

No. 817,360.

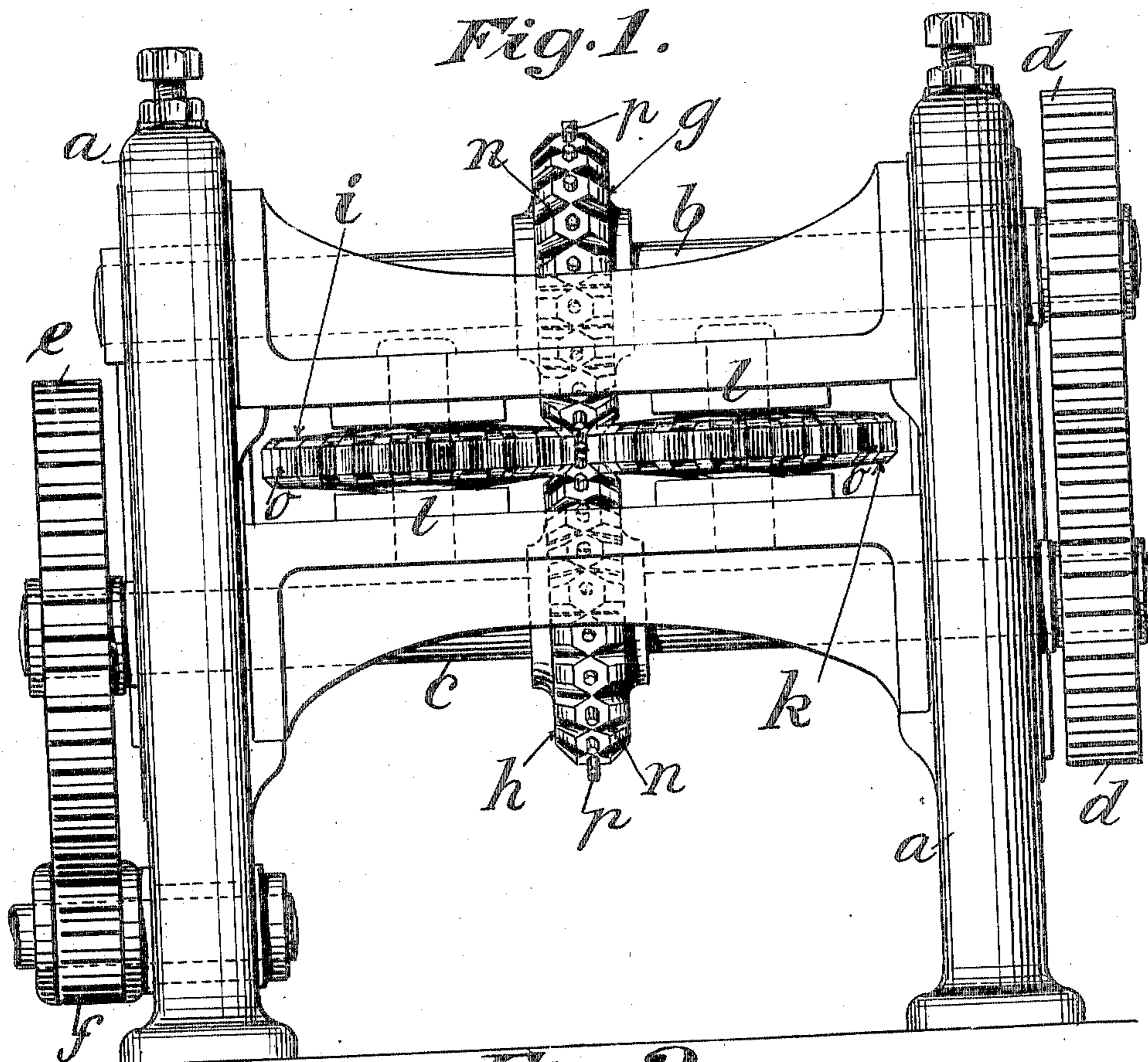
PATENTED APR. 10, 1906.

