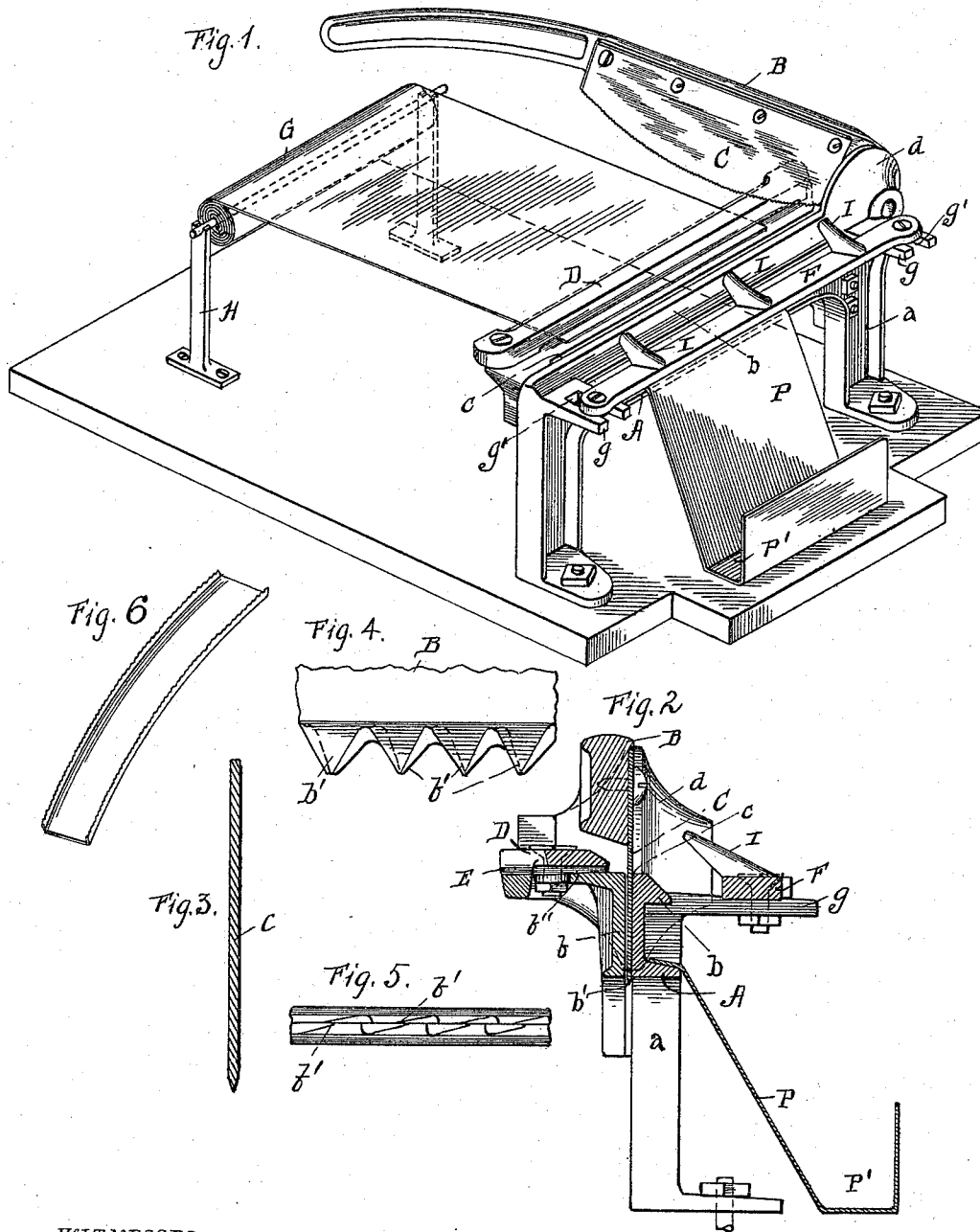


(No Model.)

C. H. DANA.
MACHINE FOR MANUFACTURING SUPPLEMENTARY METALLIC
SHINGLE STRIPS.

No. 526,299.

Patented Sept. 18, 1894.



WITNESSES

Geo. M. Anderson
Phile. Masi.

INVENTOR

C. H. Dana,
by E. W. Anderson
his Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. DANA, OF WEST LEBANON, NEW HAMPSHIRE.

MACHINE FOR MANUFACTURING SUPPLEMENTARY METALLIC SHINGLE-STRIPS.

SPECIFICATION forming part of Letters Patent No. 526,299, dated September 18, 1894.

