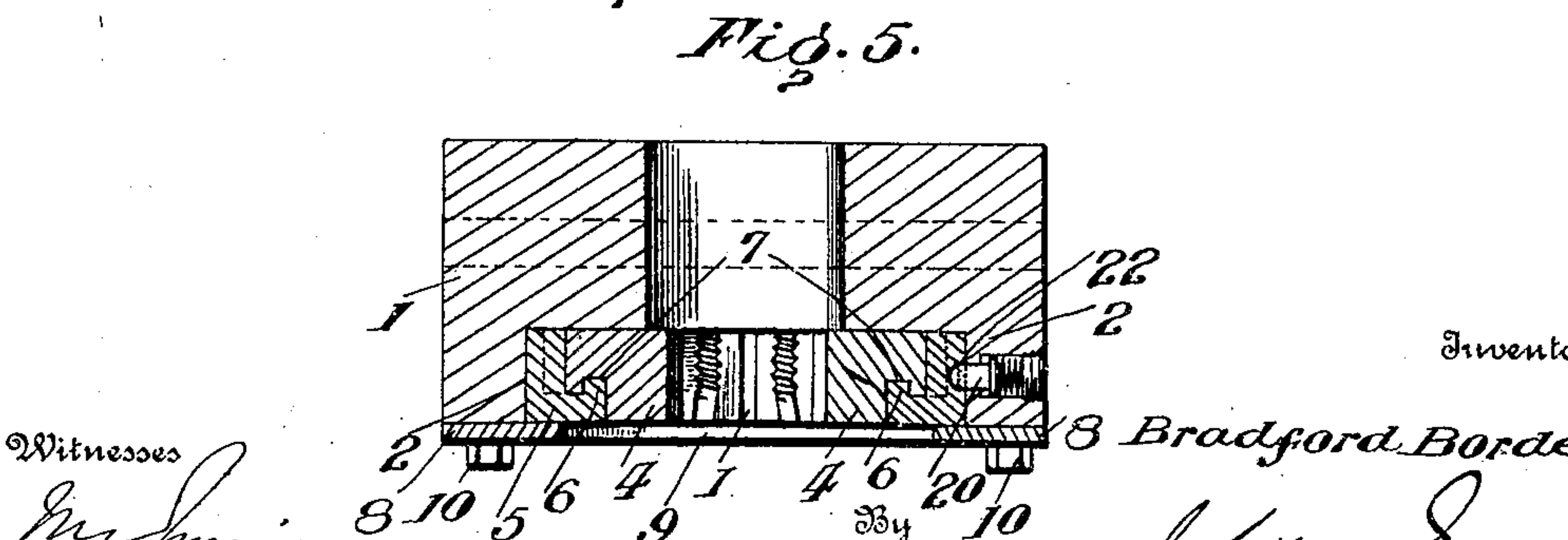
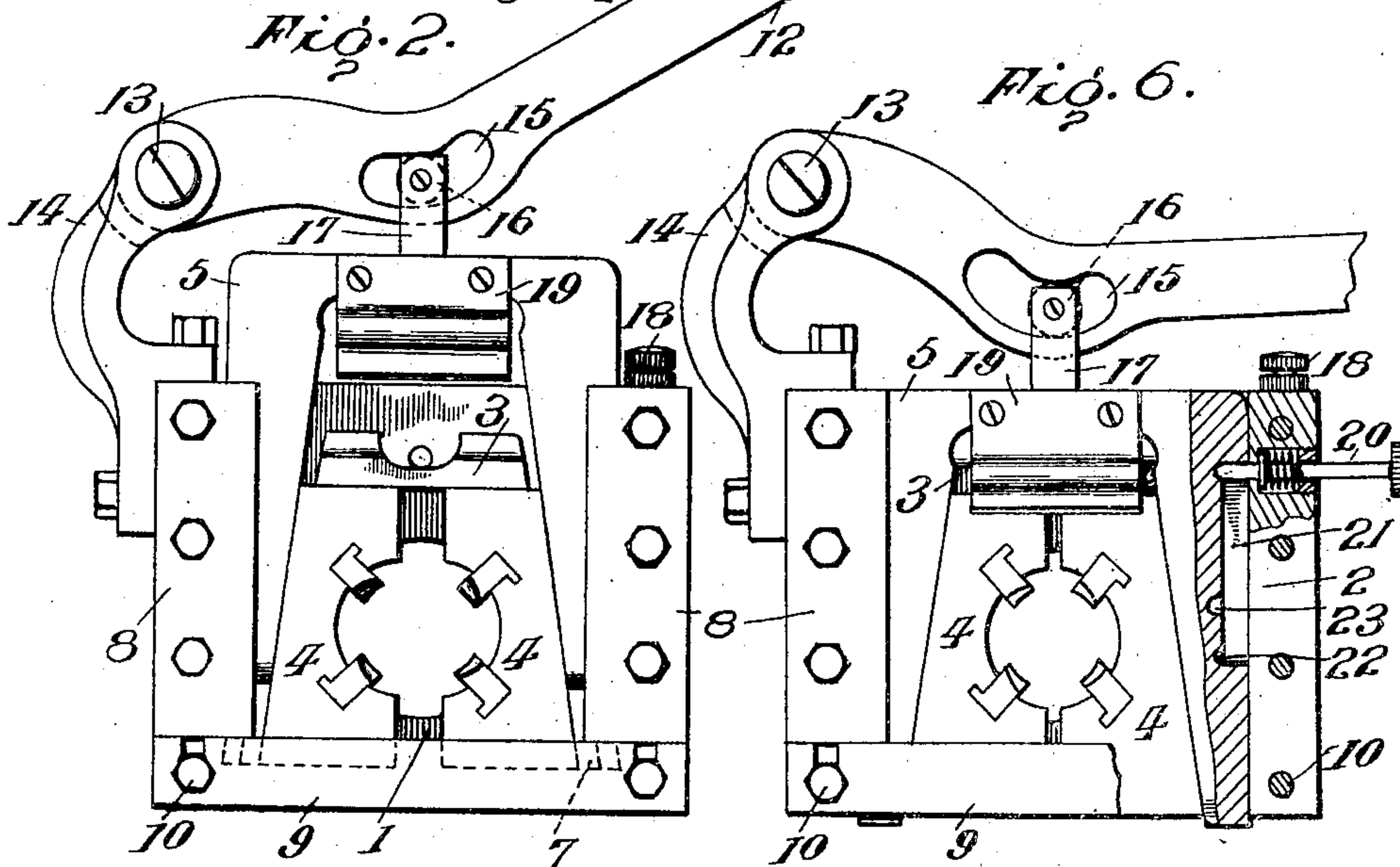
