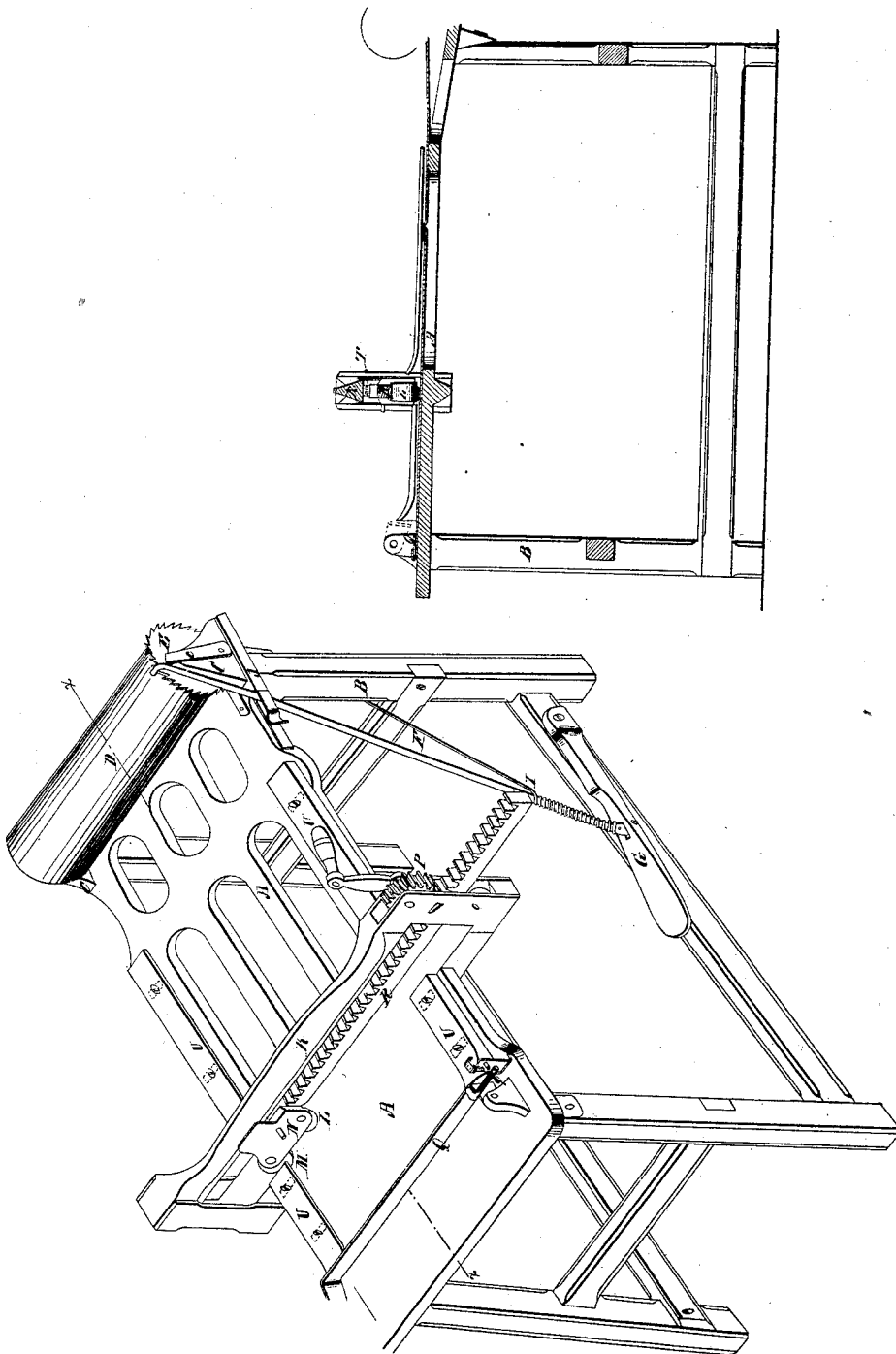


L. Fay,
Seaming Sheet Metal.

N^o 21749.

Patented Oct. 12, 1858.



UNITED STATES PATENT OFFICE.

L. FAY, OF CINCINNATI, OHIO.

IMPROVED MACHINE FOR CROSS-SEAMING SHEET METAL.

