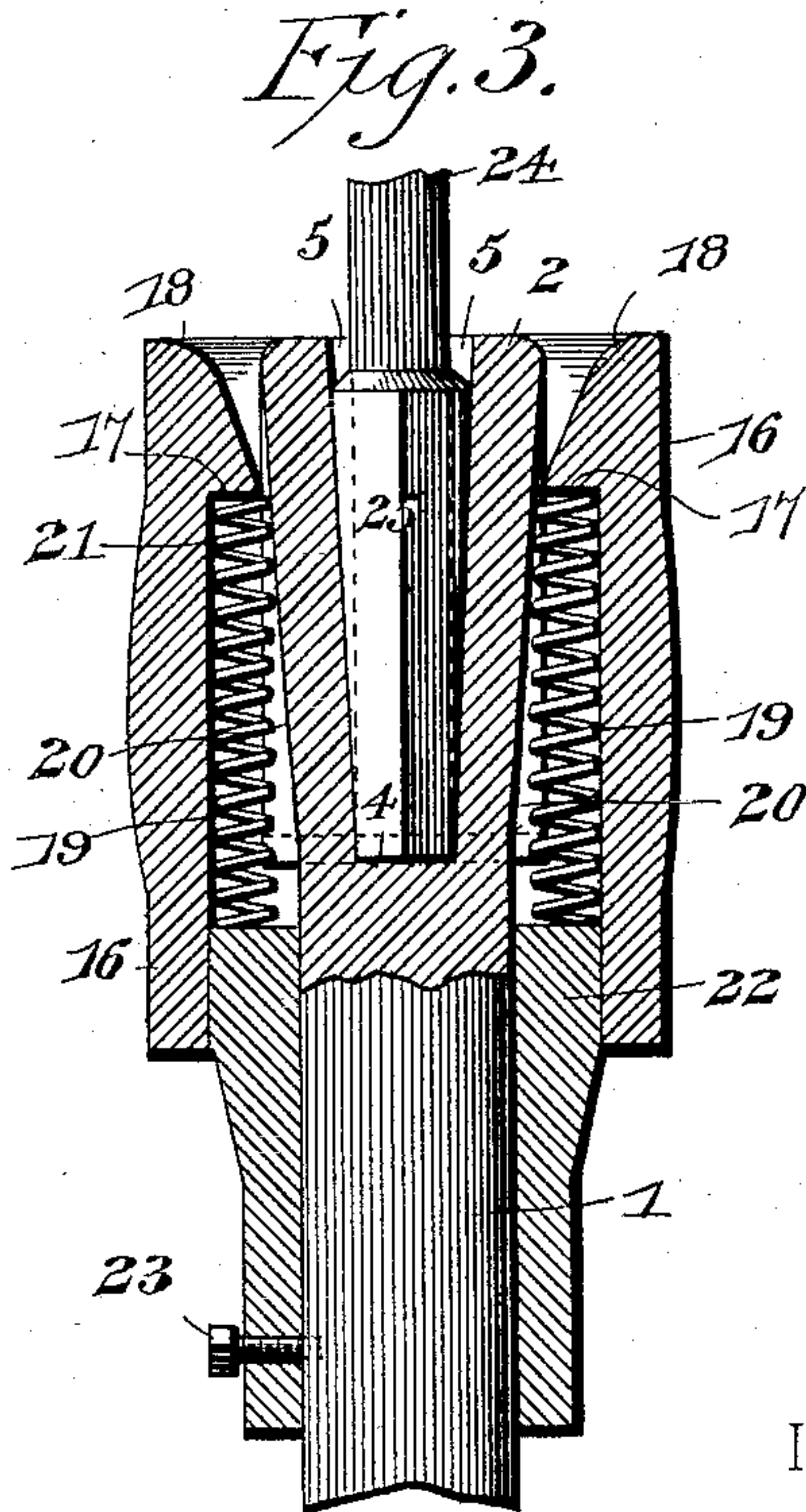