Application filed June 27, 1894. Serial No. 515,841. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. DANA, a citizen of the United States, and a resident of West Lebanon, in the county of Grafton and State of New Hampshire, have invented certain new and useful Improvements in Machines for Manufacturing Supplementary Metallic Shingle-Strips; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a perspective view of the invention in operation. Fig. 2 is a central cross-section of the machine. Fig. 3 is a cross-section of the cutter blade. Fig. 4 is a detail showing the teeth of the cutter blade in elevation. Fig. 5 is same in plan. Fig. 6 is a detail of a shingle strip produced by the machine.

This invention is designed to provide a simple and efficient machine for the rapid manufacture of supplementary metallic shingle strips, of the character set forth and claimed in my application filed May 29, 1894, Serial No. 512,884, and it consists essentially of a suitable frame, having a holding guide, an oscillating cutter-lever and cutter, and a gage.

The invention further consists in the novel construction and combination of parts, all as more fully hereinafter described and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates a suitable frame mounted upon a proper bed or base, and consisting in the present instance of a pair of posts or standards *a a*, and a horizontal connecting bar *b*, which is formed with a longitudinal slot *c*, or, as shown, said bar may be in two sections sufficiently separated from each other to form such slot.

Pivoted to a lug *d* of the bar *b*, is an oscillating lever B to which is rigidly secured a cutter plate C whose cutting edge is longitudinally convex, and is formed with a series of fine teeth *f'* beveled from each side, and upon opposite edges.

D is the holding guide, which is secured to the frame bar *b*, and consists of two longitudinal bars, integrally, or otherwise connected at their ends, the outer of said bars being offset from, and below, the inner bar, said bars forming between them an opening E. The inner bar is held sufficiently above the upper surface of the bar *b*, to form a passage for the sheet metal, the bar *b* being beveled downwardly and laterally as indicated at *b''*.

F designates the gage, which consists preferably of a longitudinal, straight-edged bar adjustably secured to lugs *g g* of the frame by means of suitable bolts or screws engaging slots *g'* in said lugs. This gage is placed parallel with the slot *c*, upon the side thereof opposite the guide and at the proper distance therefrom to form the desired width of shingle or repair strip.

The sheet metal is usually fed from a roll G hung in suitable bearings H, near the machine, being inserted in the opening E, and underneath the inner bar of the holding guide until stopped by the gage. Projecting from the inner edge of this gage are a series of lugs I having beveled under faces, and which serve to catch and hold down the free edge of the metal which would otherwise be likely to play upward under the operation of the cutter.

As the cutter is brought down upon the metal into the slot *c*, it effects a direct cut, as distinguished from a shear cut, of the metal, the edge portions adjacent to the cut being crowded down into said slot, which is slightly wider than the thickness of the blade. This results in the formation of edge ridges or flanges at each side of the cut, and gives each completed strip a trough form. The teeth of the cutter form fine teeth or serrations on the edge of these flanges in the nature of lancet points. To form these flanges the metal is necessarily drawn or stretched, which not only thins the metal at the edges, but it also hardens and strengthens it so that the points or teeth are rendered more efficient in securing the strips in place.

Owing to the curved form of the cutting edge the strips are caused to have a longitudinal bow or convexity, which is of considerable importance in retaining the strips in place in use.

The cutter lever may be oscillated either by hand or by connection with a suitable motor.

tor, each oscillation producing a completed strip. The strips may be caused to fall upon an inclined board P, having a pocket P' at its lower portion in which they are received
5 in compact or stacked form.

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

10 1. The machine for the purpose described, comprising a frame, a longitudinal slot therein, an oscillating lever pivoted to said frame, a toothed cutter blade carried by said lever, a holding guide, and a gage, substantially as
specified.

15 2. The machine for the purpose described, comprising a frame, a longitudinal slot therein, an oscillating lever pivoted to said frame, a cutter blade carried by said lever and having a curved edge, and a holding guide and
20 gage, said cutter having double-beveled teeth forming a direct forcing cut, substantially as specified.

3. The machine for the purposes described, comprising a frame, a longitudinal slot through the horizontal bar of said frame, an
25 oscillating lever pivoted to one end portion of said frame, a cutter blade carried by said lever and having a curved serrated or toothed edge, a holding guide, and an adjustable gage
30 having holding lugs, substantially as specified.

4. In a machine for cutting supplementary shingle strips, the combination with a frame having a narrow longitudinal slot therein, of
35 an oscillating cutter pivoted to said frame and having a longitudinally convex cutting edge formed with a series of fine, double beveled teeth, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. DANA.

Witnesses:

PHILIP C. MASI,
GEORGE H. PARMELEE.