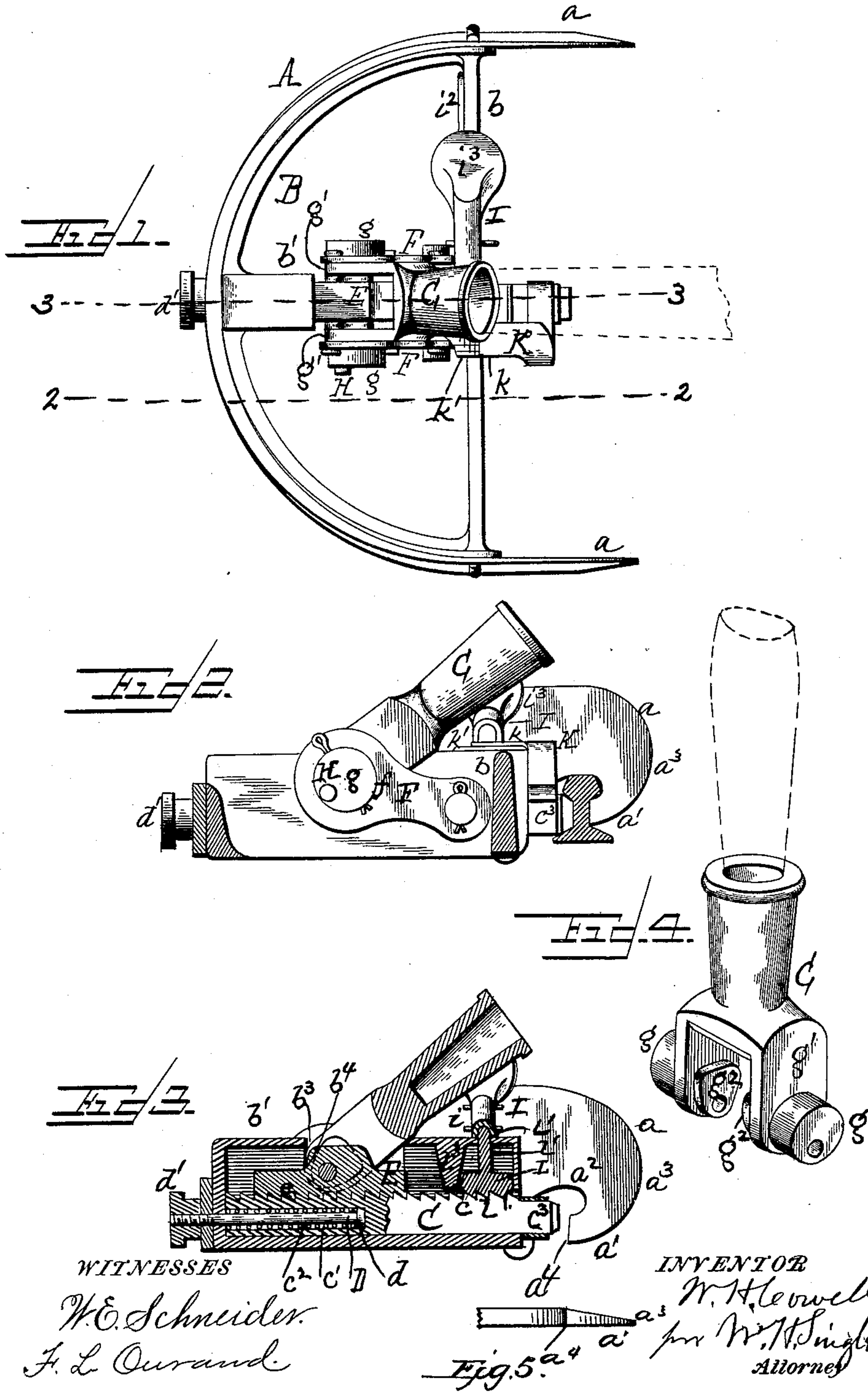


(No Model.)

W. H. COWELL.  
RAILROAD RAIL BENDER.

No. 479,491.

