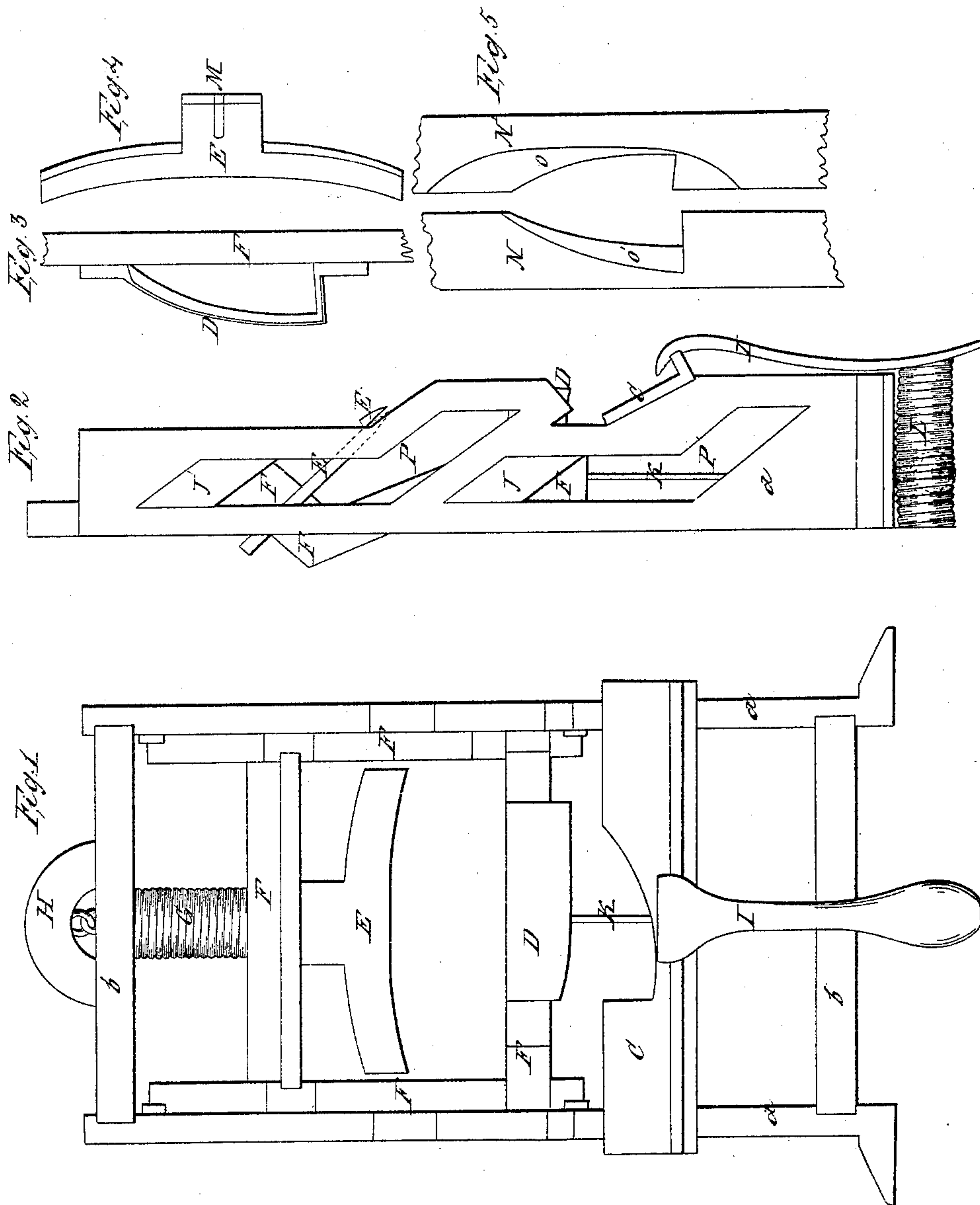


S. Littlefield,
Making Hoops.

N^o 21,507.

Patented Sep. 14, 1858.



Witnesses
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UNITED STATES PATENT OFFICE.

SANFORD LITTLEFIELD, OF WEST TROY, NEW YORK.

MACHINE FOR NOTCHING AND TRIMMING HOOPS.

