

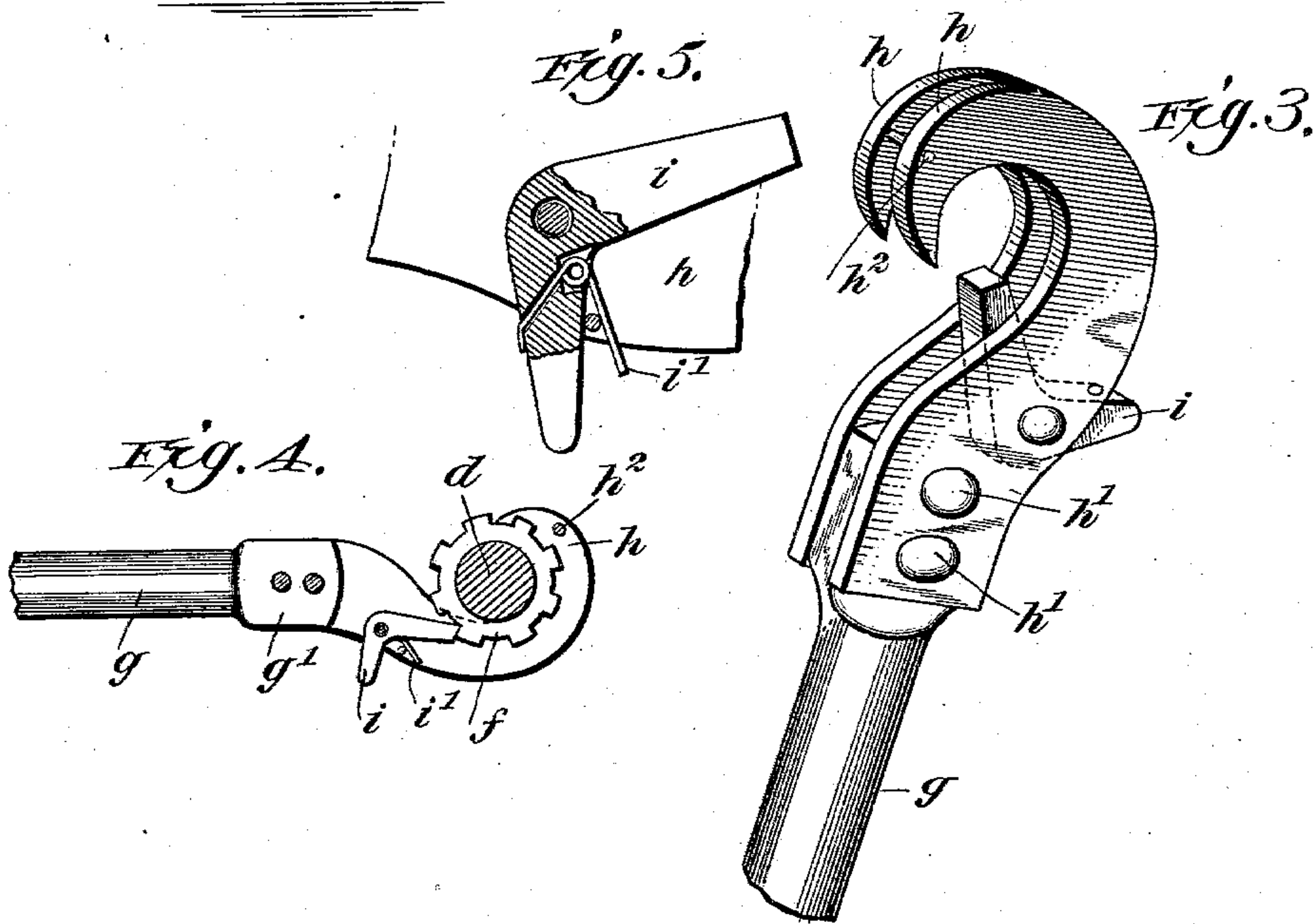
