E. Valentine,

Planing Shingles.

No. 9,983. Patented Aug. 30, 1853.

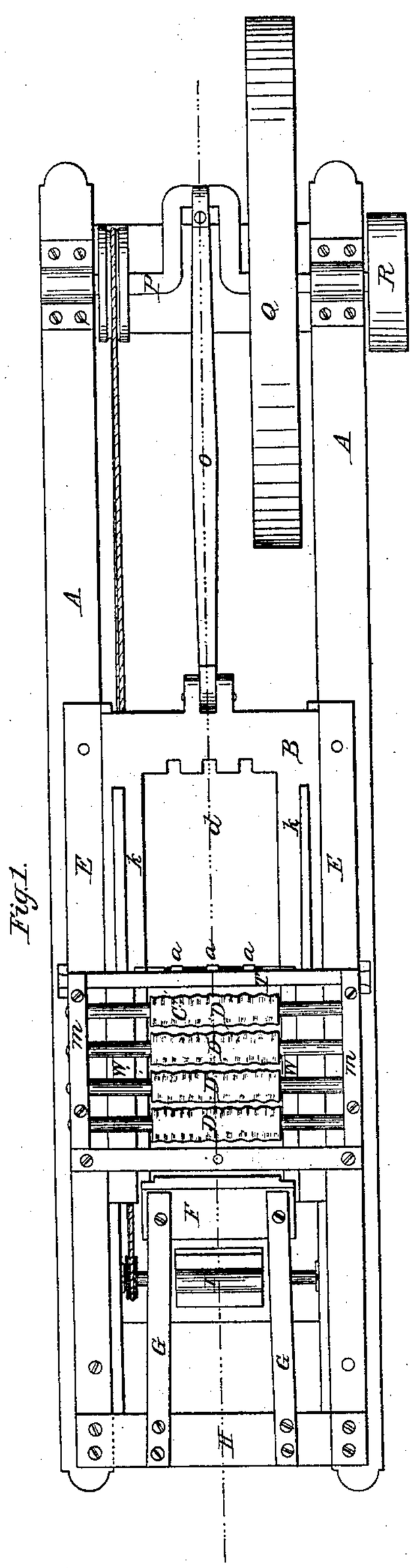

Fig. 1.

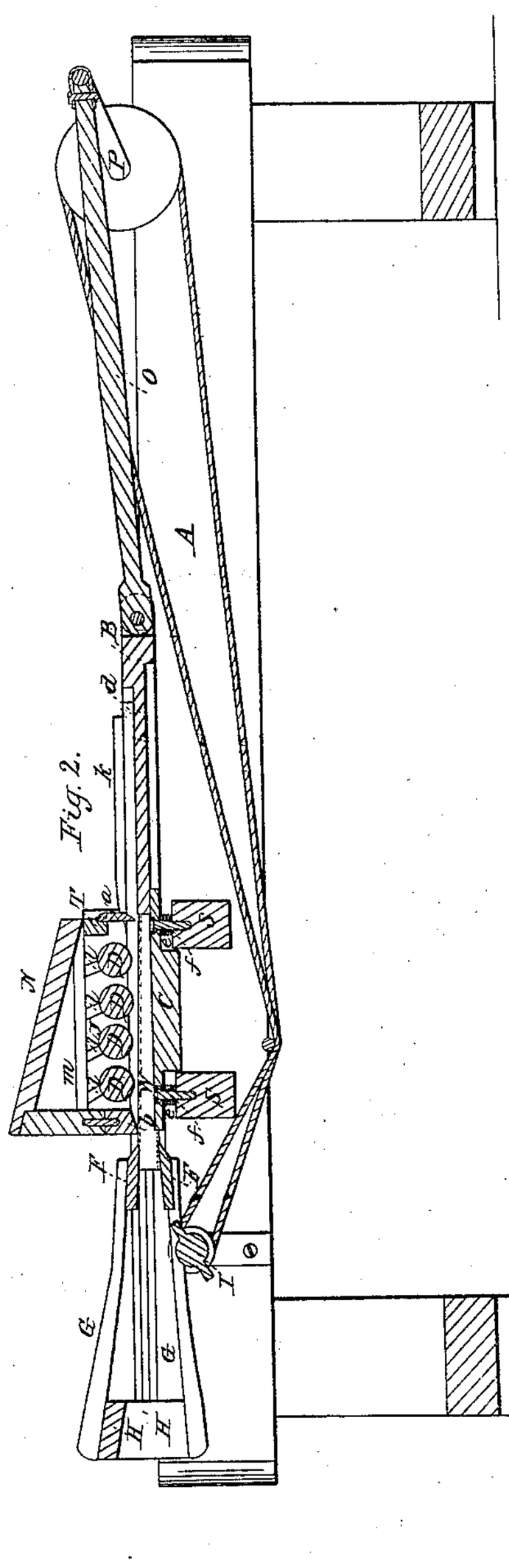

Fig. 2.

UNITED STATES PATENT OFFICE.

ELIJAH VALENTINE, OF PALMER, MASSACHUSETTS, ASSIGNOR TO ABEL BRADWAY.

SHINGLE-MACHINE.

Specification of Letters Patent No. 9,983, dated August 30, 1853.

To all whom it may concern:

Be it known that I, ELIJAH VALENTINE, of Palmer, in the county of Hampden and State of Massachusetts, have invented a new and Improved Machine for Shaping and Dressing Shingles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a top view, and Fig. 2, a vertical longitudinal section through the center of the machine.

