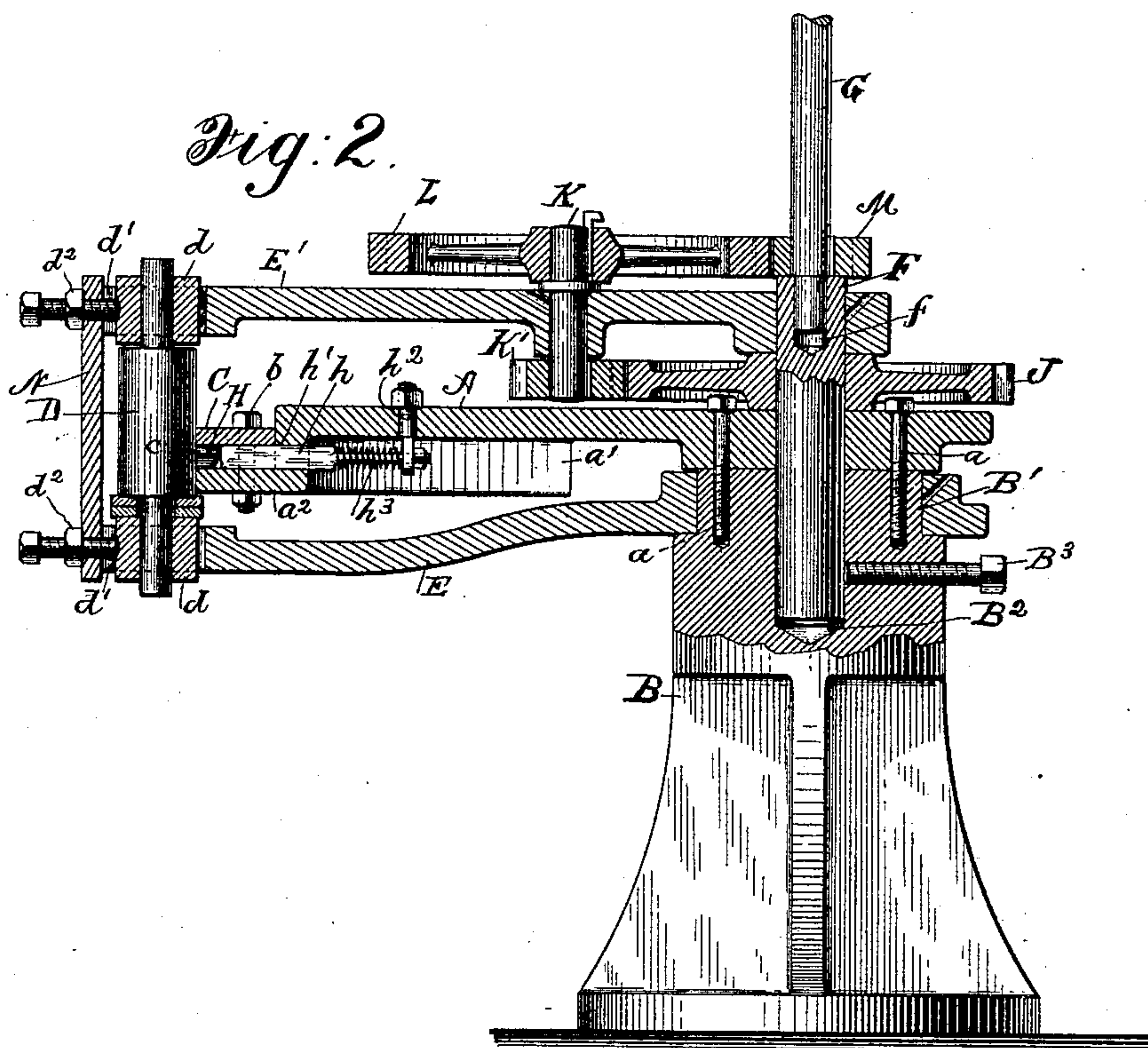
