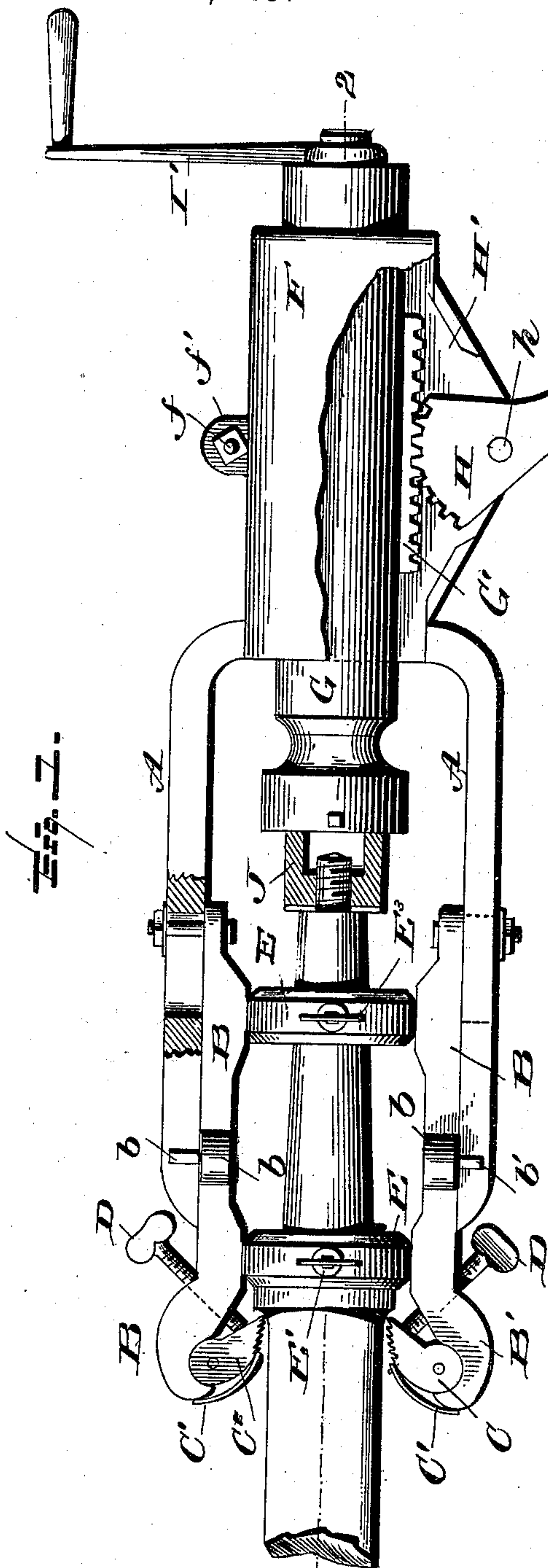


(No Model.)

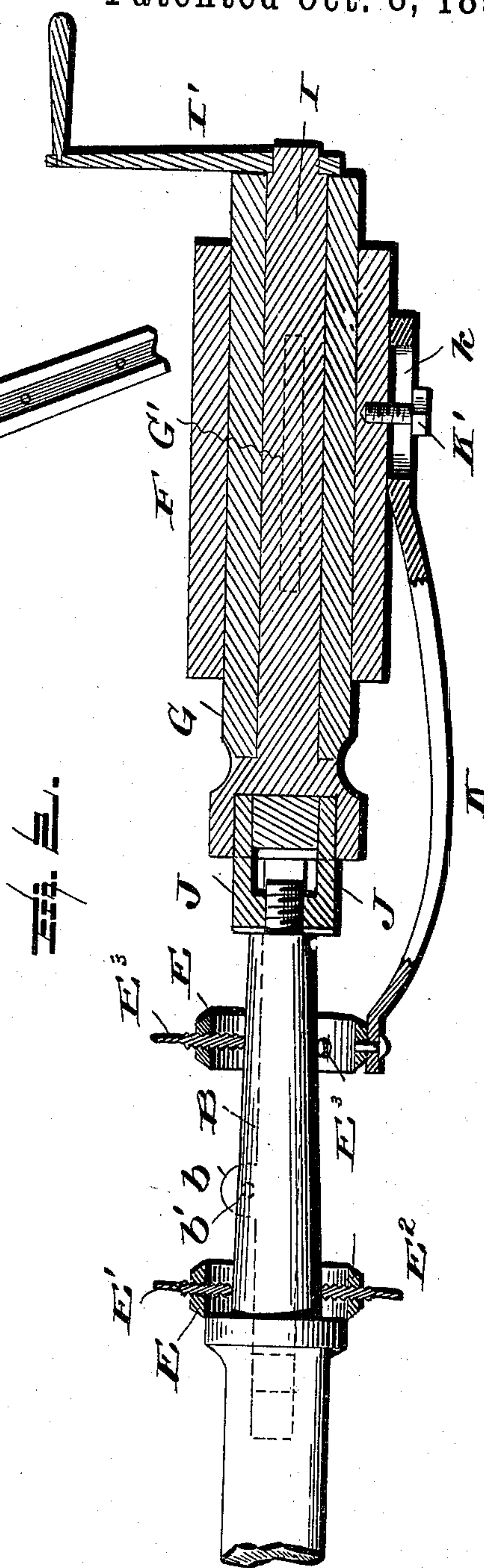
M. ENGELN.  
MACHINE FOR CUTTING AXLES.

No. 547,425.

Patented Oct. 8, 1895.