T. M. ANDERSON & R. WORMALD.  
MACHINE FOR ROLLING SCREW NUT BLANKS.

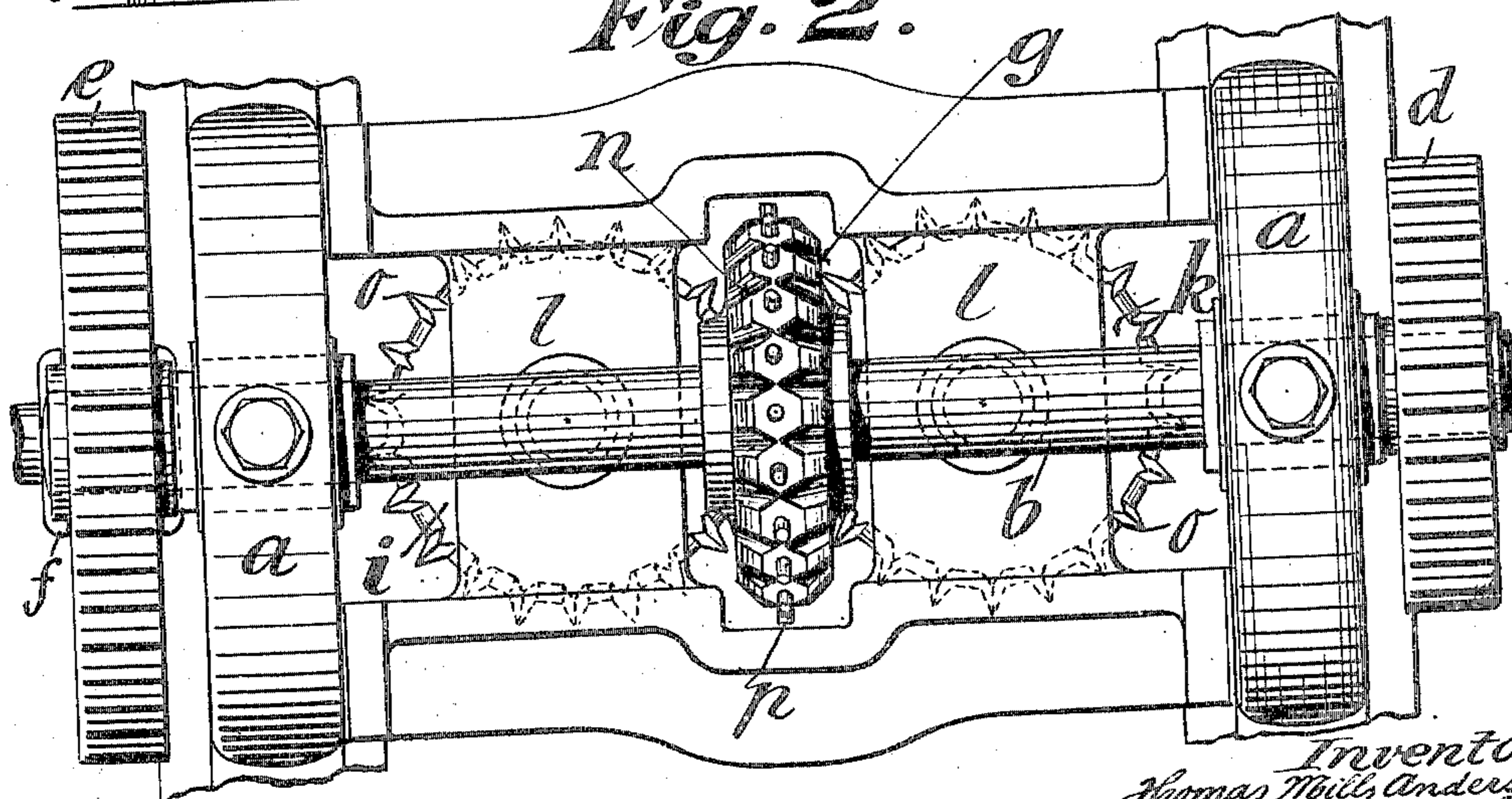
APPLICATION FILED MAY 15, 1905.

