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PATENTED SEPT. 5, 1905.

R. F. WRIGHT.
AXLE CUTTING AND TRIMMING MACHINE.

APPLICATION FILED JULY 16, 1904.

Fig. 1.

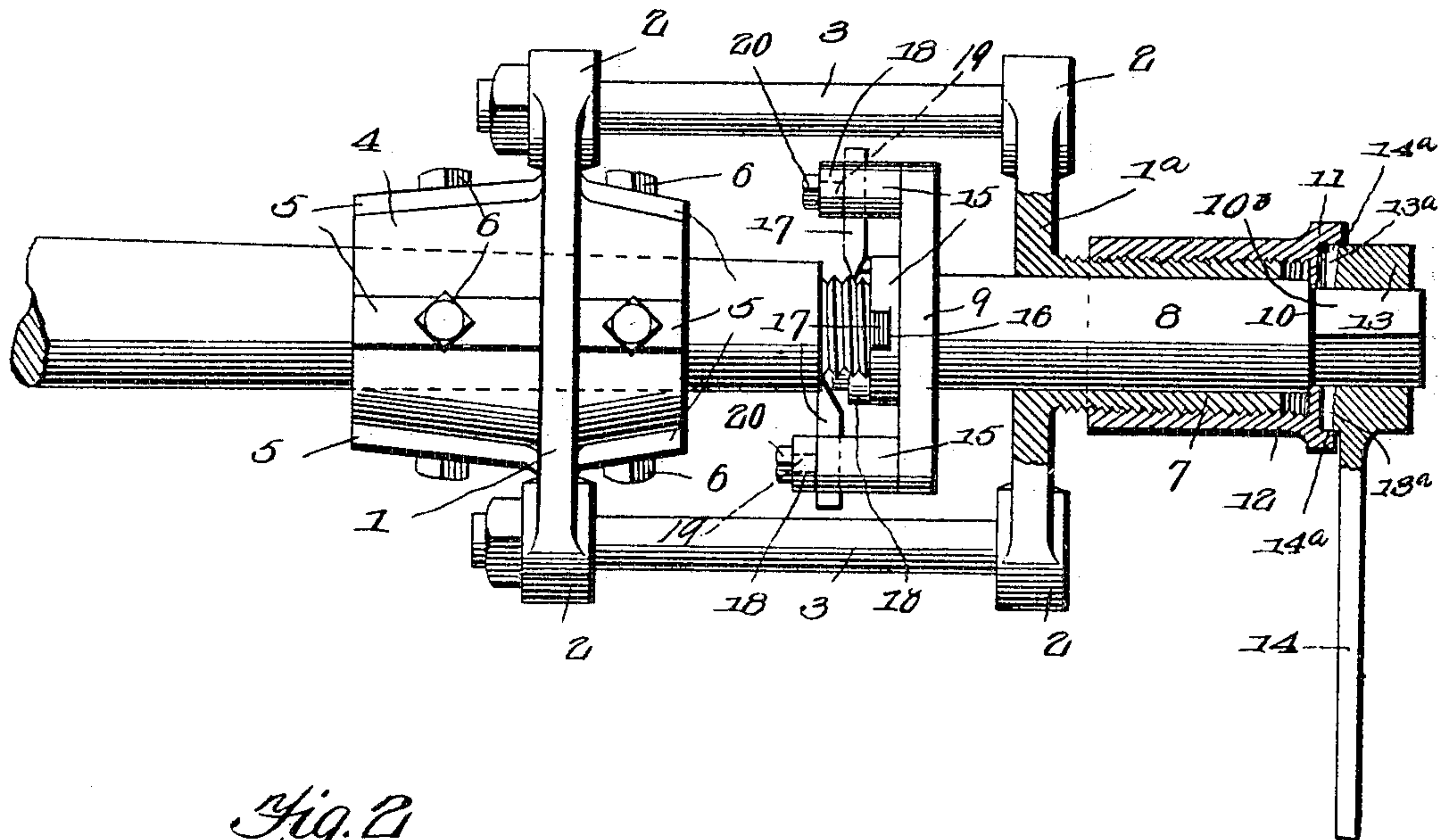


Fig. 2.

