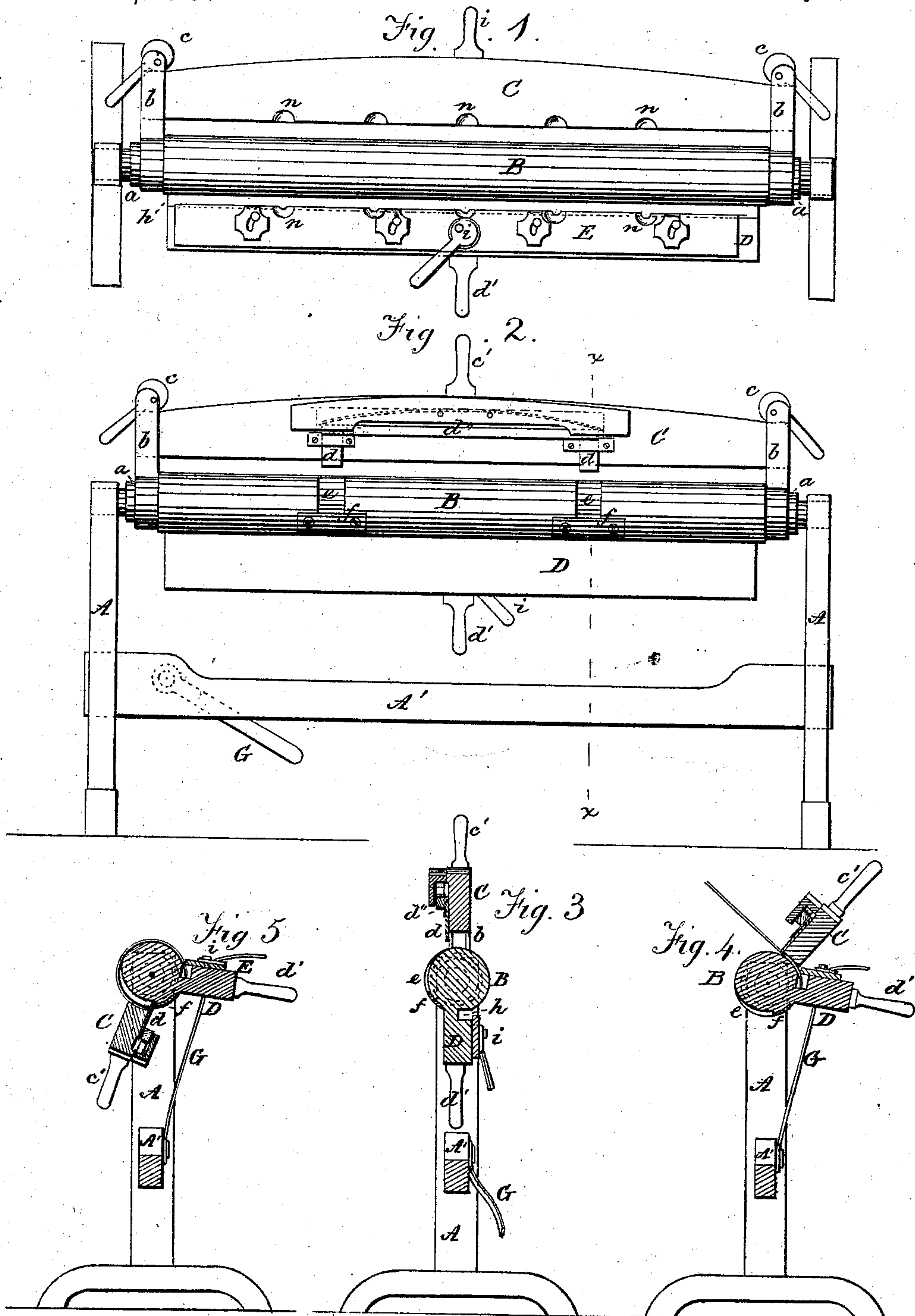


L. MANN.

Machines for Bending Eaves-Troughs.

No. 150,476.

Patented May 5, 1874.



Witnesses
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LOOMIS MANN, OF IONIA, MICHIGAN.

