No. 632,577. Patented Sept. 5, 1899.

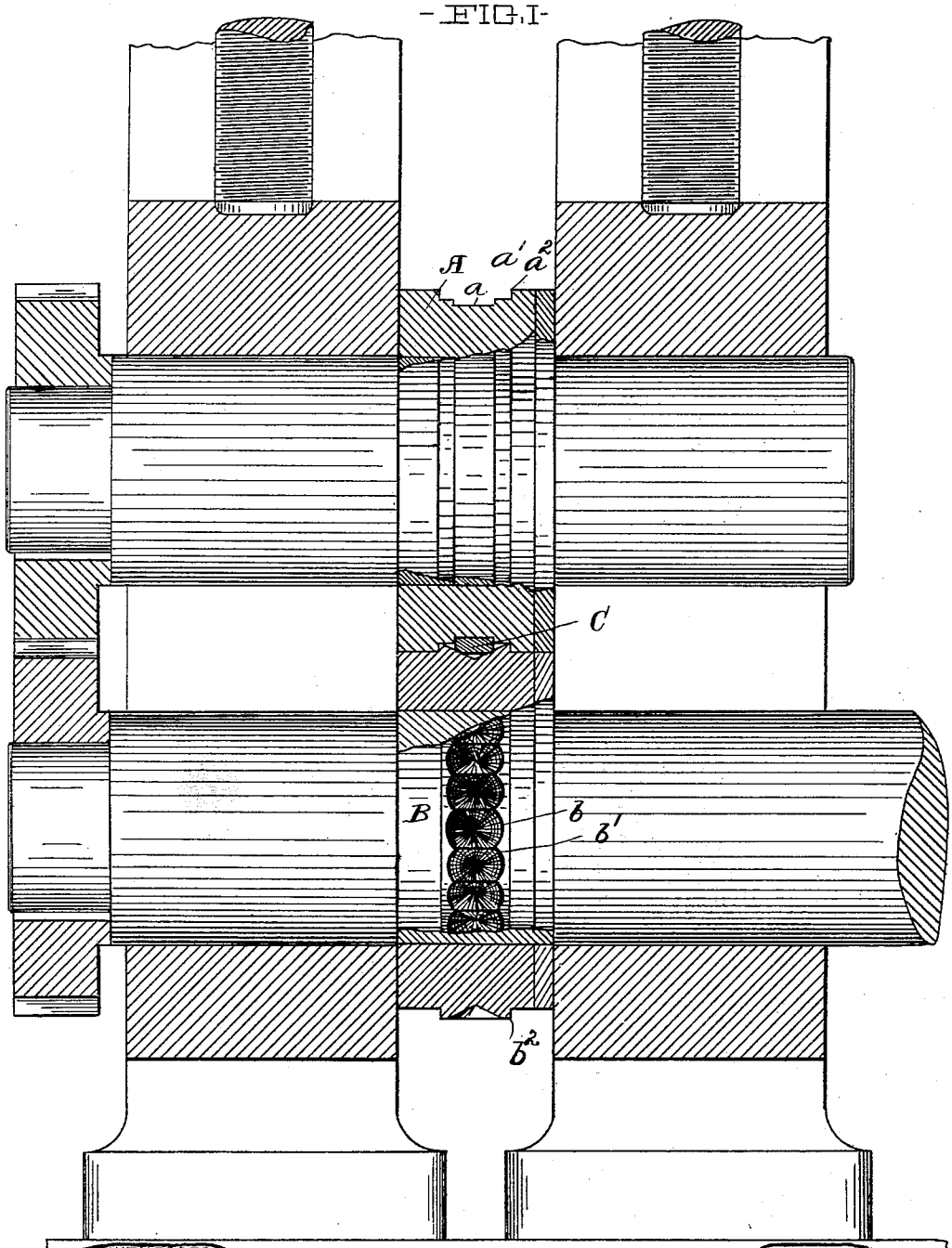
# S. D. & H. T. LATTY & W. J. SLEFFEL.

## METAL FORMING MACHINE.

(Application filed Oct. 14, 1898.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1




