(No Model.)

J. B. CHILES.

MACHINE FOR BENDING STIRRUPS.

No. 260,938. Patented July 11, 1882.

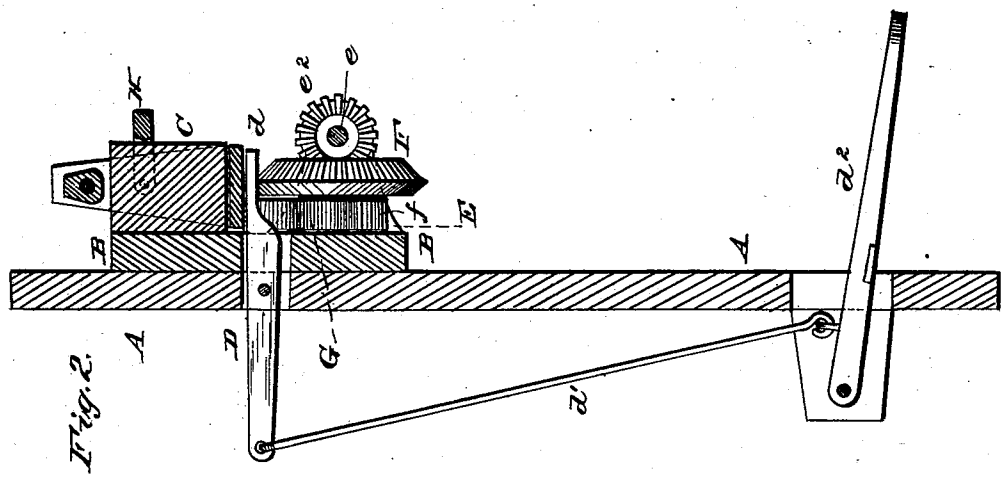


Fig. 2.

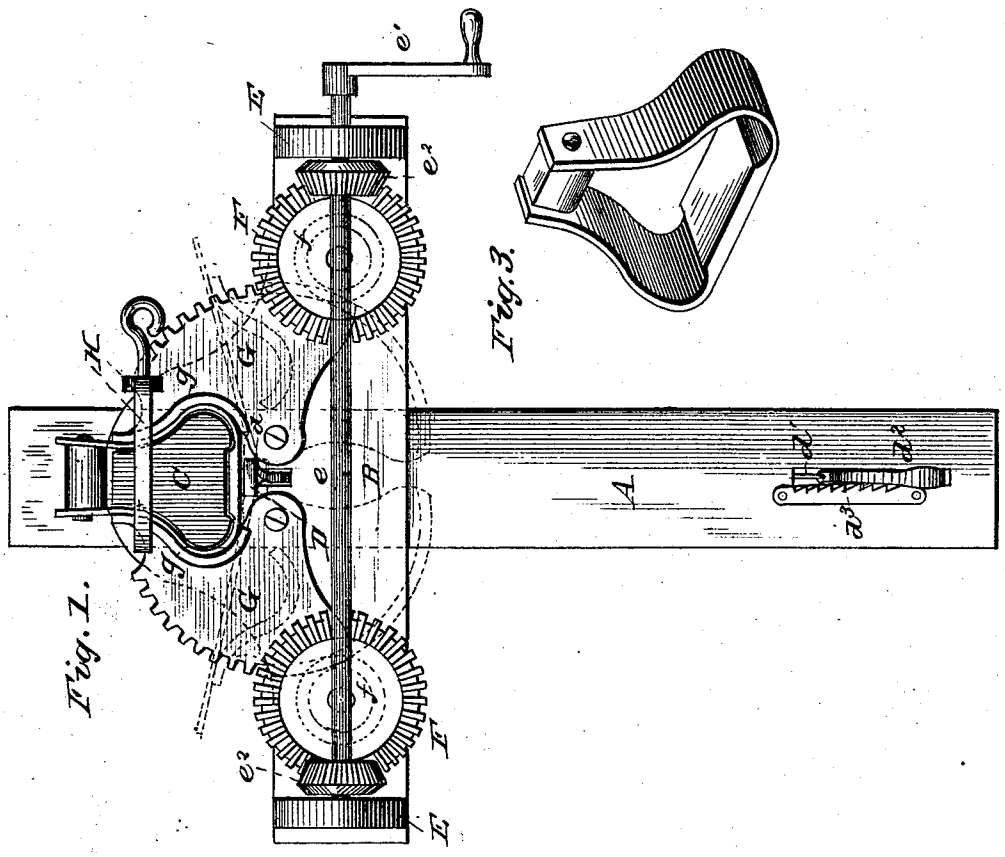


Fig. 1.

