

No. 750,967.

PATENTED FEB. 2, 1904.

E. GUNNELL.  
SUPPORTING APPARATUS FOR IMPACT TOOLS.

APPLICATION FILED APR. 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

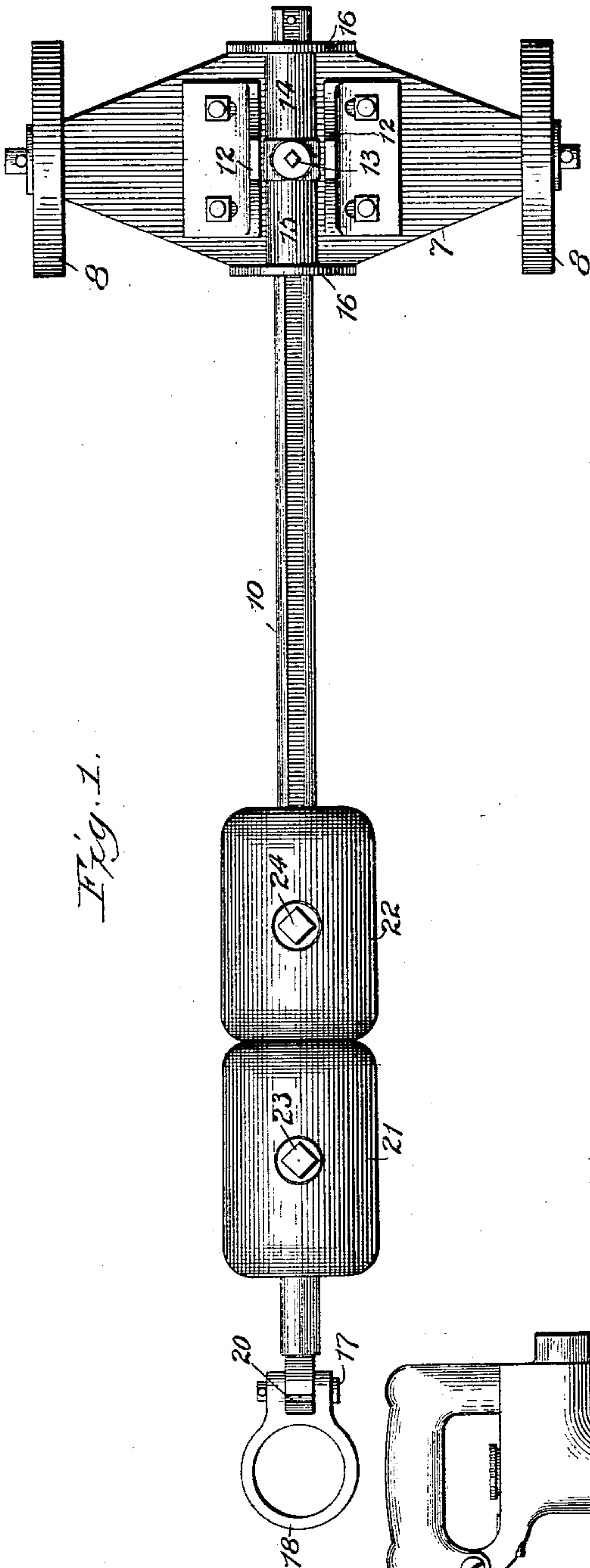


Fig. 1.

