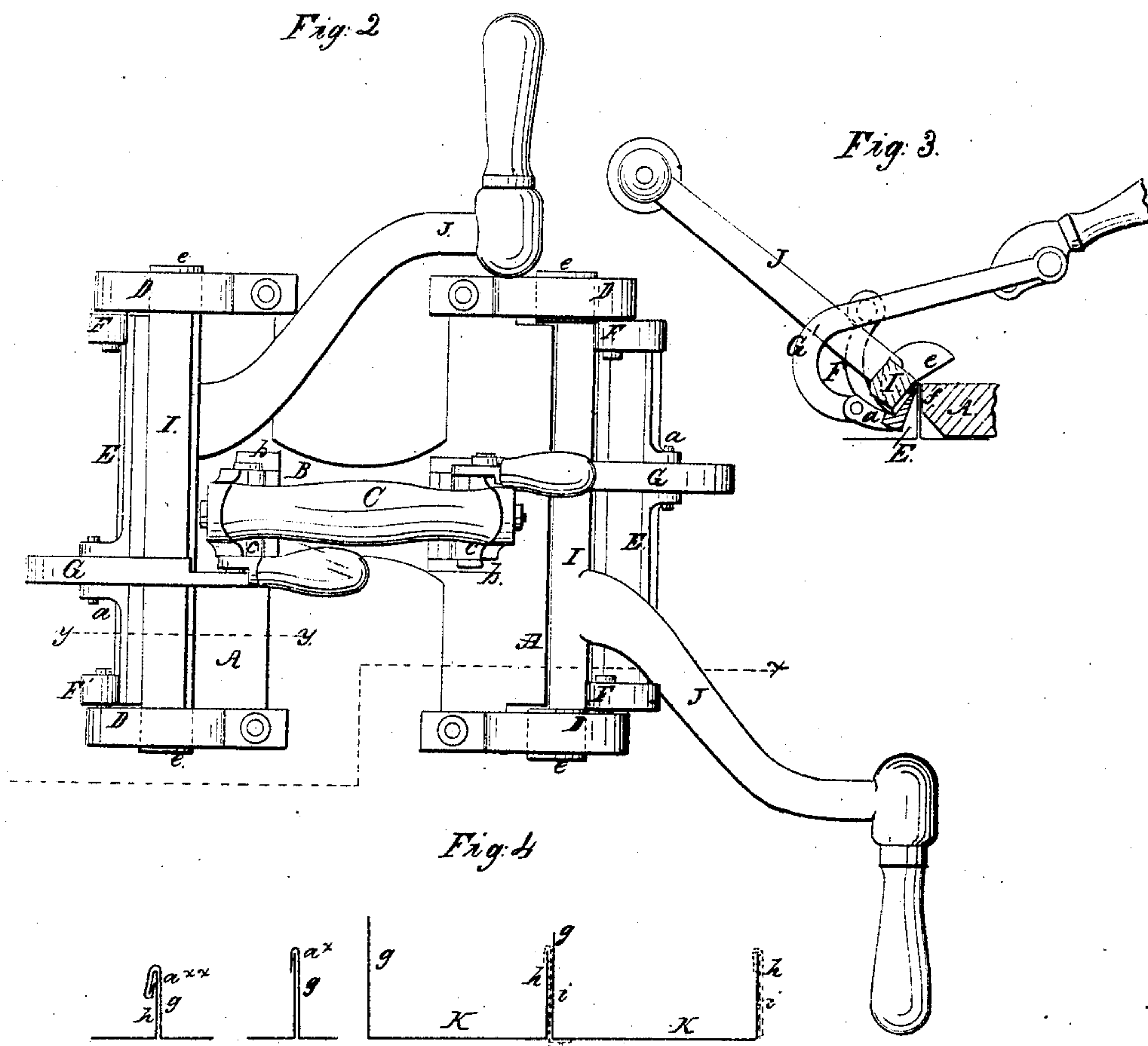