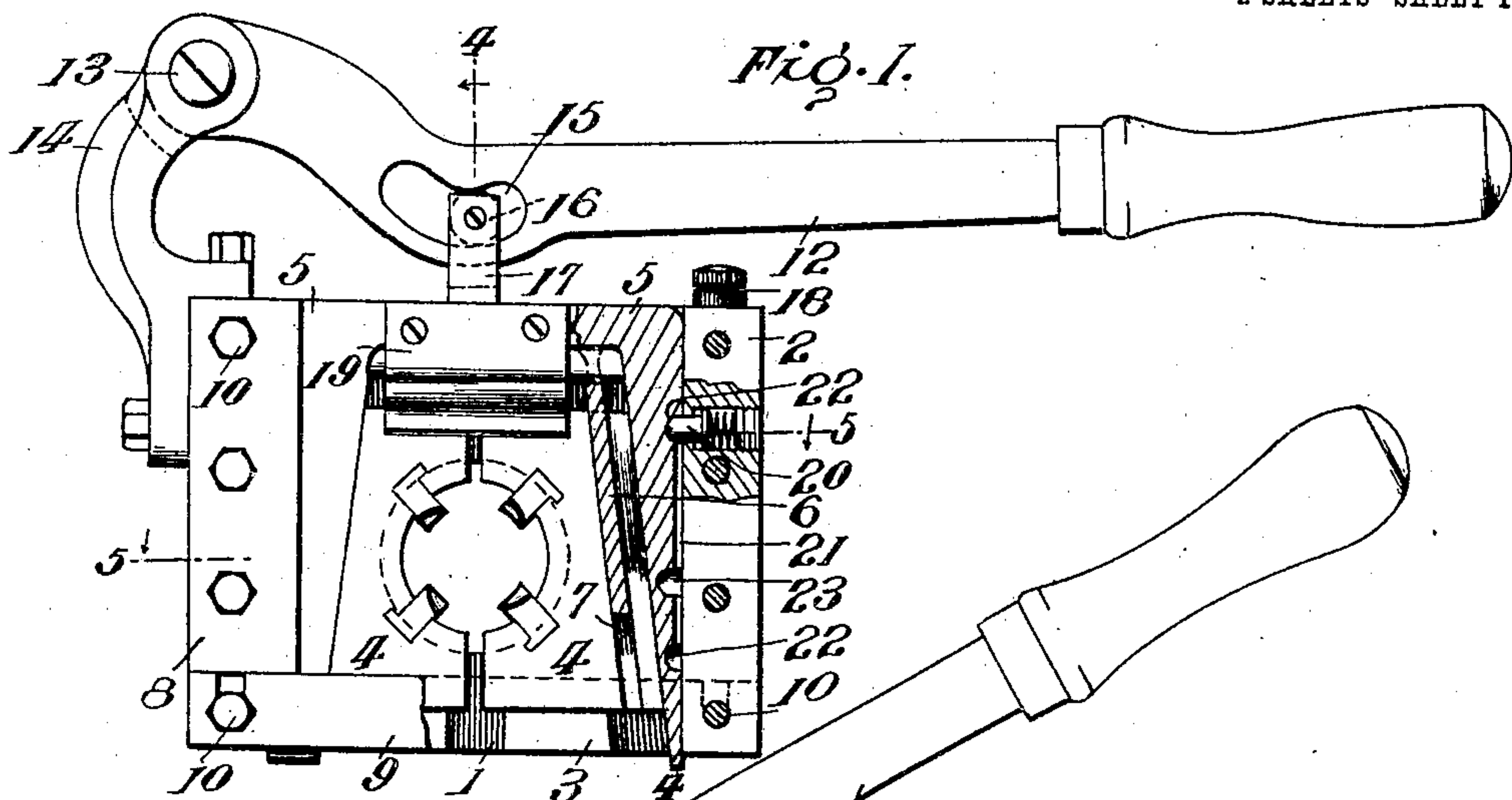