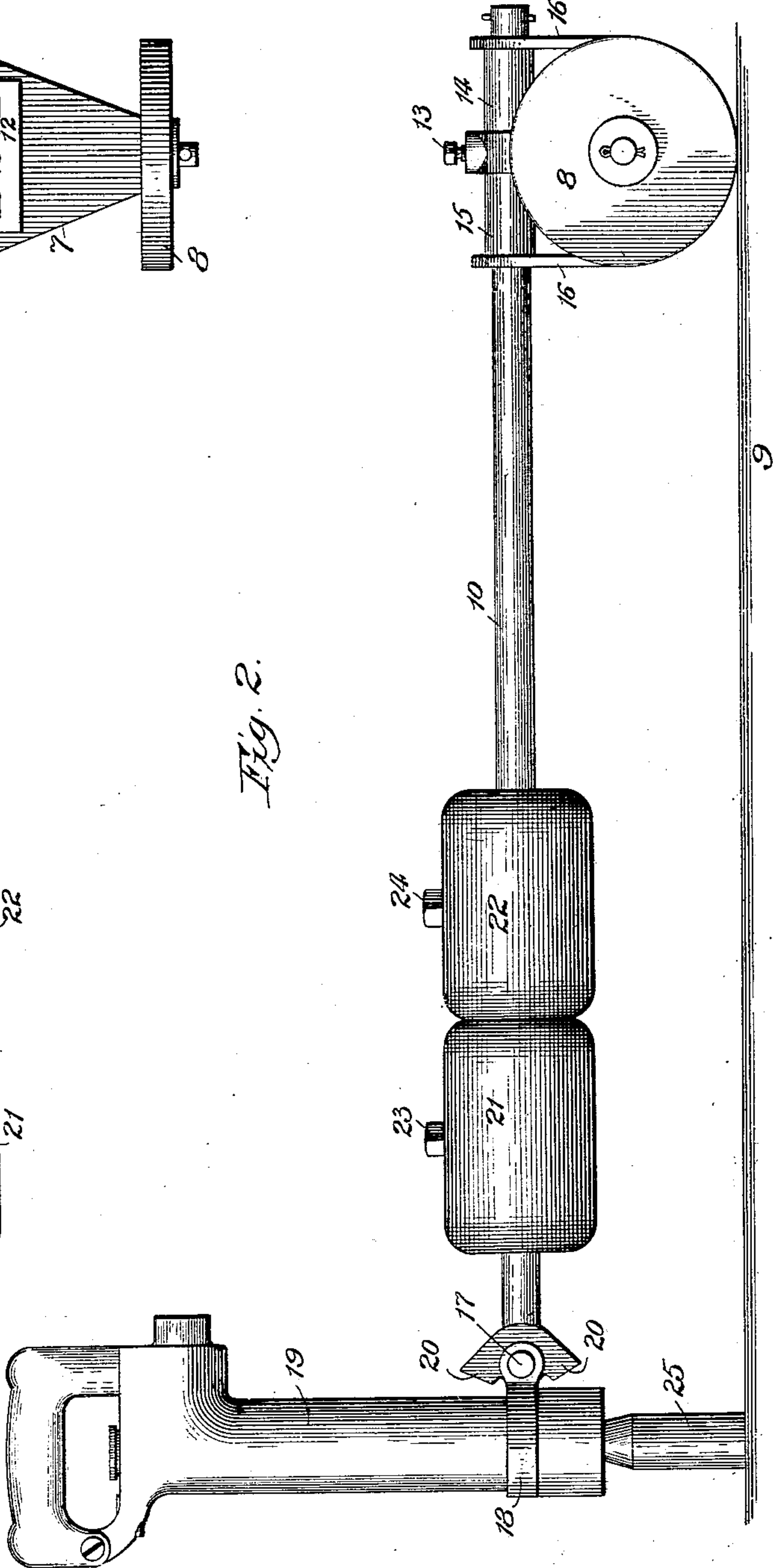


Fig. 2.

Witnesses:

Paul C. Taylor.  
Ed. C. Davis.

Inventor:

