

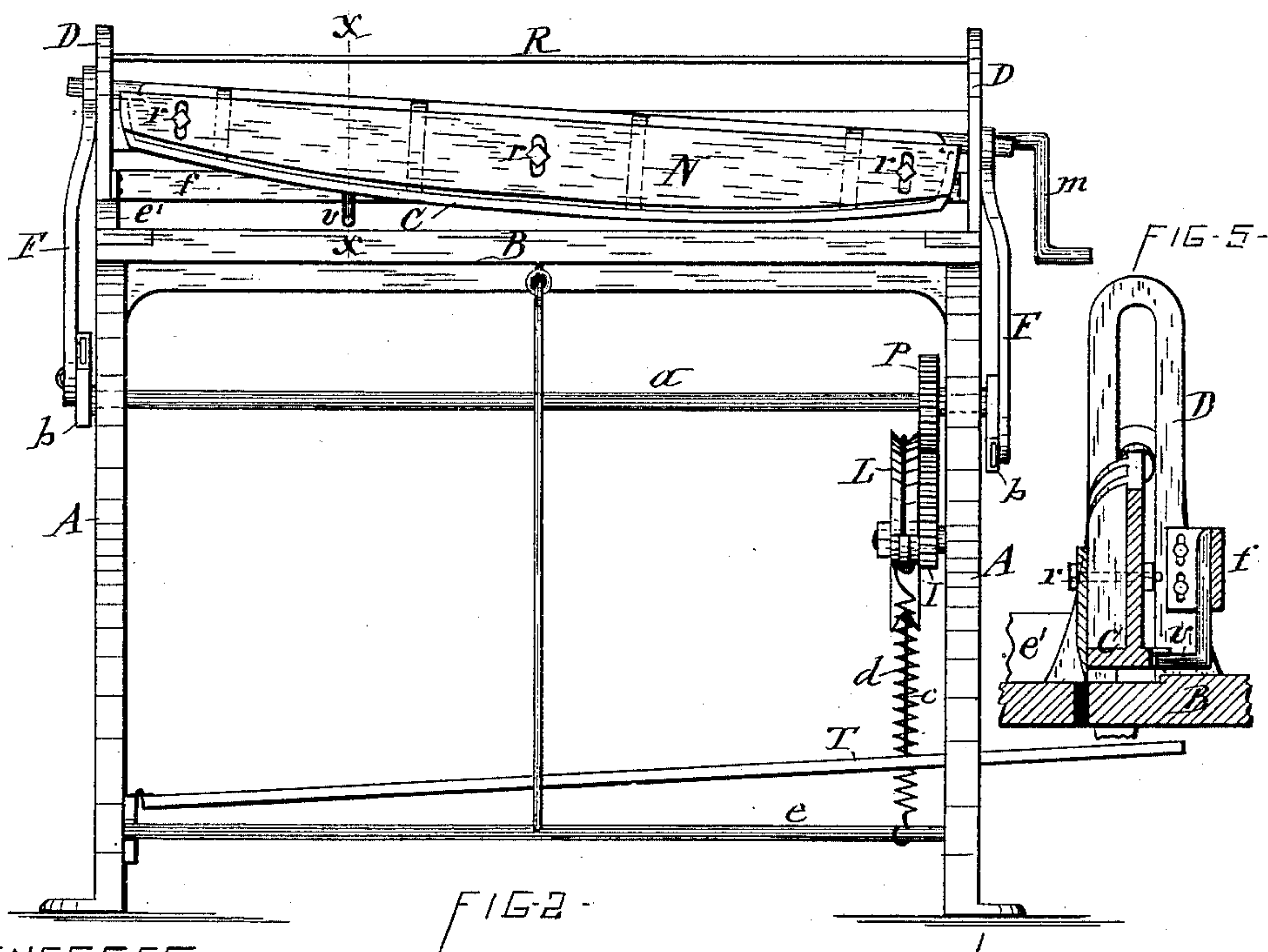
