

(No Model.)

2 Sheets—Sheet 1.

S. E. HOLT & E. ALDRICH.

ROOF SEAMING MACHINE.

No. 353,946.

Patented Dec. 7, 1886.

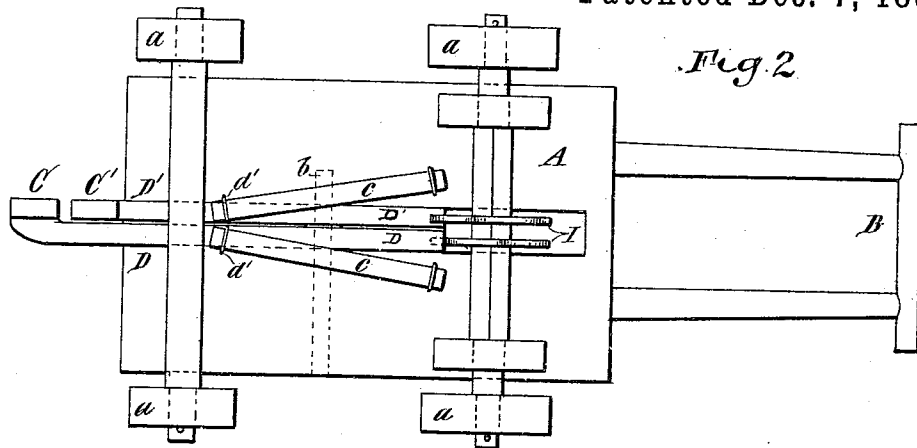


Fig. 2

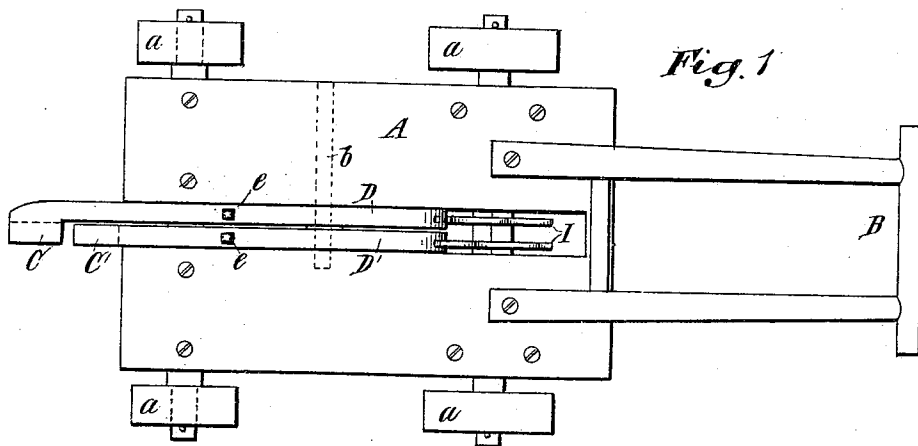


Fig. 1

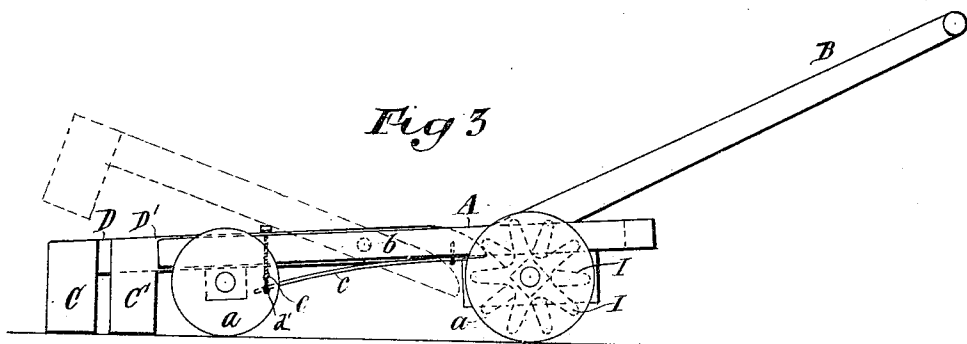


Fig. 3

Witnesses

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(No Model.)