2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
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2 SHEETS—SHEET 2.

Fig. 3.

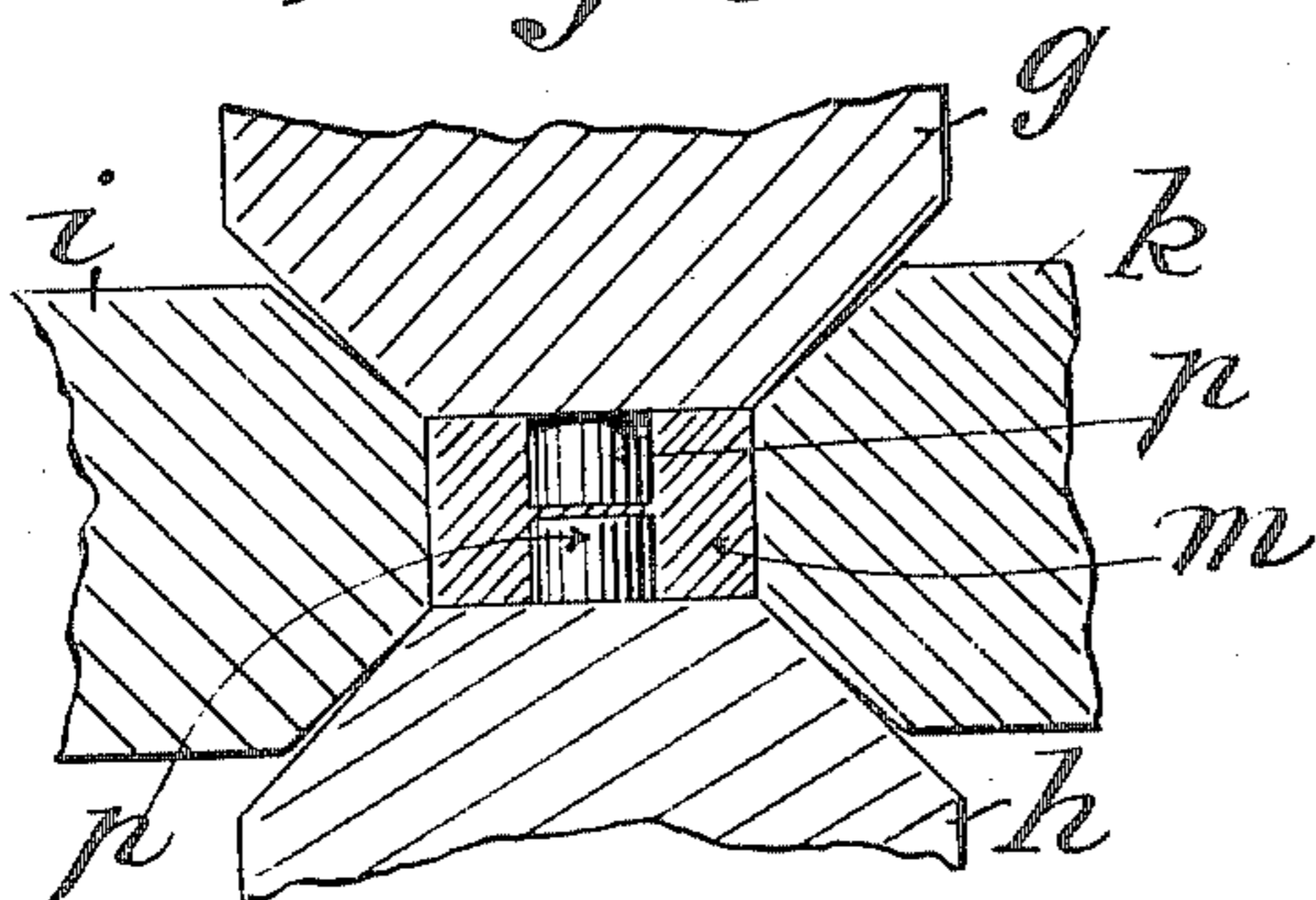


Fig. 5.

