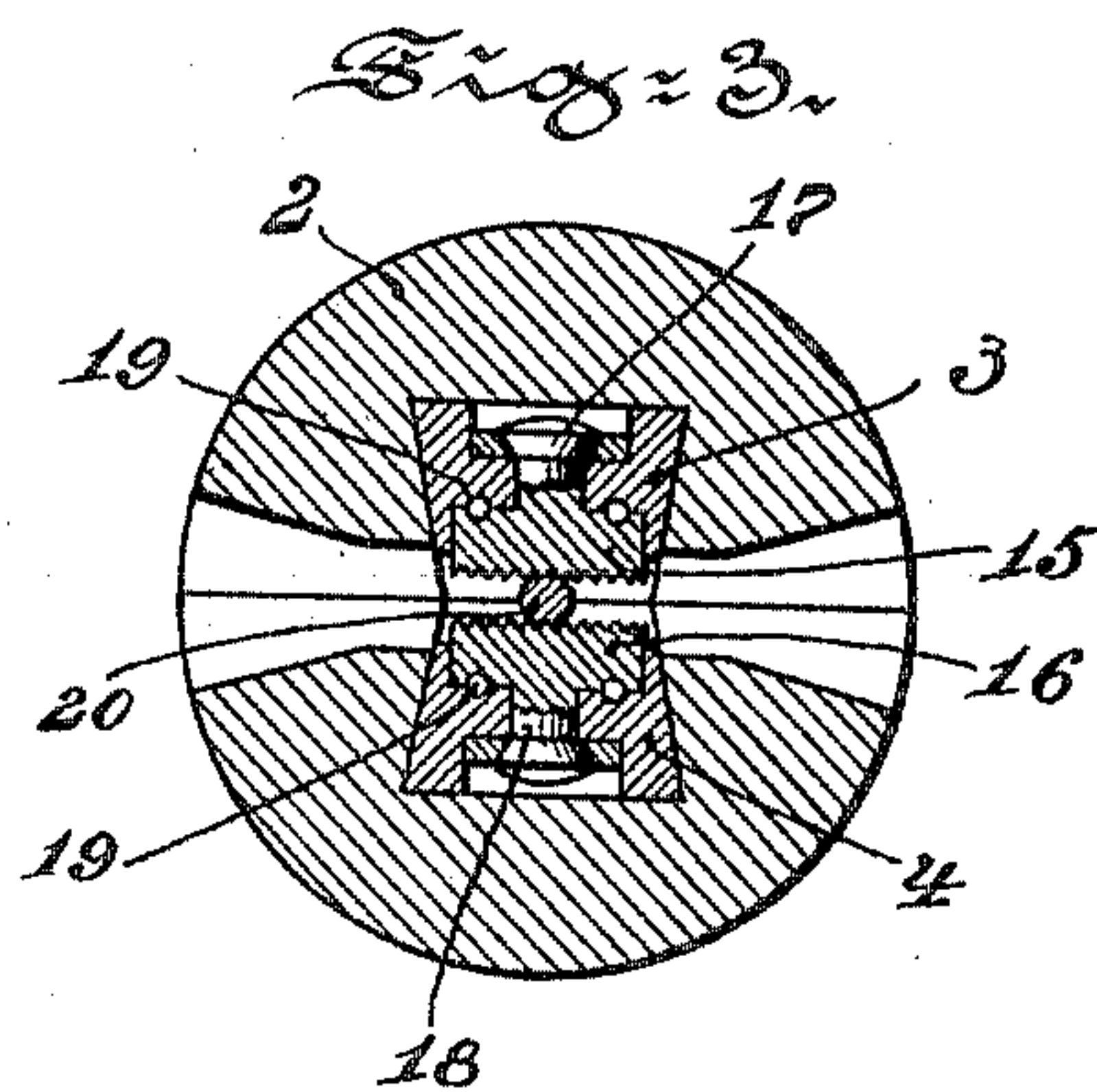