Similar letters refer to corresponding parts in both figures.

The oblong frame A, of my machine, may be constructed in any well-known or usual manner.

E, E, are ways secured to the side beams of the frame; which ways, support and guide the reciprocating driver B, and the shingle patterns W, W, that are formed on projections from the forward corners of the said driver. An elastic platform C, is secured to the cross-pieces S, S, of the supporting frame, in such a position that when the driver is drawn back, the forward portion of the said platform will be forced up between the shingle patterns W, W, as shown in Fig. 2. Immediately above the said platform C, there is placed a series of metallic rollers D; the journals of which play freely in inclined slots in the supports J, J, which are capped by the plates *m*, *m*. The peripheries of the said rollers, and the upper surface of the said elastic platform, are usually grooved, as shown in the drawings. I generally place an inclined cover N, over the rollers D, D, &c.; which cover rests upon the transverse mouth pieces *b*, and T, as shown in Fig. 2. Catches *a*, *a*, are jointed to the forward mouth piece T, in such a manner that they will swing freely forward to allow a rived shingle to pass into the machine, but will not allow it to pass rearward again.

The shaving knives F, F, are placed on the extremities of the elastic arms G, G, which presses them against the shingle patterns W, W, with such a degree of elastic force, as to cause them to closely adhere to every portion of the said patterns, as they are reciprocated back and forth. The elastic arms G, G, are secured to the blocks H′, which are connected to each other by the transverse piece H, and are secured to the side beams of the supporting frame.

The rear end of the platform C, extends rearward a sufficient distance to pass under the driver, when it is drawn backward to its fullest extent, and consequently, the upward movement of this end of the said platform, is limited by the under side of the driver. The platform C, may be forced upward by means of spiral springs *e*, *e*, and guided in its movements by pins *f*, *f*,—as shown in Fig. 2,—or by any other suitable means.

A reciprocating movement is imparted to the driver B, by means of the driving shaft P, and the pitman O,—or by any other method. A flutter wheel I, is located beneath, and a little in the rear of the pair of shaving knives F, F, and is rotated by means of a band passing from a pulley on its arbor to a pulley upon the main shaft P. The object of the said flutter wheel being to separate the finished shingles as they come from the machine, from the shavings. The effect of the said wheel being to throw the shingles some considerable distance from the machine, while the shavings will fall immediately below the knives.

Ledges *k*, *k*, rise from the sides of the driver B, which have inclined planes formed at their forward ends. When the driver B, passes forward, these ledges pass under the arbors of the rollers D, D, and elevate them in the slots *l*, *l*, causing the rollers to rest upon the said ledges during a portion of their forward and backward movements. A recess *d*, is formed in the upper side of the driver, into which the rived shingles are placed to be carried forward into the machine.

The operation of my improved machine for shaping and dressing shingles, is as follows: I generally place a quantity of rived, or split, shingles upon the inclined cover N, over the rollers D, and then when the driver (B) is drawn back to its fullest extent, a shingle is placed in the recess *d*, in its upper surface, and is carried forward therein past the mouth piece T, and under the series of rollers D; when the driver passes backward, the catches *a*, *a*, arrest the shingle, and cause it to fall upon the platform C; and as the ledges *k*, *k*, pass from

under the arbors of the rollers D, D, they all in succession fall upon the said shingle and exert sufficient force to flatten it, in case it should be warped, and cause it to pass freely under the after mouth piece *b*, to be operated upon by the knives during the next return movement of the driver. As soon as the driver is brought back again to its fullest extent, another rived shingle is placed in the recess *d*, and as this is carried forward under the forward mouth piece T, and the series of rollers D, the front end of the driver strikes against the end of the shingle first carried into the machine, and forces it under the after mouth piece *b*, in contact with the knives F, F; which knives as they approach each other (in consequence of the forward movement of the shingle patterns W, W,) impart the proper taper to the shingle, and give to it perfectly smooth surfaces. In this manner is the operation continued,—a rived shingle can be fed into the machine, and a finished shingle discharged therefrom at each forward movement of the driver.

In case the rived shingle should not be as thick as the required thickness of the butt end of the shingle, the upward pressure of the platform C, will insure a perfectly smooth and finished surface to the upper side of the shingle. And should the rived shingle be considerably thicker than the required thickness of the butt end of the shingle the platform C, will be forced down by the weight of the rollers D, D, and thereby prevent the injury to the machine which would otherwise be caused by the shingle's being brought in contact with the after mouth piece *b*.

If deemed expedient, a feeding box may be combined with the machine for the reception of the rived shingles to be shaped and dressed, instead of feeding them in singly by hand.

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

The series of rollers D, D, &c., placed above the platform C, when they are combined with the ledges *k*, *k*, which rise from the sides of that portion of the platform that receives the rived shingles to be operated upon, and so arranged that when a rived shingle is first carried forward, the said rollers will be elevated above its upper surface by the said ledges, and when the driver is drawn back, it will at the same time pass from under the said shingle and from under the rollers,—thereby allowing the shingle to fall upon the platform C, and the rollers to fall in succession upon the upper surface of the shingle, for the purpose of giving to the said shingle such a shape and position upon the platform, that it will be carried onward again by the next forward movement of the driver and be operated upon by the dressing knives, substantially as herein set forth.

The above specification of my improved shingle machine signed and witnessed this 14th day of October 1852.

ELIJAH VALENTINE.

Witnesses:

Z. C. Robbins,

George A. C. Smith.