

(No Model.)

W. W. WALLACE.
MOLD FOR CASTING ROLLS.

No. 327,840.

Patented Oct. 6, 1885.

Fig. 1.

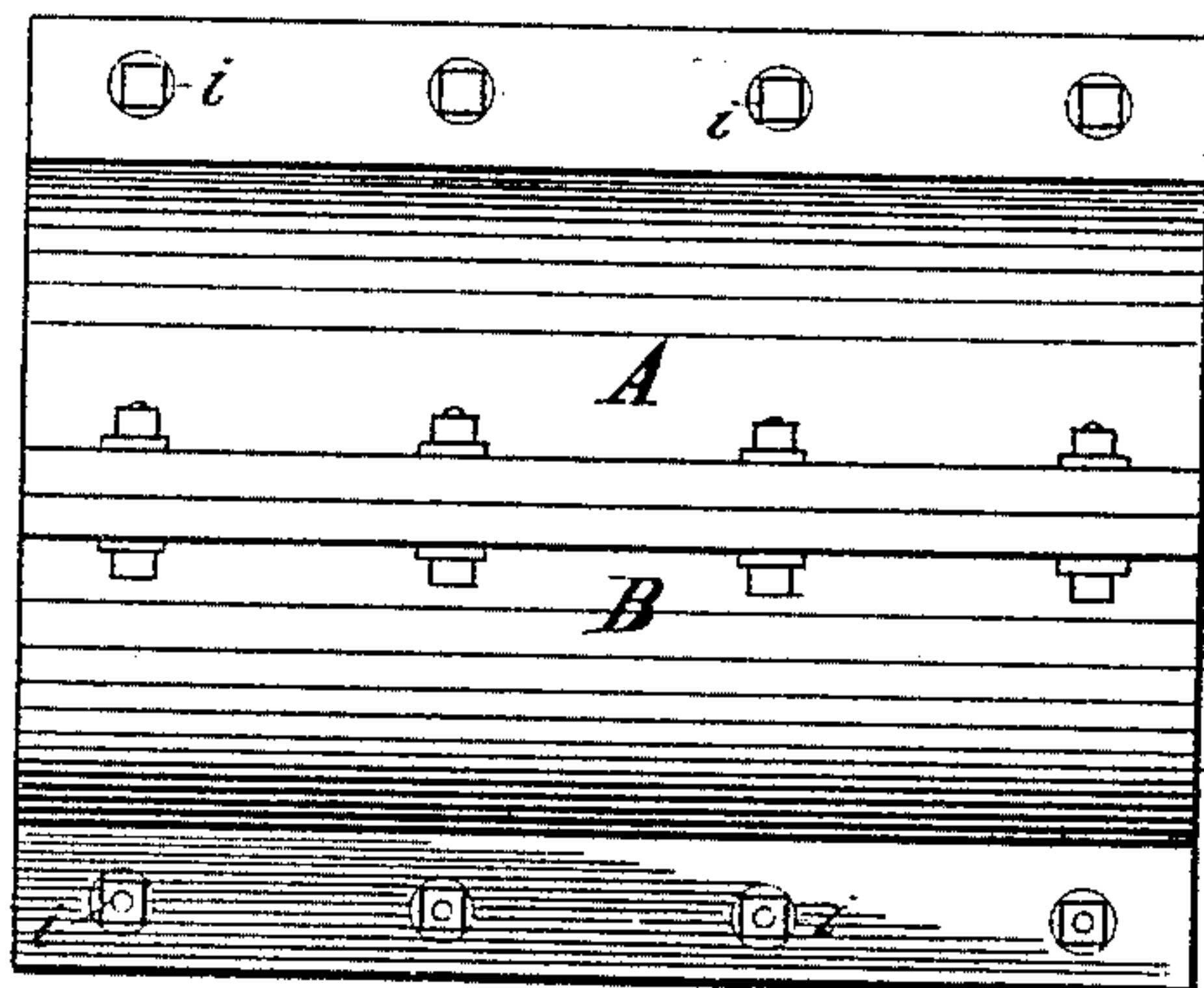


Fig. 2.