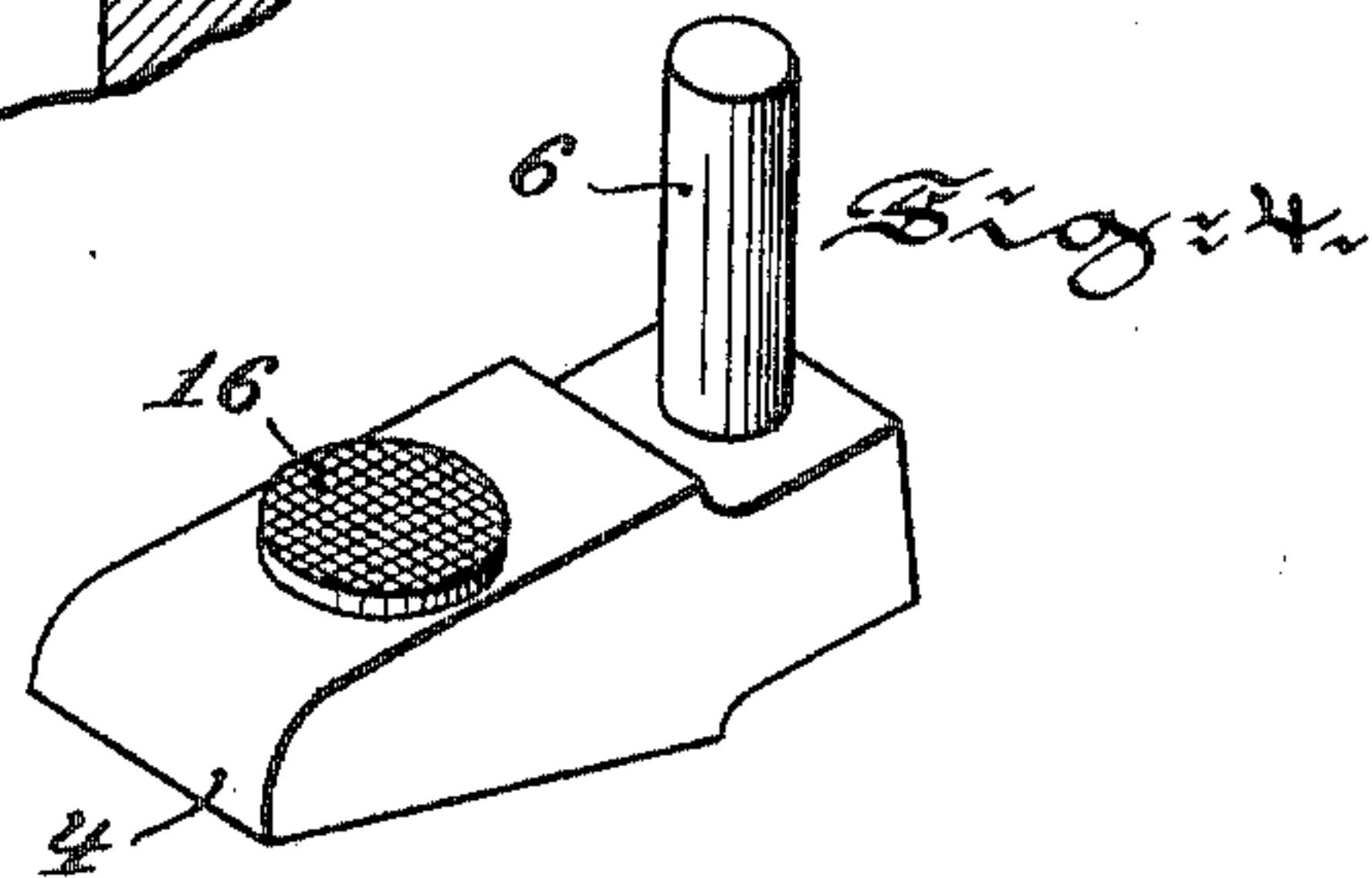
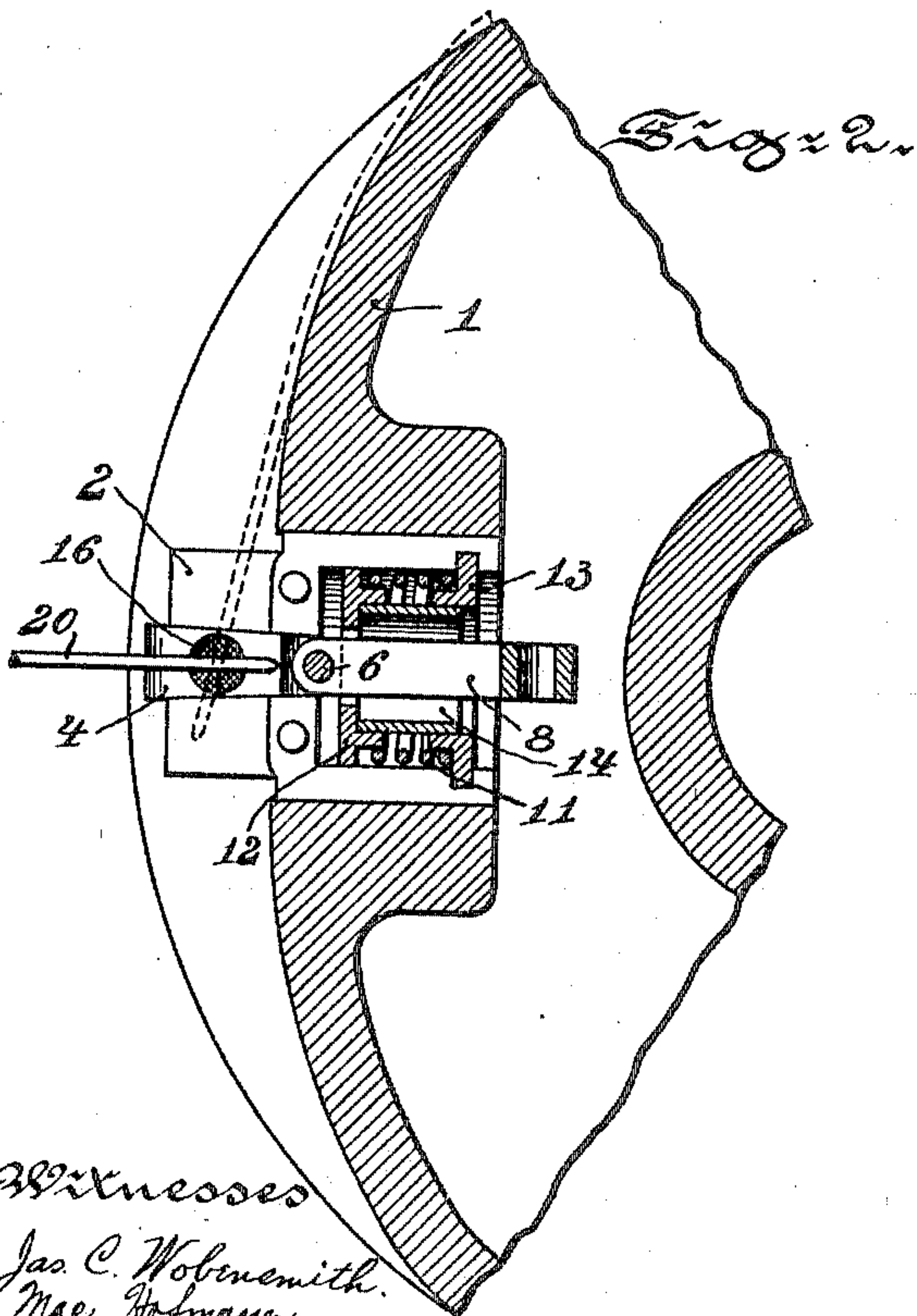