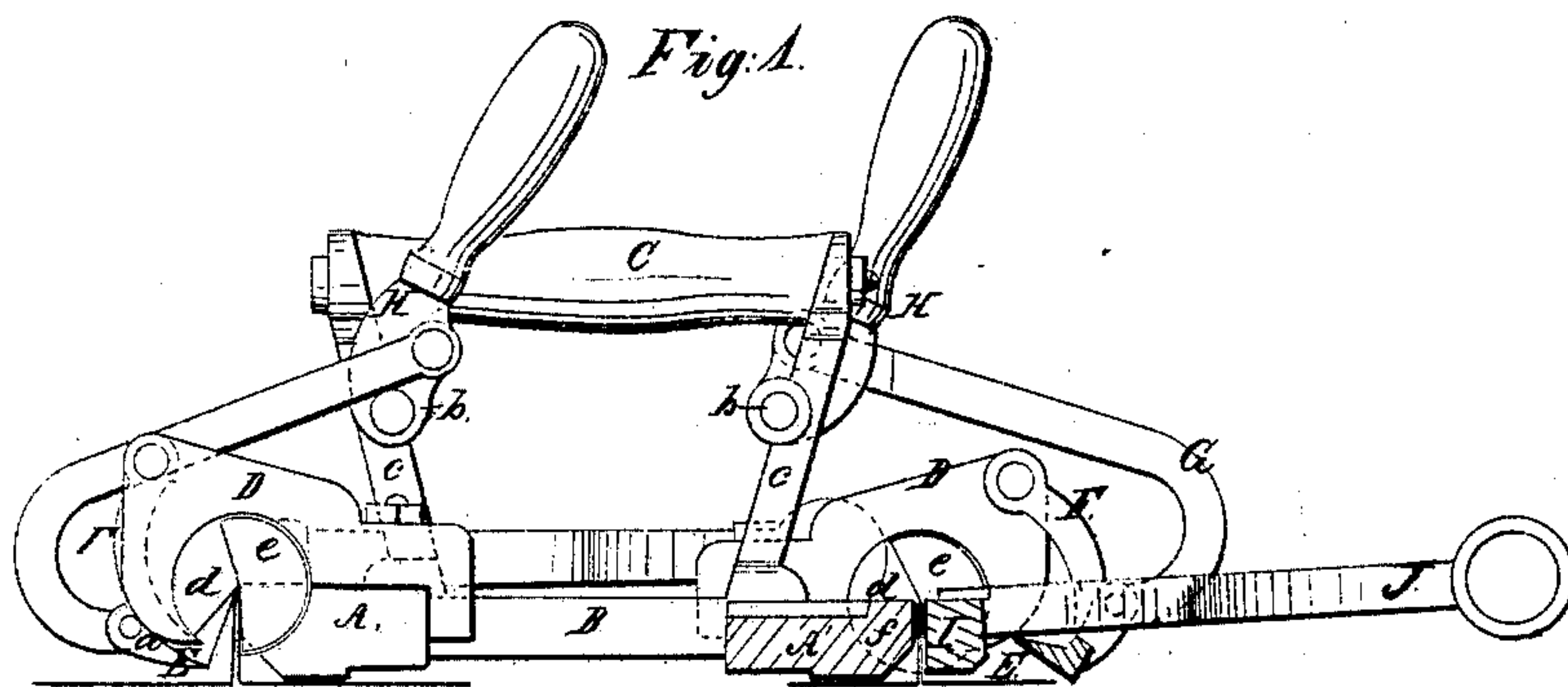


