

No. 777,161.

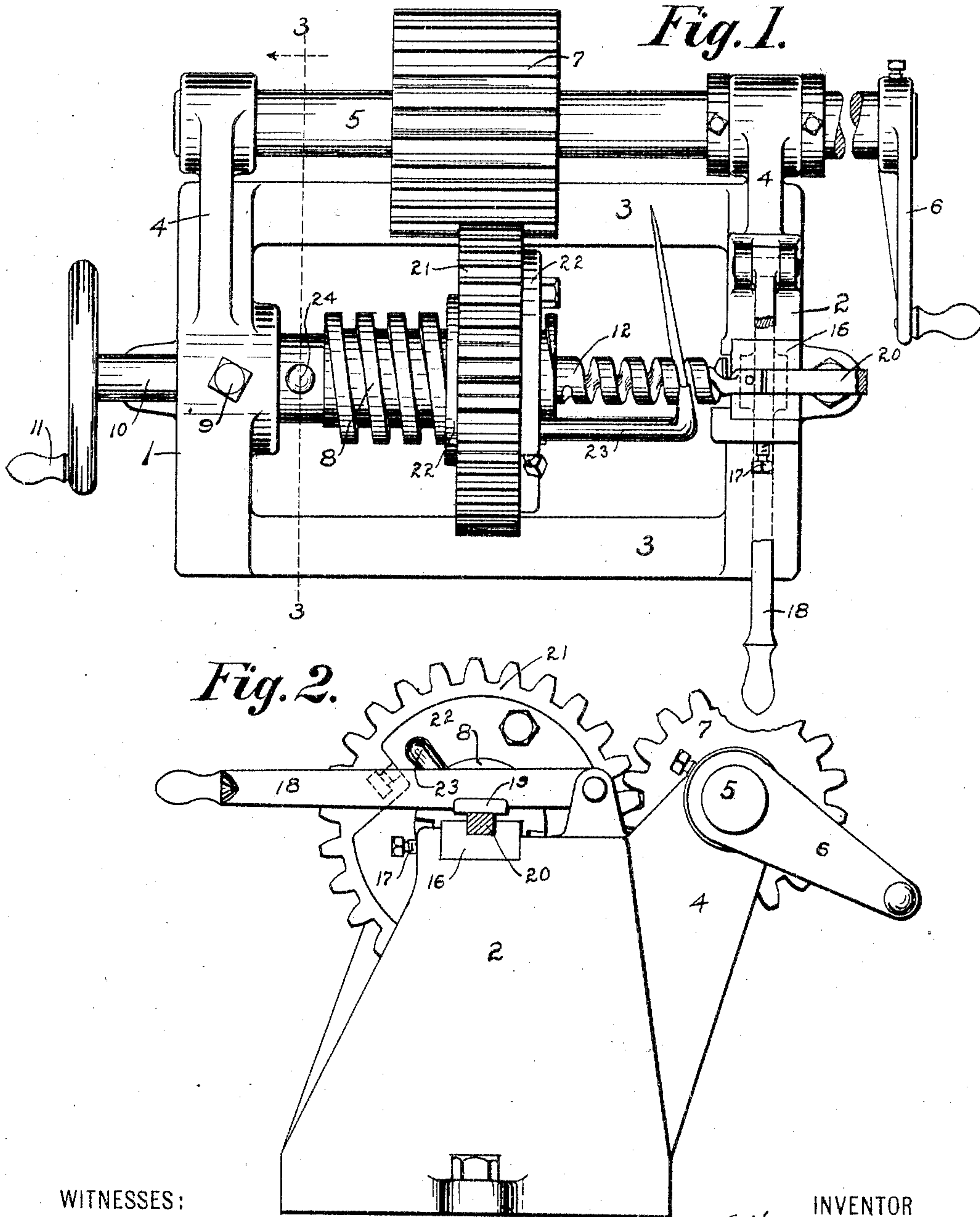
PATENTED DEC. 13, 1904.