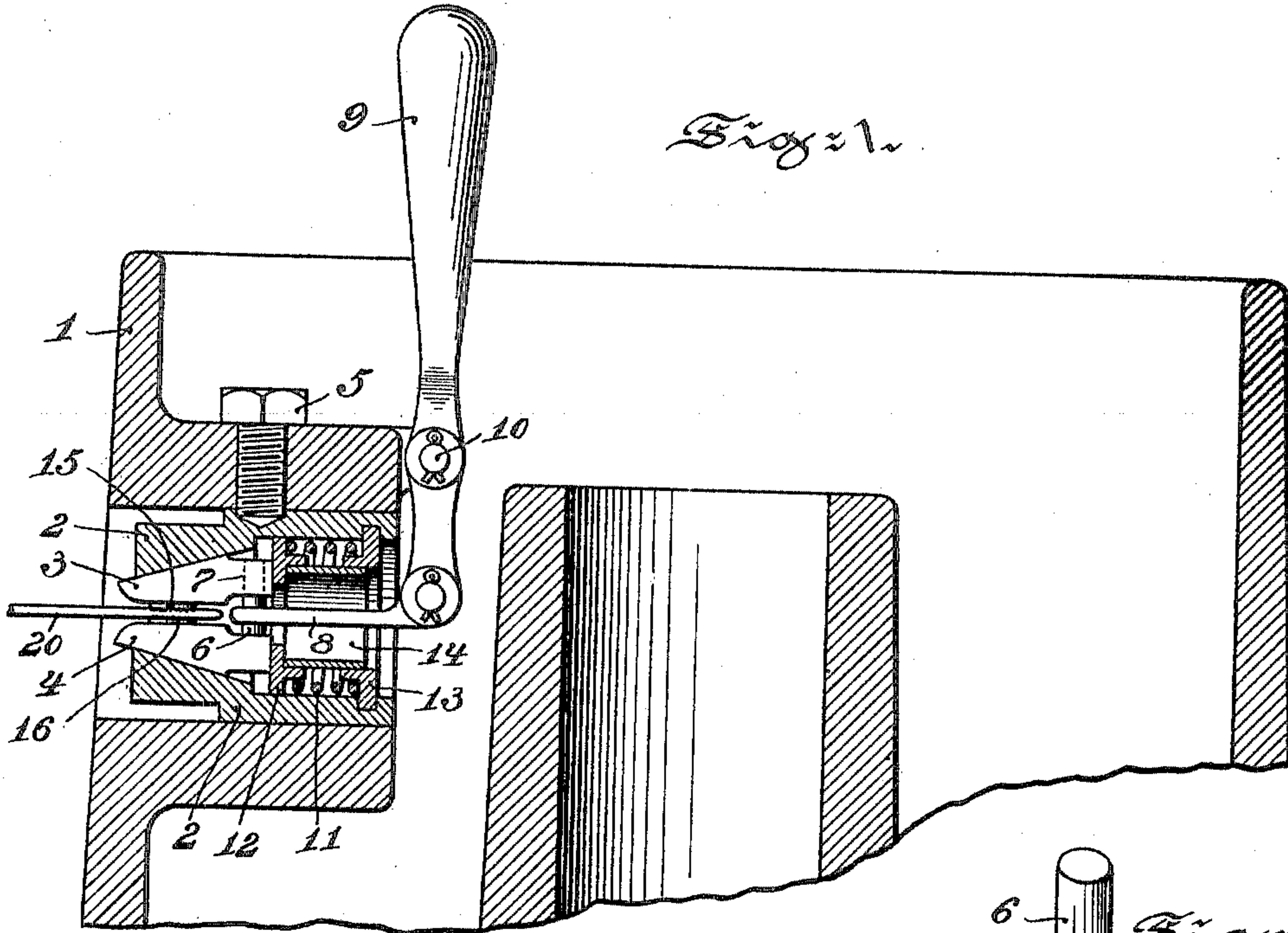


