(No Model.)

J. HENNING.

ROOFING MACHINE.

No. 348,558. Patented Sept. 7, 1886.

Fig. 1.

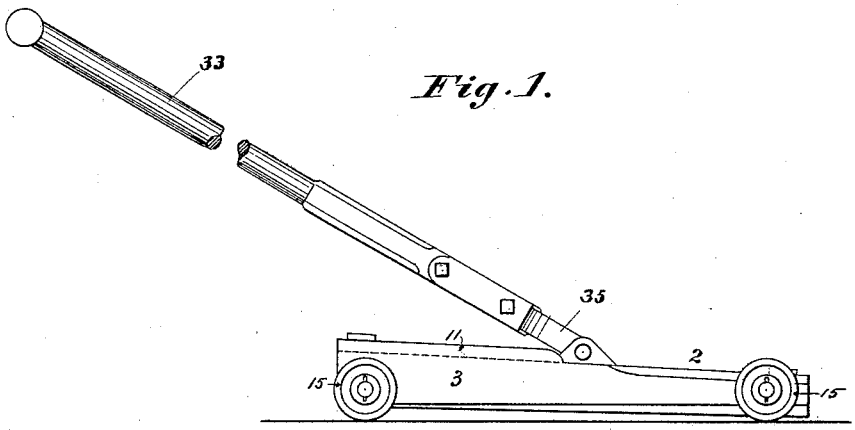

Fig. 2.

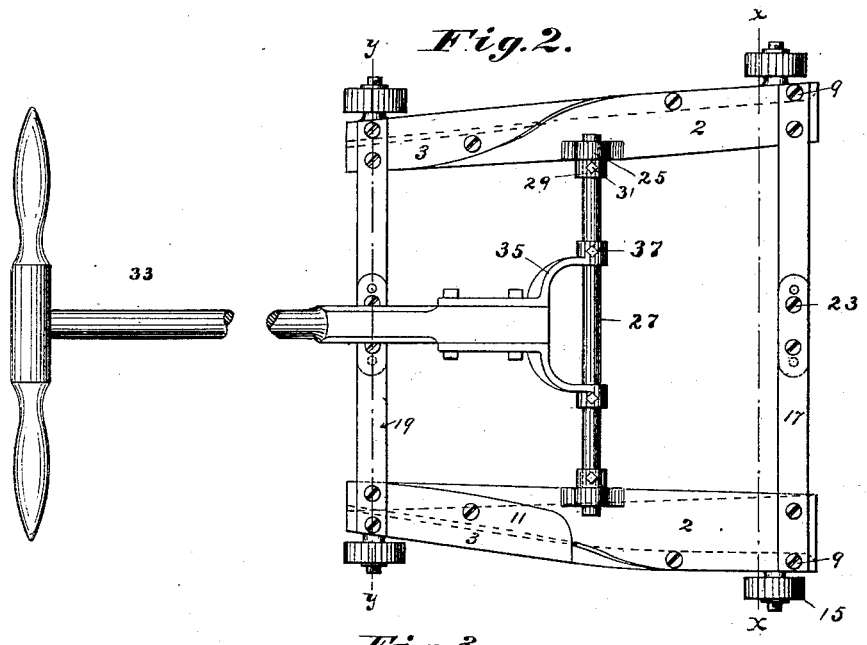

Fig. 3.

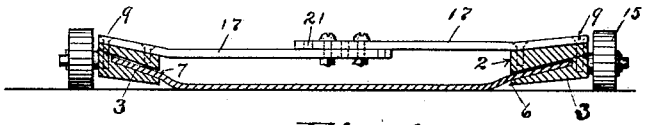

Fig. 6.

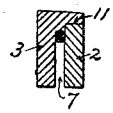

Fig. 7.

Fig. 4.

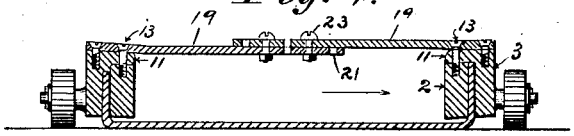

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

JULIUS HENNING, OF MINNEAPOLIS, MINNESOTA.

ROOFING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 348,558, dated September 7, 1886.

Application filed February 27, 1886. Serial No. 193,419. (No model.)

To all whom it may concern:

Be it known that I, JULIUS HENNING, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Roofing-Machines for Standing-Seam Roofing, of which the following is a specification.

