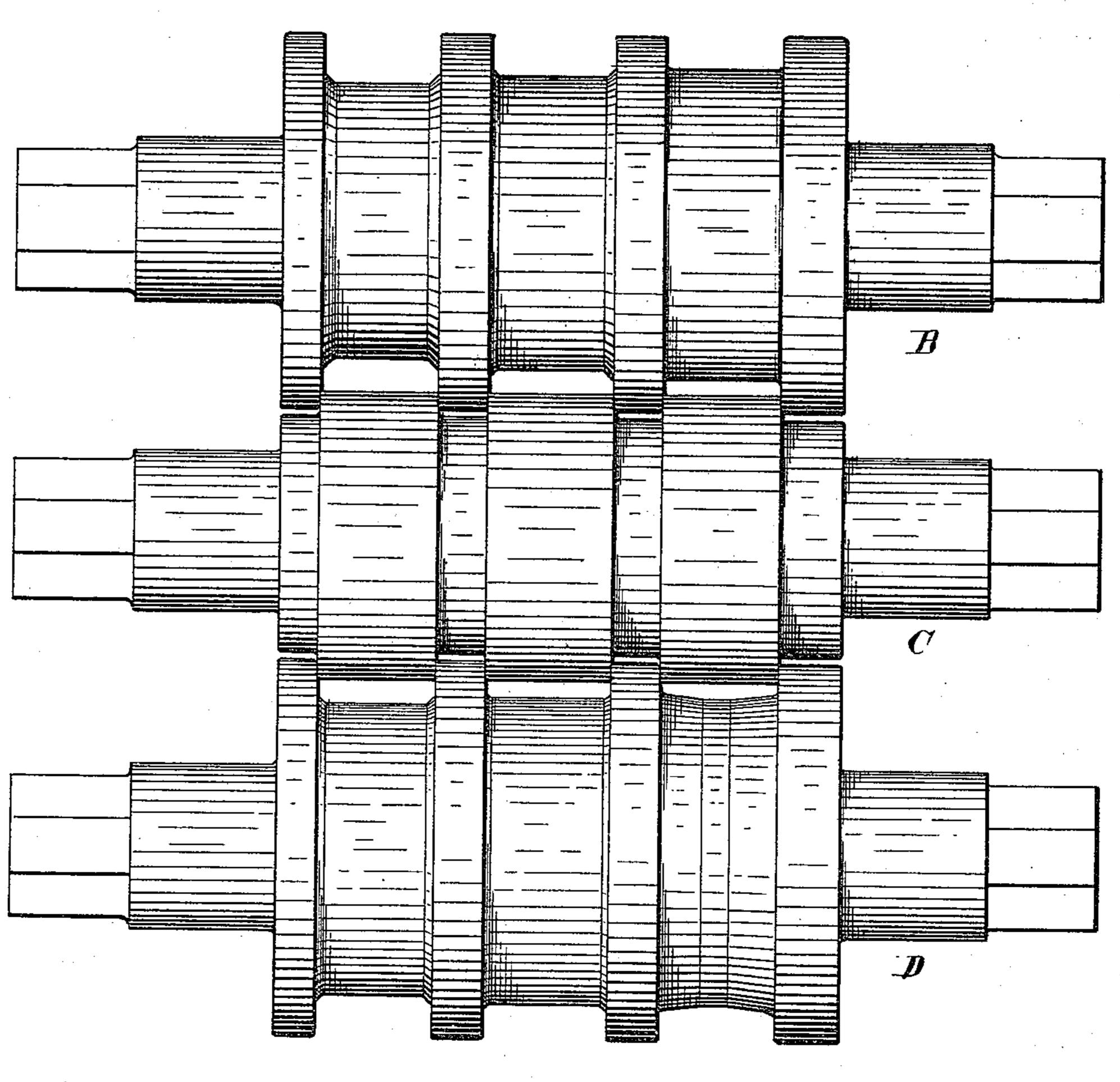
(No Model.)

## T. J. BRAY.

ROLLS FOR ROLLING SKELPS FOR MAKING PIPE COUPLINGS.

No. 442,606.

Patented Dec. 16, 1890.



T=7.1.

TI9.2

Witnesses.

Belle S. Honnie E.E. Thumphrey Inventor Thomas J. Bray, by Conthy Attorney

## United States Patent Office.

THOMAS J. BRAY, OF WARREN, OHIO, ASSIGNOR OF ONE-HALF TO THE PAIGE TUBE COMPANY, OF SAME PLACE.

## ROLLS FOR ROLLING SKELPS FOR MAKING PIPE-COUPLINGS.

SPECIFICATION forming part of Letters Patent No. 442,606, dated December 16, 1890.

Application filed September 26, 1890. Serial No. 366,221. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. BRAY, a citizen of the United States, residing at Warren, in the county of Trumbull and State of Ohio, 5 have invented a certain new and useful Improvement in Bars for Pipe-Couplings and Rolls for Making them, of which the follow-

ing is a specification.

My invention has for its object the produc-10 tion, as a new article of manufacture, of a metallic bar of peculiar and novel form for the construction of couplings for wrought-iron pipe having an exterior of even diameter and a centrally inwardly-tapering interior, and also 15 in mechanism for producing such bars. Heretofore such couplings, which are used where unusual security is required, have been made of short sections of wrought pipe of even internal diameter and afterward tapered by 2c reaming, cutting away with taper-taps, or analogous means. These operations are objectionable, because in each the metal is cut away and wasted and the original strength of the coupling impaired, and also because of 25 the expense of time, labor, and machinery required in their performance.

My invention consists of the peculiar and novel form of metallic bar hereinafter described, and in the devices for producing the 30 same, shown in the accompanying drawings, which form a part of this specification, and all as hereinafter pointed out in the claims.

Referring to these drawings, Figure 1 is an elevation of a set of rolls adapted to be journaled in a suitable housing, and Fig. 2 a cross-35

section of the completed bar.

The bar A has on one side a flat surface and on the other tapers from near the center in each direction toward the edges, where it is rounded to meet the other face. The rolls B 40 C D are arranged to run in housings, as hereinbefore stated, in the usual manner of rolling metal bars, and their configuration is such as to reduce, by successive passage between them, a flat billet to the form shown in cross- 45 section in Fig. 2.

I claim as my invention—

1. As an improved article of manufacture, a metallic bar for the construction of pipecouplings, having in cross-section a plain side 50 and reduced toward the edges on the opposite side, substantially as shown and described.

2. The hereinbefore-described rolls B C D, having registering grooves, to reduce a flattened billet by successive passes to a bar hav- 55 ing in cross-section a plain side and reduced toward the edges on the opposite side, substantially as shown and described.

In testimony that I claim the above I here-

unto set my hand.

THOMAS J. BRAY.

In presence of— GEORGE D. KIRKHAM, E. B. McCrum, Jr.