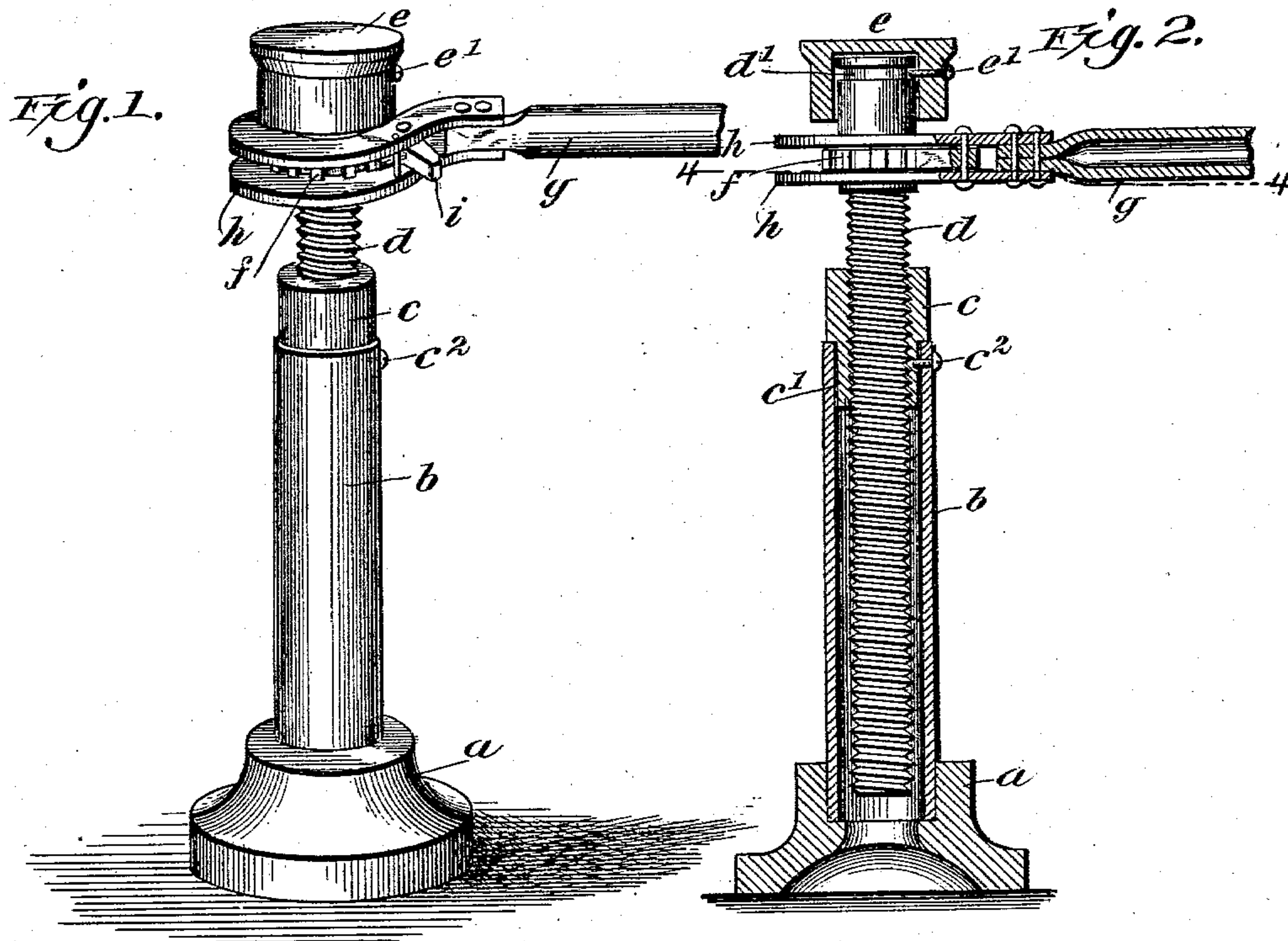
No. 740,878.