A. A. VIGNOS.  
CORKSCREW MACHINE.

APPLICATION FILED APR. 12, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Joseph J. Hosler.  
J. R. Bond.

INVENTOR

Alfred A. Vignos  
BY J. W. Bond

ATTORNEY

No. 777,161.

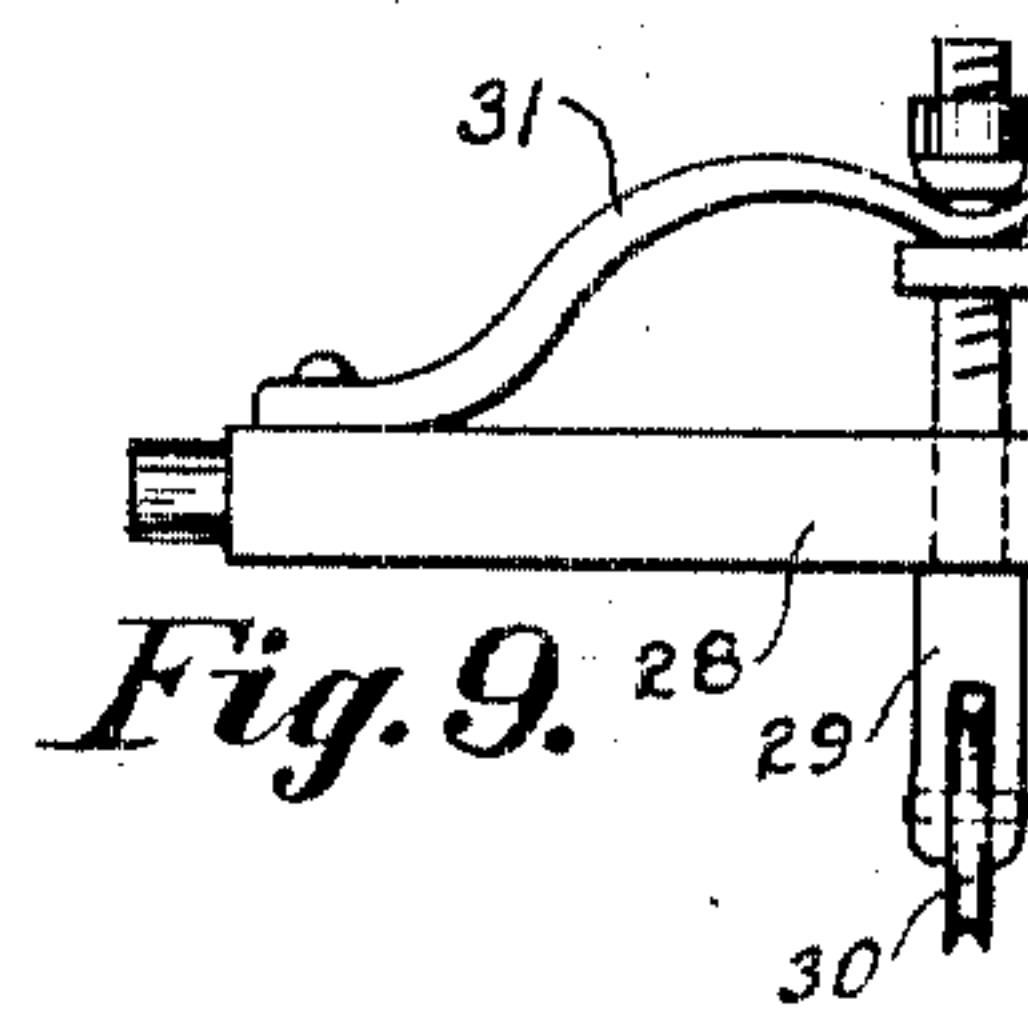
