.

To the eccentric T is fitted a rod U, seen at Figs. 2, 3 and 4 and to the end of this is fitted the lower end of a perpendicular rod as seen at V Figs. 2, 3 and 4 and the upper end of this rod is firmly attached to the center of the rocker shaft W, at each of the ends of this shaft are placed an arm seen at X Figs. 3 and 4, projecting longitudinally with the machine and in opposite directions from each other, and to these are connected the lower ends of the connecting rod Y and the upper ends are properly connected to the perpendicular projections of the ends of the knives, so as to move them apart or together as desired for dressing of the shingles.

At Z Figs. 1 and 4, can be seen the flexible or spring table, it being secured to the top of the lower pressure bar P next to the dressing knives, and at the back end it is sustained by two springs shown at *a* Figs. 2 and 4. By this arrangement of the table, the pieces for the shingles can be rived from cross-grained and gnarly wood with the same facility as straight grained stock. Back of this table I place a spring stop *h* kept up by two springs one of which is seen at *g* Fig. 4. This is for the purpose of preventing the pieces which have been rived for the shingles, or any refuse pieces of wood from sliding back and clogging the machine.

At *k* Figs. 1, 2, 3 and 4 can be seen the jaws which are for the purpose of finishing the drawing of the shingles through between the dressing knives after the driver F approaches as near to the edges of the said

dressing knives as is practicable, the said jaws *k* are moved back and forward by the eccentric T and connecting rods *l*, as seen at Figs. 1, 2, 3 and 4, at the right time to seize the shingle when the back edge of the riving knife fails to drive it through.

By the arrangement of the bevel gear J, and connecting rod I, and cross-head C, and other parts substantially as herein described a very simple, novel, and efficient machine is produced.

To operate my shingle machine all that is necessary to do is to place the block of wood for the shingles upon the spring table and the operation of the riving and dressing knives as before described, finishes the shingles except the jointing, and discharges them at the front end of the machine, from which place they are taken by the hands of the person attending the machine and each edge placed under the aforedescribed jointing knife which joints and completes the shingles.

Having thus described the construction and operation of my shingle machine, I claim as my invention and desire to secure by Letters Patent,—

1. For the riving knife F in combination with the sliding cap E, when they are arranged and operated substantially as described for the purposes set forth.

2. I claim the spring stop *g*, when made and operated substantially and for the purpurposes set forth.

3. I claim the jaws *k* or their mechanical equivalents when constructed and operated substantially as described for the purposes set forth.

WILLIAM STODDARD.

Witnesses:

PETER HAGGERTY,

H. L. BLAISDELL.