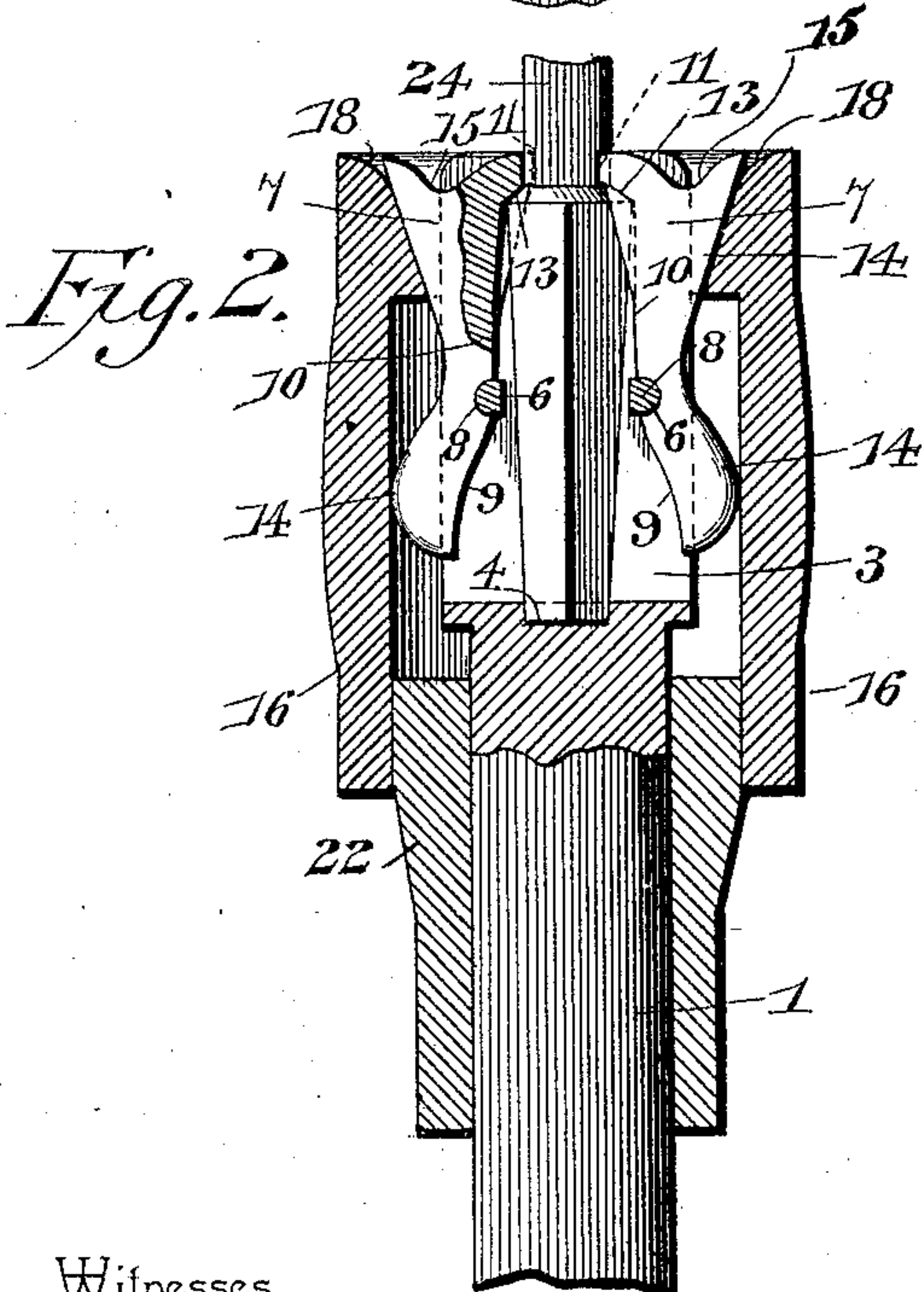