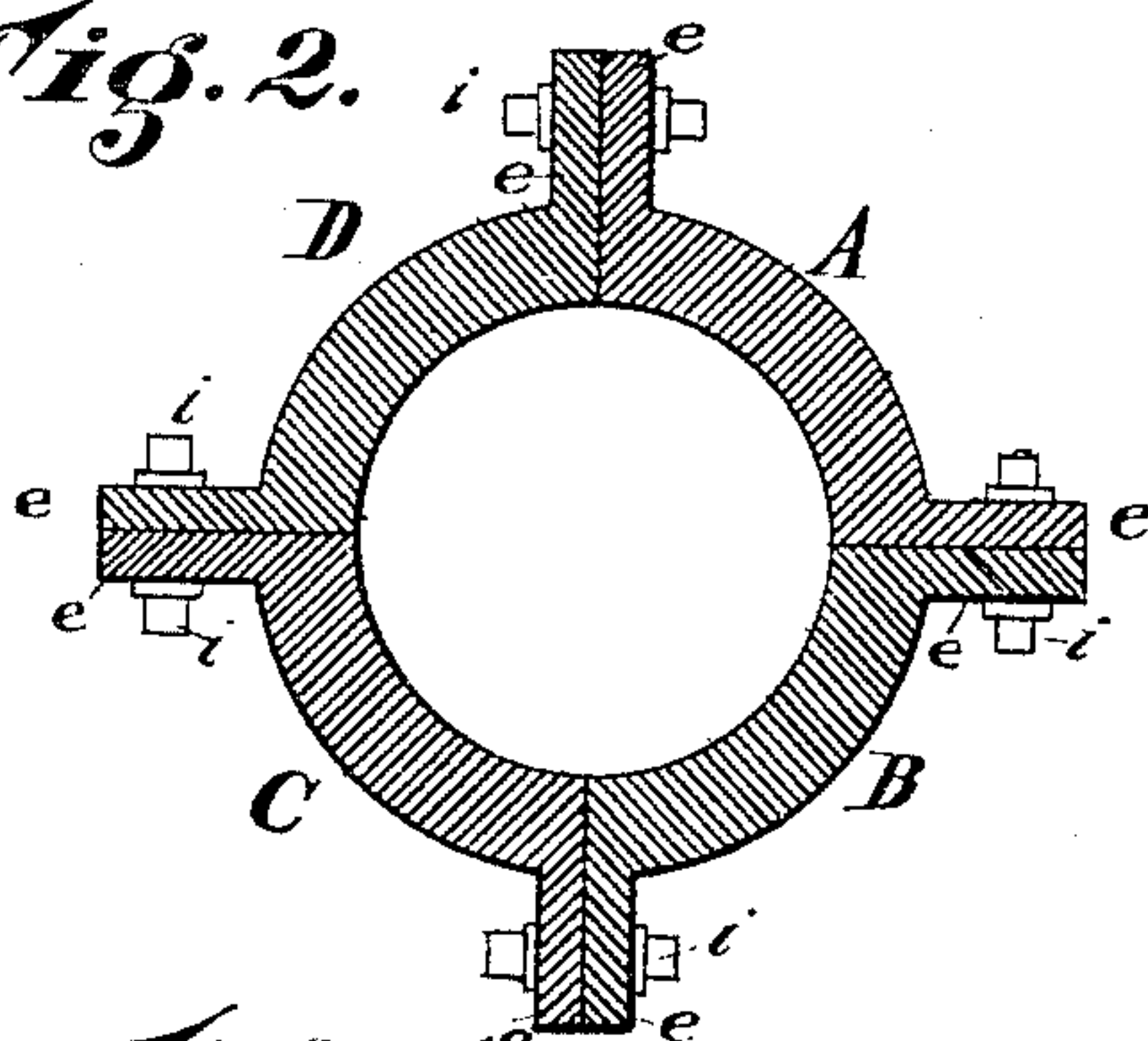


Fig. 3.