Elias Gunnell  
by Paul Symmetts  
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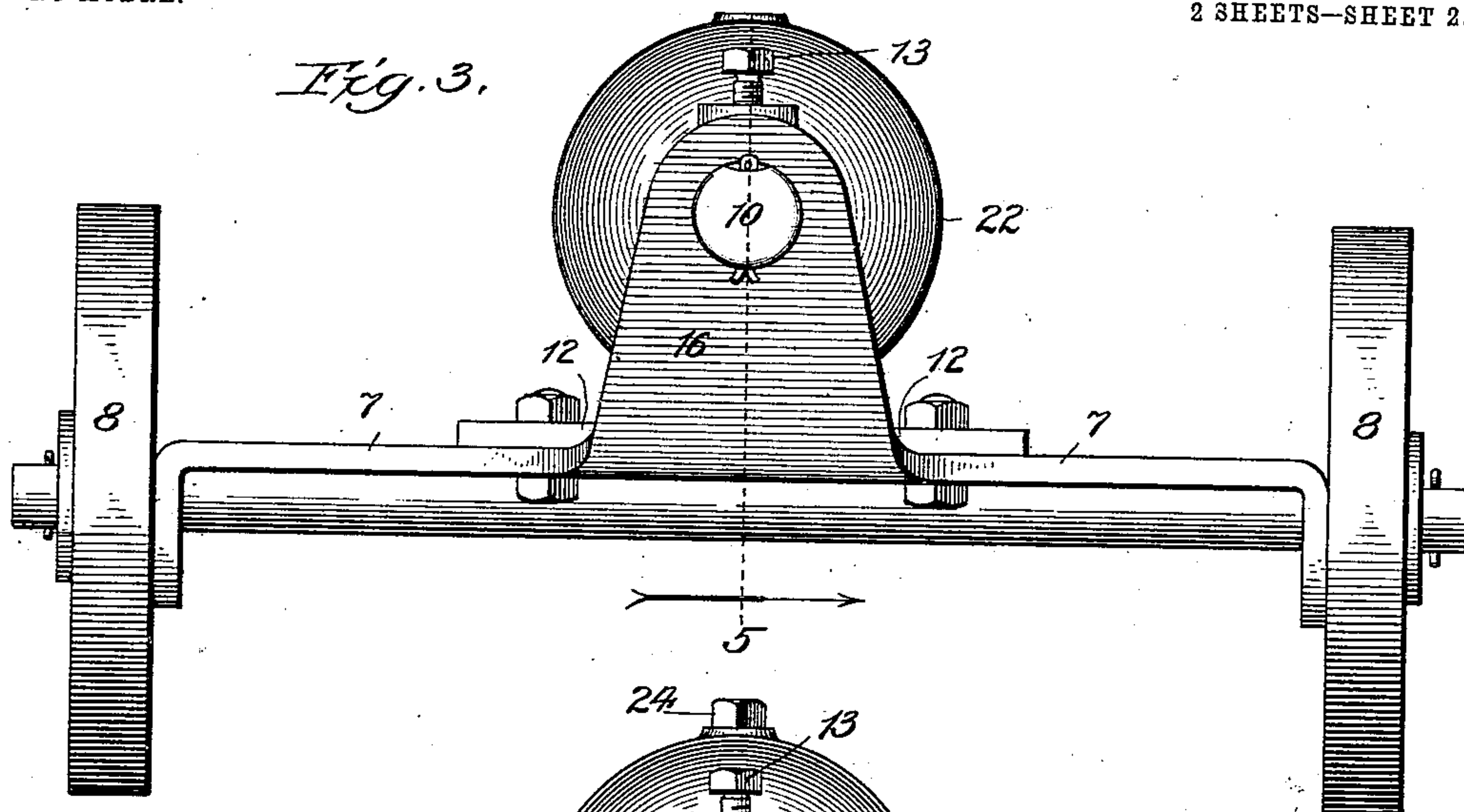
