

(No Model.)

R. D. McGEE.

AXLE CUTTER.

No. 343,058.

Patented June 1, 1886.

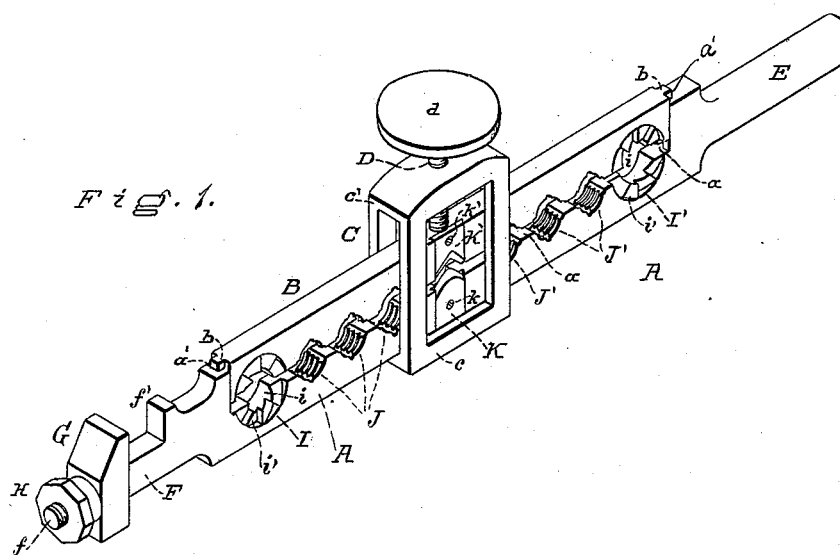


Fig. 2.

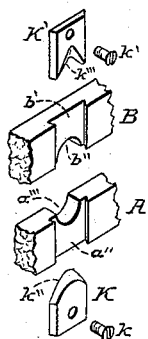
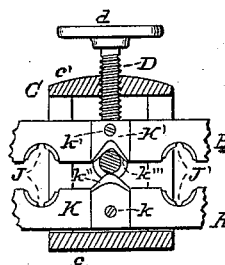


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

ROBERT D. MCGEE, OF OWENSBOROUGH, KENTUCKY.

AXLE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 342,058, dated June 1, 1886.

Application filed November 30, 1885. Serial No. 184,317. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. MCGEE, of Owensborough, Daviess county, Kentucky, have invented new and useful Improvements in Axle-Cutters, of which the following is a specification.

My invention relates to improvements in the class of of axle-cutters which is illustrated by the subject-matter of Patent No. 242,165, granted to B. T. Stowell May 31, 1881, and in which the cutting-tool is composed of two plates, of which one plate is contained in a notch in the edge of the other, and is capable of being adjustably secured therein, and of which both plates are so correspondingly formed that when thus secured together they combine with one another to form a set of screw-dies and shoulder-cutters, one half of each screw-die or shoulder-cutter being formed by each plate.

My invention consists, first, in the addition to such a device of a pair of cutters attached one to each of the aforesaid plates, and adapted to be used for clipping off the extreme end of the axle-arm; second, in a clamp for adjustably fastening said plates together; and, third, in providing at one end of the plate which receives and holds the other plate an adjustable wrench, while the other end of said plate is formed into a handle.

The object of these several improvements is to provide in a single tool all that is necessary to enable a person to move back the wheel-retaining nut on a vehicle-axle, so as to prevent lateral play of the wheel on said axle.

In the accompanying drawings, Figure 1 is a perspective view of an axle-cutter embodying my invention. Fig. 2 represents in perspective the parts of the axle-clipping cutter detached. Fig. 3 is a vertical section of the plate-fastening and adjusting-clamp, representing said clamp as forcing the cutters of the axle-clipper together so as to bite the axle, which is shown in position between said cutters.

A is a plate having in one of its edges a rectangular notch, *a*, which receives the correspondingly-shaped plate B. Tongues *b* on the ends of the plate B occupy grooves *a'* in the ends of notch *a*, so as to prevent any lateral displacement of plate B in said notch, while permitting it to slide up and down therein.

The plates A and B are both embraced in the clamp-frame C, which is open from end to end to receive them, and is also open from side to side to allow the passage through it of the axle-arm, as hereinafter set forth.