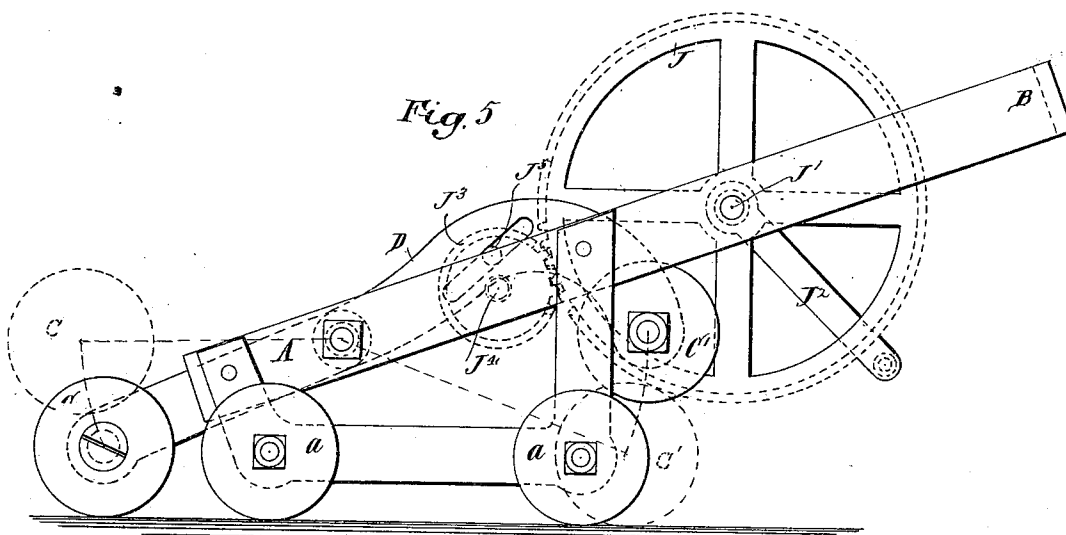
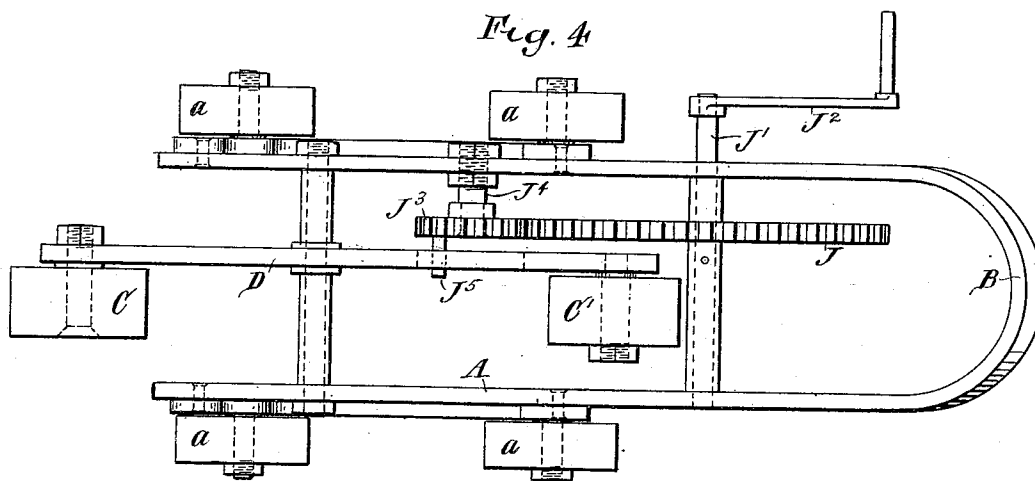
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UNITED STATES PATENT OFFICE.

SAMUEL E. HOLT, OF CATSKILL, AND ELBERT ALDRICH, OF NEW YORK, N. Y.

ROOF-SEAMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 353,946, dated December 7, 1886.

Application filed October 16, 1886. Serial No. 216,383. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL E. HOLT, of Catskill, Greene county, New York, and ELBERT ALDRICH, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Roofing or Seam-Closing Machines, of which the following is a specification.

Heretofore in closing the seams formed by uniting sheets of tin in tin roofing it has been customary to hammer them down with a mallet by hand. It is the object of our improvement to accomplish this work by a simple and effective machine.

We will describe in detail a roofing-machine embodying our improvement, and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a plan or top view of a roofing-machine embodying our improvement. Fig. 2 is a bottom view of the same. Fig. 3 is a side elevation of the same. Fig. 4 is a plan or top view of a roofing-machine of modified form embodying our improvement. Fig. 5 is a side elevation of the same.

Similar letters of reference designate corresponding parts in all the figures.

A designates a truck or carriage, having, as shown, four wheels, *a*, mounted upon axles journaled in the frame of the truck. The wheels *a* will preferably be faced with india-rubber, leather, or similar material. In the example of our improvement shown in Figs. 1, 2, and 3 the body of the truck is flat or table-shaped, and has extending from it a handle, B, by which it may be moved along.