PATENTED OCT. 6, 1903.

W. R. LEWIS.  
JACK.

APPLICATION FILED MAR. 19, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM ROBINSON LEWIS, OF MONTEZUMA, IOWA.

## JACK.

SPECIFICATION forming part of Letters Patent No. 740,878, dated October 6, 1903.

Application filed March 19, 1903. Serial No. 148,573. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ROBINSON LEWIS, a citizen of the United States, and a resident of Montezuma, in the county of Poweshiek and State of Iowa, have invented a new and Improved Jack, of which the following is a full, clear, and exact description.

This invention relates to a screw-jack the leading feature of which is a novel ratchet arrangement for operating the jack, which may engage the jack-screw in any position and be applied to or removed from the screw at will. Various other minor features are present, as will be fully pointed out herein-  
after.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the invention. Fig. 2 is a vertical section thereof. Fig. 3 is a fragmentary view of the wrench or handle. Fig. 4 is a section on the line 4-4 of Fig. 2; and Fig. 5 is a detail view of the pawl, partly broken away and in section.

*a* indicates the base of the jack, which is formed of metal cast around the lower portion of a tubular shank *b*, the latter being formed of gas-pipe or other tubing, thus providing the body of the jack in one practically integral structure, which structure affords a maximum degree of strength at a minimum cost and weight. In the upper end of the tubular shank is placed a nut *c*, which has a reduced portion *c'* fitted in the shank *b* and held removably by means of a screw *c*<sup>2</sup>. The advantage of this is that should the nut become injured it may be readily removed and a second nut placed in the jack without disturbing the other parts.

*d* indicates the screw of the jack, which is threaded in the nut and provided at its upper end with a head *e*, arranged to turn on the screw and held against axial movement by means of a threaded pin *e'*, which is screwed in the head and works in an annular groove *d'* in the upper end of the screw.

Fastened to or formed integral with the

screw, just below the head *e*, is a ratchet *f*, and with this ratchet works the improved handle. This handle comprises a bar *g*, preferably tubular, with solid plug welded in the flattened inner end *g'*, as shown best in Fig. 4. Two hooks *h* are provided, said hooks having shanks between which is sandwiched the flattened end *g'* of the bar *g*. Said parts *g* and *h* are fastened securely together by rivets *h'*, as shown. Between the hooks *h* is located a dog or pawl *i*, one end of which projects inward to engage the teeth of the ratchet *f* and the other end of which projects outward to form a finger-piece, by the manual operation of which the pawl may be moved out of active position.

*i'* indicates a spring, which may be of any desired form and which is employed to actuate the pawl, this spring holding the pawl in normal or active position and yielding to permit it to recover its hold on the ratchet, all of which will be understood from the prior art.

*h*<sup>2</sup> indicates a pin which is extended between the hooks *h* and located at the bills thereof, this pin serving to strengthen the parts and preventing relative lateral displacement of the hooks and also limiting the movement of the pawl.

In the use of the invention the hooks *h* are made to embrace the screw, one above and one below the ratchet *f*, so that the dog or pawl *i* will then engage the ratchet-teeth. By rocking the bar *g* to the left (see Fig. 4) the pawl *i* moves outwardly over the ratchet, and then by moving the bar in the opposite direction the pawl takes hold on the ratchet, and the screw *d* is then operated. It will be seen that great power may be obtained by this device and that the operating device or handle may be wholly disconnected from the screw whenever desired. This provides a jack which may be readily handled and which may be stored in a relatively small space. Numerous other advantages will be apparent to persons skilled in the art.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the intent of my claims.



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

1. The combination with a jack comprising  
5 a base and a screw working therein, of a ratchet attached to the screw, an operating device comprising a bar, a hook thereon capable of removably embracing the screw, and  
10 a pawl mounted on the operating device adjacent to the hook and capable of engaging the ratchet.

2. The combination with a jack comprising  
15 a base and a screw working therein, of a ratchet attached to the screw, an operating device comprising a bar, a hook thereon capable of removably engaging the screw, and  
20 a pawl mounted on the operating device adjacent to the hook and capable of engaging the ratchet, the said pawl comprising an arm engaging the ratchet and a second arm projecting outward to facilitate the manual adjustment of the pawl.

3. The combination with a jack, comprising  
25 a base or body and a screw therein, of a ratchet attached to the screw, and an operating device comprising a bar or handle, two hooks attached thereto and spaced from each other, said hooks being capable of removably embracing the screw with the ratchet between  
30 them, and a pawl fastened to the operating device adjacent to the hooks and arranged to engage the ratchet.

4. The combination with a jack, comprising  
a base or body and a screw therein, of a

ratchet attached to the screw, an operating  
35 device comprising a bar or handle, two hooks attached thereto and spaced from each other, said hooks being capable of removably embracing the screw with the ratchet between  
40 them, and a pawl fastened to the operating device adjacent to the hooks and arranged to engage the ratchet, the said pawl comprising  
45 two arms, one of which acts with the ratchet and the other one of which projects outward from the operating device to facilitate the manual adjustment of the pawl.

5. An operating device for screw-jacks,  
comprising a bar or handle, two hooks attached thereto and spaced from each other,  
50 and a pawl pivotally mounted between the hooks.

6. An operating device for screw-jacks,  
comprising a bar or handle, two hooks attached thereto and spaced from each other,  
55 and a pawl pivotally mounted between the hooks, said pawl having two arms, one of which is adapted to work with a coacting ratchet, and the other of which projects outward in position to facilitate the manual adjustment of the pawl.

In testimony whereof I have signed my  
60 name to this specification in the presence of two subscribing witnesses.

WILLIAM ROBINSON LEWIS.

Witnesses:

S. E. SMITH,  
JNO. HALL, Jr.