Specification forming part of Letters Patent No. 21,749, dated October 12, 1858.

To all whom it may concern:

Be it known that I, LUCIAN FAY, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Machine for Seaming Sheet Metal; and I hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

This invention relates to an arrangement of presenting, seaming, and reeling mechanism chiefly designed to facilitate the "cross-seaming" of sheet metal for roofing purposes.

In the accompanying drawings, Figure 1 is a perspective view of the machine, and Fig. 2 a vertical longitudinal section at *xx*, Fig. 1.

A is a bench or bed of cast-iron, supported at a convenient height upon a frame or trestle, B.

D is a reel, the axis of which is at one end journaled in the standard C, and at the other end in an open notch in the standard C', in which it is retained by a spring-catch, *c*, so as to admit of the removal of the reel when desired. The reel D is furnished with one or more longitudinal grooves, *d*, somewhat oblique to its radius, so as to present one edge acute.

Attached to one end of the reel D is a ratchet-wheel, E, which wheel is operated by a claw, F, from a treadle, G, convenient to the foot of the operator. The claw F and treadle G, on the release of the latter by the foot, are elevated by a spring, I, which serves also in conjunction with a spring-catch, J, to confine the claw to a proper position while in operation, but permits its elevation for the removal of the reel.

K is a horizontal bar fixed transversely above the bed A. Between this bar and the bed a seaming-tool, L M N T, is worked by means of a rack, R, and pinion P. The foremost seaming-roller, L, is sufficiently elevated to initiate the turning-down action, and the rear roller, M, being lower, completely flattens the seam. The carriage N is provided with a spring, T, which, pressing the under side of the bar K, and being made adjustable, determines the pressure of the seaming-tool. A flat bar, Q, termed by me the "gage-bar," is so journaled transversely above the bench as to describe an arc tangential, or nearly so, to the latter. This bar has a handle, *q*, which

by engaging with a spring-catch, *s*, retains the bar in its lowest position when replaced.

U U are guides secured to the bed A by screws or bolts, which by passing through transverse slots either in the bed or the guides render the latter adjustable laterally. The office of these guides is to confine the edges of the tin to a rectilinear path, and thus insure the accuracy of the work.

The operation is as follows: The front and back edges of the tin having been turned over in the usual way, two sheets are interlocked and are drawn onto the bench A and under the bar Q, which is then fastened down. The sheets are then drawn forward until the turned-up rear edge of the back one engages with the bar Q. This brings the coupled edges under the seaming-bar K in the exact position for being operated on by the tool L M N T, which being then made to traverse the seam is run back again to be ready for the next. The joined sheets are then drawn forward, another sheet is coupled, the front edge of the foremost sheet caught in the groove *d* of the reel, and the latter rotated until the next two seams, being respectively caught by the bar Q and brought under the seamer, as above explained, the work proceeds as before until a continuous strip of sheeting is wound upon the reel, sufficient to extend from the ridge to the eaves of the roof, or of any length desired. The reel with roll of roofing is then lifted out of the standards and after being temporarily bound with wire or twine the roll is slipped off the reel and may be conveniently transported to any required spot. The guides U U hold the line of sheets perfectly straight while being operated upon.

From four hundred to five hundred sheets may readily be joined in an hour by this means, and it will be observed that each seam in the act of closing is tightly drawn together by means of the reel D in conjunction with the gage-bar Q, which results in a considerable saving of stock, and by means of the adjustable guides U U in great accuracy of work.

Unskilled operators are by this machine enabled to acquire expertness in cross-seaming with much greater facility than by the usual mode of operation, while at the same time the work is much better performed and a saving of stock realized amounting to fully four per cent.

I claim as new and of my invention—

1. In the described connection with a cross-seaming tool, the gage-bar *Q q*, constructed and operating substantially as and for the purpose set forth.

2. The grooved roller or reel *D d*, constructed, substantially as explained, and employed in the described connection with a cross-seaming tool to roll up the metal as joined and afterward discharge the roll without unwinding, as set forth.

3. The adjustable guides *U U* in the described combination with a seaming-tool for the purpose of insuring accuracy of work.

In testimony of which invention I hereunto set my hand.

L. FAY.

Attest:

GEO. H. KNIGHT,
J. K. HARRIS.