No. 814,581.

PATENTED MAR. 6, 1906.

B. BORDEN.
ADJUSTABLE DIE STOCK.
APPLICATION FILED JAN. 4, 1905.

2 SHEETS—SHEET 1.



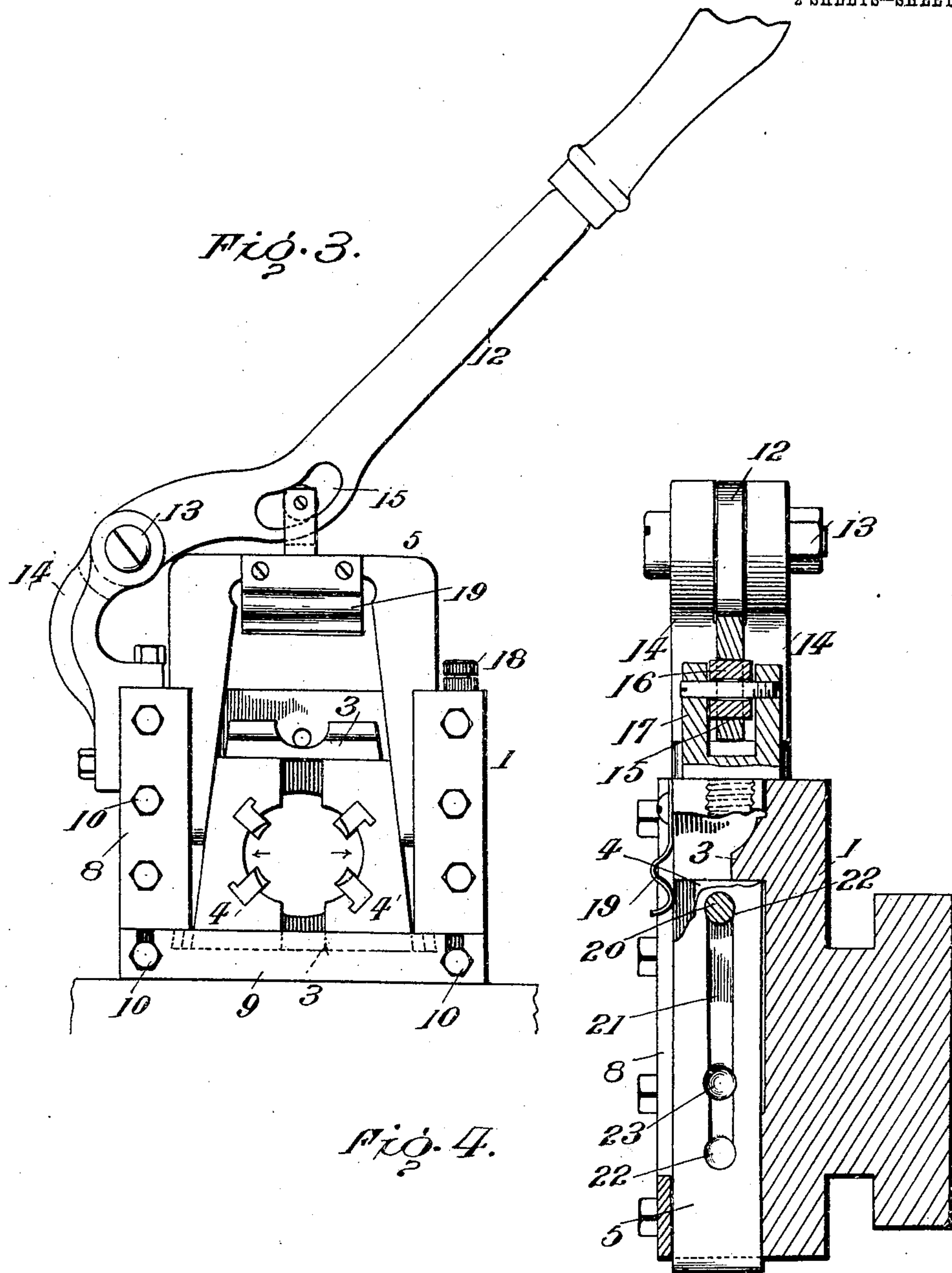
Witnesses
Francis S. Maynard
By
Bradford Borden
Attorney