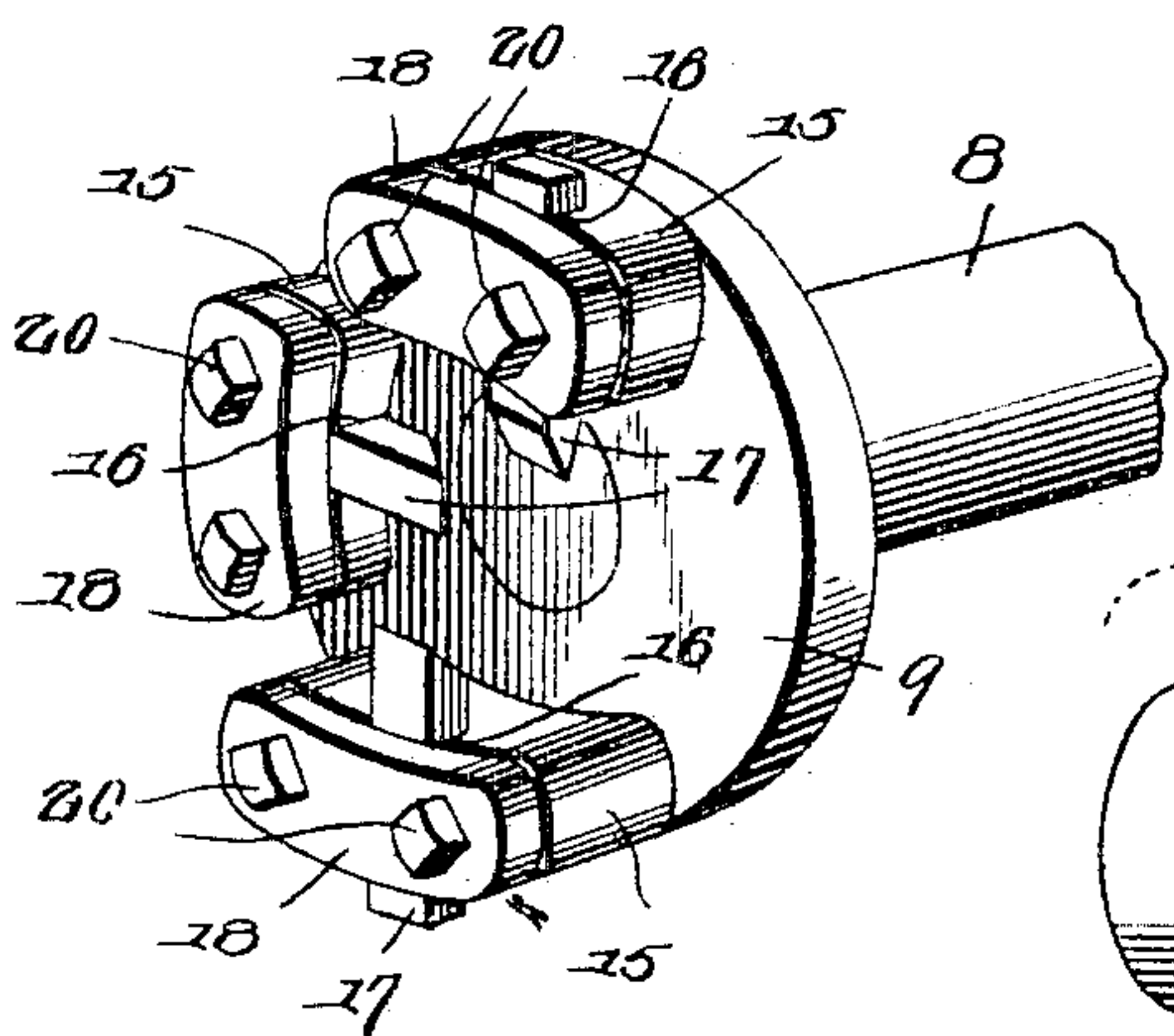