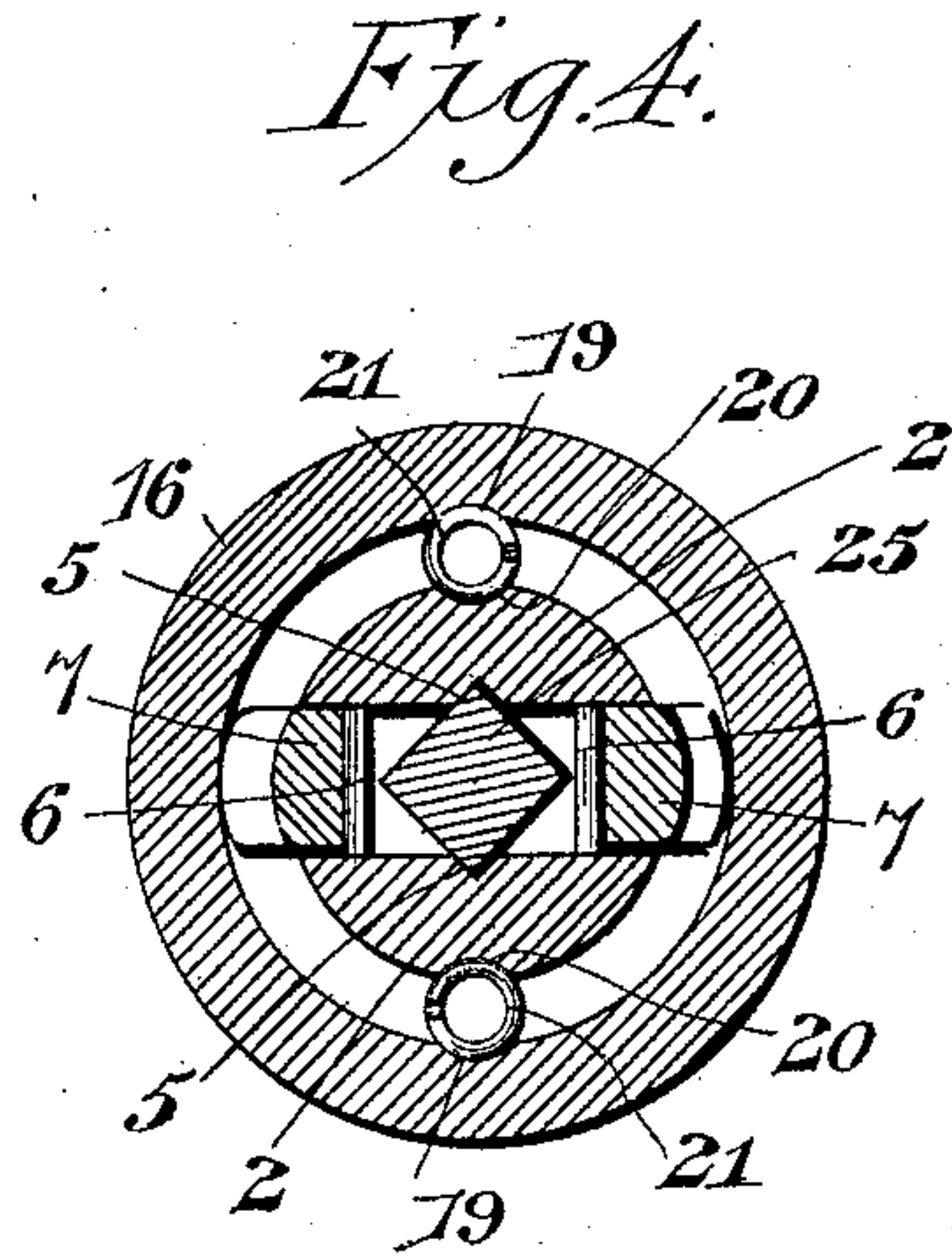
