

(No Model.)

R. HADFIELD.  
WIRE DRAWING DIE.

No. 432,236.

Patented July 15, 1890.

Fig. 1

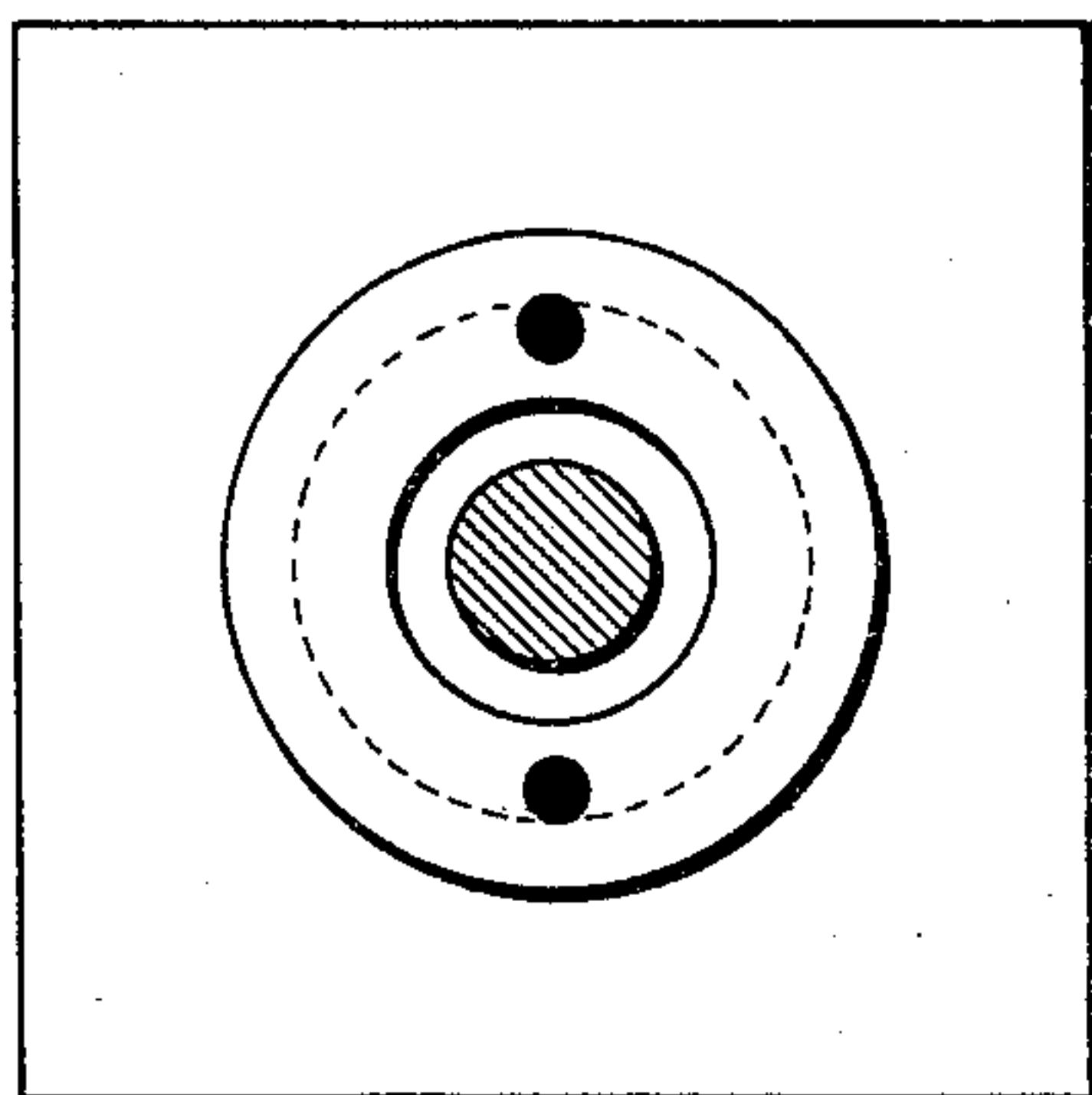
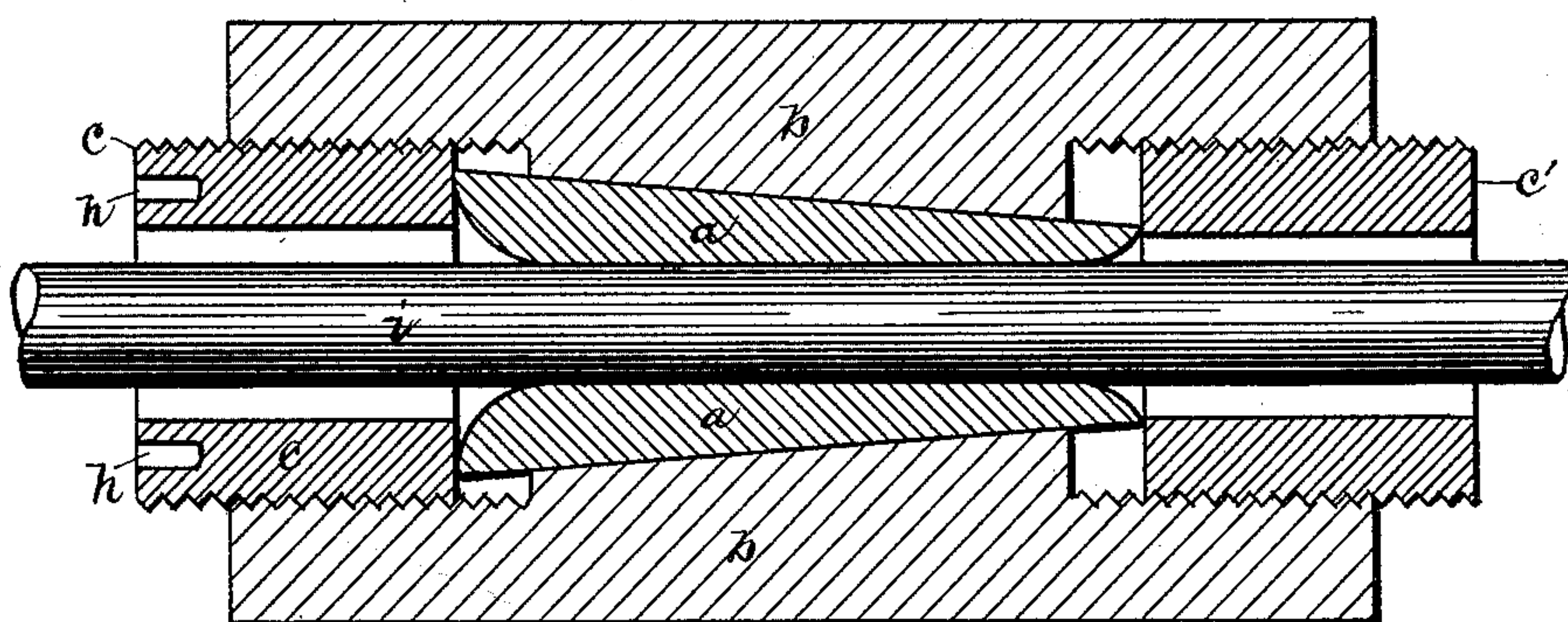