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D. G. Davies
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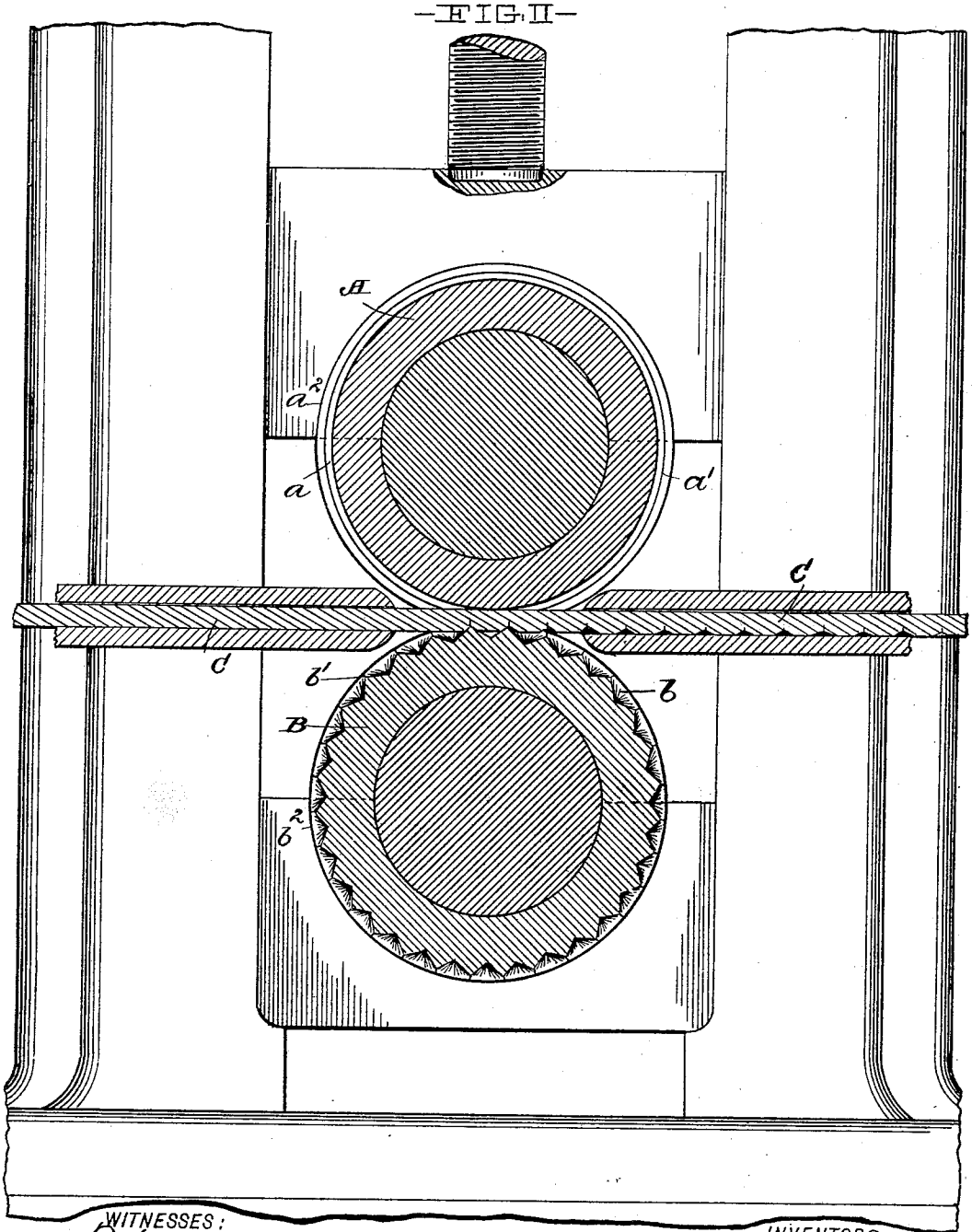
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## METAL FORMING MACHINE.

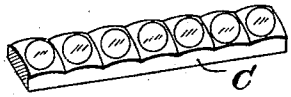
(Application filed Oct. 14, 1898.)

(No Model.) 2 Sheets—Sheet 2.

—FIG. II—




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—FIG. III—

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# UNITED STATES PATENT OFFICE.

SAMUEL D. LATTY, HENRY T. LATTY, AND WILLIAM J. SLEFFEL, OF CLEVELAND, OHIO; SAID SLEFFEL ASSIGNOR TO THE KIRK-LATTY MANUFACTURING COMPANY, OF SAME PLACE.

## METAL-FORMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 632,577, dated September 5, 1899.

Application filed October 14, 1898. Serial No. 693,542. (No model.)

*To all whom it may concern:*

Be it known that we, SAMUEL D. LATTY, HENRY T. LATTY, and WILLIAM J. SLEFFEL, residents of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Metal-Forming Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I is a central vertical axial section taken through the rolls and housing, a portion of the rolls being in elevation. Fig. II is a central cross-sectional view through the rolls, the bar to be operated on being also in section; and Fig. III is a detail perspective view of the bar after being operated on.

Our invention has for its object improved mechanism for rapidly, cheaply, and accurately forming nut-blanks.

It consists, essentially, of a pair of shaping-rolls, respectively A and B, journaled in any suitable housing. Roll A is provided on its central face with a peripheral groove $a$, rectangular in cross-section, and having a second groove $a'$ offset from the outer face $a^2$ of the roll, the face of said second groove being raised above the face of the groove $a$. The second roll member B is provided with a series of peripheral cone-shaped depressions $b$, said depressions intersecting each other and forming the axial bar-depressing edges $b'$. Said second roll member is also provided with raised shoulders $b^2$, projecting from the face of the roll and adapted to project into the offset of the first roll member.

The bar of metal C to be operated upon is fed into the rolls in any suitable manner. It passes into the opening formed between the walls of the peripheral groove $a$ and the cone-shaped depressions $b$, the intersecting edges $b'$ of the roll B impressing themselves on the lower face of the roll-blank and the conical face of the depressions rounding off said lower face, as shown in Fig. III. The vertical walls of the groove $a$ act to confine the longitudinal edges of the bar, so that as the finished nut-blank emerges from the opposite sides of the rolls its longitudinal edges are substantially parallel with each other and require little or no subsequent trimming.

Other modes of applying the principle of our invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means covered by any one of the following claims be employed.

We therefore particularly point out and distinctly claim as our invention—

1. In a metal-forming machine, the combination of a pair of shaping-rolls, one member of the pair provided with a peripheral groove rectangular in cross-section, the second roll member provided with a series of peripheral cone-shaped depressions, said depressions intersecting each other, substantially as set forth.

2. In a metal-forming machine, the combination of a pair of shaping-rolls, one member of the pair provided with a peripheral groove rectangular in cross-section, and having a second peripheral groove offset from the outer face of the roll, the base of the offset raised above the bottom of said first groove, the second roll member provided with a series of peripheral cone-shaped depressions, said depressions intersecting each other, said second roll member provided with projecting shoulders adapted to project into the offset of the first roll member, substantially as set forth.

Signed by us this 11th day of October, 1898.

S. D. LATTY.
H. T. LATTY.
WM. J. SLEFFEL.

Attest:
D. T. DAVIES,
J. C. TURNER.