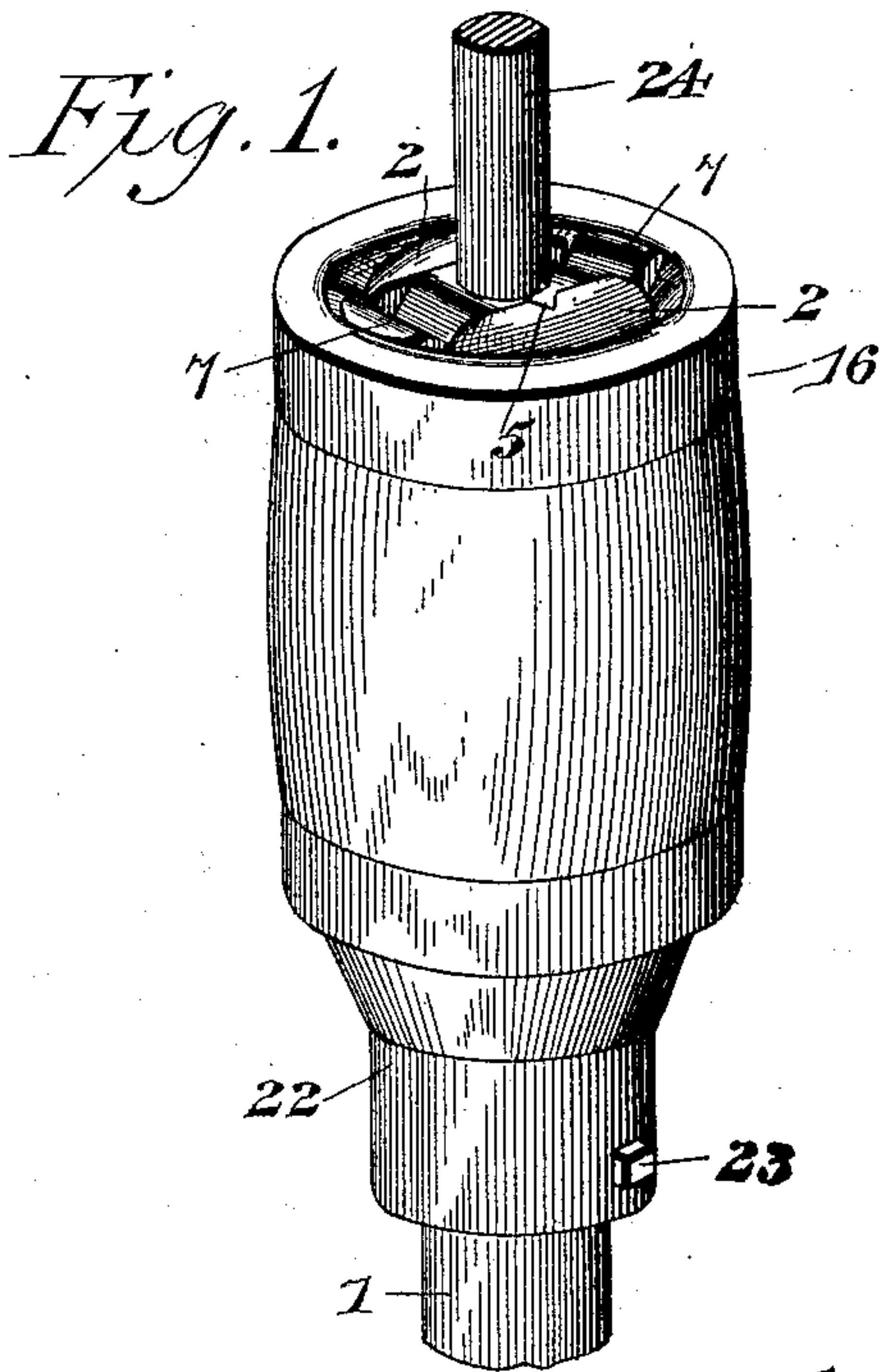