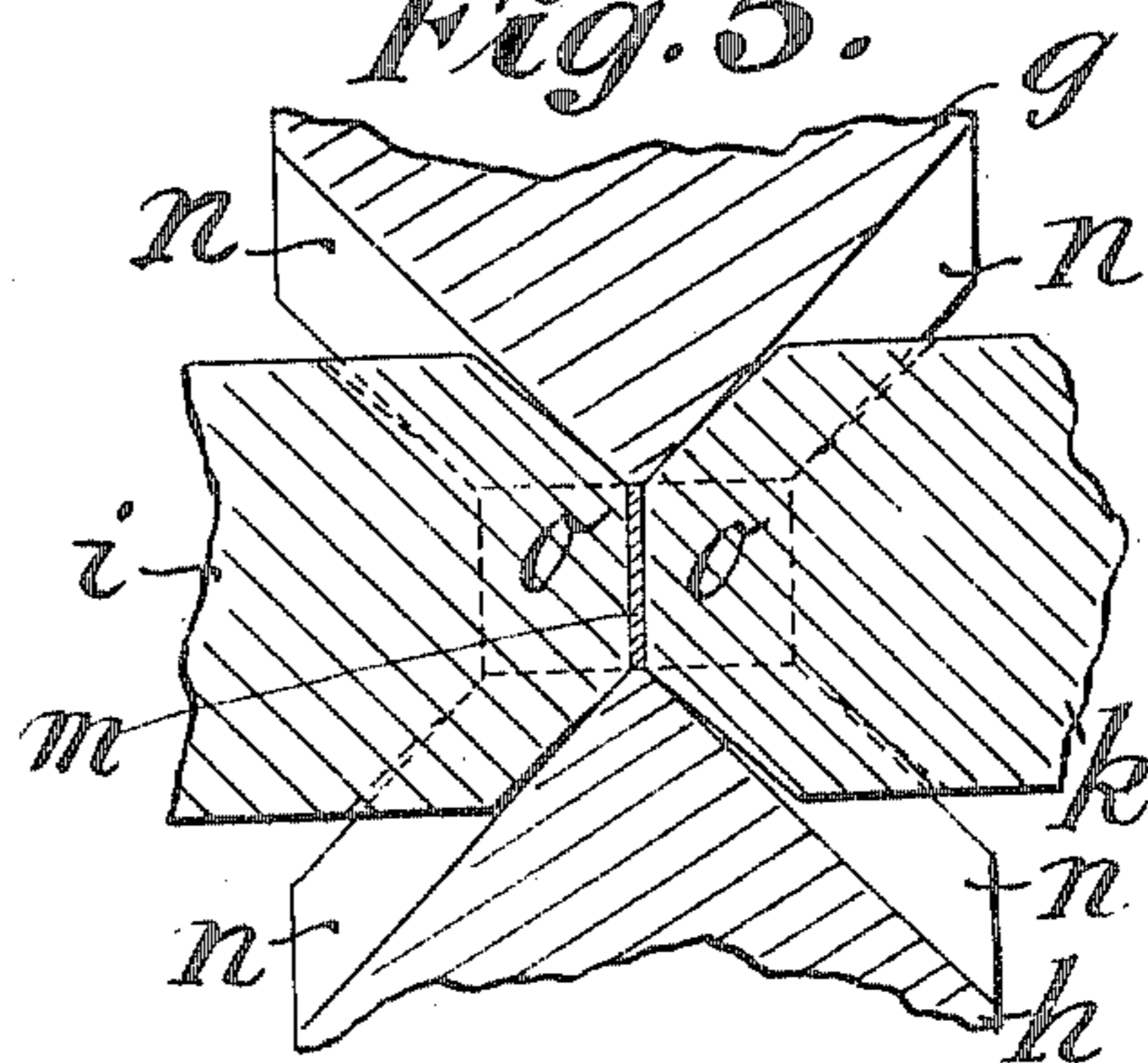


Fig. 4.