Specification of Letters Patent No. 21,507, dated September 14, 1858.

To all whom it may concern:

Be it known that I, SANFORD LITTLEFIELD, of West Troy, in the county of Albany and State of New York, have invented a new and Improved Machine for Notching and Trimming Hoops; and I do hereby declare that the following is a full and exact description of the nature, construction, and operation thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

I describe my invention in the following manner, to wit:—1st. The nature. 2d. The construction. 3d. The operation, and 4th, the claim, which I draw out of and base upon the said nature, construction and operation.

Nature of the invention.—The nature of my invention consists in so constructing a machine with cutter knives as to cut a notch in hoops for locking their respective ends, and at the same time and operation, trim the said notch upon the back side of it.

It also consists in arranging the cutter knife for to cut the notch, with and upon the same movable frame containing the cutter knife for to trim the said notch.

It also consists in so arranging the movable frame hereinafter described, that by the downward motion of the treadle, a downward and oblique motion is given the said movable frame, whereby the said notch is cut ready for locking purposes without further work or trouble.

Construction.—I construct my machine in the following manner, to wit, (*a, a*) are upright standards. (*b, b*) are cross pieces which when united as seen at Figure 1 constitutes the frame. (*c*) is a rest for the purpose of holding the hoop (*N*) Fig. 5, while being cut or notched, (*I*) is for the purpose of holding the hoop upon the rest (*c*) and is operated by the spring (*L*), Fig. II.

(*D*) Figs. 1 and 3, is the cutter knife for notching the hoop as seen at (*o*) Fig. 5. It is fastened by screws or otherwise to (*F*) the lower part of the movable frame composed of (*F, F, F, F*) which moves up and down in the frame (*a, b*) and is guided in its motion downward to cut the notch (*o* and *o'*) Fig. 5, by the guides (*J, J'*) Fig. 2, which move in the grooves (*P, P'*), same figure.

(*E, E*) Figs. 1 and 4 is the cutter knife fastened by a set stem to (*F*), the upper

cross piece of the movable frame, and it cuts (*o*) as seen at (*N'*) Fig. 5, being the back part of the hoop. This knife may be made in any shape required to trim the notch made by the knife (*D*). The side pieces of the movable frame containing the cutter knives (*D*, and *E*) are made crooked as seen at Fig. 2. This is so that the said movable frame will not interfere with the hoop while being cut or notched.

(*G*) Fig. 1 is a flat coiled spring attached to (*H*) and the upper end of the movable frame (*F*) for the purpose of adjusting the said frame to its proper position before the operation of cutting the notch in the hoop.

(*K*) is a wire connecting the said movable frame to a treadle so as to operate the machine by the foot.

(*M*) Fig. 4 is a slot in the cutter knife (*E*) so as to adjust the said knife to any required point.

Fig. 1, shows a front view of the entire machine. Fig. 2, shows a view of the side pieces of the frame and the manner in which the working of the machine is guided; Figs. 3 and 4, the cutter knives for notching. Fig. 5, shows a hoop notched and trimmed upon the back part thereof.

Like figures represent like parts.

Operation.—By making a treadle or any other machinery attached to the rod (*K*) the movable frame before described and containing the cutter knives (*D* and *E*) is brought downward to the hoop to be cut. The lower knife cuts the notch (*o'*) Fig. 5 first and immediately before the knife (*E*) comes down and cuts the trimming (*o*) same figure. The motion downward and then obliquely, is produced by the slots (*P'*, and *P*) Fig. 2 in the frame (*a, b*), Fig. 1. By one downward motion the notch is cut and trimmed ready for use. The movable frame is drawn upward to its proper place by the spring (*C*). The machine is then ready for use and so the operation continues at the will of the operator. The hoop is held in its required position or place by the rest (*c*) and piece or lever *I*.

This entire machine may be of cast malleable iron or of any other material best to be used. The cutter knives may be taken out and sharpened or new ones put in their place as the case may require.

Having thus described my invention I do

not claim notching the hoop, by the cutter D, moving in its frame, but

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

- 5 The relative arrangement of the cutters D, and E, moving in ways rectilinearly, and obliquely, whereby the notch is cut and

trimmed at one operation, as herein described and set forth.

SANFORD LITTLEFIELD.

Witnesses:

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