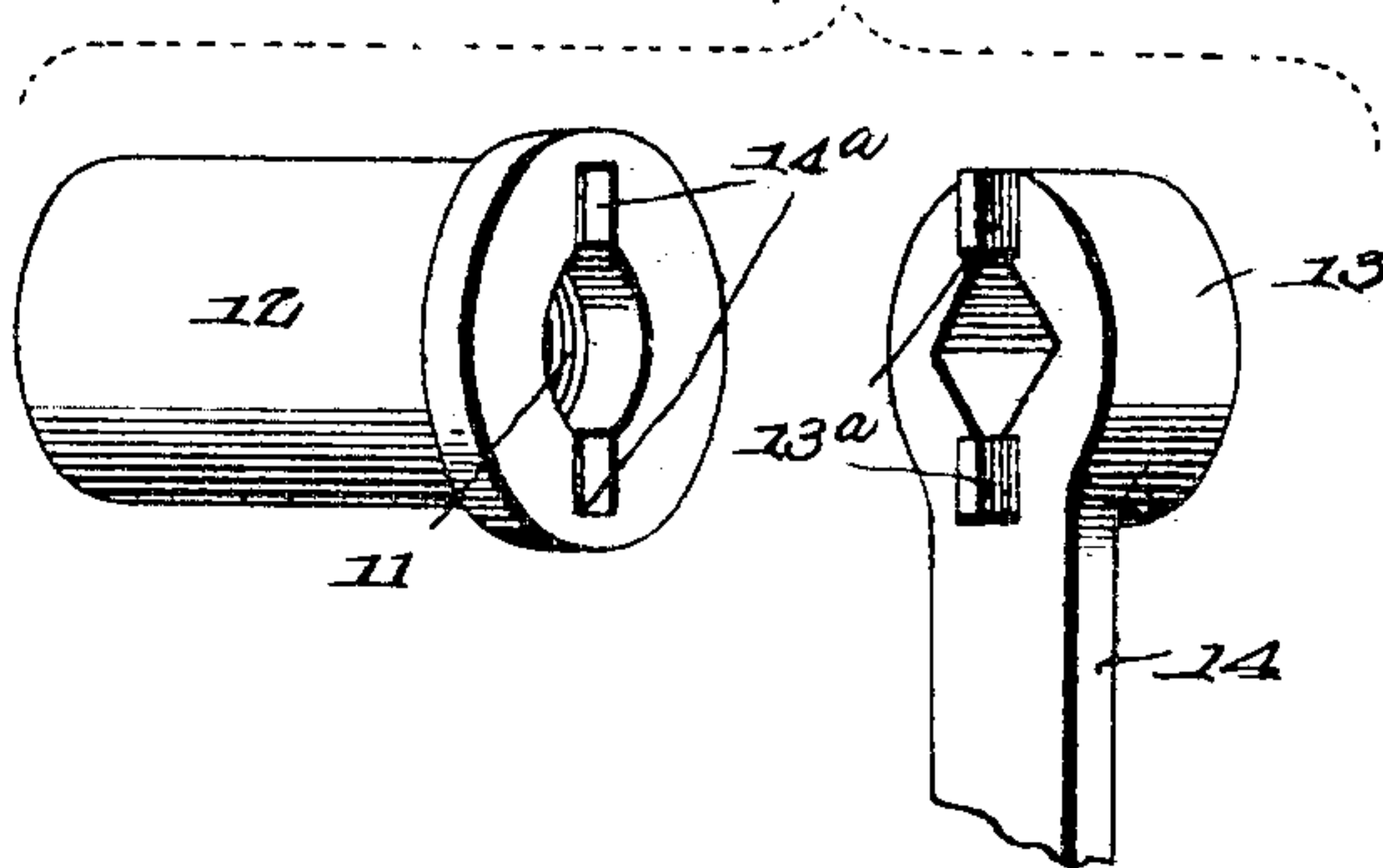


