No. 699,795. Patented May 13, 1902.

J. & W. D. EYNON.

APPARATUS FOR ROLLING DESIGNS UPON STRIPS OR BARS.

(Application filed Dec. 31, 1896.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

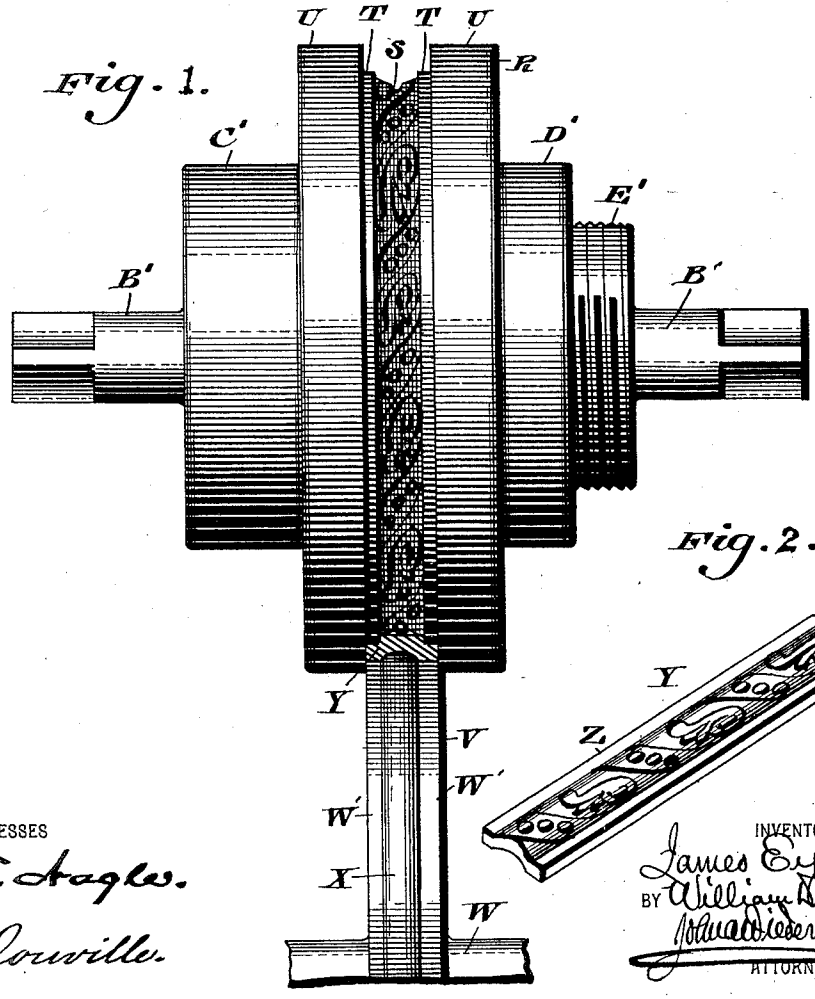


Fig. 2.

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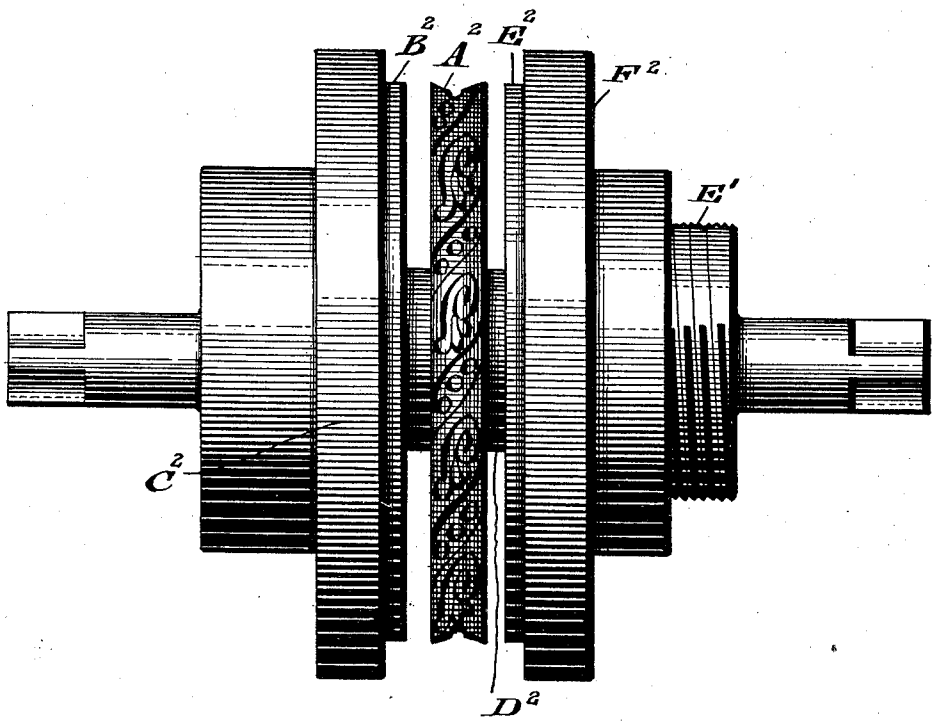
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Fig. 3.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR ROLLING DESIGNS UPON STRIPS OR BARS.