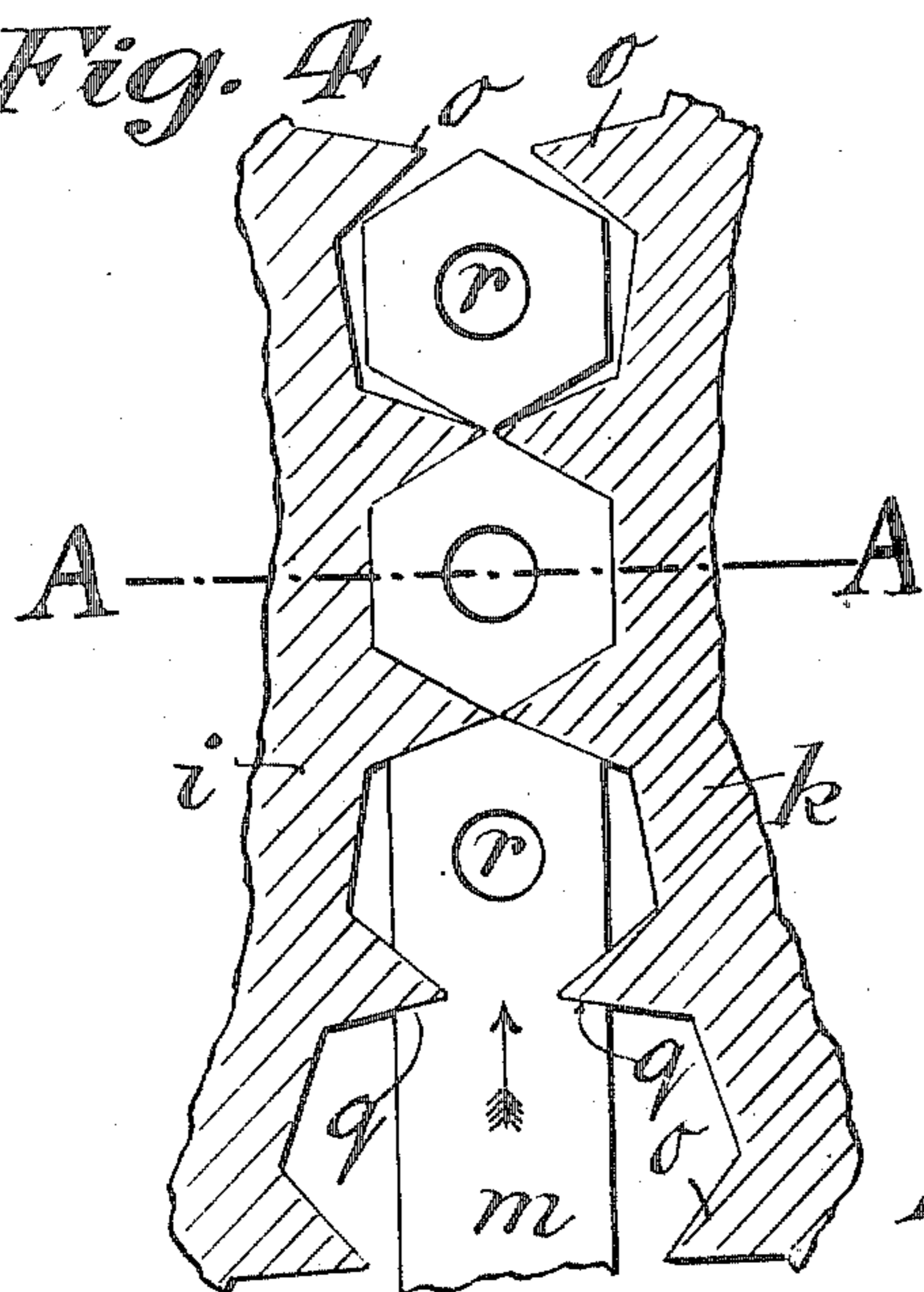


Fig. 6.