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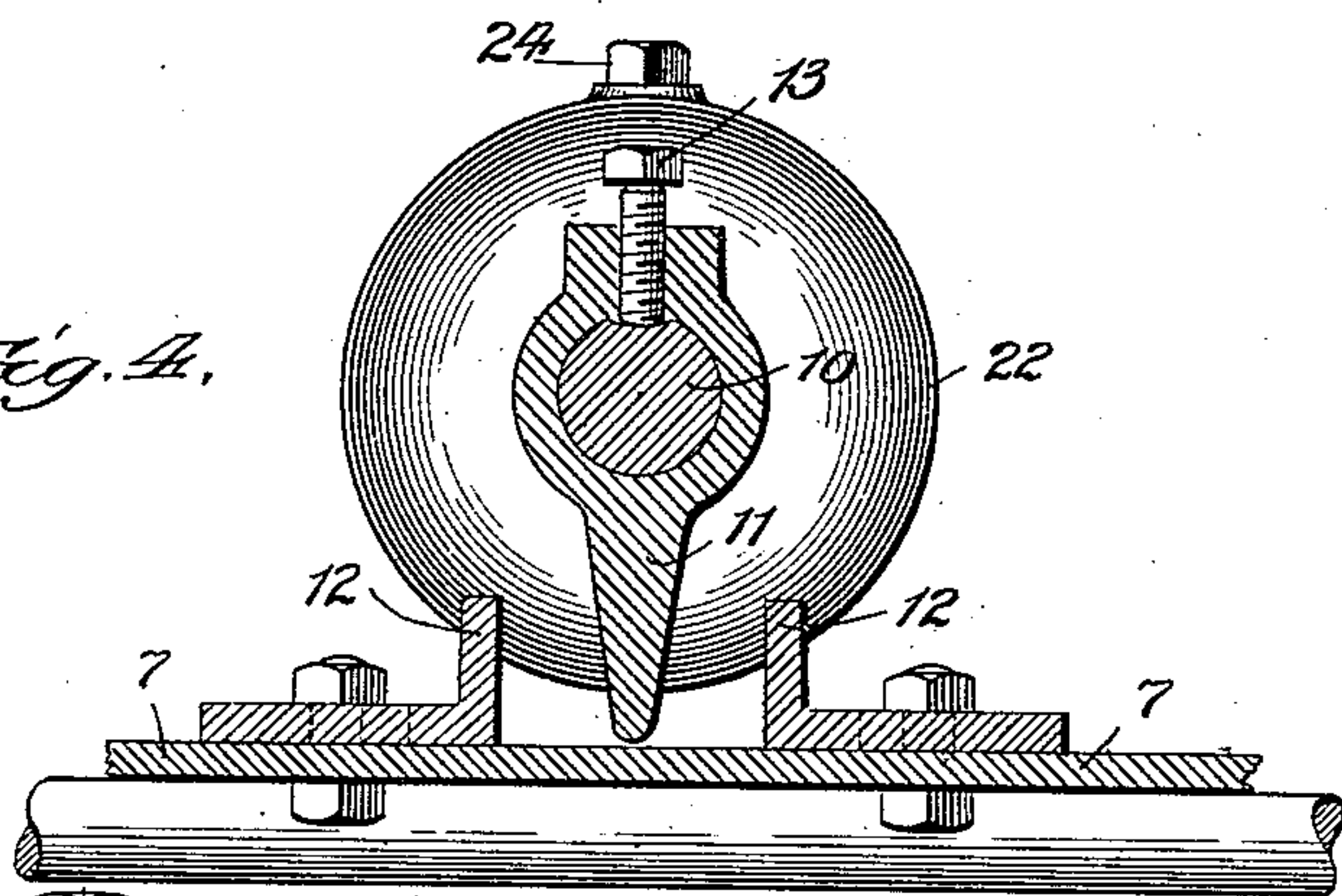
NO MODEL.