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN B. CHILES, OF KERNSTOWN, VIRGINIA.

MACHINE FOR BENDING STIRRUPS.

SPECIFICATION forming part of Letters Patent No. 260,938, dated July 11, 1882.

Application filed March 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CHILES, of Kernstown, Frederick county, State of Virginia, have invented a new and Improved Machine for Bending Wooden Stirrups; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front end elevation. Fig. 2 is a transverse section, and Fig. 3 a perspective view of a wooden stirrup.

This invention has for its purpose the bending of stirrups from a suitably-prepared blank of wood; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth.

In the drawings, A represents a vertical standard forming the main support of the machine, which is itself held upon any suitable foundation.

B represents a transverse beam or plate properly secured to the standard A, which beam serves as a basis of support for the former-block and the bending mechanism.

C represents the former-block projecting from the face of beam B, as shown, which is formed in such manner that its outer surface corresponds exactly with the inner surface of a properly-shaped stirrup.

D represents a lever pivoted in the vertical standard A, and extending through the same from front to rear, the front end of which is provided with a horizontal portion, *d*, adapted, when the lever is properly actuated, to press in an upward direction and clamp the blank against the bottom of the former.

d' represents a connecting-rod, by means of which the rear end of clamping-lever D is united to the foot-lever d^2 near one end of the same, as shown.

d^3 represents a rack-plate, by means of which the foot-lever, when depressed to clamp a blank, may be held in any desired position.

E E represent bearings extending from the beam B at its ends, which bearings support the shaft *e*, having the crank e' or other proper means for communicating motion.

e^2 e^2 represent pinions upon the shaft, which engage with the gear-wheels F F, having the pinion *f f*, as shown.

G G represent segmental gears pivoted to the beam B near the center of the same, the teeth of which engage with the pinions *f f*, as shown.

g g represent former-plate projections for the gear end, which are shaped in such manner as to coincide exactly with the outer surface of one side of the stirrup-former block C.

H represents a screw-clamp of the usual well-known or any other proper construction, the purpose of which will be hereinafter explained.

The operation is substantially as follows: The wooden blank, having been previously shaped and steamed, is brought to the machine, and is placed centrally upon the horizontal portion *d* of the lever D. The foot-lever d^2 is then actuated to cause the portion *d* to clamp the blank against the bottom of the former-block. When the blank is thus strongly secured in its proper place the shaft *e* is actuated to cause, through the intermediate mechanism described, the former-plates *g g* to shape the blank to the sides of the former-block C. When the blank has been thus bent into proper form the screw-clamp H is applied thereto for the purpose of holding the upper ends of the same securely while the securing-rod is passed through the center block and riveted. The completed stirrup may then be removed to make place for another blank.

The machine possesses great efficiency in the performance of the work for which it is designed, and its construction is durable and simple.

I am aware that timber has heretofore been bent into any desired form by means of a former made of exactly the shape which it is desired the timber should have when bent, around which former the timber is bent by means of gear-wheels and cam-gear, and I therefore lay no claim, broadly, to such construction and arrangement of parts for bending wood, my invention being intended to cover the arrangement and construction of parts for bending wooden stirrups as pointed out in the claims.

Having thus described my invention, what I claim is—

1. As an improved article of manufacture, the sector-gear G, adapted to be pivoted as set forth, and provided with a former-plate, *g*, on one of its edges of the configuration of one-half of a stirrup, substantially as described.

2. The combination of the segmental gears G G, each provided with a former-plate, *g*, former-block C, clamping mechanism D d' d^2, and operating mechanism F F *f f*, substantially as described.

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Witnesses:
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