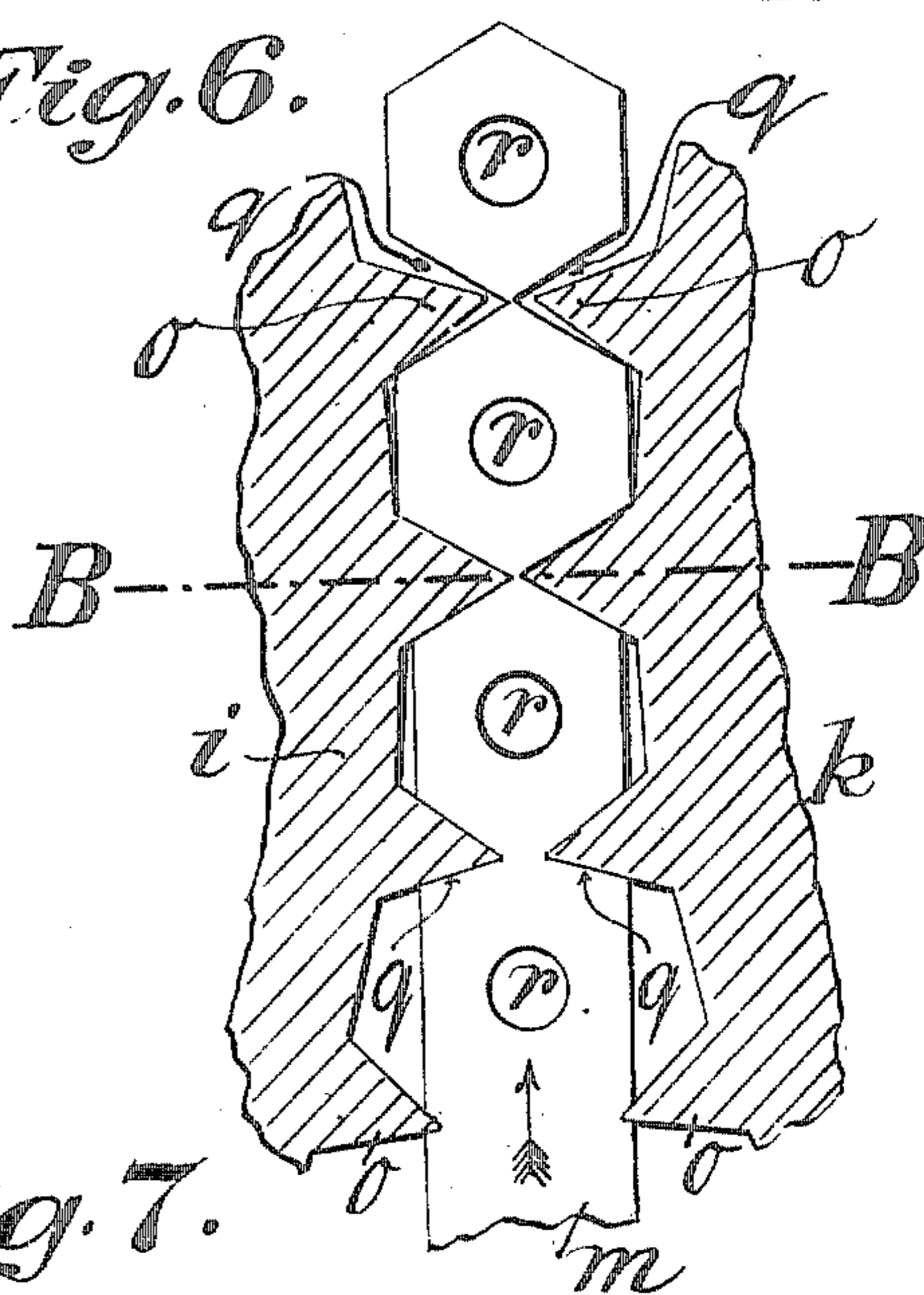
