

Patented July 14, 1891.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN SWEGLES, OF WAYNE, MICHIGAN.

AXLE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 455,835, dated July 14, 1891.

Application filed January 8, 1891. Serial No. 377,160. (No model.)

To all whom it may concern:

Be it known that I, JOHN SWEGLES, a citizen of the United States, residing at Wayne, in the county of Wayne and State of Michigan, have invented a new and useful Axle-Cutter, of which the following is a specification.

This invention relates to improvements in axle-cutters for reducing the length of spindles of axes, whereby the wear of the boss at the inner ends of the spindles are compensated for and the hubs or boxes of the wheels made to fit upon the same.

The objects of the invention are to provide a device of cheap, simple, and durable construction, adapted to be revolvably mounted upon the spindles of axes to cut the same when said device is revolved, and has its knife automatically fed to its work and at a proper speed relative to that of the rotation of the cutter or device.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of an axle-cutter constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a transverse section. Fig. 4 is a detail in longitudinal section of the feed-sleeve.

Like numerals of reference indicate like parts in all the figures of the drawings.

The frame-work of the device comprises a front and rear plate 1 and 2, connected at their opposite diagonal corners by means of cross-bars 3, which serve to space the said plates apart. At the centers of the two plates 1 and 2 there are formed cylindrical bearing-openings 4, in which are mounted the opposite ends of a sleeve 5, said ends being reduced, as at 6, to form journals. The sleeve 5 is provided at suitable points with set or clamping screws 7, and is also provided with a radiating lug 8. In diagonally-opposite corners of the plates are formed bearing-openings 9, and in each of the same there are mounted for reciprocation shafts 10, the ends of which extend beyond the openings 9 and one end of each shaft is reduced, as at 11. These reduced ends are connected by means of a crank or handle 12, extended at one end considerably beyond one of the shafts 10, said crank being

curved upon one side, so as to clear the bearing-opening 6 of the adjacent plate 1.

Seated in the curved portion of the crank 12 is a flat knife 13, the cutting end of which is directly opposite and eccentrically located with relation to the center of the bearing-opening 6.

A loose sleeve 14 is mounted upon one of the shafts 10, and has its bore threaded, as at 15, to engage the threads upon the center of the shaft 10, upon which it is mounted. The periphery of the sleeve is provided with a series of radiating lugs or arms 16, in this instance six in number, and each of said arms or lugs is provided with a beveled face 17 and terminates in the path of the lug 8 of the sleeve 7.

In operation, the device thus constructed is mounted upon the spindle of the axle 18, said spindle 19 being passed through the sleeve 5 of the device, so that the outer shouldered end of the spindle is in contact with the cutting-edge of the knife 13. It is now simply necessary to tighten the set-screws 7, so as to connect the sleeve 5 and bearing or spindle rigid with each other. By grasping the handle or crank 12 and revolving the cutter the knife of cutter 13 will shave off the surplus metal at the end of the spindle, and at each revolution of the device one of the radiating arms 16 will have its bevel-face brought in contact with the radiating lug 8 of the sleeve 5, and in passing the same the sleeve 14 will be given a partial rotation. In this instance, where six arms are employed, the sleeve will be given a one-sixth of a rotation, and as it rotates, the shafts 10, being rigidly connected with the handle 12, will be fed inwardly, so as to bring the cutter 13 to its work, and thus an automatic feed is established, and the cutting operation will be carried on until the desired amount of metal is removed. After the removal of a sufficient quantity of metal the set-screws 7 are loosened and the device withdrawn. By the application of a suitable thread-cutter threads may be formed upon the cut portion of the spindle, after which the wheel may be placed in position and will be found to fit the spindle.

Having thus described my invention, what I claim is—

1. In an axle-cutter, the combination, with

opposite plates having opposite central bearing-openings, a sleeve mounted therein and adapted to receive the spindle of an axle, said sleeve being provided with a radiating lug, of
5 a pair of reciprocating shafts, one mounted at each side of said sleeve and having their ends extended beyond the plates, a handle connecting said shafts and rigid therewith, a cutter mounted on the handle and terminating
10 opposite the central bearing-openings of the plates, and a sleeve mounted upon one of the shafts and interiorly threaded to engage threads upon the same and provided with radiating arms or lugs adapted to be engaged
15 by the arm or lug of the first-mentioned sleeve, substantially as specified.

2. In an axle-cutter, the combination, with the frame, the hollow loosely-journaled axle-receiving sleeve, means for tightening the
20 same upon the axle, an axle-cutting knife mounted for movement on the frame and having its cutting-edge terminating opposite the axle-cutting sleeve, and devices operated by the axle-receiving sleeve and adapted to
25 operate or feed the knife, substantially as specified.

3. In an axle-cutter, the combination, with the opposite plates 1 and 2, having the trans-

versely-opposite bearings, openings 4, the diagonally-opposite connecting-strips 3, and the
30 diagonally-opposite bearing-openings 9, of the sleeve 5, adapted to receive the axle provided with oppositely-reduced bearing ends 6, received by the openings 4; set-screws mounted
35 in the sleeve and a lug extending from the same, reciprocating shafts 10, mounted in the bearings 9, one of said shafts being provided with a screw-thread and each terminating beyond the plate 1, the crank or handle 12, connecting said shafts and cut away at its center
40 opposite the opening 4, the knife 13, mounted in the cut-away portion and terminating opposite said opening, and the sleeve 14, internally threaded, mounted upon and engaging the threads of the threaded shaft 10 and pro-
45 vided with a series of radiating bevel-faced arms or lugs extending into the path of the arm or lug of the sleeve 5, substantially as specified.

In testimony that I claim the foregoing as
50 my own I have hereto affixed my signature in presence of two witnesses.

JOHN SWEGLES.

Witnesses:

A. C. PARSONS,
GILES H. COLLINS.