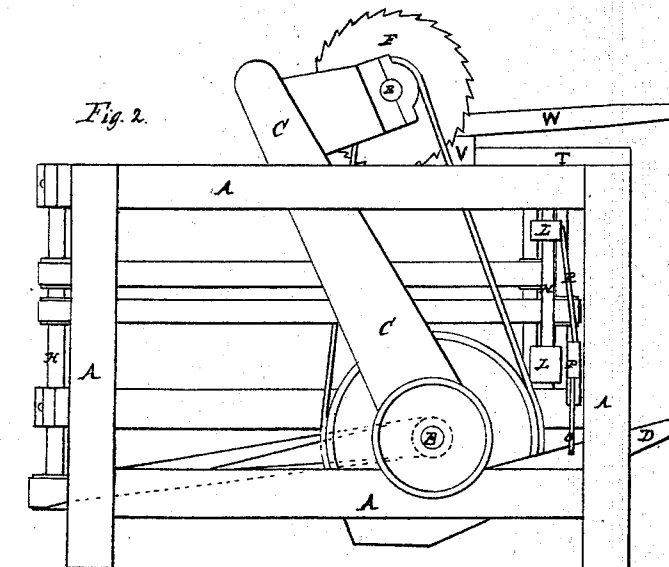
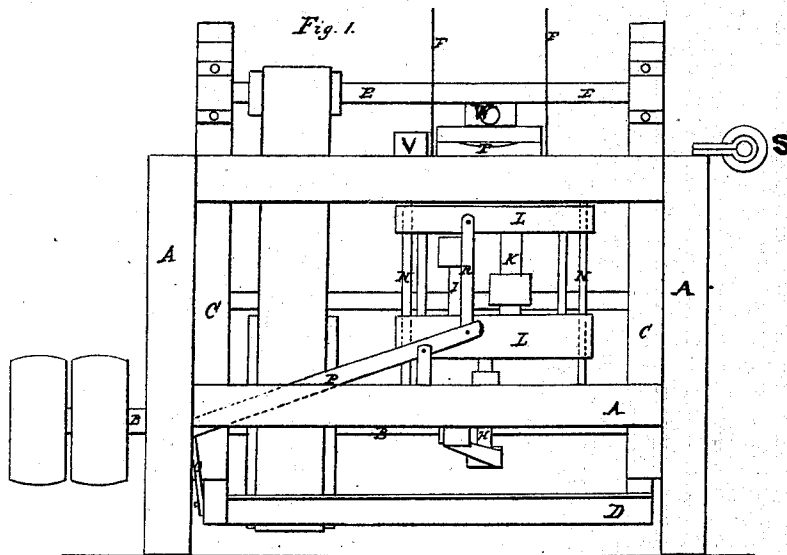


E. H. WOODSUM.
Block-Fitting Machines.

No. 144,427.

Patented Nov. 11, 1873.



Witnesses:

T. T. Snow
at test

Inventor.

Elias H. Woodsum
Per Geo. E. Reid.
att'y.

UNITED STATES PATENT OFFICE.

ELIAS H. WOODSUM, OF SOUTH BOSTON, MASSACHUSETTS, ASSIGNOR TO
FRANCIS H. WHITMAN, OF HARRISON, MAINE.

IMPROVEMENT IN BLOCK-FITTING MACHINES.

Specification forming part of Letters Patent No. **144,427**, dated November 11, 1873; application filed
September 8, 1873.

To all whom it may concern:

Be it known that I, ELIAS H. WOODSUM, of South Boston, in the Commonwealth of Massachusetts, have invented a new and useful Block-Fitting Machine; and I do hereby declare that the following is a full, clear, and exact description thereof that will enable others skilled in the art to which it appertains to make and use the same.

Letters Patent of the United States, No. 91,893, have already been granted for a railway-sleeper, in which the improvement consists in the insertion of a block of hard wood into the softer wood of the sleeper. A machine for cutting the sleeper for the reception of the blocks has also been patented—Letters Patent No. 114,079. It is the object of this invention to provide a machine for simultaneously cutting and boring the blocks to be inserted.

The following is a description of the construction of the machine, reference being had to the accompanying drawing, in which—

Figure 1 shows a front view of the machine with the saw-frame drawn forward; Fig. 2, a side elevation with the saw-frame thrown back.

A A is a rectangular frame of ordinary construction. Running across this frame is the main shaft B. Pivoted upon this shaft is the saw-frame C, which is provided at the bottom with the treadle D. At the top, and across this frame C, is the horizontal shaft E E, which is belted to the main shaft B. This shaft contains the two saws F F, the distance between which is to be regulated by the length of the block to be cut. At the back of the frame is the vertical shaft H, which is rotated by a cross-belt from the main shaft. (See Fig. 2.) By means of belts from this shaft are rotated the vertical shafts I and K. These two shafts are secured to the frame L L, which admits of a vertical motion upon the rods or slides N N. (See Fig. 1.) The relative position of these shafts to each other, and to the saws F F, is fixed by the position of the bolt-holes in the rails. Into the upper ends of the shafts I and K are inserted bits of the proper length and diameter. The movable frame is connected with the treadle of the saw-frame by means of the compound lever O P R. At

the right of the frame, and at the top, is placed the roller S, and between the saws, and at the same or about the same level, the platform or table T, at the left of which is the stop V. The platform, also, may be provided with the lever W, under which is placed a spring which shall keep it in an elevated position when not in use.

The operation of this machine may be readily seen. The plank, already cut to the requisite width, is fed in over the roller upon the platform and against the stop V, where it is held in place by means of the lever W. The foot of the operator is then placed upon the treadle D, by means of which the saw-frame is thrown forward and the saws brought in contact with the wood, while, by the same motion, the vertical frame is elevated by the levers O P R, and the bits brought in contact with the under side of the plank. Continued pressure upon the treadle carries the saws and bits through the plank.

Great care is necessary in order to properly adjust the movable frame L relatively to the saws, and the position of the bit-shafts relatively to both, in order that the blocks may conform to the requirements of the gage of the road. The position of the blocks in the sleepers is fixed by the cuts made in them by the machine described in Letters Patent No. 114,079, and the position of the rail upon the blocks is fixed, in turn, by the position of the bolt-holes in the block. These should be equidistant, upon the right and left, from the line drawn through the center of the block.

By adding another saw and another frame with bit-shafts, the capacity of the machine can be doubled.

What I claim, and desire to secure as my invention by Letters Patent of the United States, is—

The device, substantially as herein described, by means of which blocks are simultaneously cut and bored, for the purpose herein set forth, and for similar uses.

Portland, July 18, 1873.

ELIAS H. WOODSUM.

Witnesses:

T. T. SNOW,
G. L. BAILEY.