Fig. 3.



Witnesses

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AXLE CUTTING AND TRIMMING MACHINE.

No. 798,722.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed July 16, 1904. Serial No. 216,860.

To all whom it may concern:

Be it known that I, ROBERT FRED. WRIGHT, a citizen of the United States, residing at Hawarden, in the county of Sioux and State of Iowa, have invented a new and useful Axle Cutting and Trimming Machine, of which the following is a specification.

This invention relates to machines for cutting and trimming the axles of vehicles, especially when the shoulders at the inner ends of the spindles have become worn to such an extent that the axle-boxes will no longer fit the spindles properly. The invention has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had without departing from the spirit of the invention or sacrificing the advantages of the same.

In said drawings, Figure 1 is a longitudinal sectional view showing the improved device mounted upon an axle-spindle in position for operation. Fig. 2 is a perspective view of the cutter-head. Fig. 3 is a perspective detail view of the feed-sleeve and the operating-crank.

Corresponding parts in the several figures are indicated by similar characters of reference.

A pair of approximately triangular plates 1 1^a are provided at the corners thereof with enlarged perforated heads 2 2, transversely perforated for the reception of bolts 3, whereby the said plates are securely connected together. The plate 1, which may be described as the inner frame-plate, is provided with a centrally-disposed clamping-sleeve 4, which extends on both sides of the plate and is provided with ribs 5, having screw-threaded radial perforations through which clamping-bolts 6 are inserted. These bolts are for the

purpose of clamping the machine securely upon the spindle that is to be operated upon, as will be seen clearly in Fig. 1 of the drawings. The frame-plate 1^a is provided with an outwardly-extending exteriorly-screw-threaded sleeve 7, which constitutes a bearing for a shaft 8, carrying a disk 9, which constitutes the cutter-head. The shaft 8 is provided with an annular shoulder 10, forming a reduced portion 10^b, extending through an opening 11, formed in the head at the outer end of a feed sleeve or cap 12, which is interiorly screw-threaded and engages the exteriorly-threaded sleeve 7, so that by manipulating the feed-sleeve 12 the stem 8, carrying the cutter-head 9, may be fed or forced in an inward direction in the direction of the work, as will be readily understood. The extended reduced end of the shaft 8, which is specially designated 10^b, is made non-circular in cross-section for the reception of a crank 13, which is slidably mounted upon said non-circular portion and is provided with an operating-handle 14, the crank being provided adjacent to the eye thereof with a rib 13^a, adapted to engage a corresponding recess 14^a in the head of the feed-sleeve.

The disk which constitutes the cutter-head 9 is provided upon its inner surface with a plurality of lugs 15, differing in height. In the example illustrated in the drawings three such lugs have been shown, disposed approximately at right angles to each other and each provided with a transverse groove 16, forming a seat for a cutter 17, which is secured in place by means of a clamping-plate 18, provided at its ends with perforations 19 for the reception of clamping-bolts 20, which latter are in the nature of stud-bolts that engage screw-threaded openings in the lugs 15, so that the said clamping-plates may be tightened to any desired extent, thus enabling the cutters to be very firmly secured in position for operation. These several cutters may be set so that one of their number shall operate upon the spindle at the inner end of its screw-threaded extremity, while another cutter is set to operate upon said screw-threaded extremity to reduce the end of the latter, the third cutter being in the nature of a finishing-cutter, so that by a single operation the length of the spindle may be reduced to any desired extent, while at the same time the spindle is trimmed and ready for further use.

One very important advantage of this device is that the shaft carrying the cutter-head

has a very firm bearing in the sleeve 7, extending directly from the head 1^a of the machine. By this arrangement the friction between the cutter-head-carrying shaft and the feed-sleeve or cap will be materially reduced, and said feed-sleeve is capable of being readily rotated by one hand of the operator, so as to feed the cutting-tools to their work while the cutter-head is being rotated by the other hand of the operator applied to the handle 14. Should the application of the hand of the operator to the sleeve 12 prove insufficient to feed the tools as forcibly as may be desired, the crank 13 is moved upon the reduced portion of the shaft 8 in the direction of the feed-sleeve until the rib 13^a of the crank engages the groove 14^a of the feed-sleeve, which latter may thus be forcibly rotated to any desired extent by means of the crank. The feeding forward of the tool-carrying head having been accomplished, the crank 13 may be moved outward upon the reduced portion of said shaft, thus disengaging the rib 13^a from the groove 14^a and causing the rotation of the crank to be transmitted merely to the cutter-head.

By the employment of three cutters, as herein shown and described, the desired re-

sults may be attained at a single operation and in a very thorough and workmanlike manner.

The construction of the device is of such a nature that it will be found strong and durable and very inexpensive.

Having thus described the invention, what is claimed is—

In a device of the class described, a clamping-frame, a bearing-sleeve extending from said frame and having exterior screw-threads, an interiorly-threaded feed-screw sleeve mounted thereon and having a perforated head provided with a transverse groove, a cutter-carrying shaft journaled in the bearing-sleeve and having a reduced non-circular portion extending through the perforated head of the feed-sleeve, and a crank slidably engaging the reduced non-circular end of the cutter-carrying shaft and provided with a rib adapted to engage the groove in the feed-sleeve.

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

ROBERT FRED. WRIGHT.

Witnesses:

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A. D. HORTON.