IMPROVEMENT IN MACHINES FOR BENDING EAVES-TROUGHS.

Specification forming part of Letters Patent No. **150,476**, dated May 5, 1874; application filed March 19, 1874.

To all whom it may concern:

Be it known that I, LOOMIS MANN, of Ionia, in the county of Ionia and State of Michigan, have invented an Improved Machine for Making Eaves-Troughs, of which the following is a specification:

This invention consists in certain improvements on a machine for like purpose, for which Letters Patent were granted to me on the 17th day of April, 1860, No. 27,916, in the operation of which machine by inexperienced hands difficulties arise, and even a practiced workman will occasionally loose the hold on the material, by running the bender or former too far round the form, which this improvement is designed to prevent.

I will now describe the improved machine by referring to the drawing accompanying this specification, and in which—

Figure 1 represents a plan or top view of the machine, with the clamping-bar and former extended horizontally. Fig. 2 is a rear elevation, showing the improvement on the original machine. Fig. 3 is a section taken on the line *xx* of Fig. 2. Fig. 4 is a section on the same line, but showing the parts in position when the sheets have been inserted and clamped. Fig. 5 is a similar section, with the parts in position after the sheets have been formed and ready for soldering.

The same letters indicate like parts on the several figures, in which the frame is represented as consisting of two uprights or posts, A, with suitable feet, and connected by a tie-bar, A'. In the upper ends of these posts are holes or boxes, to receive the journals of the roller or form B, which latter has also reduced portions *a* at each end inside the posts, on which the radial slotted projections *b* are free to turn. In the slots of these projections the former C has a limited radial motion, which is controlled by the eccentrics *c*, to bring said former C down on the sheets, so that, by its motion around the form B, from the position represented in Fig. 4, to that shown in Fig. 5, the sheets are bent around the form B, and held for soldering.

The spring-points *d*, connected with the

former C, on passing the edge of the sheets, fall into the recesses *e*, and rest against the stop-plates *f*, on the form B, by which the former C is prevented from passing off the edge of the sheets until the soldering is completed.

To one side of the form B is attached a radial projection or bed-piece, D, which is fast to, and moves with, the form B, around the axis of the latter. In the upper side of this bed-piece, parallel with and adjacent to the periphery of the form B, is a groove, *h*, to receive the edge of the tin, which is secured therein by the face-plate E, being operated by the eccentric *i*, to clamp the one edge of the sheets of tin against the form B, while being bent and soldered.

In operating the machine, the bed-piece D is supported on the rest G. The eccentrics *c* and *i* being turned outwardly, the former C is brought into the position represented in Fig. 4. The one edge of the several sheets of tin is then inserted into the groove *h*, and clamped against the form B by turning the eccentric *i* inward. The eccentrics *c* are then to be turned, to bring the free portion of the tin, by the pressure of the former C, to a bearing on the form B, as seen in Fig. 4. The operator then holds the bed-piece D down on the rest G, by placing one hand on the lever or handle *d'*, and with the other hand on the lever *c'* forces the former C around the periphery of the form B, into the position represented in Fig. 5, where its further motion is arrested by the spring-points *d* locking against the stop-plates *f*, in which position the plates of tin are retained at one edge by the face-plate or clamp E, and by the former C at the other edge. The rest G may then be turned aside, to allow the form B to be oscillated on its axis, for the convenience of soldering the several sheets together to complete the trough.

At regular distances apart, equivalent to the width of the sheets of tin, are recesses *n*, on the inner edge of the face-plate E and former C, to allow the point of the soldering-iron to reach the extreme edge of the trough.

When the soldering is finished the spring-

points *d*, which are connected by a bar, *d''*, may be withdrawn, and the former C passed beyond the edge of the trough, which latter is finally released by withdrawing the face-plate E, through the medium of the eccentric *i*.

What I claim herein as new, and desire to secure by Letters Patent, is—

The spring-points *d*, recesses *e*, and stop-plates *f*, in combination with the form B and former C, for operation substantially as and for the purpose set forth.

LOOMIS MANN.

Witnesses:

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