2 SHEETS—SHEET 2.

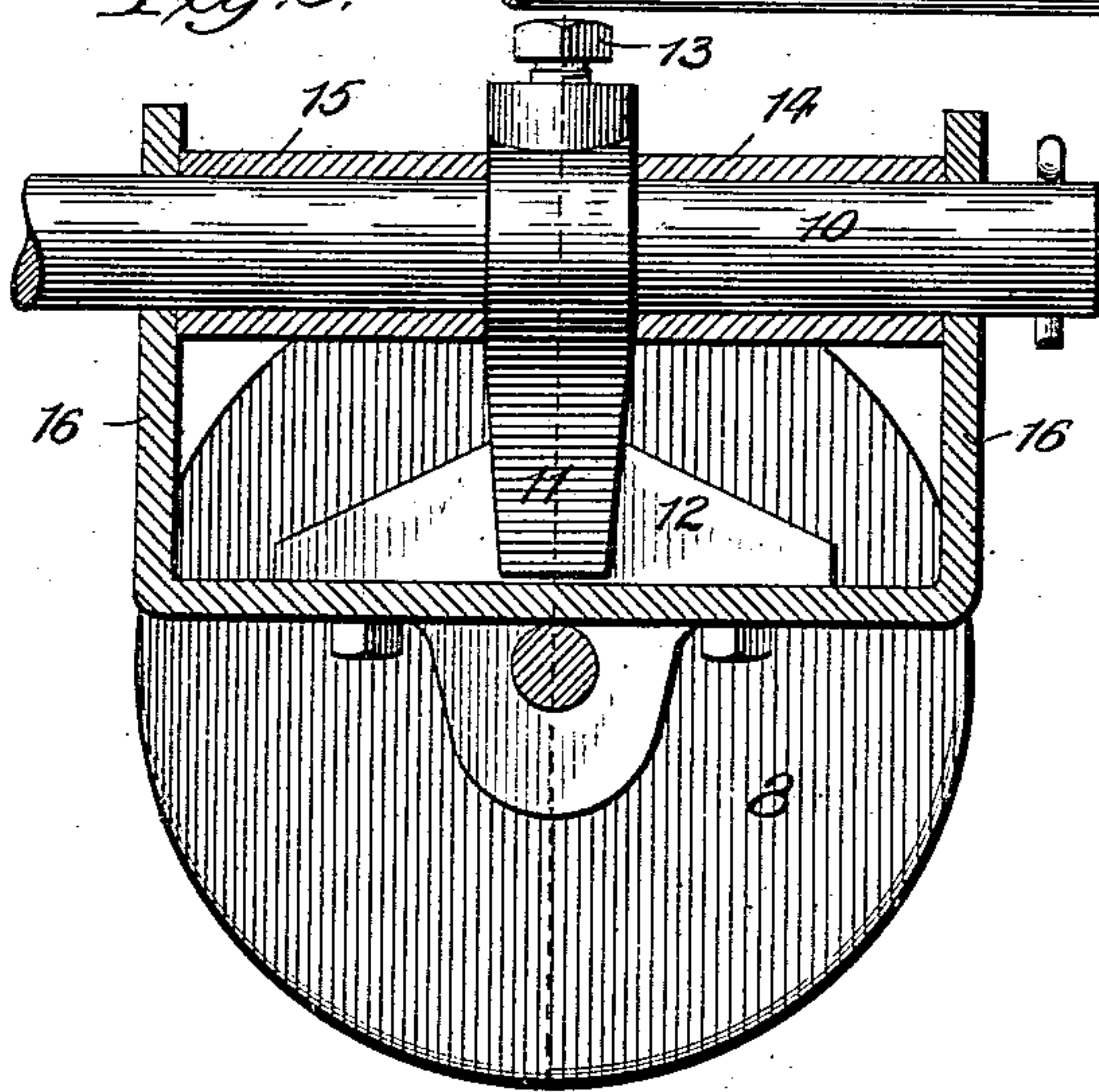
*Fig. 3.*



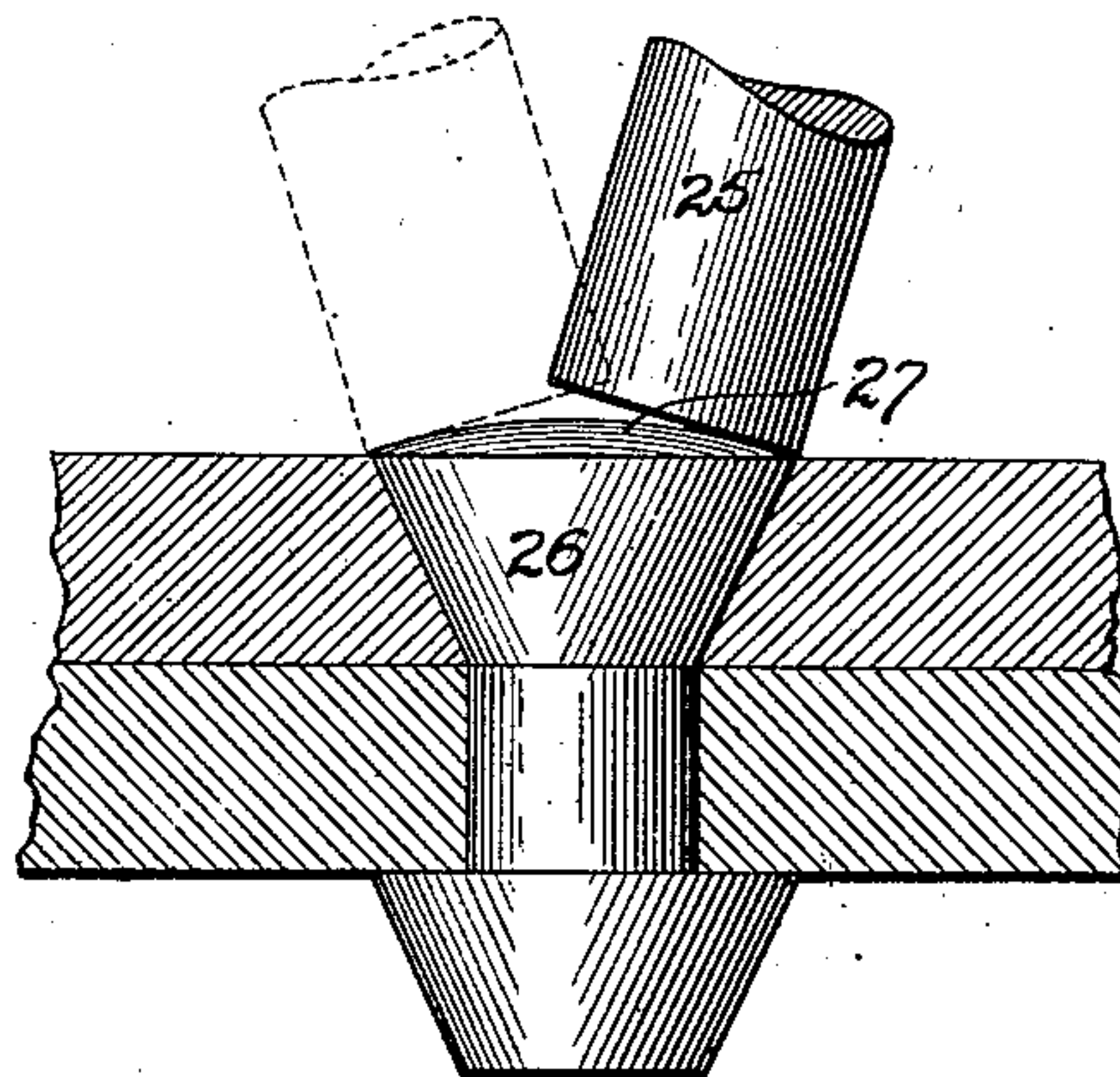
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Witnesses:  
*Edw. C. Taylor.*  
*Geo. C. Brown.*

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*Elias Gunnell*  
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# UNITED STATES PATENT OFFICE.

ELIAS GUNNELL, OF CHICAGO, ILLINOIS.

## SUPPORTING APPARATUS FOR IMPACT-TOOLS.

SPECIFICATION forming part of Letters Patent No. 750,967, dated February 2, 1904.

Application filed April 23, 1902. Serial No. 104,735. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS GUNNELL, a citizen of the United States of America, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Supporting Apparatus for Impact-Tools, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention has reference to the provision of apparatus intended for use in carrying, supporting, and guiding impact tools, such as pneumatic hammers or riveters when in use on a flat or horizontal surface, as for example on the deck of a boat, or in other like work.

The first of the objects of the present invention is the provision of a device of the character specified, which will be cheap to construct, and yet capable of easy operation, and which will permit, by improved and novel means, of universal movement of the impact tool, such universal movement being procured through pivotal support upon one member of the supporting apparatus, and hinge support or other equivalent connection for another member of the apparatus.

A further object of my invention is the provision of a device of the character specified, by the use of which it will be possible, in riveting the tops of rivets in deck plates, to round them over, instead of making them perfectly flat, as is the common practice in this class of riveting, thus enabling me to make a much stronger job than is possible where the rivets are merely flattened, or made flush with the surface of the deck. In connection with this improvement I have provided mechanism which renders it possible, with facility, to hold the tool in approximately upright position, and give it then a substantially universal movement, holding the die meanwhile at approximately one point on the end of the rivet, the supporting apparatus accommodating itself readily to the movement of the tool.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have illustrated in preferred form in the accompanying drawings, in which

Figure 1 is a plan view of an improved apparatus of the character specified,

Figure 2 is a side elevation thereof,

Figure 3 is an end view,

Figure 4 is a sectional view taken on the line 4 of Figure 5,

Figure 5 is a sectional view taken on the line 5 of Figure 3, and

Figure 6 is a view showing a rivet being operated upon by a rivet set, the set being carried in an apparatus supported by my improved device.

