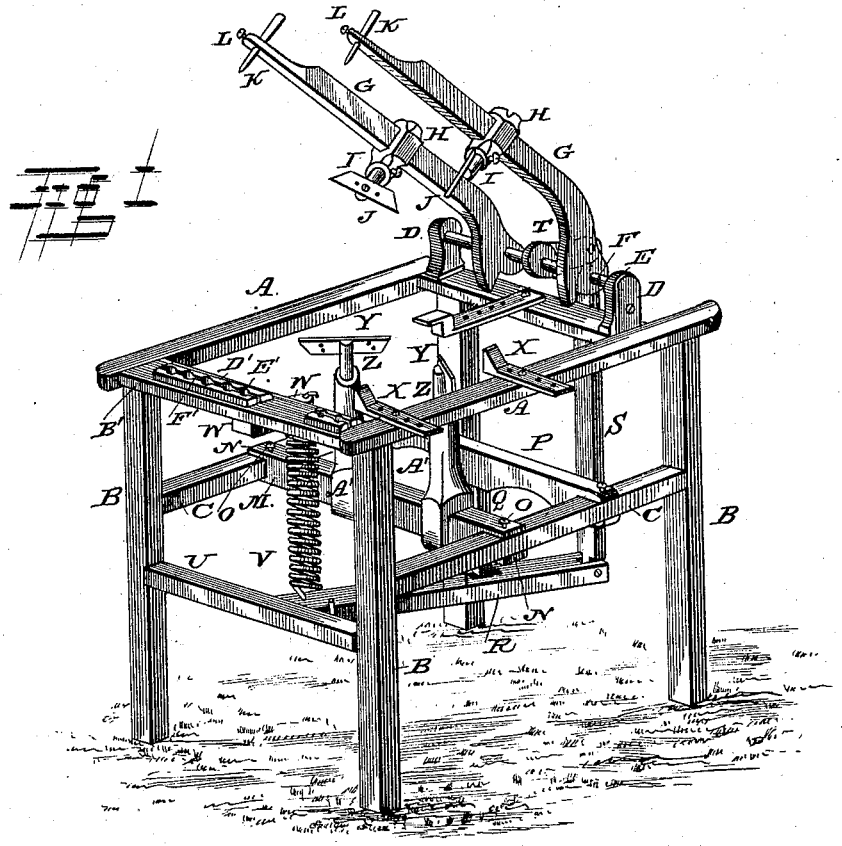
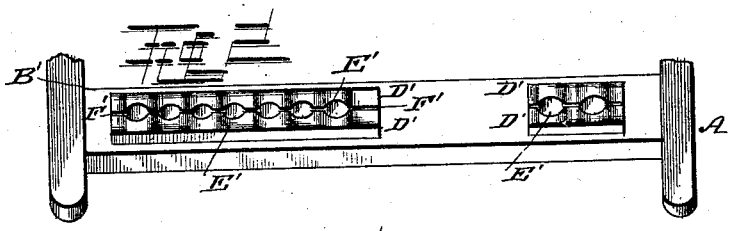
(No Model.)

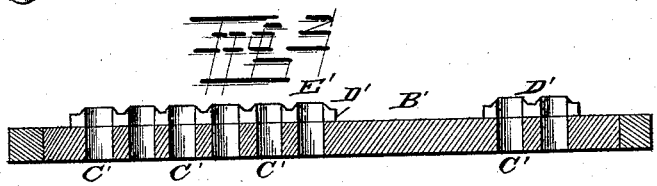
C. W. ROMOSER.

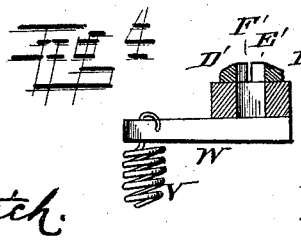
MACHINE FOR TRIMMING AND PUNCHING ROOFING SLATE.

No. 304,961. Patented Sept. 9, 1884.









WITNESSES:

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CHARLES W. ROMOSER, OF MARION, OHIO.

MACHINE FOR TRIMMING AND PUNCHING ROOFING-SLATES.

SPECIFICATION forming part of Letters Patent No. 304,961, dated September 9, 1884.

Application filed March 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. ROMOSER, a citizen of the United States, and a resident of Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Machines for Trimming and Punching Roofing-Slates; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved slate trimming and punching machine. Fig. 2 is a perspective detail view of the perforated front bar of the frame, and Figs. 3 and 4 are sections of the same.