(No Model.)

M. BARBER.  
BIT STOCK.

No. 603,825.

Patented May 10, 1898.



Inventor

*Melvin Barber*

Witnesses

*Jack McLaughlin*  
*Edwin Cruise.*

By *Two* Attorneys,

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

MELVIN BARBER, OF OKLAHOMA, OKLAHOMA TERRITORY, ASSIGNOR OF  
ONE-FOURTH TO L. E. JOHNSON, OF SAME PLACE.

## BIT-STOCK.

SPECIFICATION forming part of Letters Patent No. 603,825, dated May 10, 1898.

Application filed August 23, 1897. Serial No. 649,169. (No model.)

*To all whom it may concern:*

Be it known that I, MELVIN BARBER, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and Territory of Oklahoma, have invented a new and useful Bit-Stock, of which the following is a specification.

This invention relates to bit-stocks, its object being to provide a device of this character provided with clamping-jaws to embrace and hold the bit, and which jaws may be quickly and easily operated to permit the insertion or removal of the bit or drill.

With this and other objects in view the invention consists of the several details of construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a bit-stock made in accordance with my invention. Fig. 2 is a longitudinal section. Fig. 3 is a longitudinal section taken at a right angle to Fig. 2. Fig. 4 is a horizontal section.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates a shaft to be attached to an ordinary brace, either ratchet or plain. The shaft is enlarged at its outer end to form a head 2, which is provided with a transverse slot 3, extending nearly the entire length of the head.

4 indicates a rectangular recess formed in the bottom wall of the slot to receive the end of the rectangular shank of the bit. In the opposing faces of the vertical walls of the slot V-shaped recesses 5 are formed, which extend from diagonally opposite corners of the recess 4 outwardly to the outer end of the slot and gradually increase in depth as they extend outwardly.

6 indicates pins extending across the slot about midway its length, at the outer edges thereof.

7 indicates the jaws, which are duplicates of each other, and a description of one will therefore suffice for both. The jaw is provided with a transverse semicircular groove 8 in its inner face to fit over the pin 6, which will form a fulcrum on which the jaw may rock. The inner face of the jaw below the

groove curves outwardly, as indicated at 9. Above the groove the inner face of the jaw is straight for a portion of its length, as indicated at 10, and then gradually inclines inwardly to form an overhanging lip 11, which is provided with a curved recess to embrace the round part of the bit adjacent to its rectangular shank.

13 indicates a V-shaped recess formed in the inner face of the jaw and extending downwardly from the lip 11 and gradually decreasing in depth. The outer face 14 of the jaw curves outwardly above and below the groove 8 in such manner that when the jaw is seated on the pin 6 one of its ends will always project outwardly beyond the periphery of the head. The portion of the jaw below the groove is shorter than that above it in order that it may be free to swing inwardly into the slot. The outer end of the jaw extends to and is flush with the end of the head 2 and will preferably have a transverse V-shaped groove therein to form a finger-hold to rock the jaw on its fulcrum should it be necessary to do so at any time.

16 indicates a sleeve the bore of which is reduced at its outer end, and an internal shoulder 17 is thus formed, and the outer end of the reduced bore is flaring, as indicated at 18. Below the shoulder 17 two semicircular grooves 19 are formed in the bore of the sleeve at diametrically opposite points and extend longitudinally thereof, and two semicircular grooves 20 are also formed diametrically opposite each other in the head 2, and when the parts are assembled the grooves 19 and 20 will register and form seats for the coiled springs 21, which abut at one end against the shoulder 17 and at their other ends against the end of a collar 22. The collar 22 is slidably supported on the shaft 1 to extend within the sleeve 16 and is held in any adjusted position by a set-screw 23, which works in the collar and engages the shaft. The bit is indicated by 24, and 25 indicates its rectangular shank.