Patented July 26, 1892.



# UNITED STATES PATENT OFFICE.

WILLIAM HENRY COWELL, OF LOGAN, OHIO.

## RAILROAD-RAIL BENDER.

SPECIFICATION forming part of Letters Patent No. 479,491, dated July 26, 1892.

Application filed April 18, 1892. Serial No. 429,620. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY COWELL, a citizen of the United States, residing at Logan, in the county of Hocking and State of Ohio, have invented certain new and useful Improvements in a Jim-Crow or Railroad-Rail Bender; and I do hereby 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.

The object of this invention is to furnish a "crow" or rail-bender for making curves in railroad-rails; and the invention consists in the construction hereinafter pointed out.

In the annexed drawings, Figure 1 is a plan view. Fig. 2 is a section on line 2 2, Fig. 1, showing also a section of a rail. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a perspective view of the operative lever. Fig. 5 is a detail view of one end of the frame.

Referring to the drawings, the letter A indicates a semicircular frame terminating in the ends  $a a$ . These ends have the hooks  $a'$  with the recesses  $a^2 a^2$ . The outer edges  $a^3 a^3$  of these hooks are narrower than the backs or catching-edges  $a^4 a^4$ . This construction strengthens these hooks. Secured within the frame A is another frame B, having the cross-bars  $b$  and  $b'$  at a right angle to each other. The bar  $b'$  is a hollow box. Within it is placed a bar C, having the teeth  $c$  on top and the socket  $c'$  in its rear end. In this socket  $c'$  is placed a spiral spring  $c^2$ , through which passes a rod D. This rod has a head  $d$  and projects through the frames A and B, and on the outside has the nut  $d'$  thereon. The spring  $c^2$  surrounds the rod D between its head  $d$  and the edge of the frame B. The outer end  $c^3$  of the bar C projects out of the box of the bar  $b'$  and beyond the edge of the cross-bar  $b$ . Within the box of the bar  $b'$  is a slide E, having teeth  $e$ , which fit the teeth  $c$  of the bar C. The bar  $b'$  has an opening  $b^3$

in its top, with the curved sides  $b^4 b^4$ . Pivoted to the sides of the bar  $b$  in front of this opening  $b^3$  are links F F, having the holes  $f f$ . In these holes  $f f$  are pivoted the trunnions  $g$  of a forked lever G, the forks  $g' g'$  of which straddle the bar  $b$ . On the inside these forks have the bosses  $g^2 g^2$ . Through the trunnions  $g g$ , bosses  $g^2 g^2$ , and slide E a pin H passes. This pin is off the center, and therefore gives a cam movement to the trunnions  $g g$  in the links F F. Hinged to the top of the bar  $b$  is a lever I. Within the box of the bar  $b'$  is a detent L, having the teeth  $l$ . This detent has a stem  $l'$ , which passes through a hole  $i'$  and is hinged to the front end  $i$  of the lever I. A stop  $l^3$  catches the detent L when there is back strain on the bar C, and thus relieves the hinge of the lever I and detent L. This detent is held in engagement with these teeth by a spring  $i^2$ , and has a pedal  $i^3$ . Secured to the projecting end  $c^3$  of the bar C is a slide K, the upper end  $k$  of which comes above a scale  $k'$  upon the bar  $b$ . In use a rail is placed in the hooked ends  $a$ , as shown in Fig. 2, the hooks coming on one side and the bar C on the other. Power is applied to the lever G, and the bar C being forced outward the desired curve is given to the rail, the slide K indicating the amount of the curvature.

Having thus described my invention, what I claim is—

The combination of the frame and its two cross-bars, one of which is hollow and has an opening with curved sides, the toothed slide in such hollow bar, the links secured to the bar, the spring at the rear of the bar, the forked lever secured to the slide, and the lever to hold the toothed slide, as set forth.

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

WILLIAM HENRY COWELL.

Witnesses:

J. P. ROCHESTER,  
HENRY LUTZ.