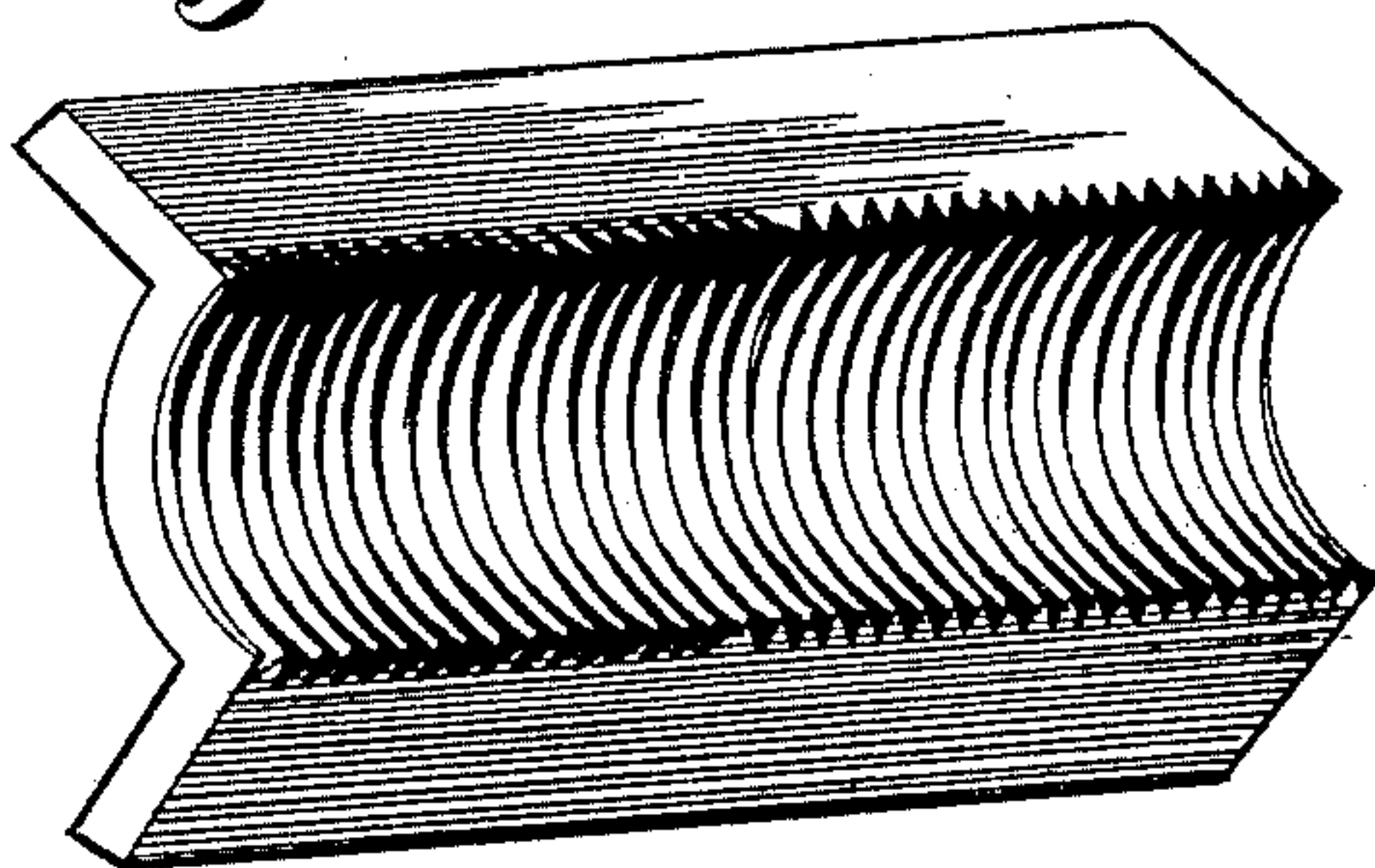
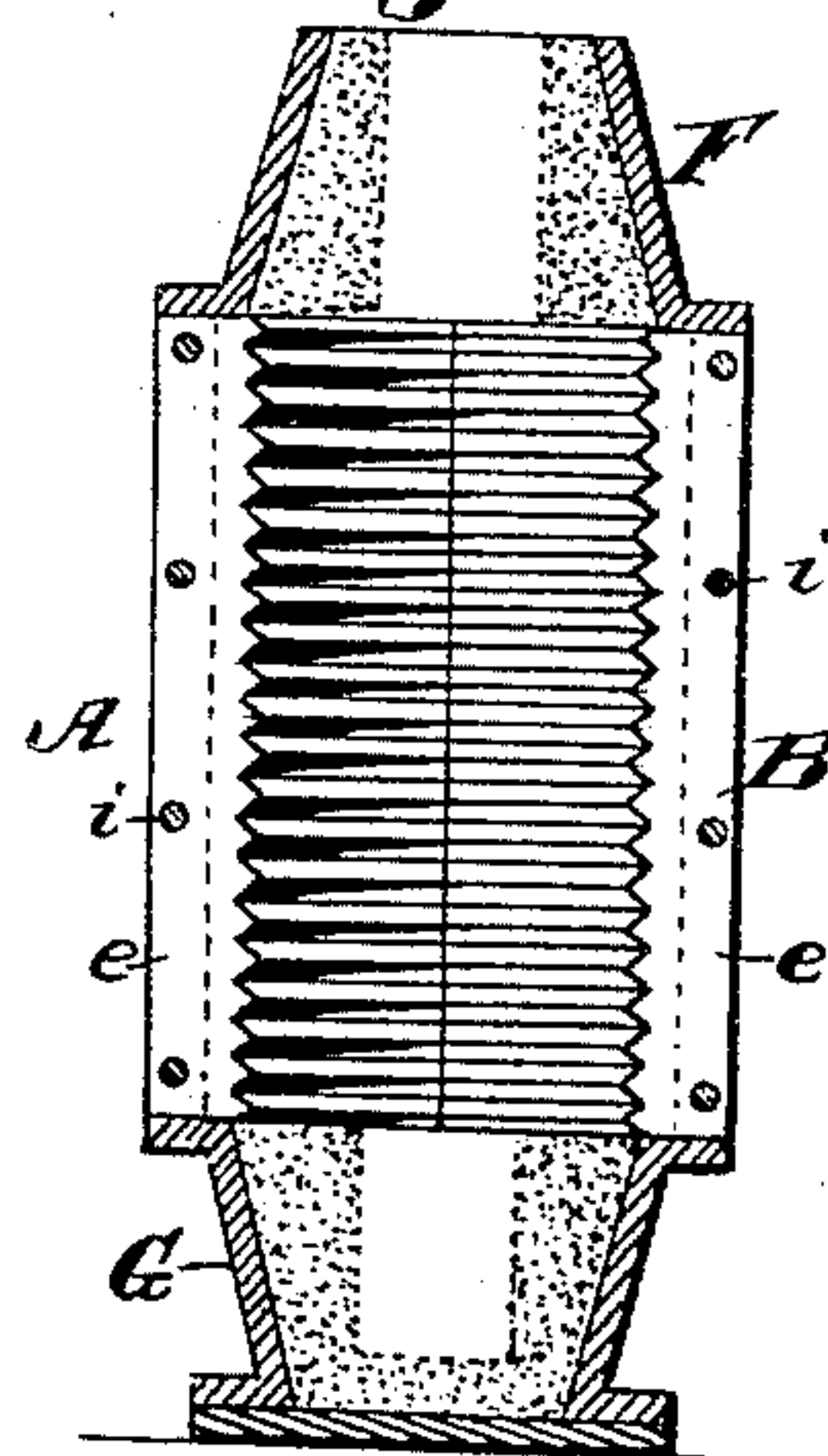