When the parts are assembled and the collar 22 properly adjusted, the normal tendency of the springs 21 will be to force the sleeve 16 outwardly and thereby force the outer ends of the jaws inwardly toward each other. The



parts will be so arranged that when in their normal position the shoulder 17 will be opposite the fulcrum-pins 6 and the curved outer face of the lower end of the jaws will be in the larger bore of the sleeve. It is obvious, therefore, that if the sleeve 16 is retracted against the force of the springs the shoulder 17 will move over the curved outer face of the lower end of the jaws and force them inwardly into the slot, thereby spreading their outer ends apart, and the bit can then be easily inserted, and that as soon as the sleeve is released the springs will again force it outwardly, and the flaring outer end of the reduced bore of the sleeve will act upon the curved outer faces of the outer ends of the jaws and force them inwardly toward each other and clamp the bit firmly in position, and the parts are intended to be so proportioned that the lips 11 will embrace the round part of the bit adjacent to its rectangular shank and thereby prevent the withdrawal of the bit.

While I have illustrated and described my invention as applied to a bit-stock, it is obvious that it will be equally useful and efficient to hold other tools which are provided with rectangular shanks—such as screwdrivers, awls, &c.—and it is also to be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. The combination with a shaft having a slotted head, of fulcrum-pins extending across the slot in the head near its edges, clamping-jaws fulcrumed on the pins with their outer faces projecting beyond the periphery of the head, a sleeve slidably fitted over the head to open and close the jaws by its movement, and springs interposed between said sleeve and an adjustable support on the shaft to normally force the sleeve outwardly to close the jaws, substantially as described.

2. The combination with a shaft having a slotted head, the jaws supported to rock on fulcrums in said slot, the outer faces of said jaws being curved outwardly above and below their fulcrums, a sleeve slidably fitted over the head and having an internal shoulder to engage the curved outer face of the inner ends of the jaws, and a flaring bore at its outer end to engage the curved outer face of the outer ends of the jaws, and springs interposed between said internal shoulder and an adjustable support on the shaft, to normally force the sleeve outwardly, substantially as described.

3. The combination with a shaft having a slotted head, of jaws supported to rock on fulcrums in said slot, the outer faces of said jaws being curved outwardly above and below their fulcrums, a sleeve slidably fitted over the head and having an internal shoulder to engage the curved outer faces of the inner ends of the jaws, and a flaring bore at its outer end to engage the curved outer faces of the outer ends of the jaws, a collar slidably supported on the shaft to extend within said sleeve, springs interposed between the said shoulder and the end of the collar, and means to lock the collar on the shaft, substantially as described.

4. The combination with a shaft having a slotted head, the opposing faces of said slot being provided with V-shaped grooves extending longitudinally thereof, of jaws supported to rock on fulcrums in said slot, the outer faces of said jaws being curved outwardly above and below their fulcrums, and their inner faces having overhanging lips at their outer ends, and V-shaped grooves extending longitudinally from said lips, and said lips having curved recesses in their opposing faces, a sleeve slidably fitted over the head and having an internal shoulder to engage the curved outer faces of the inner ends of the jaws, and a flaring bore at its outer end to engage the curved outer faces of the outer ends of the jaws, and springs interposed between said internal shoulder and an adjustable support on the shaft to normally force the sleeve outwardly, substantially as described.

5. The combination with a shaft having a slotted head, of fulcrum-pins extending across the slot in the head near its edges, clamping-jaws fulcrumed on the pins with their outer faces projecting beyond the periphery of the head, a sleeve slidably fitted over the head to open and close the jaws by its movement, said sleeve having an internal annular shoulder, and the head and sleeve having registering semicircular grooves extending outwardly from said shoulder, coiled springs seated in said grooves and abutting at one end against said shoulder, a collar slidably supported on the shaft to engage the other ends of the springs, and means to lock the collar on the shaft, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MELVIN BARBER.

Witnesses:

L. E. JOHNSON,  
G. F. CRUSS.