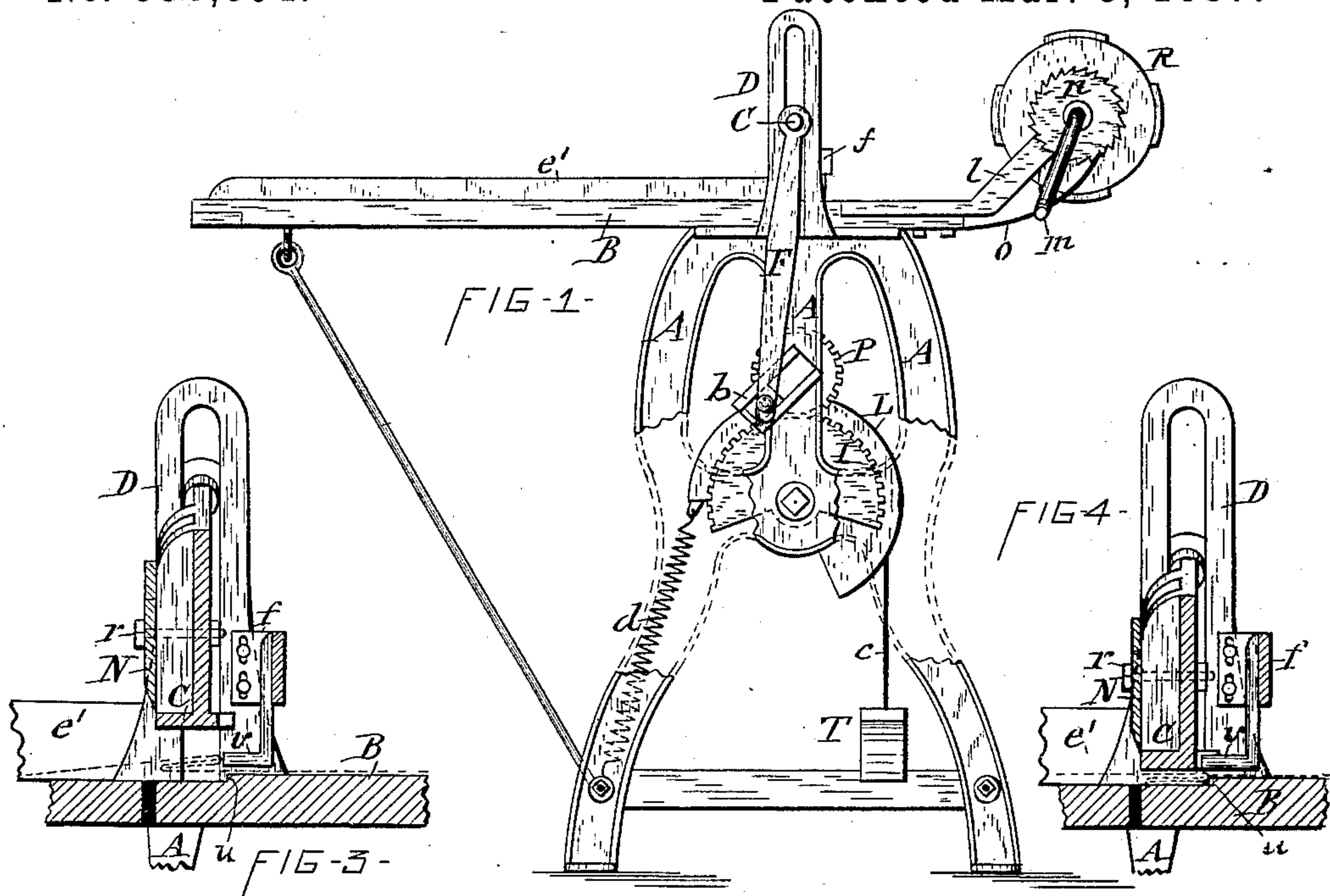
(No Model.)

