October 22, 1913.

DRAWING

4,147

A careful search has been made this day for the original drawing or a photolithographic copy of the same, for the purpose of reproducing the said drawing to form a part of this book, but at this time nothing can be found from which a reproduction can be made.

Finis D. Morris,

Chief of Division E.

AWK

UNITED STATES PATENT OFFICE.

SOLOMON F. FINCH AND JAMES WHEELER, OF ROOTSTOWN, OHIO.

LATH-CUTTING MACHINE.

Specification of Letters Patent No. 4,147, dated August 16, 1845.

To all whom it may concern:

Be it known that we, SOLOMON F. FINCH and JAMES WHEELER, of Rootstown, Portage county, Ohio, have invented a new and useful Machine for Cutting Laths from Bolts or Blocks of Wood, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes it from all other things before known and of the manner of constructing and using the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1 is a top view of the machine, with the covering of the frame removed to exhibit the moving parts more distinctly. Fig. 2 a transverse vertical section taken at the line (X—X), and Fig. 3 an end view of the carriage separate from the other parts at the line O of Fig. 1.

The same letters are used to designate like parts in all the figures.

Machines have long since been made for cutting laths in which the block of wood is carried against the edge of a permanent knife, and then drawn back to permit the block to descend onto a bed preparatory to another cut; but in all machines of this kind, heretofore known, the block has not been gripped and held tight during the operation of cutting and drawing back the block, which is a decided defect for it is well known that what is termed a "clean cut" cannot be made from a block of wood which is not held firm when presented to the action of the cutter, and although this has been effected in machines in which the knife is carried against the block instead of the block against the knife, it has not been effected in a manner so simple as that invented by us, and presents an objection avoided by our invention, viz: retaining the grip on the block until it has been carried back clear of the edge of the knife before being liberated to permit its descent on to the bed—the manner of effecting these important ends constitutes the essential character of our invention.

In the accompanying drawings (A) represents the frame of the machine properly adapted to the moving parts of the machine, and (B) a block to which is properly secured the knife (C), of the length required for cutting laths. The bed (D) on which the face of the bolt or block of wood rests, to gage the thickness of the laths, is properly secured to the ends of the frame, and may then be provided with screws or wedges to adapt the machine to the cutting of laths of different thicknesses. The carriage (E) for holding and carrying the bolt or block of wood slides between the end pieces of the frame, and is guided in its horizontal movement by the bed (D), on which it rests, and the cleats (F, F). This carriage is made in two parts; the inner one (G) consists of a lower plate (*g*) on which the end pieces of the outer one slide, and a vertical clamp plate (*h*), which, together with the front clamp plate (*e*), of the outer part, constitutes the clamp for gripping and holding the bolt or block of wood; these two parts are connected together by a bow spring (H), the middle attached to a block (*i*) projecting from the bottom plate of the inner part of the carriage, and the ends fitted in pockets in the end pieces of the outer part of the carriage, so that by the tension of this spring the bolt or block of wood is gripped firmly between the two clamp plates of the carriage.

Back of the carriage, and turning on journals (*a*) (represented by dotted lines) is a rocking shaft (I) provided with a lever to be worked by hand or any other motive force. To the lower edge of this rocking shaft is hinged, by staples and pins or by other means, the lower plate (*g*) of the inner part of the carriage, so that when the lever of the rocking shaft is moved down, the bolt or blocks is carried against the edge of the knife (C), by which a lath is severed from it, and on the reverse movement of the rocking shaft, the carriage, with the bolt or block still gripped, is drawn back until it has passed the edge of the knife, at which time the end pieces of the outer part of the carriage have reached and rest against the upper edge of the rocking shaft (which is on a line with its journals), and hence the continued movement of the rocking shaft will draw the inner part of the carriage, contract the spring, and thus liberate the bolt or block that then descends by gravity on to the bed, which gages it for another lath.

The motive power may be applied to the rocking shaft in any manner desired.

We are aware that machines for cutting laths have been made with a carriage to carry the bolt or block against the edge of a knife, and that the bolt or block has been

gripped preparatory to, and during the operation of cutting, in machines in which the knife is carried against the bolt, instead of the bolt against the knife, and the bolt liberated before the knife has been moved back clear of the bolt, and hence we wish it to be clearly understood that we do not claim to be the original and first inventors of these; but

What we do claim as our invention and desire to secure by Letters Patent is—

Making the carriage which carries the bolt or block to the knife in two parts, moving on each other and connected together by a spring, or analogous device, so that the bolt is gripped while being carried against the edge of the knife, and still gripped until drawn back of the edge of the knife, and then liberated for the purpose and in the manner substantially as herein described.

SOLOMON F. FINCH.
JAMES WHEELER.

Witnesses:
C. W. M. KELLER,
GEO. C. JACKSON.