No. 811,107.

PATENTED JAN. 30, 1906.

H. L. THOMPSON.
GRIPPING MEANS FOR WIRE DRAWING DEVICES.
APPLICATION FILED MAY 24, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

HUGH L. THOMPSON, OF WATERBURY, CONNECTICUT.

GRIPPING MEANS FOR WIRE-DRAWING DEVICES.

No. 811,107.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed May 24, 1905. Serial No. 262,070.

To all whom it may concern:

Be it known that I, HUGH L. THOMPSON, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Gripping Means for Wire-Drawing Devices, of which the following is a specification.

My invention relates to improvements in gripping means for wire-drawing devices, my object being to afford means whereby the wire may turn in the gripping-jaws as the block rotates from the initial position, thereby preventing the undesirable bending or the breaking of the wire.

By my improved mechanism it is possible to locate the gripping-jaws close to the periphery of the block, and the drawing operation may be begun with the wire in a radial position. A gradually-increasing speed of wire-drawing is secured from such radial position until the wire becomes tangential to the block. The rotating of the contact or engaging surfaces seated in the sliding jaws is especially applicable to the wire-drawing operation involving the radial start. This construction obviates the necessity of pivoting the gripping member.

Referring to the drawings, Figure 1 is a vertical section of the gripping member and a portion of the block in which the same is located. Fig. 2 is a fragmentary view in horizontal section. Fig. 3 is a vertical section on line 3 3 of Fig. 2. Fig. 4 is a perspective view of the under jaw of said gripping device.

Similar numerals refer to similar parts throughout the several views.