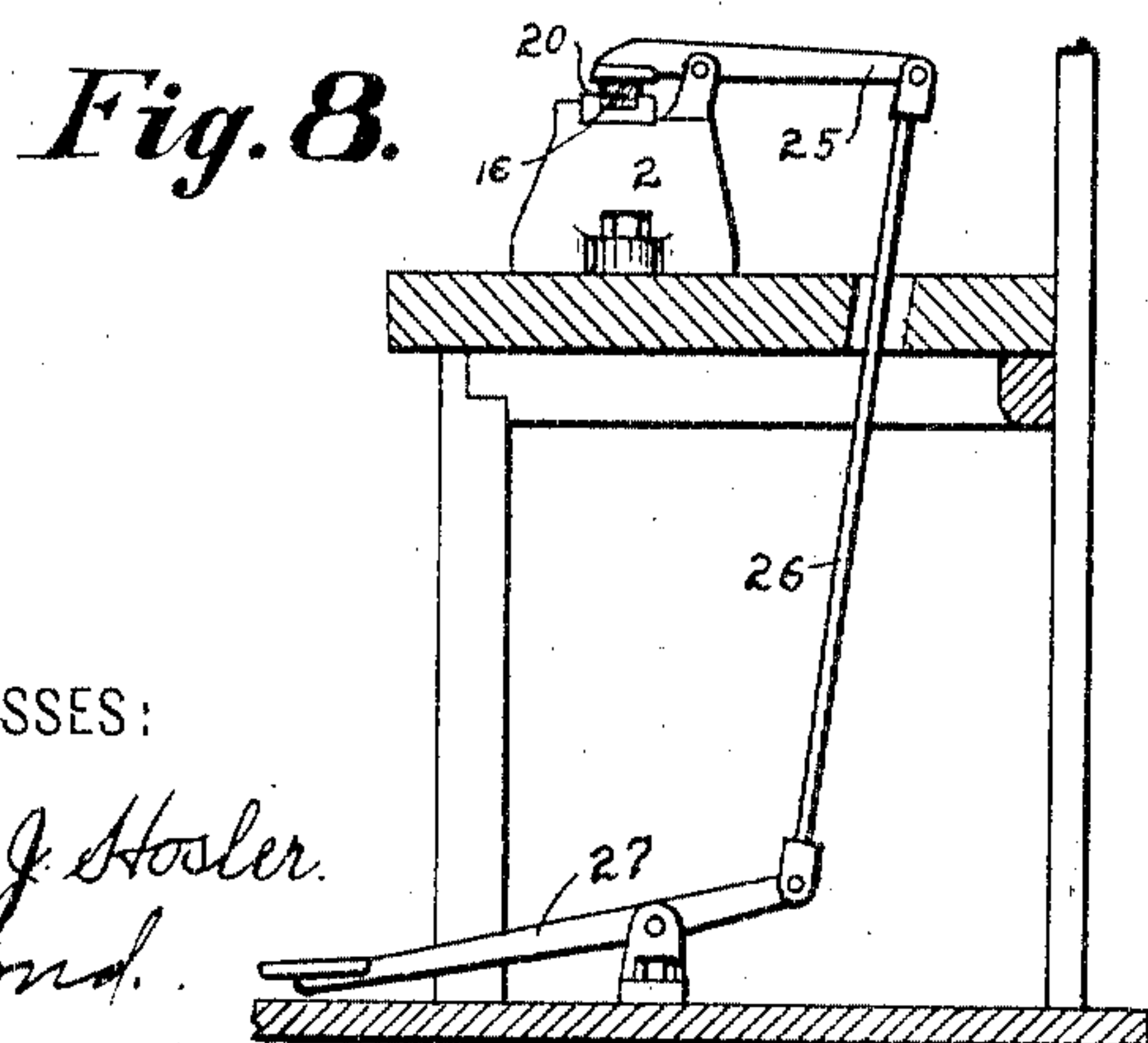
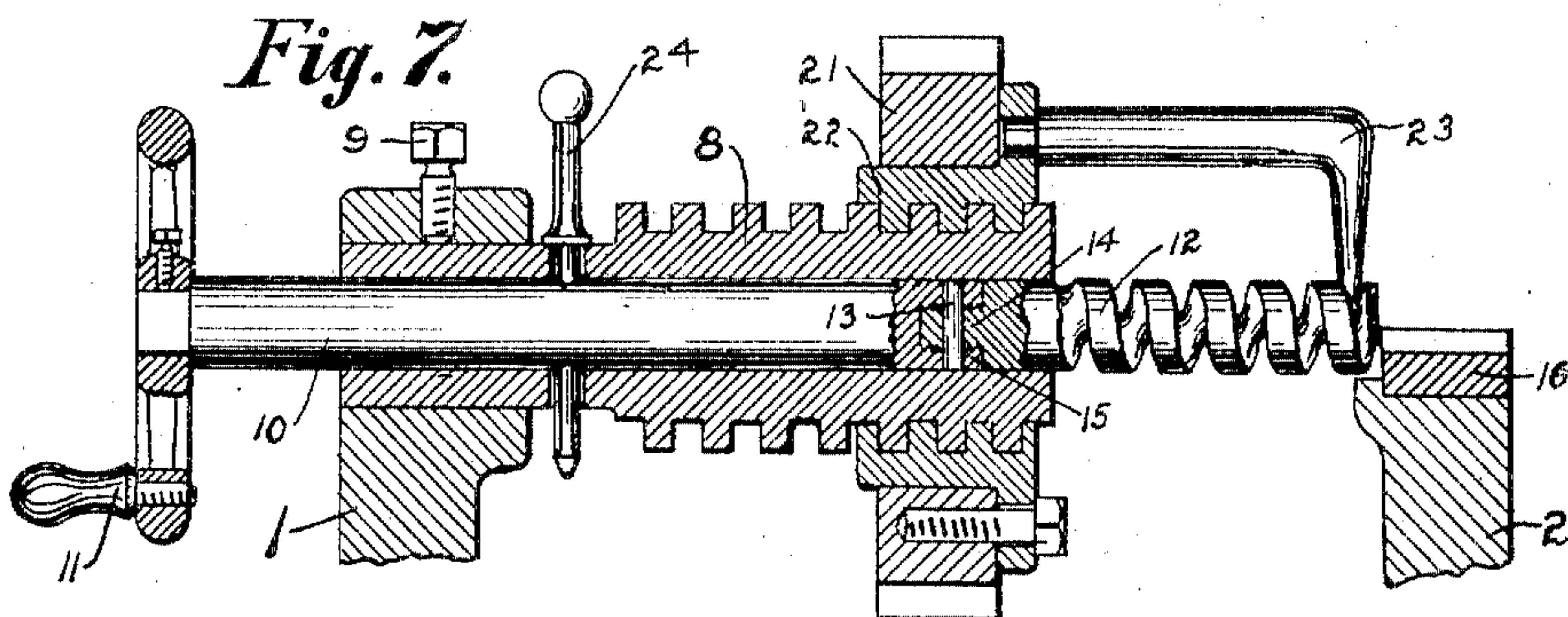