VAN SCHAICK SHARP.

MACHINE FOR SEAMING SHEET METAL.

No. 358,894.

Patented Mar. 8, 1887.



WITNESSES

C. Burdison
A. F. Walz

INVENTOR

Van Schaick Sharp
per Smith, Lasso & Wey
Attys

UNITED STATES PATENT OFFICE.

VAN SCHAICK SHARP, OF WEEDSPORT, NEW YORK, ASSIGNOR TO HOLCOMB RHEUBOTTOM & CO.

MACHINE FOR SEAMING SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 358,894, dated March 8, 1887.

Application filed June 19, 1886. Serial No. 205,652. (No model.)

To all whom it may concern:

Be it known that I, VAN SCHAICK SHARP, of Weedsport, in the county of Cayuga, in the State of New York, have invented new and
5 useful Improvements in Machines for Seaming Sheet Metal, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists in a novel organization of a machine by means of which the so-called "cross-seams" and analogous splicings of tin and other sheet metal can be formed in an expeditious and perfectly workmanlike manner.

15 This invention is fully illustrated in the annexed drawings, wherein—

Figure 1 is a side elevation of the machine having portions of the frame broken away to illustrate more perfectly other more important
20 features. Fig. 2 is a front elevation. Figs. 3 and 4 are enlarged transverse sections on line *x x*, Fig. 2, showing the press-beam in different operative positions; and Fig. 5 is a transverse section showing the knife in its operative position for trimming the end of the metal sheet.

Similar letters of reference indicate corresponding parts.

A represents a stout upright frame, carrying a table, B. Across the top of said table is
30 extended the press-beam C, the under side of which is curved longitudinally in the form of an inverted arch; and under the press-beam, and parallel therewith, is a vertical offset, *u*, extending across the surface of the table, for
35 the purpose hereinafter described. The ends of said press-beam are provided with trunnions or stud-pins, which project through vertically-slotted guides D D, rising from opposite sides of the table and rigidly secured to the
40 frame A.

Underneath the table, and parallel with the press-beam C, is arranged a shaft, *a*, journaled in suitable bearings on the frame. To the ends of said shaft are attached two cranks, *b b*,
45 which are set at an angle in relation to each other, for the purpose hereinafter explained. These cranks are connected with the trunnions on the ends of the press-beam, at the outside of the guides D D, by means of pitmen
50 F F. On the shaft *a* is also secured a pinion,

P, which meshes in a segment of a gear, I, journaled on a gudgeon attached to the leg of the frame A, below the shaft *a*. On the side of the gear I is a segment of a pulley, L, which is rigidly attached thereto and journaled in common therewith. 55

To the base of the frame A is connected a treadle, T, and to the latter is attached one end of a belt, *c*, the opposite end of which runs over the periphery of the pulley, and is
60 firmly secured to the end of the segment thereof. To the same end of said segment is attached one end of a spring, *d*, the opposite end of which is secured to a cross-bar, *e*, or other suitable support on the frame A. 65

To the top of the table B, in front of the press-beam, is attached a straight gage, *e'*, extending along one side of the table, for the purpose of guiding the tin or sheet metal so as to bring the seam thereof parallel with the press-
70 beam.

Back of the press-beam, and parallel therewith, is a skeleton roller, R, journaled in arms L, projecting from the rear end of the table, said roller having longitudinal cleats on which
75 to hang the end of the sheet metal, which is bent over so as to permit of hooking it onto one of the cleats. The roller is provided with a crank, *m*, by which to turn it, and on the end of said roller is also affixed a ratchet-
80 wheel, *n*, with which engages a dog, *o*, connected to the table, as shown in Fig. 1 of the drawings.

Across the table B, some distance above it and back of the press-beam, is extended a bar, *f*, which is secured at opposite ends to the guides D D, adjustable vertically thereon, and from the bottom of said bar project downward two or more lugs, *v v*, which serve as stop-
90 gages in placing the sheets to be seamed under the press-beam, the vertical adjustment of said gages being necessary to accommodate the same to different thickness of the sheet metal.