My invention relates to machines for turning up the edges of sheets of tin preparatory to forming standing seams uniting the edges of the sheets; and the invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation of my machine. Fig. 2 is a plan of the same. Fig. 3 is a transverse vertical section on line X X, Fig. 2. Fig. 4 is a similar section on line Y Y, Fig. 2. Fig. 5 is a view of one part of the side bar, looking in the direction of the arrow, Fig. 4. Figs. 6 and 7 are detail views.

The machine is constructed in the form of a carriage with oppositely-placed bars having upon their inner edges grooves that turn the edges of the sheet metal into a position at right angles to the main part of the sheet. The grooved bars are preferably adjustably connected, so that they may be moved nearer together or farther apart to adapt the machines to different widths of tin. For convenience in construction, each grooved bar is made in two parts, connected as hereinafter described.

In the drawings, 2 and 3 represent the two parts of the side bars. The bar 3 is provided with a shoulder, 5, against which the bar 2 bears, thereby leaving a groove or space, 7, between the two parts of the bars. At the forward end of the carriage this groove is nearly horizontal, as shown in Fig. 3, and it gradually inclines from this point toward the back end, where it is substantially vertical, as shown in Fig. 4. The bar 2 at its forward end projects over the shoulder 5, as shown in Figs. 2 and 3, and screws 9 pass through the bar 2, and are tapped into the bar 3. At the rear end of the carriage the bar 3 is provided with a flange, 11, that projects over the upper edge of the bar 2. Screws 13 pass through this flange, and are tapped into the bar 2. By this means the two parts are rigidly secured together, forming a solid side bar with the described turning groove therein. Each side bar is provided with projecting axles, upon which are mounted trucks or wheels 15, by which the carriage is supported. The carriage is provided with cross-bars 17 19, preferably located at the front and rear ends of the machine. The ends of each cross-bar are secured to the side bars, preferably by suitable screws. One of the screws that secure the two parts of the bars together may pass through the end of each cross-bar to aid in holding it in place. The bars 17 19 overlap each other, and are provided with holes 21 and screws 23. These screws preferably pass loosely through the cross-bars, and are provided with nuts on their lower ends. A series of holes, 21, are provided in each bar to allow an adjustment of the carriage. Each side bar is provided with a projection, 25, having an opening through it, and in the openings is a handle-bar, 27. Collars 29, having set-screws 31, are located on the bar 27, inside the projections, and prevent sidewise movement of the bar. A handle, 33, has the forks 35 secured to it by bolts or other suitable means. The bar 27 passes through openings in the ends of the forks, and the handle is held in position by the set-screws 37. The turned-up portion of the sheet metal is usually one-fourth inch higher on one edge than on the other, and therefore the groove in one side bar is one-fourth inch deeper than that in the other. The sheet metal is generally turned up one and one-fourth inch on one edge and one and one-half inch on the other. It is sometimes desired to turn up each edge a quarter or half inch less. For this purpose I provide filling-pieces 35 for each groove, (see Figs. 6 and 7,) which are secured in place by screws or other suitable means. These pieces are preferably made to fill a space equal to one-quarter or one-half inch in the bottom of the groove, and when these pieces are used the cross-bars are lengthened to correspondingly increase the width of the carriage.

The sheet metal that is generally used for roofing purposes is generally ten, fourteen, or twenty inches wide. I prefer, therefore, to provide three sets of cross-bars and handle-bars for each machine, corresponding to the

width of the metal. More or less may be used, or the adjustment by means of the screws on the cross-bars may be sufficient for all purposes.

The details of construction of the adjusting devices and the means for holding the parts of the grooved bars together may be varied without departing from my invention.

I claim as my invention—

1. In a machine of the class described, a metal turning-bar having therein a groove, 7, that is substantially horizontal at its forward end and gradually changes to a perpendicular position at its rear end, as described, and for the purpose set forth.

2. The combination of the oppositely-placed bars having in their inner sides the turning-grooves 7, the wheels 15, and the adjustable cross-bars 17 19, all substantially as described.

3. In a machine of the class described, the turning-bar consisting of the independent parts 2 and 3, having the described groove or space 7 between them, and means for holding said parts together, as and for the purpose set forth.

4. The combination, with the side bars having the grooves 7 and the projections 25, the handle-bar 27, passing through openings in said projections, collars 29, having set-screws 31, the handle 33, secured to said bar 27, and the adjustable cross-bars 17 19, all substantially as described.

In testimony whereof I have hereunto set my hand this 20th day of February, 1886.

JULIUS HENNING.

In presence of—

A. C. PAUL,

R. H. SANFORD.