H. E. BOTTUM.

Closing Seam of Sheet-Metal Roof.

No. 205,172. Patented June 25, 1878.

Fig. 1

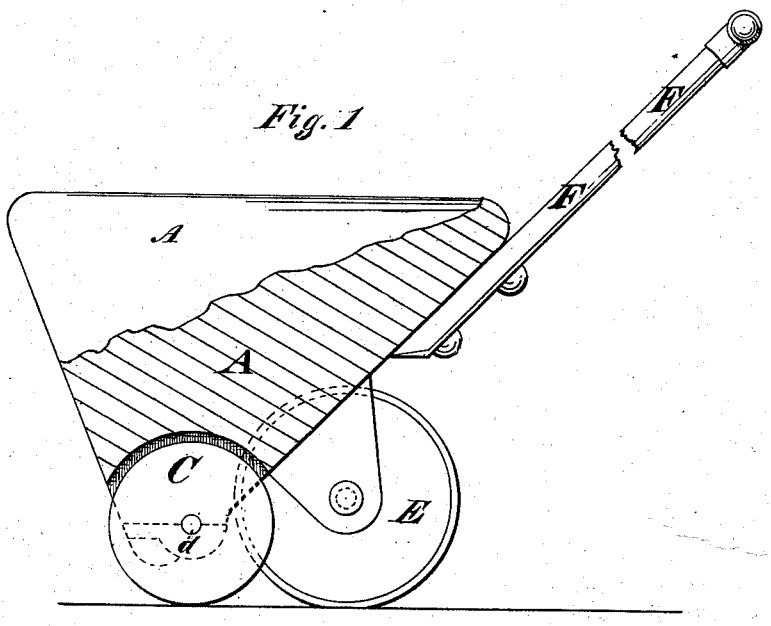
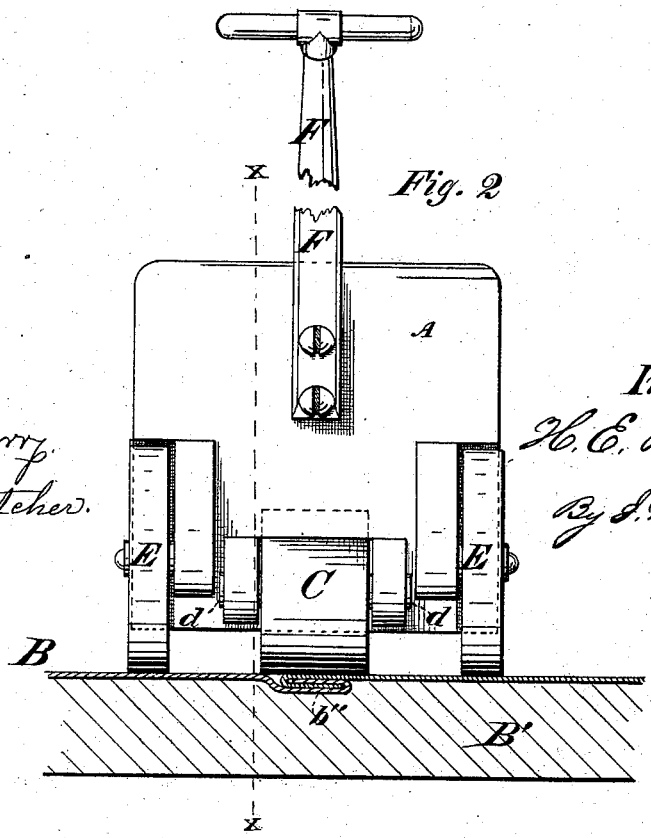


Fig. 2



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UNITED STATES PATENT OFFICE.

HAMLET E. BOTTUM, OF COHOES, NEW YORK.

IMPROVEMENT IN CLOSING SEAMS OF SHEET-METAL ROOFS.

Specification forming part of Letters Patent No. **205,172**, dated June 25, 1878; application filed May 23, 1878.

To all whom it may concern:

Be it known that I, HAMLET E. BOTTUM, of Cohoes, in the county of Albany and State of New York, have invented a new Mode of Closing Seams of Sheet-Metal Roofs Preparatory to Soldering of the Same, of which the following is a specification:

The mode of closing the seams on roofs of sheet metal has heretofore been done by means of mallets, hammers, and the like, producing an undulating, rough, and uneven seam, making the operation of soldering in a perfect manner almost impossible, as well as laborious and expensive, by reason of gaping seams, which would absorb more solder than would be necessary were the seams uniformly closely united.

My invention consists simply of a heavy or weighted iron or other metallic roller, guided, either by automatic means or by hand, over the sheet-metal seams or joints, (where the sheets are united,) closing the same perfectly flat upon the roof-bed or board surface of the roof, one person being required to operate my invention, and who will perform the work of ten or more men using mallets, &c.

To enable others skilled in the art to fully understand and construct the same, I will proceed to describe it as follows:

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

Figure 1 is a side elevation of my invention, and Fig. 2 represents a front elevation of the same, Fig. 1 being a partial sectional view taken in the line X X, Fig. 2.

A, Figs. 1 and 2, is the body or frame-work, to which the other parts of my invention are attached; B, the sheet-metal roofing; B′, the board sheathing or substructure of roof.

I use a heavy iron roller, C, which has journals *d d* fitted to turn in suitable bearings in the frame-work A. The face or periphery of the roller C is sufficiently broad to admit of pressing and rolling the whole breadth of the seam or joint *b″* of the roofing material B.

The center of gravity of the weighted frame A is designed to fall a short distance forward of the center of the seaming-roller C, and somewhat in rear of the two guiding-rollers E E, which are also fitted to turn in suitable bearings attached to the frame-work A, as shown in the drawing.

The guiding rollers or wheels E E may have their peripheries covered with rubber, leather, or other elastic substance or material having a slightly sticky surface, which will prevent the lateral tendency to slip, and serve to guide the seaming-roller C more perfectly, as will be readily understood, as well as to obviate the tendency to dent the sheet metal.

A neap, tongue, or handle, F, is applied to the body or frame-work A, by which the whole mechanism, and especially the seaming-roller C, may be propelled in any required direction. By elevating the neap F the guiding-rollers E E are released from contact with the roof or other surface, which operation throws the center of gravity quite over the center of the seaming-roller C, and enables the operator to turn the apparatus in any direction desired.

The frame-work or truck-body may be made of such a form as to receive the necessary weight to compress the seams of the roofing-plates; or the roller or roll C may be made of a sufficient weight—say about one hundred and twenty to one hundred and fifty pounds, which will be quite adequate to compress the seams on the roofs.

By the use of my invention the seams or joints of metallic roofing can be more perfectly closed, requiring much less solder than by any other known means, and making the seams smooth and flat throughout their entire length.

I find that a small roller as the seaming-roll will require much less weight to close a seam than a large one, by reason of having a smaller area of pressure than a large one, as will be readily understood. I therefore prefer the weight to be contained in the body A of the apparatus, as already stated. Two rollers used to compress the seam would require about double the weight of a single one.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A heavy or weighted cylindrical roller, in combination with means for propelling and controlling it, substantially as and for the purpose set forth.

2. The combination of the cylindrical weighted roller C, guiding-rollers E E, neap F, and body A, substantially as and for the purpose set forth.

HAMLET E. BOTTUM.

Witnesses:

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