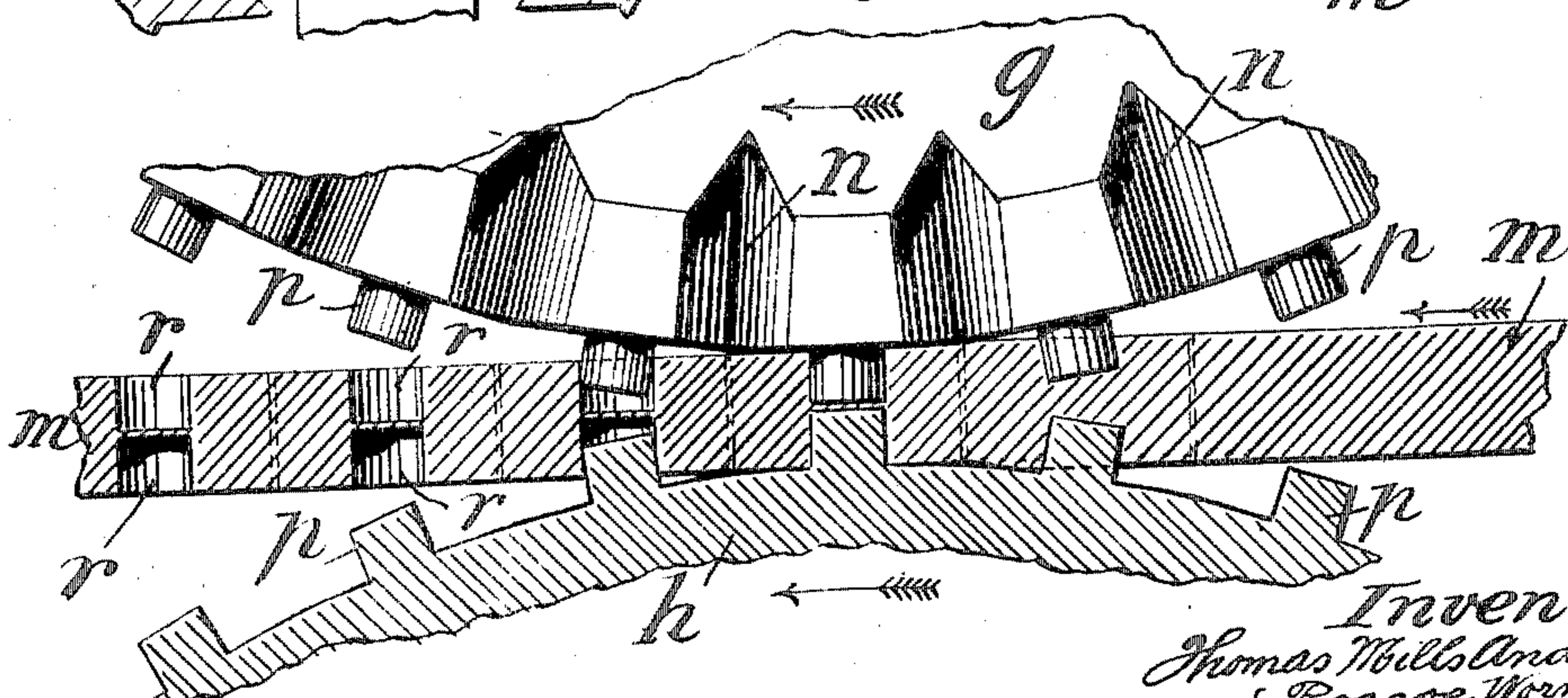