CC' designate mallets or hammers secured to levers DD'. The levers DD' extend, as shown, beyond the front end of the truck, and the mallets CC' are secured to them near such outwardly-extending ends. The mallets extend downwardly. As shown, the levers DD' are arranged side by side, and are fulcrumed on a pin, *b*. The lever D is longer than the lever D', and is offset near its outer end in such manner that it extends in front of the end of the lever D'. The mallet C is secured to such offset portion, and the two mallets are therefore approximately in line. Upon the rear axle of the truck are rigidly keyed two toothed wheels,

I. These wheels are arranged upon the axle opposite the inwardly-extending ends of the levers DD'. The teeth upon them are long, and, as shown, the teeth upon one wheel are opposite the spaces between the teeth upon the other wheel. The inner ends of the levers DD' are shown as beveled upon their upper sides. They extend so far that when the truck is moved forward the ends of the teeth upon the wheels I will, as they rotate, come in contact with the ends of the levers upon their upper sides and rock them on their fulcrum, thus causing the mallets to be elevated. The teeth upon the wheels being arranged as described, the levers will be rocked alternately. After a toothed wheel has been rotated far enough to carry one of its teeth past the end of the lever with which it has been in contact, the lever is returned to its normal position, the teeth upon the wheels being far enough apart to admit of this. As here shown, the lever is returned to this position by means of a spring, *c*, (shown as flat,) and secured near one end to the body of the truck. A separate spring, *c*, coacts with each of the levers. Near their other ends the springs have secured to them, as here shown, cords *d*', which cords are connected with the ends of screws or bolts *e*, extending through suitable screw-threaded apertures in the levers. These screws or bolts constitute tension devices; but any other suitable form of tension device may be used. The tendency of the springs is to return the levers quickly to their normal positions and cause the mallets to strike a blow. By adjusting the tension devices the strength of blow delivered by the mallets may be varied as desired. Of course but one of the levers DD' and mallets CC' need be used, if desirable.

In the example of our improvement illustrated in Figs. 4 and 5 the truck is of frame-like construction, and its rearward end is more elevated than its forward end, constituting a portion which may be grasped by hand to move it along. In this instance we use a single lever, D, provided with mallets CC', mounted one upon each end of the lever in approximate alignment. This lever D is rocked by hand.

J designates a gear-wheel, of large diameter

ter, mounted rigidly upon a shaft, J', journaled in the side portions of the truck. Upon a portion of this shaft extending beyond the truck is a crank, J². The gear-wheel J meshes with another gear-wheel, J³, of smaller diameter, mounted loosely upon a stud, J⁴, fixed in the side portion of the truck. Upon the side of the gear-wheel J³ is a crank-pin, J⁵, which extends into a diagonal slot in the lever D. When the gear-wheels are rotated, the crank-pin plays to and fro in the slot, and causes the lever to be rocked up and down. The mallets C C' will thus be caused to strike alternate blows. The mallets are shown as in the form of wheels; but they need not necessarily be so. In this example the lever is operated when the machine is being moved both backward and forward.

Of course motion may be transmitted from the shaft J' to the crank J³ J⁵ by means of belt and pulleys, or otherwise, if desired.

The mallets in both examples of our improvement will preferably be made of wood; but the other parts of the machine may be made of wood or metal, as desired. The mallets will preferably be weighted.

By our improvement the closing of seams in tin roofs may be done very rapidly, and much time and labor saved.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a roofing or seam-closing machine, the combination, with a truck, of a mallet and a support therefor automatically operated while the truck is being moved along to cause the

mallet to strike a blow, substantially as specified.

2. In a roofing or seam-closing machine, the combination, with a truck, of a mallet and a lever automatically operated while the truck is being moved along to cause the mallet to strike a blow, substantially as specified.

3. In a roofing or seam-closing machine, the combination, with a truck, of mallets and mechanism, substantially such as described, whereby the mallets will be caused to alternately deliver a blow, substantially as specified.

4. In a roofing-machine, the combination, with a truck, of mallets in approximate alignment and mechanism, substantially such as described, whereby the mallets will be caused to alternately deliver a blow.

5. In a roofing-machine, the combination of a truck, A, levers D D', mallets C C', and toothed wheels I, substantially as specified.

6. In a roofing-machine, the combination of a truck, A, levers D D', mallets C C', springs c, and wheels I, substantially as specified.

7. In a roofing-machine, the combination of a truck, A, levers D D', mallets C C', springs c, tension devices for the springs, and wheels I, substantially as specified.

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Witnesses:

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