No. 814,581.

PATENTED MAR. 6, 1906.

B. BORDEN.
ADJUSTABLE DIE STOCK.
APPLICATION FILED JAN. 4, 1905.

2 SHEETS—SHEET 2.



Witnesses

Francis S. Maynard

Inventor

Bradford Borden

By

J. H. Borden

Attorney

UNITED STATES PATENT OFFICE.

BRADFORD BORDEN, OF WARREN, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE BORDEN COMPANY, OF WARREN, OHIO, A CORPORATION OF OHIO.

ADJUSTABLE DIE-STOCK.

No. 814,581.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed January 4, 1905. Serial No. 239,670.

To all whom it may concern:

Be it known that I, BRADFORD BORDEN, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Adjustable Die-Stocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The primary object of this invention is to improve the construction and promote the efficiency of an adjustable die-stock of the type covered by Letters Patent of the United States No. 744,465, issued to me November 17, 1903, as applied to a power-machine.

As well known in the art, in power-machines the dies or thread-cutters have to pull the carriage wherein the pipe is mounted and rotated, the dies and their housing being stationary. The result is that the weight of the carriage, coupled with the cutting action of the dies, tends to pull the latter away from their bearings. In consequence imperfect threads are formed and grit and chips are liable to get between the dies and their bearings, preventing the former from fitting snug against the latter.

A further object is to provide improved means for limiting the outward movements of the adjuster and holding it in its raised positions, and yet permit it to be readily removed from the housing when it is desired to insert new dies.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a face view showing the parts in their closed positions, portions being broken away. Fig. 2 is a similar view with the parts open. Fig. 3 is likewise a face view showing the parts in position to permit of the dies being changed. Fig. 4 is a cross-sectional view on line 4 4, Fig. 1. Fig. 5 is a transverse sectional view on line 5 5, Fig. 1. Fig. 6 is a side view, partly in section, of a slight modification.

Referring to the drawings, 1 designates the housing, which is constructed of heavier material than is required in hand-stocks and is designed to be suitably mounted in such relation to a pipe-rotating carriage (not shown) that the pipe will be turned axially as it is passing through the housing. As in the be-

fore-noted patent the housing has straight end walls 2 and top and bottom walls 3, between which fit the sectional dies 4, which are moved toward and away from each other by an adjuster 5. This adjuster is shown in the form of a frame whose side members have straight and inclined faces, the former bearing against the end walls 2 and the latter against the inclined walls of the dies, thus entirely filling the spaces between the dies and the housing. Those portions of the sides of the adjuster which overlap the dies have tongues 6, which work in grooves 7 of the dies, so as to draw the latter away from each other as the adjuster is moved outwardly. The adjuster is held in place within the housing by overlapping plates 8, bolted to the end walls of such housing, and the dies are retained at their lower ends by a cross-plate 9, held by removable bolts 10.