Fig. 7.



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# UNITED STATES PATENT OFFICE.

THOMAS MILLS ANDERSON AND ROSCOE WORMALD, OF OLDHAM,  
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## MACHINE FOR ROLLING SCREW-NUT BLANKS.

No. 817,360.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed May 15, 1905. Serial No. 260,467.

*To all whom it may concern:*

Be it known that we, THOMAS MILLS ANDERSON and ROSCOE WORMALD, subjects of the King of Great Britain, residing at Oldham, in the county of Lancaster, England, have invented new and useful Improvements in Machines for Rolling Screw-Nut Blanks, of which the following is a specification.

This invention has for its object to provide an improved construction of machine whereby screw-nut blanks in bars having serrations or indentations at each edge of a shape corresponding with that of the nut to be produced can be rolled successfully—that is to say, to such a nicety that the consecutive nut-blanks can be more readily separated from each other and require less finishing than hitherto has been the case, and there is practically no waste of material. We attain these objects by the mechanism illustrated in the accompanying two sheets of drawings, in which—

Figure 1 is a front view, and Fig. 2 a plan, of a machine for rolling screw-nut blanks constructed in accordance with our invention. Figs. 3 and 5 are vertical sections at lines A A and B B of Figs. 4 and 6, respectively, and the latter sectional plans of Figs. 3 and 5, while Fig. 7 is a sectional end view of the rolls enlarged.

Similar letters refer to similar parts throughout the several views.

In carrying out our invention and referring to the figures generally we employ in suitable bearings in the frame *a* of the machine above each other two horizontal shafts *b* and *c*, suitably geared together—say by spur-pinions *d*—and one shaft having rotary motion imparted—say by spur-wheel *e* and pinion *f*—from any suitable source. Upon the said shafts are secured a pair of rolls *g* and *h* in conjunction with another pair of rolls *i* and *k*, secured upon vertical shafts mounted in bearings *l l* at the side and at a right angle to the rolls *g* and *h*, leaving a space between the four rolls *g h* and *i k*, forming a nip for the bar *m*, Sheet II, corresponding with the section of the nut to be rolled. The sides of the upper and lower rolls *g* and *h* have recesses *n*, (see more particularly Figs. 3, 4, 5, 6, and 7,) which are opposite each other and extend through the edges to near the middle of the roll, while the said side rolls *i* and *k* have on their peripheries tooth-like projections *o*,

which at each edge of the rolls are adapted to engage in the recesses *n* and gear with the rolls *g* and *h*, so as to cause the four rolls to work in strict unison with each other. In passing the hot bar *m* through the said rolls the middle part of the tooth-like projections *o* on the side rolls *i* and *k* press into and thereby form the desired serrations or indentations *q* in the edges of the bar *m*, (see more particularly Figs. 4, 5, and 6,) while the periphery of the top and bottom rolls *g* and *h* and the middle part of the periphery of the side rolls *i* and *k* prevent the bar *m* from spreading.

The periphery of one or, as in the present instance, of both of the top and bottom rolls *g* and *h* may have studs *p* adapted to press holes *r* into one or both sides of the bar *m* as it passes through the rolls and is serrated or indented by the tooth-like projections of the side rolls *i* and *k*, (see more particularly Figs. 3, 4, and 7,) which holes form the nut-holes for the blanks. The studs *p* also insure a regular and uniform feed of the bar *m*.

What we claim as our invention, and desire to secure by Letters Patent, is—

In a machine for rolling screw-nut blanks, the combination of two pairs of rolls mounted at right angles to each other, one of the said pair of rolls having in the middle peripherally flat faces corresponding in outline with the nut-blanks to be rolled and between them V-recesses inclining from the middle to each side of the roll and the other pair of rolls V-projections straight in the middle and continuing at an incline to each side of the roll, the inclined parts of the said projections engaging in the said recesses from the sides to the middle of the respective rolls and gearing the four rolls in themselves together and the straight part of the said projections being adapted to indent the nut-blank bar at each edge which indents meet each other and form two adjacent nut-blank sides, all substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

THOMAS MILLS ANDERSON.  
ROSCOE WORMALD.

Witnesses:

ALFRED BOSSHARDT,  
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