Witnesses:  
L. C. Hills.  
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att'y.



# UNITED STATES PATENT OFFICE.

MATHIAS ENGELN, OF McHENRY, ILLINOIS.

## MACHINE FOR CUTTING AXLES.

SPECIFICATION forming part of Letters Patent No. 547,425, dated October 8, 1895.

Application filed January 31, 1895. Serial No. 536,826. (No model.)

*To all whom it may concern:*

Be it known that I, MATHIAS ENGELN, a citizen of the United States, residing at McHenry, in the county of McHenry, State of Illinois, have invented certain new and useful Improvements in Machines for Cutting Axles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in devices for cutting and shortening axles without the necessity of removing the same from the vehicle; and it has for its objects, among others, to provide a simple and cheap device that can be easily attached to a vehicle without removing the axle to shorten the axle to take up the wear.

It has for a further object to provide a device adjustable to any and all lengths of axles and operated with ease to shorten the axle or to thread the end thereof. Means are provided for securely holding the parts after they are adjusted.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a plan view of my improved device shown in operative position upon the axle with portions broken away and parts in section. Fig. 2 is a longitudinal section on the line 2 2 of Fig. 1 with parts in elevation.

Like letters of reference indicate like parts in both of the views.

Referring now to the details of the drawings by letter, A designates the supporting-frame, to which is adjustably secured in any suitable manner—as, for instance, by slots and bolts, as indicated in Fig. 1—the bars B, which are provided with the ears *b*, from which project pins *b'*, which bear upon the upper face of the side bars of the frame A, as shown, and serve to prevent tilting of either the frame or the bars. The bars are held in their adjusted position by tightening the nuts on the bolts in the well-known manner. The outer ends of the arms or bars B terminate in curved portions *B'*, in which are pivotally

mounted the dogs C, the curved acting faces of which are serrated, as shown in Fig. 1, springs *C'* being provided for acting against the outer faces of the dogs and thumb-screws D being tapped through the curved portions of the arms or bars B in an inclined direction, as shown, for forcing the said dogs outward and in engagement with the axle. The dogs are thus adapted for clamping any size of axle. The arms or bars B carry two collars or rings or bridges E, through which the axle is adapted to be received, as shown, the outer bridge having a thumb-screw *E'* upon the top and another *E<sup>2</sup>* on the opposite side, whereby the dogs may be kept on the center of the shoulder of the axle. The inner bridge is provided with three set-screws *E<sup>3</sup>*, equally spaced in the form of a triangle, for elevating the machine at any required angle or inclination.

The frame A carries a tubular portion F, preferably made in two halves secured together by a bolt *f*, passed through ears *f'* on the two parts, as shown, and within this tubular part is mounted to slide the tube G, which has upon one side a longitudinally-disposed rack *G'*, which is engaged by the racked segment H, which is pivoted upon a pivot *h*, held in a lateral extension *H'* of the tubular part, a suitable opening being provided for the working of the said segment, which is provided with an operating handle or lever, as shown in Fig. 1. Mounted for rotation within the sleeve G is the spindle I, having a suitable crank-handle *I'*, by which it may be rotated, and at its inner end carrying a chuck or other provision for holding a suitable cutting-tool J. A milling-die may be substituted for the cutting-tool when it is desired to cut or recut the threads on the end of the axle.

K is a rod or bar arranged under the device and connected at one end in any suitable manner to the outermost bridge E, and its other end is slotted, as seen at *k*, for the passage of a screw or bolt *K'*, adapted to be screwed into the tubular part F for holding the device after all the parts have been adjusted into the desired position.

In operation the wheel is removed from the axle and the device is applied by slipping the same over the axle, as indicated, the collars or rings E embracing the axle and secured



thereto by the set-screws, so as to true the same, the frame being adjusted lengthwise according to the length of the axle. The tool is then placed in position and the parts firmly  
5 held in their proper positions by tightening the bolt or screw K' and then the spindle is revolved by the crank I', the same being fed forward by the handle on the segment, as will be readily understood.

10 Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

1. The combination with the frame and the  
15 spindle and its operating means, of the arms adjustably mounted on the frame, the pivoted dogs and the rings with set screws carried by said arms, substantially as specified.

2. The combination with the frame and the  
20 spindle and its operating means carried by said frame, of the arms adjustably mounted on said frame, the rings carried by said arms and provided with set screws, and the pivoted dogs with means for actuating them, all sub-  
25 stantially as specified.

3. The combination with the frame, the spindle and its operating means, the adjustable arms with their axle-holding devices, and the tool carried by the spindle, of the

bar carried by the said arms and adjustably 30 connected with the tubular portion of the frame, substantially as and for the purpose specified.

4. The combination with the frame, of the arms adjustably mounted thereon, the dogs 35 pivoted on said arms, the springs bearing upon said dogs, and the thumb screws for actuating the dogs, substantially as specified.

5. The axle-cutting device described, comprising the frame, the tubular portion carried 40 thereby and having a lateral extension, the sleeve mounted in said tubular part and provided with a rack-bar, the toothed segment pivoted on said extension and engaging the rack-bar, the spindle mounted for rotation 45 within the sleeve, the arms adjustably mounted on the side bars of the frame, the dogs pivoted at the ends of said arms, the springs bearing against the dogs, the thumb screws acting upon the dogs, and the collars carried 50 by and between said arms and provided with set screws, substantially as specified.

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

MATHIAS ENGELN.

Witnesses:

CHR. STEGMAM,  
LEWIS H. OWEN.