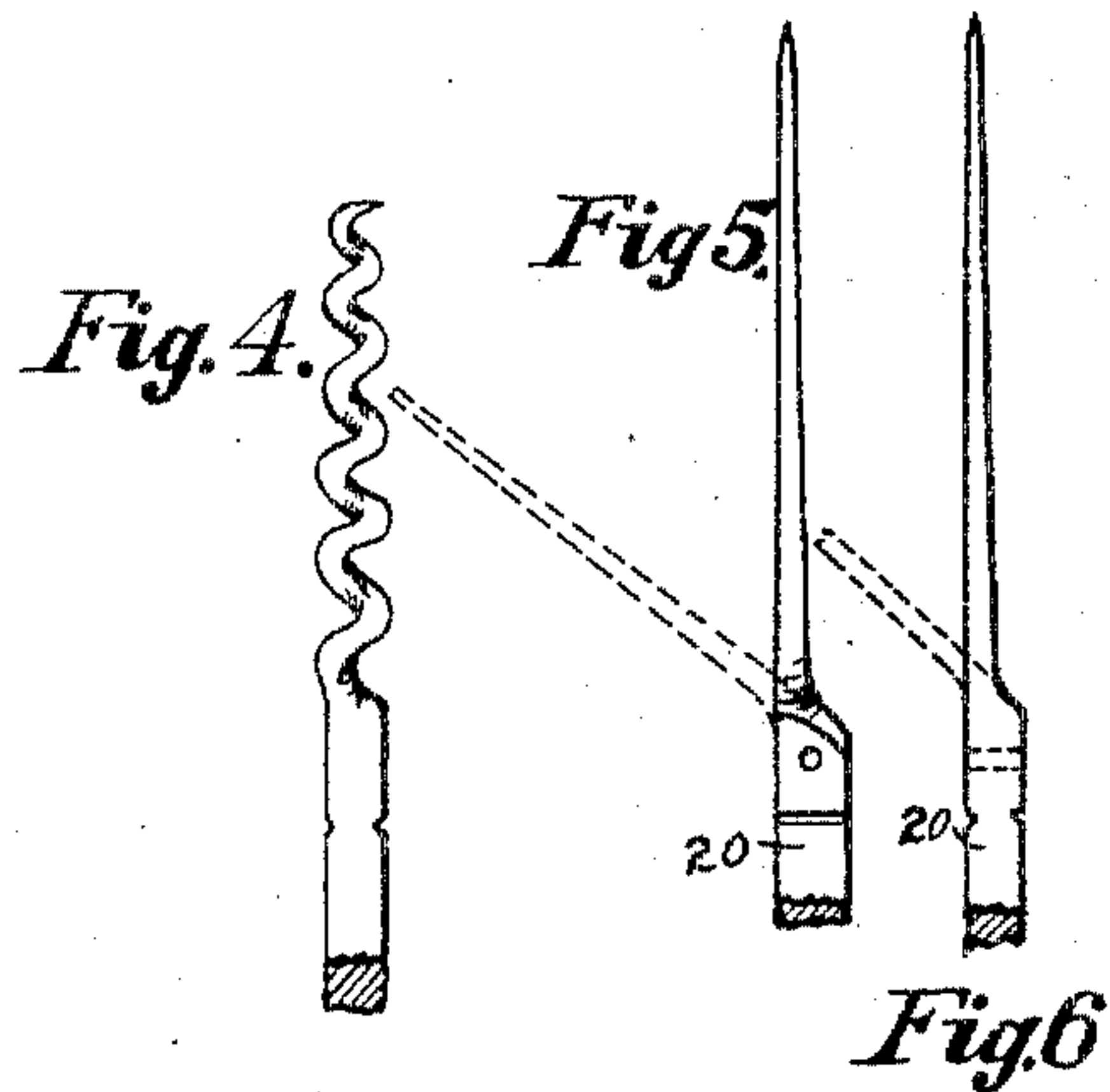
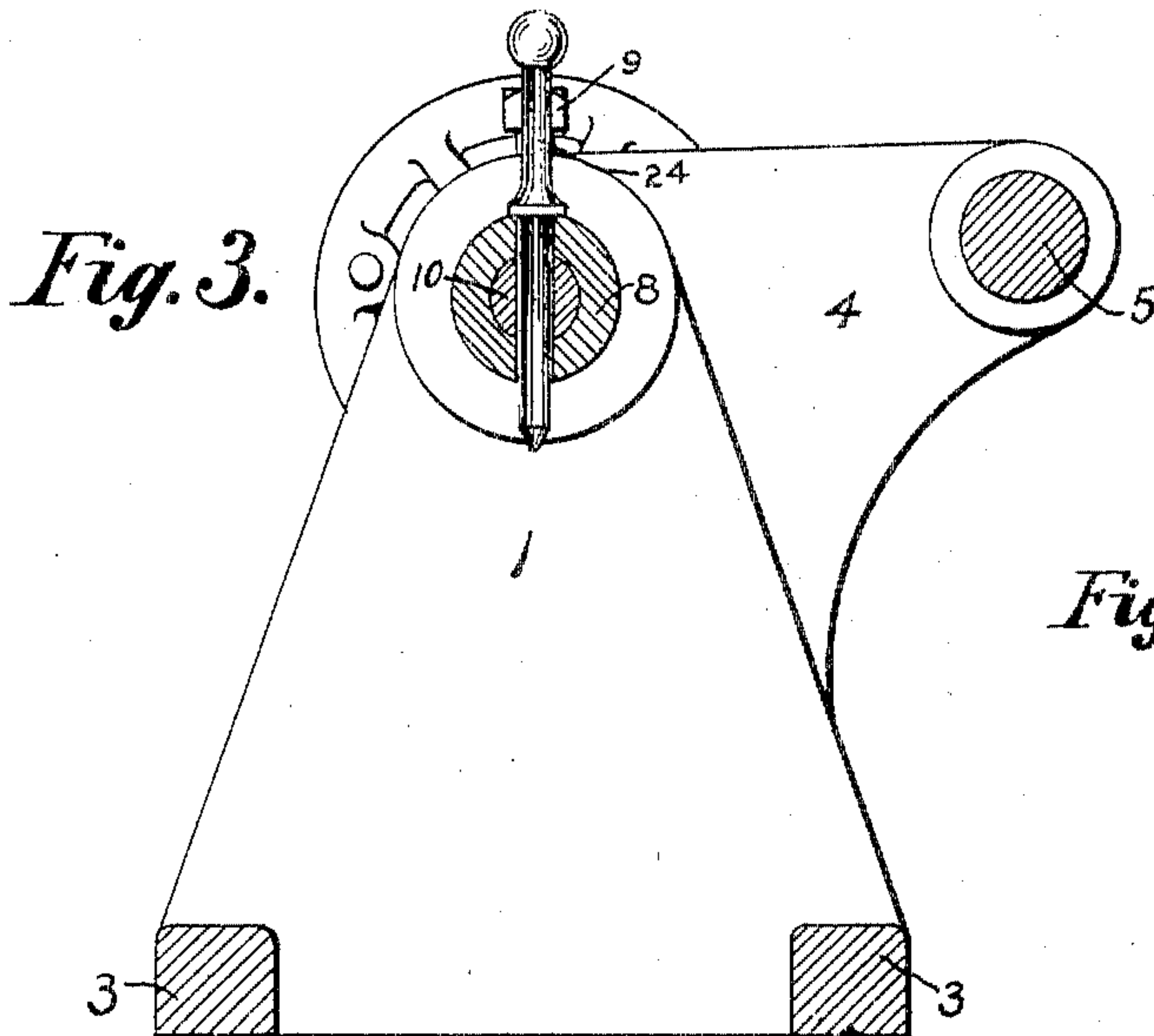
PATENTED DEC. 13, 1904.

