

No. 698,071.

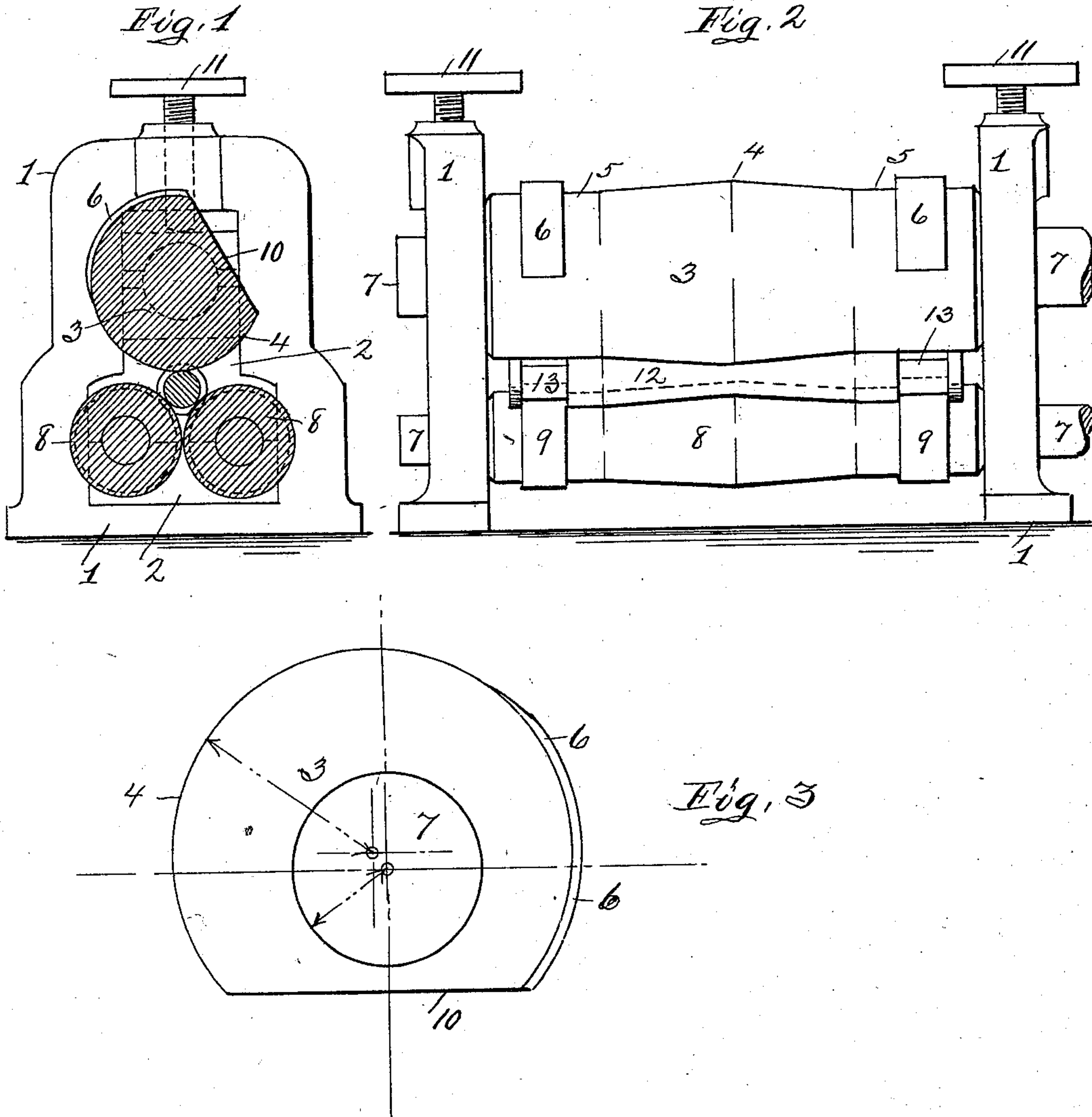
Patented Apr. 22, 1902.

C. STEELE.

APPARATUS FOR ROLLING CAR AXLES.

(Application filed Mar. 6, 1900. Renewed Aug. 24, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES STEELE, OF DUQUESNE, PENNSYLVANIA.

APPARATUS FOR ROLLING CAR-AXLES.

SPECIFICATION forming part of Letters Patent No. 698,071, dated April 22, 1902.

Application filed March 6, 1900. Renewed August 24, 1901. Serial No. 73,173. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STEELE, a citizen of the United States of America, residing at Duquesne, (post-office box 653,) in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Rolling Car-Axles; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved apparatus for rolling car-axles; and it consists in three rolls arranged in suitable housings, together with certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is an end sectional elevation of my improved apparatus for rolling car-axles which is constructed and arranged in accordance with my invention. Fig. 2 is a front elevation of the same having the lower front roll removed from the housing and showing a finished axle therein. Fig. 3 is an enlarged end elevation of the top or eccentric roll.

To construct an apparatus for rolling axles in accordance with my invention, I provide a set of housings 1 of a suitable size and form of construction and arrange in proper bearings two rolls 8, the one parallel to the other and both upon the same plane. Each of these rolls 8 is formed with an enlarged middle portion to form the reduced central part of the axle 12 and at points near each end with collars 9 to form the journals 13 of the said axle. Operating in connection with these two rolls 8 is a large eccentric roll 3, located and arranged in bearings directly above the dividing-line of the two lower rolls 8. This roll 3 is formed with an eccentric portion 4, which operates in conjunction with the enlarged portions of the lower rolls 8 to form the reduced center of the axle 12, and is also formed with segmental integral collars 6, which operate to form the journals 13 of the said axle. This roll 3 is also formed with a flat portion or side 10, which when turned down will permit the operator either to remove the fin-

ished axle 12 or arrange a blank bar to be operated upon.

In operation the top roll 3 is arranged in the housing 1 in a manner that will permit the same to be elevated or lowered and adjusted by screws 11 in a manner well known in the art. The flat side of the eccentric roll 3 is turned down and a properly-heated bar of a suitable length and diameter inserted between the rolls, as shown at Fig. 1. The top roll 3 is now given a slow powerful rotary movement, and the eccentric part 4, engaging with the said bar, rotating it, together with the lower rolls 8. This rotary movement of the parts will cause the eccentric part 4 to reduce the metal at the center of the bar, and when this has been accomplished the collars 6 and 9 by reason of their rotary movement will roll the journals 13, thereby completing the axle, which may be removed when the flat side 10 is down.

Various slight modifications and changes may be made in the details of construction without departing from the spirit of the invention.

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

The combination with the housing and a pair of lower rolls journaled therein, said rolls tapering from their center toward each end and carrying collars at the end of the taper, of an eccentric roll having a flat face and of relatively greater diameter than the lower rolls, said eccentric roll being journaled in the housing above the dividing-line of the lower rolls and being tapered from its center toward each end, and segmental collars secured on said eccentric roll, said collars having one end terminating at the flat face of the roll, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

CHARLES STEELE.

Witnesses:

JOHN GROETZINGER,
H. M. LEVIS.