1 represents the drawing-block, having a recess in its peripheral face, in which is seated the member 2, which for convenience of assembling is split in two parts. These parts, however, after assembling are secured together by suitable pins and locked into position by the set-screw 5. Each part is provided with inclined beveled ways, in which are seated the gripping-jaws 3 and 4. To gripping-jaw 4 is secured the pin 6, which projects through an aperture 7 in the rear of jaw 3, so that said pin will have a sliding engagement with said aperture as the jaws separate and come together in their forward and backward movement. The connecting-link 8 is also connected with pin 6 at one end and the bottom of hand-lever 9 at the other end, hand-lever 9 being pivotally secured to the drum structure at 10. The spring 11 oper-

ates between a washer 12, which abuts the rear ends of said jaws 3 and 4 and the ring 13, which is secured in member 2. A sliding collar 14 is surrounded by the spring and ring 13 and abuts against the washer 12. By this construction the hand-lever 9 may be operated to draw the jaws 3 and 4 in their divergent channels against the pressure of spring 11 to cause the separation of said jaws. Upon releasing the hand-lever 9 the spring 11 will return the jaws to the initial or closed position in the usual way. Seated in the opposite faces of the jaws 3 and 4 are the rotatable buttons or disks 15 and 16. The buttons or rotatable elements may also be journaled on the stems 17 and 18 and secured in any suitable way.

From an inspection of Fig. 3 it will be seen that the contacting face of the button projects slightly beyond the surrounding surface of the jaw and is preferably roughened or indented to increase the efficiency of the gripping-surface. Operating between the buttons 15 and 16 and the jaw members 3 and 4, in which they are seated, respectively, are preferably located the antifriction-balls 19 to facilitate the turning of the button members when the same are under severe pressure in gripping the wire 20.

In Fig. 2 the wire 20 is shown in solid lines in the initial position when the same has a radial direction with respect to the block. The dotted lines indicate the wire in the final or tangential position, when the drawing operation is proceeding at the maximum speed.

From an inspection of Figs. 2 and 3 it will be seen that the front end of the split member 2 and the adjacent portions of the drum are cut away on either side and in line with the rotatable elements 4 and 5. In this way the said elements 4 and 5 are located with respect to this cut-out portion substantially on the periphery of the block, said peripheral surface adjacent the elements 4 and 5 being flattened slightly out of the true circle of the block. The result and advantage of this construction are that after the wire has been secured between elements 4 and 5 in a direction radial with respect to the block the block can be turned in either direction to lay the wire upon its periphery and so that the wire will then travel from die to block in a direction tangential to the block, and this is accomplished without bending the wire.

What I claim is—

1. In a wire-drawing machine, the combi-

5 nation of a block, and gripping mechanism therefor comprising journaled elements having wire-engaging faces in planes at right angles with the axes of their rotation and having axes of rotation substantially parallel with the axis of the block.

10 2. In a wire-drawing machine, the combination of a block, and gripping mechanism connected therewith comprising journaled elements movable to and away from each other in lines parallel with the axes of their rotation, and having axes of rotation substantially parallel with the axis of the block.

15 3. In a wire-drawing machine, the combination of a block, gripping-jaws secured thereto, a wire-engaging element journaled in each jaw, said elements having axes of rotation substantially parallel with the axis of the block.

20 4. In a wire-drawing machine, the combination of a block, a pair of cooperating gripping-jaws secured to said block, each provided with a journaled element having an engaging face slightly above the surrounding surface of the jaw, said journaled elements having axes of rotation substantially parallel to the axis of the block.

25 5. In a wire-drawing machine, the combination of a block, and gripping mechanism connected therewith comprising a pair of gripping-jaws, means for moving said jaws

toward and away from each other, and cooperating oppositely-disposed rotatable wire-engaging elements seated in and having ball-bearing relation with said jaws, the said rotatable elements having axes substantially parallel with the axis of the block. 35

6. In a wire-drawing machine, the combination of a block, and gripping mechanism connected therewith comprising a pair of members sliding in convergent ways, cooperating oppositely-disposed rotatable elements for engaging the wire seated in said members, and manually-operative means for actuating said members, the said rotatable elements having axes of rotation substantially parallel with the axis of the block. 40 45

7. In a wire-drawing machine, the combination of a block having a recess in its peripheral surface, gripping mechanism disengageably secured in said recess comprising a casing having convergent ways, jaws sliding in said convergent ways provided with cooperating rotatable elements for engaging the wire, and manually-operative means for actuating said jaws, the rotatable elements having axes of rotation substantially parallel with the axis of the block. 50 55

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Witnesses:

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