The plate A rests against the bottom piece, *c*, of the clamp-frame C, and the plate B may be pressed toward the plate A by means of a set-screw, D, which bears against the top of plate B, and is tapped into the top piece, *c'*, of the clamp-frame. The screw D is provided with a hand-wheel, *d*, whereby it may be turned so as to adjust the plates A and B to any desired distance apart.

The plate A is provided at one end with a handle, E, and at its other end is prolonged to form a rectangular bar, F, which passes through a jaw, G, capable of sliding but not of turning on it, and terminates in a screw-threaded projection, *f*, which occupies a nut, H, bearing against the back of the jaw G. By turning the nut H the jaw G can be adjusted to any desired distance from a shoulder, *f'*, of the bar F, so as to constitute an adjustable wrench for operating the wheel-retaining nut on the end of the axle-arm.

I and I' are two shoulder-cutters, of which each is formed half on the plate A and half on the plate B in such a manner that when said plates are brought together by means of clamps C D they form a central axle-receiving orifice, *i*, and radiating from said orifice is a series of cutting-teeth, *i'*. The end of the axle-arm having been passed through one or other of the orifices *i*, the wheel retaining nut is screwed on so as to bring the cutter I or I' up to the shoulder of the axle. The tool is then rotated by means of handle E, so as to cut back the shoulder as far as desired. The cutting-teeth *i'* are oppositely directed on the two cutters, so as to adapt said cutters for use on opposite sides of the vehicle.

Formed in the opposing edges of the plates A and B are two series of screw-dies, J and J'. The shoulder of the axle-arm having been cut back, as above described, the screw-thread on the end of the axle-arm is continued back to the newly formed shoulder by means of one or other of the screw-dies J or J', the parts of the screw-die being forced together by means of clamp C D. These several screw-dies of each series are of different sizes for different sizes

of axles, and those of one series are reversely pitched to those of the other, so that the two series are adapted for use on opposite sides of the vehicle. The thread having been cut back to the new shoulder, the end of the axle-arm must be clipped off somewhat, so that it will not project beyond the nut and make an unsightly appearance when an open nut is used, or will not prevent the screwing home of the nut against the new shoulder when a closed nut is used. For this purpose I provide two cutters, K and K', secured opposite each other to the plates A and B, respectively, each cutter K or K' fitting into an undercut or dovetailed groove, *a''* or *b'*, in the corresponding plate, and being secured therein by a screw, *k* or *k'*. The end of the axle arm having been inserted between the cutters K and K' the set screw D is screwed up, so as to press said cutters toward one another, and cause them to bite the axle. The tool is then rotated, so as to cut a groove around the axle, said groove being made deeper and deeper by repeated screwing up of the set screw until the axle is cut through. The cutting-edges *k''* and *k'''* of the cutters K and K' lie in the plane of rotation, and are formed, respectively, convex and concave, so as to more effectually bite and cut the axle. Back of grooves *a''* and *b'* the plates A and B are notched, as at *a'''* and *b''*, to receive the axle.

The clamp C D may be shifted to any portion of the cutting-tool, so that the bearing-point of the set-screw D against the plate B may be brought directly over the particular die or cutter which is being used, the clamp-frame C being open from side to side to receive the axle-arm.

By means of the above-described convertible cutting-tool and monkey-wrench the whole operation of moving back the wheel-retaining nut on a vehicle-axle may be performed without the use of any other tool whatever, thus obviating the necessity of using a monkey-wrench, a pair of cold chisels, a hammer, &c.

I claim as new and of my invention—

A tool for moving back the wheel-retaining nut on a vehicle-axle, comprising, substantially as described, the following elements, to wit: holding-plate A, provided with handle E, and adjustable wrench F G f H f', adjustable plate B, shoulder-cutters I I', and screw-dies J J', formed on and in the plates A and B, severing-cutters K K', secured to said plate, and the shiftable adjusting-clamp C D *d*, substantially as and for the purposes set forth.

In testimony of which invention I have hereunto set my hand.

ROBERT D. MCGEE.

Witnesses:

E. H. LUCKETT,
WM. H. MCHENRY.