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

My invention has relation to machines for trimming and punching slate, consisting of a pair of arms mounted upon a shaft operated by a treadle, and provided with adjustable cutters and punches, the said cutters being forced down against two stationary and adjustable cutters; and it consists in the detailed construction and combination of parts of such a machine, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates a rectangular frame mounted upon four legs, B, having two rails, C C, upon the sides between the legs, and provided with two upright lugs, D D, upon its rear side piece, forming transverse bearings E. A shaft, F, turns with its ends in the said bearings, and is provided with two arms, G G, sliding adjustably with their inner ends upon the shaft, and having two blocks, H H, sliding adjustably upon them, in the lower ends of which blocks the cutter-bearing rods I, upon which the cutter-blades J are secured, slide adjustably. The punches K slide adjustably in vertical perforations in the outer ends of the arms, secured by means of set-screws L. A transverse bar, M, having its ends recessed to form lips N, slides with its recessed ends upon the side rails, C, and may be secured upon the same at any place by means of set-screws O, and a cross-bar, P, having its ends recessed in the same manner, is secured upon the rear portions of the side rails, and has a downwardly-pending bar, Q, upon the lower end of which a lever, R, has its fulcrum, the rear end of which lever has a connecting-rod, S, pivoted to it, the upper end of which rod is pivoted adjustably to a perforated lug, T, projecting from and secured upon the shaft. The forward end of the lever is provided with a cross-treadle, U, and has the lower end of a spiral spring, V, attached to it, the upper end of which spring is attached to a lug, W, projecting inward from the forward side of the rectangular frame, the said spring serving to raise the treadle, and thus raise the cutter and punch bearing arms. Adjustable guides X are secured upon the one side of the rectangular frame and upon the rear end piece, serving to bear against the sides of the slate, which is placed upon the stationary cutters Y, which are secured upon the upper ends of the cutter-bearing bars Z, which slide adjustably with their lower ends in sockets formed in the upper ends of blocks A′, sliding adjustably upon the adjustable cross-bar M. In this manner it will be seen that the slate may be trimmed and punched by depressing the treadle, throwing the cutter and punch bearing arms down, and, all parts being adjustable, they may be adjusted to suit any size of slate.

In punching slate in this kind of machine a great difficulty is met with in the shape of the tendency of the slate to break or scale around the punched holes, the lower layers of slate in the slab or plate of slate being forced out by the point of the punch, or the entire end of the slate, what will be the tail of the finished slate breaking off; and to obviate this diffiulty I construct the blocks upon which the slate rests at the points at which it is punched in the following manner: The forward end piece, B′, has a number of perforations, C′, with which the punches may be brought to register, and parallel bars or blocks D′ are placed by the sides of these perforations, secured upon the forward end piece of the frame, and have recesses E′ in their inner sides corresponding to the perforations, the inner sides of the bars being placed close to each other, forming a narrow slot, F′, between them. The edges of the recesses in the bars, upon the upper sides of the same, are raised, the surrounding por-

tions of the upper sides of the bars being cut away, so that the slate resting upon the upper sides of the bars will only bear upon the said raised edges, which will serve to confine the scaling off of the lower layers in the slate within the bounds of the raised edges. The slot between the inner edges of the bars will serve to allow the dust and chips falling from the slate to be readily removed, and will also serve to give a certain amount of elasticity or yielding to the support for the slate formed by them, preventing the slate from breaking off when punched.

I am aware that machines for trimming and punching slate have been made having adjustable stationary cutters, adjustable guides for the slate, and adjustable cutters secured upon pivoted arms operated by a treadle, and I do not wish to claim this construction; but

What I claim is—

1. In a machine for trimming and punching slate, the parallel bars having recesses in their inner edges or sides, having their faces cut away, forming raised edges around the recesses, and secured upon the frame of the machine, forming a narrow slot between them, as and for the purpose shown and set forth.

2. In a machine for trimming and punching slate, the combination of the pivoted arms provided with punches at their ends, the forward end piece of the frame, having perforations, and the parallel bars secured upon the upper side of the said end piece, forming a slot between them, having recesses upon their inner edges corresponding with the perforations, and having their upper sides cut away to form raised edges around the recesses, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

CHARLES W. ROMOSER.

Witnesses:

STEPHEN A. COURT,

P. DRAKE.