The operation of my invention thus far described is as follows: Before the tin or sheet
95 metal is subjected to the operation of the machine the edges of the sheets to be joined are bent over so as to hook into or interlock with each other, and the sheets thus interlocked are passed along the top of the table B until ar- 100

rested by the collision of the upper edge of the interlocked portions of the sheets with the stop-gages *vv*, as represented by dotted lines in Fig. 3 of the drawings. Then by depressing the treadle *T* the pulley *L* and gear *I* receive a partial rotation and transmit rotary motion to the pinion *P*, which, being fastened to the shaft *a*, imparts rotary motion to the cranks *b b*, and the latter imparts to the press-beam a combined longitudinal rocking or oscillatory and vertical reciprocating motion at right angles to the plane of the table. The press-beam is thereby caused to press upon the folded or interlocked edges of the sheet metal successively from one side of the table toward the opposite side, the pressure being applied with sufficient force to effectually close the seam of the sheet metal, as represented by dotted lines in Fig. 4 of the drawings. The offset *u* in the surface of the table is of the proper depth to receive in front thereof the compressed folded edges of the sheets and leave the tops of the sheets flush with each other. The folded forward edge of the first sheet is hooked onto the skeleton roller *R*, upon which the joined sheets are subsequently wound by turning the crank *m*. The engagement of the dog *o* with the ratchet-wheel *n* serves to retain the roller *R* from reverse movement after it is released from the operation of the crank.

To the side of the press-beam *C*, preferably to the front, I attach a knife, *N*, which is extended lengthwise the press-beam. The attachment I make adjustable vertically by providing the knife with vertical slots, through which the attaching-bolts *rr* pass. This allows the knife to be raised, so as not to interfere with the operation of the press-beam in compressing the seam of the sheet metal. By lowering the knife so as to project below the bottom of the press-beam, said knife can be employed for cutting or trimming the sheets.

Having described my invention, what I desire to secure by Letters Patent is—

1. The combination, with the sheet-supporting table, of a press-beam extended across the top of said table and arranged movably at right angles to the plane thereof, and oscillatory longitudinally, substantially as and for the purpose specified.

2. The combination, with the sheet-supporting table, of a press-beam arranged across the top of and movably at right angles to the plane

of the table, and oscillatory longitudinally, and curved at its under side longitudinally in the form of an inverted arch, substantially as described and shown.

3. In combination with the sheet-supporting table, vertical guides rising from opposite sides of said table, a press-beam extended across the top of the table and arranged movably vertically in said guides, pitmen on opposite ends of the press-beam, and cranks connected with said pitmen and set at an angle in relation to each other to impart a longitudinally-rocking motion to the press-beam, substantially as and for the purpose set forth.

4. In combination with the sheet-supporting table, a longitudinally-rocking press-beam, a pulley and gear pivoted in common on the frame of the machine, a belt on the pulley, a treadle connected to the belt, a shaft extended across the frame parallel with the press-beam, a pinion on the said shaft meshing in the aforesaid gear, cranks set at an angle to each other on the ends of the shaft, and pitmen connecting the cranks with the ends of the press-beam, all combined to operate substantially as and for the purpose specified.

5. In combination with the sheet-supporting table and press-beam, a knife extended lengthwise said press-beam and secured thereon to be adjustable vertically, substantially as and for the purpose set forth.

6. In combination with the sheet-supporting table and press-beam, a shaft parallel with said press-beam, cranks set at an angle to each other on the ends of said shaft, pitmen connecting the cranks with the ends of the press-beam, a pinion on said shaft, a pivoted segmental gear meshing in said pinion, a segmental pulley on the side of said gear and pivoted in common therewith, a belt on the pulley for turning the same in one direction, a treadle connected with said belt, and a spring for turning the pulley in the opposite direction, all combined substantially as described and shown, for the purpose set forth.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 14th day of June, 1886.

VAN SCHAICK SHARP. [L. S.]

Witnesses:

FREDERICK H. GIBBS,
F. A. WALZ.