12 designates the lever by which the adjuster is manipulated. It is fulcrumed by a pin 13 in the slotted end of a bracket 14, bolted to the housing, and at a point in line with the center of the connecting portion between the two side members of the adjuster is equipped with a curved slot 15, wherein is located a roller 16, mounted in a bracket 17, secured to the said connecting portion. By grasping the handled end of the lever the adjuster may be readily moved inwardly or outwardly, the slot 15 allowing the roller to readily accommodate itself to the different positions of the parts, such slot being curved, so as to avoid binding. The extent to which it is desired the dies should be moved toward each other by the adjuster, so as to insure uniformity in the depth of the cuts, is controlled by an adjustable screw 18, working in the top of the housing, such screw limiting the movement of the adjuster by reason of the lever contacting therewith.

In order to keep the dies firm in their bearings—that is to say, against the rear wall of the housing—and prevent any deflection thereof and guard against grit or chips falling between the dies and the housing, I mount a heavy steel spring-plate 19 on the connecting portion of the adjuster. This spring-plate at its lower end is designed to extend over and firmly contact with the front faces of the dies. This tends to force the adjuster outwardly and the dies inwardly, holding the latter firmly against the housing. Thus the

tendency in a power-machine to pull the dies away from the housing is effectively overcome, since the adjuster being forced forwardly the spring-plate carried thereby must
 5 of necessity hold the dies as against outward deflection. When it is desired to change the dies, the upward movement of the adjuster will clear them of the spring-plate, the latter being made of width accordingly.

10 20 designates a spring-pressed pin or plug mounted in a horizontal bore of one of the end walls of the housing, such pin being designed to extend into a groove 21, formed longitudinally of one of the side members of the
 15 adjuster. This pin acts as a stop to limit the normal extreme movements of the adjuster by entering recesses 22 in the ends of the groove, and it also serves to retain the adjuster in its raised position—that is to say,
 20 when moved outwardly sufficient to permit of the insertion of a pipe between the dies, but without disengaging the dies—by projecting into a circular recess 23, formed in the groove near the lower end thereof. This latter re-
 25 cess is somewhat deeper than the recesses at the ends of the groove. In order, therefore, to move the adjuster beyond the point of coincidence between the recess 23 and the spring-pressed pin, as when new dies are to
 30 be substituted, greater lifting pressure against the handled end of the lever is required. The projecting end of the pin is rounded, so that the tension of its spring may be readily overcome when it is desired to move the adjuster
 35 in either direction.

The advantages of my invention are apparent to those skilled in the art. It will be seen that by reason of the present improvements all danger of the sectional dies pulling
 40 away from their bearings during the cutting operation is successfully avoided and that by reason of the rounded spring-pressed bolt the adjuster is not only limited in its movements, but may be held as against falling at a point
 45 sufficient to permit of the removal of one pipe and the insertion of another. At the same time the holding means permits the adjuster to be entirely removed from the housing when occasion requires.

50 I claim as my invention—

1. A pipe-threading machine comprising an open-front housing having opposite end walls, sectional dies within the housing be-
 55 tween such walls, a free sliding adjuster filling the spaces between said dies and said end walls for moving the dies toward and away

from each other, means for preventing forward deflection of the adjuster, and means carried by the adjuster for engaging the dies and so acting on the latter and the adjuster
 60 as to force the dies and adjuster in opposite directions and enable the former to resist any forward deflection during the cutting operation.

2. A pipe-threading machine comprising 65 an open-front housing having opposite end walls, sectional dies within the housing between such walls, a free sliding adjuster filling the spaces between said dies and said end walls for moving the dies toward and away
 70 from each other, means for preventing forward deflection of the adjuster, and a heavy spring-plate carried by the adjuster for engaging the front faces of the dies during the cutting operation, said plate being dis- 75 engaged from said dies when the adjuster is moved outwardly, permitting the dies to be moved from the housing.

3. A pipe-threading machine comprising an open-front housing having opposite end 80 walls, sectional dies within the housing between such walls, a free sliding adjuster filling the spaces between said dies and said end walls for moving the dies toward and away from each other, said adjuster having corre- 85 sponding side members and a connecting portion, plates secured to said housing overlapping said side members, a spring-plate secured to said connecting portion for engaging the front faces of said dies, and a lever for oper- 90 ating said adjuster, said spring-plate being of such width that when the adjuster is moved outwardly by the lever it will be disengaged from the dies.

4. The combination with the housing, the 95 dies and the free sliding adjuster therefor having a longitudinal groove in one side and recesses at the upper and lower ends of said groove and a third recess near said lower end, and an actuating-lever connected to said ad- 100 juster, of a spring-pressed pin mounted in the housing and extended into said groove, said pin being designed to hold said adjuster and lever raised when the pin is in either of the lower recesses. 105

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

BRADFORD BORDEN.

Witnesses:

FRANK S. CHRYST,
 JOHN R. LACHMAN.