SPECIFICATION forming part of Letters Patent No. 699,795, dated May 13, 1902.

Application filed December 31, 1896. Serial No. 617,574. (No model.)

To all whom it may concern:

Be it known that we, JAMES EYNON and WILLIAM D. EYNON, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Rolling Designs Upon Strips, Bars, &c., of which the following is a specification.

Heretofore in the art of rolling designs or configurations upon metal strips or bars it has been the practice to chip the desired contour, device, or configuration upon the roll by hand, and since this involves highly-skilled labor great expense is thereby incurred, and in case of any injury to the roll the same being worthless cannot be replaced except at great expense.

By our invention we cast upon a roll, ring, or collar the desired configuration and afterward finish or turn the peripheral portion of the cast roll adjacent to the device, design, or configuration, so that a smooth or finished periphery exists on either side of the said design, the collar being then secured to the roll in any convenient manner, and the metal to be rolled being passed between said collar having the design cast thereon and a contiguous roll, whereby the desired configuration is imparted to the finished article.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and pointed out in the claims.

Figure 1 represents a front elevation of a roll having thereon a cast ring or collar embodying our invention, showing also the manner in which the completed article is rolled. Fig. 2 represents a perspective view of the completed article. Fig. 3 represents a side elevation of a modified construction of collar and means for assembling the same on its roll.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, we first cast a collar or ring R, having a configuration S, as shown in Fig. 1. The ring R is next centered, and the portions T on either side of the configurations S are now turned or finished to the desired extent, the walls or roll-sections U of the ring or collar R being in the present instance of greater diameter than the finished portions T, as will be understood from Fig. 1.

V designates an auxiliary roll which is mounted on the shaft W, said roll being in the present instance provided with the finished portions W′ and the raised central portion X, although it will of course be evident that the contour of the latter may be changed according to requirements, it being noted, however, that in the act of rolling, as in the present instance, the finished portions W′ are directly under the finished portions T of the collar R, while the angular ridge or central raised portion X serves to force the metal of the bar or strip Y into the design or device S on the collar R, the finished article being seen in Fig. 2, the same having the finished edges Z and the design A′ therebetween.

The collar R is supported and actuated in any suitable manner, the same being in the present instance mounted on a shaft B′, which latter is provided with a shoulder C′, against which one face of said collar abuts, the other face of said collar R having a collar or washer D′ contacting therewith, said collar being screwed upon the threaded portion E′ of the shaft B′.

It will thus be evident that by producing a cast roll in the manner described with the device, design, or configuration cast therein and afterward turning or finishing one or both of the peripheral edges of the same adjacent to said design that we are enabled to equip a plant for the purpose of rolling bars, such as Y, (seen in Fig. 2,) at a greatly-reduced cost as compared with a plant equipped with collars or rolls in which the configurations or designs S are chipped or otherwise produced therein by hand, as is now the practice.

It will of course be apparent that we may attach the collar R to its shaft in any suitable manner other than that shown and that the finished portions T may be V-shaped, grooved, or curved or given any desired configuration without departing from the spirit of our invention.

In Fig. 3 we have shown another embodiment of the principle of our invention, A^2 designating the cast collar, having the desired device or design cast thereon, while the turned or finished shoulder B^2 is integral with the flange C^2 of the roll D^2. In like manner the turned or finished shoulder E^2 can be integral with the collar F^2, or, if desired, the portions C^2 and F^2 may be loose washers. In Fig. 1,

however, it will be understood that the collar S, having the device or configuration thereon, and the turned or finished shoulders T on either side thereof are integral.

It will of course be evident that changes may be made by those skilled in the art which will come within the scope of our invention, and we do not desire to be limited to the exact construction we have shown and described.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus of the character named, a roll for making ornamental configurations, consisting of an ornamental ring or collar having therein the device to be impressed, the portions adjacent to said device being peripherally turned or finished and a plurality of roll-sections having turned or trued shoulders thereon, adapted to contact with said ring or collar, in combination with means for clamping said collar and sections together.

2. In an apparatus of the character named, a roll for making ornamental configurations, consisting of an ornamental ring or collar having therein the device to be impressed, the portions adjacent to said device being peripherally turned or finished, a plurality of roll-sections having turned or trued shoulders thereon, adapted to contact with said ring or collar, and means for clamping said collar and sections together, in combination with a second roll located in proximity to said first-mentioned roll and means for rotating one of said rolls.

3. In an apparatus of the character named, a roll for making ornamental configurations, the same consisting of an ornamental ring or collar having cast therein the device to be impressed, the portions adjacent to said device being peripherally turned or trued so as to impart a finished appearance to the edges of the article rolled, and a plurality of roll-sections having turned or trued shoulders thereon, adapted to contact with said ring or collar, in combination with means for clamping said collar and sections together.

4. In an apparatus of the character named, a collar or ring having cast in the periphery thereof a design or device, in combination with a roll having a turned or trued shoulder thereon, adapted to contact with said collar, a loose collar having a turned or trued shoulder adapted to contact with said first-mentioned collar and means for clamping said collars in position.

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