Fig. 4.



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MOLD FOR CASTING ROLLS.

SPECIFICATION forming part of Letters Patent No. 327,840, dated October 6, 1885.

Application filed June 4, 1884. Serial No. 133,838. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. WALLACE, a citizen of the United States, and a resident of Frankfort, in the county of Clinton and State of Indiana, have invented certain new and useful Improvements in Molds for Casting Rolls, of which the following is a specification.

My invention relates to an improved mold for casting grooved or corrugated rolls with a chilled surface, and has for its object to prevent the shrinking or expansion of the mold, whereby rolls with perfectly round surfaces are formed that do not require to be turned off to make them true.

The invention consists in making a mold or chill of three or more segmental sections, each section being provided with outwardly-extending flanges of great strength, which fit counter-flanges of adjacent sections, and are detachably secured together by clamping-bolts, whereby a mold is produced in which a uniform expansion of the metal forming the roll is secured and an unequal contraction varying from a circle is prevented.

In the drawings, Figure 1 represents a side elevation of my sectional mold. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a perspective view of one of the mold-sections. Fig. 4 is a vertical sectional view representing the relative arrangement of an ordinary cope and drag with my improved mold.

Sectional molds have heretofore been resorted to for casting corrugated rolls; but they possess the disadvantage of allowing the cast article to receive an elongated and flattened form, due to the unequal expansion of the metal forming the surface of the mold, and for such reason rolls thus cast require to be turned or finished to make them perfectly true.

I have discovered that by making the mold of three or more sections which are united by flanges and bolts the expansion such a

mold is liable to receive is not sufficient to materially change the form of the cylindrical roll from a true circle.

The letters A B C D represent the segments or sections comprising my mold. They are formed with edge flanges, *e*, which, when placed together, are secured by means of bolts *i*, or other suitable devices capable of firmly uniting the flanged sections. In other words, I do not wish to limit myself to the use of screw-bolts passing through the flanges *e* for uniting the mold-sections, as other forms of clamps may be resorted to, provided they are sufficiently positive to prevent the spreading apart of the sections by the expansion of the lining.

Four sections, with their respective clamps, are employed to make up the mold seen in the drawings, such mold being used for casting rolls of the ordinary diameter. Small rolls, however, may be cast in a mold consisting of three sections, and in large rolls five or six sections would be advantageous.

In practice the mold or chill, constructed as above described, is placed in alignment or in juxtaposition to the ordinary cope *F* and the drag *G*, which are arranged and supported in any suitable manner and serve to form the journals of the roll, as is readily apparent.

Having thus described my invention, what I claim is—

A mold for casting corrugated rolls, consisting of three or more segmental sections having coupling-flanges *e*, and the bolts or clamps connected with said flanges for securing the parts rigidly together, substantially as herein set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM W. WALLACE.

Witnesses:

ELI MARVIN,
S. C. BORHER.