Referring now more particularly to Figures 1 and 2, it will be seen that in carrying out my invention I provide first a carriage 7, provided with a pair of wheels 8, adapted to rest upon the deck plate 9, the carriage having a rod or extension part 10 rotatably mounted within the carriage, but limited in the extent of its rotative movement by means of a projecting finger piece 11 (see Figures 4 and 5), which is arranged to abut, at the limits of its movement, against stops 12 secured to the carriage, determining the extent of movement of the rotation of the rod 10. The finger piece 11 is secured firmly to the rod 10 by means of the set screw 13, and each side of the finger piece there is a sleeve 14 and 15 tending to act against the upwardly extending bracket 16 to prevent longitudinal movement of the rod or bar 10 within the carriage, after the set screw 13 is tightened.

The free end of the bar 10 is provided with a pivot pin 17, which carries a clamp 18, that surrounds the tool 19, the pivot pin 17 permitting a movement of the tool in one direction about the pivot pin as a center, to the extent that will be permitted by the stops 20, which are provided to maintain an approximately upright position of the tool, or more properly, to limit the amount of hinge like movement about the pivot pin 17. The bar 10 is provided, preferably, with a plurality of weights, as 21 and 22, held upon the bar by means of set screws 23 and 24, the use of a plurality of the weights being preferred because it is more easy to change to suit the requirements of the work. Thus for example, if a very heavy hammer is used, there is more



recoil than where a light one is used, and in that case both of the weights 21 and 22 are moved out to the position shown in the drawings, adjacent to the hammer, whereas if a  
 5 light hammer is used, and the recoil is less, one of the weights is then slid along the bar back to a position adjacent to the carriage, where it will not exert so much force in absorbing recoil, but where it will also be easier  
 10 to manipulate. The hammer 19 is shown as acting against a set 25, which operates upon the top of the rivet 26 (see Figure 6) in the manner shown, so as to round it over, as indicated at 27, the universal movement or sub-  
 15 stantially universal movement of the set and tool being permitted by the combination of the pivot connection 17 about which there is the hinge movement, and the rotative movement of the rod 10 within the carriage, as al-  
 20 ready described. The slight longitudinal movement of the upper portion of the hammer resultant upon holding the set at substantially one point on top of the rivet head is compensated for by movement of the carriage  
 25 itself on its rollers 8.

I have only illustrated the hammer diagrammatically, since it is obvious that any type of fluid pressure or other impact tool could be used, as desired.

30 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An impact tool holder comprising a movable carriage, a carrier arm mounted at one  
 35 end on the carriage and at its free end provided with a tool holding head mounted with universal angular movement on said arm, and stops to limit the angular motion in all directions.

40 2. An apparatus for holding impact tools, comprising a carriage, wheels supporting said carriage, a bar secured at one end on said carriage, and at the other end provided with means for supporting the impact tool, said bar  
 45 having rotative movement within said carriage, substantially as described.

3. An apparatus for holding impact tools, comprising a carriage, wheels supporting said carriage, a bar secured at one end on said carriage, and at the other end provided with  
 50 means for supporting the impact tool, said bar having rotative movement within said carriage, and stop mechanism for limiting the rotative movement of said bar, substantially as described. 55

4. An apparatus for holding impact tools, comprising a carriage, wheels supporting said carriage, a bar secured at one end on said carriage, and at the other end provided with  
 60 means for supporting the impact tool, said bar having rotative movement within said carriage, the said means for supporting the hammer comprising a hinged or pivotally connected device carried on the end of the bar, substantially as described. 65

5. An apparatus for holding impact tools, comprising a carriage, wheels supporting said carriage, a bar secured at one end on said carriage, and at the other end provided with  
 70 means for supporting the impact tool, said bar having rotative movement within said carriage, the said means for supporting the hammer comprising a hinged or pivotally connected device carried on the end of the bar, and projecting stops on the free end of the  
 75 bar to limit the hinged movement of the hammer supporting device, substantially as described.

6. An apparatus for holding impact tools, comprising a carriage, wheels supporting said  
 80 carriage, a bar secured at one end on said carriage, and at the other end provided with means for supporting the impact tool, and recoil absorbing weights carried by said bar, substantially as described. 85

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ELIAS GUNNELL.

In presence of—

PAUL CARPENTER,  
 PHILIP J. FINNEGAN.