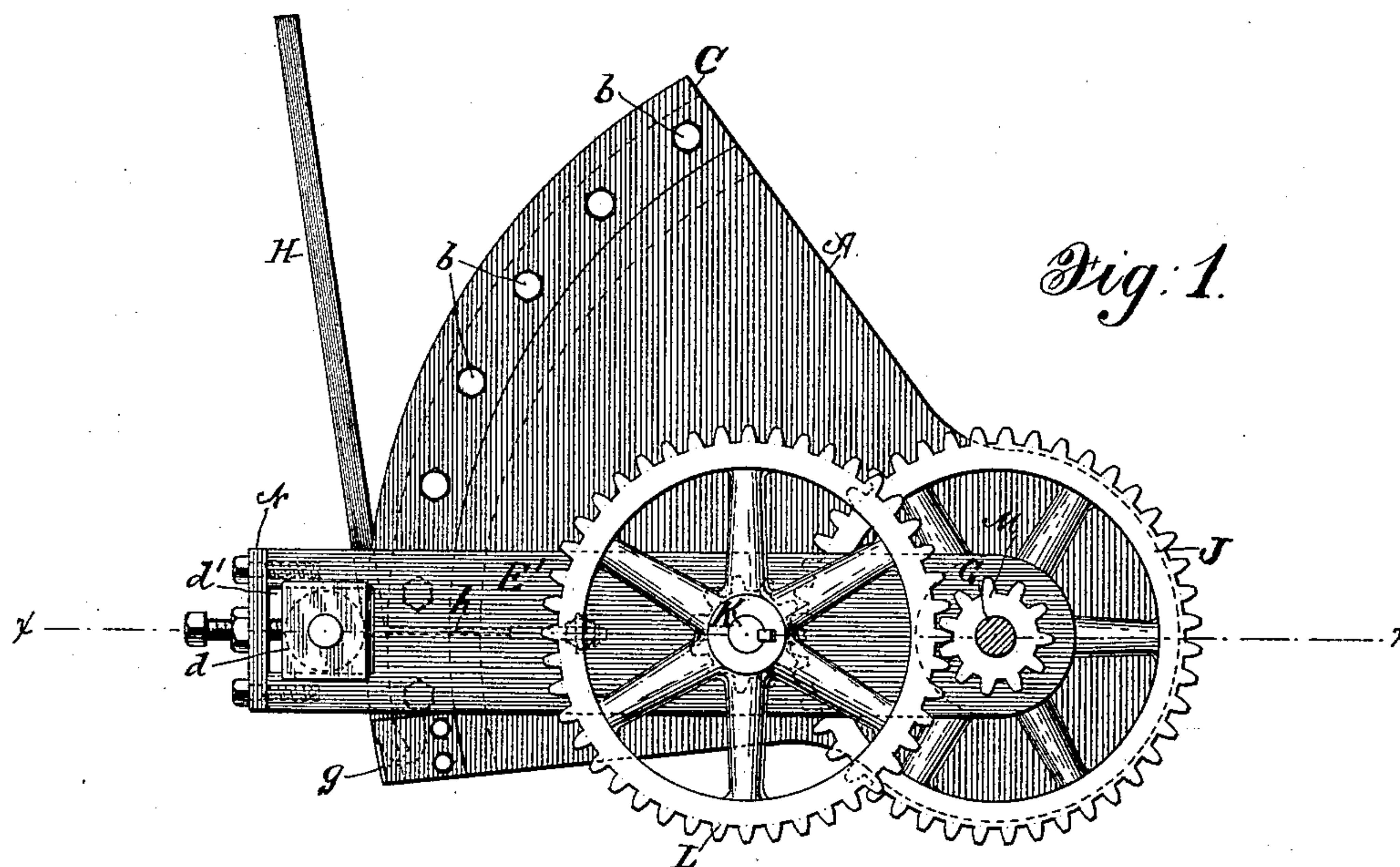