Patented June 9, 1857.



UNITED STATES PATENT OFFICE.

J. B. DRISCOLE, OF KNOXVILLE, TENNESSEE.

IMPROVEMENT IN ROOFING-MACHINES.

Specification forming part of Letters Patent No. 17,497, dated June 9, 1857.

To all whom it may concern:

Be it known that I, J. B. DRISCOLE, of Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Implement or Device for Jointing Sheet-Metal Plates for Roofing Purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of a portion of my improvement, *x x*, Fig. 2, showing the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a cross-section of the bars at one side of the frame, *y y*, Fig. 2, showing the plane of section. Fig. 4 is a transverse section of metal plates, showing the form of the point.

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

This invention relates to a device or implement for jointing or locking together sheet-metal plates for roofing purposes.

The invention consists in the employment of a swinging bar hinged or swung between the side plates or frame of the machine, as hereinafter set forth.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A' represent two parallel bars connected by a cross-piece, B, and C represents a handle attached to the bars A A'. The bars and cross piece may be of cast metal and cast in one piece.

To each end of the two bars A A' a plate, D, is attached, and to the inner sides of the plates of each bar a bar, E, is suspended by arms F. The bars E extend the whole width of the space between the plates D, and to each bar E a covered bar or arm, G, is attached by a joint, *a*, the opposite ends of the arms being pivoted to handles or levers H, which work on fulcrum-pins *b*, fitted in uprights *c c*, to which the handle C is attached. The bars E are transversely of triangular wedge form, as shown in Figs. 1 and 3.

In each plate D a circular recess, *d*, is made. The recesses form nearly a complete circle, and serve as bearings for the journals *e* of the bars I, which extend the whole width of the space between the plates D. The journals *e* are of semicircular form, and the bars I are trans-

versely of square or rectangular form, or their face surface and sides should be at right angles with each other, with angular corners or edges. The outer sides of the bars may have their corners beveled off, if desired. To each bar I a handle, J, is attached. The outer surfaces of the two bars A A' are perfectly vertical at their upper parts, as shown at *f*. Their lower parts may be beveled or inclined, as shown in Figs. 1 and 3. The sheet-metal plates or strips K extend from the eaves at one side of the roof to the eaves at the opposite side, and the plates at each edge are bent up vertically, as shown at *g h*, the bent edge *g* at one side of the plate being somewhat higher than the bent edge *h* at the opposite side. (See Fig. 4.) The plates have their edges thus bent previously and by any suitable and proper means, and the plates are secured to the roof by narrow strips or plates *i*, the lower ends of which are tacked or nailed to the roof, the upper ends passing up between the bent edges *g h* of the plates, and having their upper parts bent over the upper end of the shorter bent edges *h*, (see Fig. 4,) in which two strips or plates, *i*, are shown by dotted lines. The plates K are adjusted to the roof side by side, the shorter bent edge, *h*, of one plate adjoining the higher bent edge, *g*, of the adjoining plate, as shown clearly in Fig. 4. The strips or plates *i* may be placed at suitable distances apart, a sufficient number being employed to properly secure the plates K to the roof. The implement is then placed on one strip or plate, the edge of the bar A being placed against the side of its higher bent edge, *g*. The bar E is then drawn inward by operating its lever H, said bar pressing snugly against the shorter bent edge, *h*, of the adjoining plate, K. The bar I is then turned over by moving its handle J, and the bar I bends the upper part of the higher edge, *g*, over the upper end of the edge *h*, and at an angle of about forty-five degrees. (See Fig. 3.) The upper end of the bar E, it will be seen, is an acute angle or sharp edge, over which the upper part of the bent edge *g* is bent, and consequently a quick turn or bend of the part *g* is obtained. When this bend is formed, the bar E is moved outward, and the bar I is turned around in its bearings till the upper or bent portion of the edge is pressed snugly against the upper part of the edge *h*

of the adjoining plate. This is shown at a^x in Fig. 4. The machine is moved along by the handle the whole length of the plate till the upper part of the edge g is turned or bent over the upper part of the edge h . The implement is then turned, and the opposite bar, A' , placed against the edge g , and the same operation is repeated; but in the latter operation the upper parts of both edges, g h , are bent over, as shown at a^{xx} , Fig. 4, making thereby a double joint or lock. In order to effect this the bar A' , and also the bars I E adjoining it, are placed rather lower than those on the opposite end of the machine. In other respects the parts and their arrangement are precisely the same.

The lock or joint turned as above described is not new. The same joint or lock has been formed by hand and used for connecting metal plates.

By my implement the double joint or lock may be formed in an expeditious manner and with much greater perfection than can be done by hand.

The implement is simple, may be constructed at a small cost, and there are no parts liable to get out of repair.

In view of G. W. Burling's patent, October

28, 1856, I disclaim the broad idea of folding the edges of metallic plates by means of a bar interposed between two parallel bars, one of which is movable. In the above device one end of the interposed bar is attached to a lever, the other end of the bar being free. Under this arrangement the free end of the interposed bar is liable to spring out away from the metal in the act of turning the fold, thus leaving the work imperfectly done. In my improvement the interposed bar is made to swing, and its bearings are not attached to a lever, nor are either of its ends free, but both its extremities have bearings in the side plates or frame of the machine, thus rendering it impossible for the swinging bar to spring or refuse to operate.

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

The employment of a swinging bar, E , hinged or swung between the frame or side plates, DD , in the manner and for the purposes substantially as described.

J. B. DRISCOLE.

Witnesses:

W. WITCHER,
D. LYONS.