A. A. VIGNOS.  
CORKSCREW MACHINE.

APPLICATION FILED APR. 12, 1904.

NO MODEL.

2 SHEETS—SHEET 3.



WITNESSES:

Joseph J. Hosler.  
J. R. Bond.

INVENTOR

Alfred A. Vignos  
BY J. W. Bond

ATTORNEY



# UNITED STATES PATENT OFFICE.

ALFRED A. VIGNOS, OF CANTON, OHIO.

## CORKSCREW-MACHINE.

SPECIFICATION forming part of Letters Patent No. 777,161, dated December 13, 1904.

Application filed April 12, 1904. Serial No. 202,780. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED A. VIGNOS, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have  
5 invented certain new and useful Improvements in Corkscrew-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being  
10 had to the annexed drawings, making a part of this specification, and to the numerals of reference marked thereon, in which—

Figure 1 is a top view showing the different parts properly arranged and illustrating a corkscrew partially formed. Fig. 2 is an end  
15 view showing a section of the corkscrew-blank. Fig. 3 is a section on line 3 3, Fig. 1, looking toward the left. Fig. 4 is a view showing a completed corkscrew. Figs. 5 and 6 are detached views of the corkscrew-blank, showing  
20 the blank end bent in dotted lines. Fig. 7 is a sectional view of the screw-threaded shaft and the different parts located thereon, showing the side view of the corkscrew-forming mandrel and the operating-shaft, except at the  
25 point where the corkscrew-forming mandrel and shaft are joined together, which parts are shown in section. Fig. 8 is a view showing a portion of the machine located upon a bench and illustrating the position of the blank  
30 clamp-lever designed to be operated by the foot. Fig. 9 is a detached view of the corkscrew-forming die, and illustrating a modified form from that shown in Figs. 1 and 7.

The present invention has relation to machines designed and calculated for forming  
35 corkscrews from blanks, and the corkscrews designed to be formed are especially adapted to be attached to knife-handles. However, I do not desire to be confined to this particular and  
40 exclusive use.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 and 2 represent the end housings and members, which  
45 are held in proper relative position by means of suitable tie-bars 3. The housings or side members 1 and 2 are provided with the flanges 4, which flanges are preferably formed integral with the housings or side members 1 and

2 and are for the purpose of providing suitable bearings for the power-shaft 5, which power-shaft is provided with the crank 6. Upon the shaft 5 is securely mounted the pinion 7, which pinion is for the purpose herein-  
55 after described.

To the end member 1 is securely attached the screw-threaded shaft 8, which screw-threaded shaft is held against rotation by means of the set-screw 9. The screw-threaded  
60 shaft 8 is formed hollow and has located therein the mandrel-operating shaft 10, which mandrel-operating shaft is provided with the crank 11. To the mandrel-operating shaft 10 is attached the corkscrew-forming mandrel 12 by  
65 means of the coupling-pin 13. In the drawings I have illustrated the corkscrew-forming mandrel provided with a shank 14, which shank is seated in the socket 15, said socket being  
70 formed in the end of the mandrel-operating shaft 10; but I do not desire to be confined to this particular manner of attaching the corkscrew-forming mandrel, as the only object is to provide some means for so connecting the  
75 mandrel that it will rotate with the shaft 10 at the time said shaft is rotated.

To the side member or housing 2 is attached the clamp-block 16, which clamp-block may be held by the set-screw 17.

To the housing 2 is pivotally attached the lever 18, which lever is provided with a clamp-  
80 block 19, which clamp-block is so located that it will clamp the corkscrew-blank 20 when the free end of the lever 18 is pressed downward, thereby securely holding the corkscrew-blank  
85 during the time the convolutions of the corkscrew are formed.

The screw-threaded shaft 8 is provided with screw convolutions of the same pitch as the convolutions of the mandrel 12, by which ar-  
90 rangement the gear-ring 21, together with the flange-nut 22, will move longitudinally when rotary motion is imparted to the gear-ring 21 by means of the pinion 7, said pinion 7 being  
95 formed of such a width that the gear-ring will not be moved out of mesh by the longitudinal movement of the gear-ring 21.

To the flange-nut 22 is securely attached the corkscrew-forming arm or die 23, which arm or die rotates around the mandrel 12 at the  
100



time rotary motion is imparted to the gear-ring 21.