Fig. 2



Witnesses.  
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# UNITED STATES PATENT OFFICE.

REUBEN HADFIELD, OF AKRON, OHIO, ASSIGNOR TO THE AKRON IRON COMPANY, OF SAME PLACE.

## WIRE-DRAWING DIE.

SPECIFICATION forming part of Letters Patent No. 432,236, dated July 15, 1890.

Application filed May 27, 1889. Serial No. 312,289. (No model.)

*To all whom it may concern:*

Be it known that I, REUBEN HADFIELD, a citizen of the United States, residing at Akron, Summit county, Ohio, have invented a new and useful Improvement in Dies for Drawing Cold-Metal Rods, of which the following is a specification.

The main object of the invention herein set forth is to compress the die to compensate for the wear or the enlargement of the die by use.

In the drawings forming a part of this specification, Figure 1 is an end view of the die and its holder, and Fig. 2 represents a longitudinal section of the same.

The outer part or surface of die *a* is slightly tapering toward one end in order that it may be compressed in its holder *b* by means of the hollow screw *c* at the larger end of the die. A similar screw *c'* at the smaller end of the die is not essential, but may be used when the die is not worn, and therefore does not require compression to assist in keeping it in proper position. Die-holder *b* is screw-threaded to receive screws *c c'*, which are formed with holes *n* at their outer ends, by which they may be turned by a suitable instrument. It is obvious that if they are made to project sufficiently beyond the ends of holder *b* they may be suitably formed to be turned by an ordinary wrench.

In drawing cold-metal bars *i* for shafting

and other purposes there is great pressure on the die, which causes it to expand somewhat unless strongly compressed, and as great accuracy is sometimes required in the diameter of the shaft to be drawn it is desirable and useful to restrict the expansion of the die or compress it in order to attain such accuracy in the diameter of the shaft. This I accomplish by means of a slightly-tapering die *a* and screw *c*, to be turned in contact with the larger end of the die to force it farther in die-holder *b*, (whose interior is correspondingly tapered,) and thereby slightly compress the die and prevent its expansion.

I claim as my invention—

1. A slightly-tapering solid die, in combination with a screw-threaded die-holder in contact with the larger end of the die and adapted to move it in the direction of its taper and compress its substance, substantially as described.

2. A slightly-tapering solid die, in combination with a die-holder screw-threaded at each end and hollow screws in its ends to move the die and compress its substance, substantially as described.

REUBEN HADFIELD.

Witnesses:

W. A. PARDEE,  
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