(No Model.)

T. A. COOK.  
HOOP FLARING MACHINE.

No. 482,300.

Patented Sept. 6, 1892.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

THEODORE A. COOK, OF CALLICOON DEPOT, ASSIGNOR TO JAMES MATHISON  
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## HOOP-FLARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,300, dated September 6, 1892.

Application filed May 1, 1891. Renewed August 13, 1892. Serial No. 442,946. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE A. COOK, a citizen of the United States, and a resident of Callicoon Depot, in the county of Sullivan and State of New York, have invented a new and useful Improvement in Hoop-Flaring Machines, of which the following is a full, clear, and exact description, sufficient to enable others skilled in the art to make and use the same.

My invention relates to a new and improved machine for flaring the metal hoops or hoop-blanks used on barrels, kegs, tubs, and other cooperage; and my invention consists of the general construction of the machine and of the various combinations of parts comprising the same, all as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which like letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of my new hoop-flaring machine, showing the power-shaft in section; and Fig. 2 is a sectional elevation taken on line *x x* of Fig. 1.

A represents the segment, secured in this instance by bolts *a a* upon the top of the standard or main frame B. The outer curved edge of the segment is depressed at *a'* and flanged, as shown at *a''*, and upon this flange is secured by bolts *b b* a curved plate C, a narrow space or slot *c* being formed between the flange and plate to receive the hoop-blank H to be placed edgewise in said space, so that when the bender D sweeps around the curved edge of the segment it will bend the blank to the form of the curve of the segment, forcing it within the said slot or space, which, being gradually effected, prevents buckling of the blank. The said bender is by preference in the form of a roller and is carried by the two sweep-arms E E', one journaled upon the hub B' of the standard or frame B, the other upon the post F, stepped in a socket B<sup>2</sup> in the standard and secured by a set-screw B<sup>3</sup>. The said post and standard may be made in one piece, if desired.

In the end of the post F is formed a socket *f*, which forms a journal for the power-shaft G, and on said post is secured the large stationary gear J, with which meshes a pinion

K' on the lower end of the short shaft K, journaled in the upper sweep-arm E', as shown clearly in Fig. 1. To the upper end of this short shaft K is secured the large gear-wheel L, with which meshes the pinion M, secured upon the power-shaft G, so that when the power-shaft is revolved the sweep-arm E' will rotate upon the post F. The sweep-arm E' is yoked to the lower sweep-arm E by a heavy plate N, so that the movement of sweep E' carries with it the lower sweep and the bender D, thus carrying the bender adjacent to and around the curved edge of the segment. The bender for the sake of adjustment is journaled in blocks *d d*, held in corresponding openings *d' d'* in the outer ends of the sweep-arms, and in the yoke-plate N are fitted set-screws *d''* for adjusting said blocks, so that the bender may be varied in location to correspond with different widths of hoops.

At one edge of the segment is secured over the slot *c* a small stop or retaining-plate *g* to hold the inserted end of the hoop or blank to be bent, as illustrated in Fig. 1, and near this retaining-plate is fitted in a small slot, as at *h'*, in the segment a discharge-plunger *h* for throwing out the blank after the sweep passes the opposite edge of the segment. This plunger is held at its rear end in an eyebolt *h''* and is acted upon by a coiled spring *h'''*, which thrusts the plunger forward and causes it to force out the blank if by any cause it should not discharge itself, which in most cases it will do.

In operation, the power-shaft G being revolved, the pinion M will turn gear-wheel L, shaft K', and pinion K, which, being in contact with the stationary gear-wheel J, will cause the sweep-arms, the gears K L, and bender to rotate around the gear-wheel J on the post F and hub B'. The attendant will place one end of the blank to be bent in slot *c* back of the retaining-plate *g*. In passing the curved edge of the segment the bender will force the blank edgewise into the slot *c*, and one end being retained it will bend the blank to the curve of the segment. As the bender passes the segment the blank will usually fly out of its own accord; but in case it should not, the plunger *h* having been forced inward by the blank-compressing



spring  $h^3$ , will react and force out the blank. A hoop is bent with each revolution of the sweep-arms and bender.

Having thus described my invention, what  
5 I claim as new, and desire to secure by Letters Patent, is—

1. In a hoop-flaring machine, a segment  
fixed upon a standard and a gear-wheel J  
fixed above the segment on a post or stud, in  
10 combination with a sweep-arm journaled at  
the center of the said fixed gear-wheel, a  
power-shaft journaled at the axis of the  
sweep-arm, a pinion M, shaft K', journaled in  
the sweep-arm, and the gear-wheels K L, fixed  
15 on said shaft and meshing, respectively, with  
pinion M and gear-wheel J, substantially as  
described.

2. The standard B, provided with a seg-

ment A, secured thereto, and having a bearing B' beneath said segment, and provided 20  
with the shaft or stud F, in combination with  
the sweep-arms E F', one above and the other  
below the segment, the fixed gear-wheel J be-  
tween the segment and the upper sweep-arm,  
the shaft K', held by the upper sweep-arm, 25  
the pinion K, meshing with the gear-wheel J,  
and the upper gear-wheel L, meshing with the  
pinion on the power-shaft, the sweep-arms be-  
ing provided with a bender held adjacent to  
the curved edge of the segment, substantially 30  
as described.

THEODORE A. COOK.

Witnesses:

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