In use the blank 20 is placed in the position illustrated in Fig. 1, said blank being first bent as illustrated in dotted lines, Figs. 5 and 6, and the bend placed in the first convolution of the mandrel 12, after which rotary motion is imparted to the ring 21, together with the different parts attached thereto, and as the arm or die 23 rotates around the mandrel it will bend the blank into the form shown in Fig. 4. It will be understood that the arm or die moves away from the extreme end of the mandrel as it rotates around said mandrel, the screw-threads upon the screw-threaded shaft 8 causing the gear-ring 21 to move by means of the nut 22, which nut is located upon the screw-threaded shaft 8, as illustrated in Fig. 7. After the cork-screw has been properly formed the pin 24 is withdrawn from the position illustrated in Fig. 7, which disconnects the shaft 10 from the screw-threaded shaft 8 and permits the shaft 10 to be rotated, which rotation imparts a rotary movement to the mandrel 12, and owing to the fact that the blank being held in fixed position the convolutions of the mandrel 12 draw said mandrel backward or away from the clamping devices, which leaves the formed corkscrew in such a position that it can be easily removed from its clamp. After the finished corkscrew has been removed the shaft 10 is moved endwise until it is brought into the position illustrated in Fig. 7 and the pin 24 again placed in the position shown in said Fig. 7.

It will be understood that the pin 24 holds the shaft 10, together with the corkscrew-forming mandrel, against rotation during the time the corkscrew is being formed.

The lever 18 is located in position to be operated by hand; but if desired to operate by the foot the lever 25 is provided and located as shown in Fig. 8 and the connecting-rod 26 connected thereto, the bottom end of said rod being attached to the lever 27, by which arrangement the foot-lever can be used to clamp the blank.

In Fig. 9 the arm 28 is provided with the bar 29, which bar is provided with a grooved wheel or roller 30, which grooved roller will come in contact with the blank 20 and bend the blank in the same manner that the die-arm 23 bends said blank. The object of attaching the bar 29 as shown is to allow said arm to come and go to and from the mandrel 12. The spring 31 is for the purpose of crowding the bar 29 toward the mandrel 12, by which arrangement the corkscrew proper is pointed at its extreme end.

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

1. In a machine for forming corkscrews, a suitable frame, a power-shaft having mounted thereon and rotating therewith a pinion, a gear-ring meshing with the pinion, said gear-ring mounted upon a nut, a screw-threaded shaft held in fixed position, an operating-shaft having detachably connected thereto a mandrel provided with convolutions, the convolutions corresponding in pitch with the convolutions of the fixed shaft, a die arm or bar secured to the nut mounted upon the screw-threaded shaft, substantially as and for the purpose specified.

2. In a corkscrew-forming machine the combination of a suitable frame a power-shaft journaled thereto, said power-shaft provided with a pinion, a gear meshing with the pinion, said gear mounted concentrically upon a screw-threaded shaft and the screw-threaded shaft held in fixed position, an operating-shaft located within the screw-threaded shaft, a corkscrew-forming mandrel detachably connected to the operating-shaft, and means for holding the operating-shaft against rotation, and a corkscrew-forming die rotatable with the gear meshing with the pinion upon the power-shaft, substantially as and for the purpose specified.

3. In a machine for forming corkscrews, a frame, a power-shaft journaled in the frame, a screw-threaded shaft held in fixed position, an operating-shaft located within the screw-threaded shaft movable longitudinally therein, a corkscrew-forming mandrel rotatable with the operating-shaft, a gear mounted upon the screw-threaded shaft and movable longitudinally thereon said gear meshing with a pinion mounted upon the power-shaft, a forming-die rotatable around the corkscrew-forming mandrel, and means for clamping the corkscrew blank, substantially as and for the purpose specified.

4. In a corkscrew-forming machine, a frame, a power-shaft journaled therein, a screw-threaded shaft held in fixed position, a gear mounted upon the screw-threaded shaft, said gear adapted to move longitudinally upon the shaft by its rotation, a corkscrew-forming mandrel provided with grooved convolutions corresponding in pitch with the convolutions of the screw-threads upon the fixed shaft, and a forming-die, an operating-shaft and a pin adapted to hold the shaft against rotation, and a lever adapted to clamp the corkscrew-blank, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALFRED A. VIGNOS.

Witnesses:

J. A. JEFFERS,  
F. W. BOND.