

No. 849,940.

PATENTED APR. 9, 1907.

F. F. TIFFT.
TOOL FOR LATHES.
APPLICATION FILED MAY 12, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

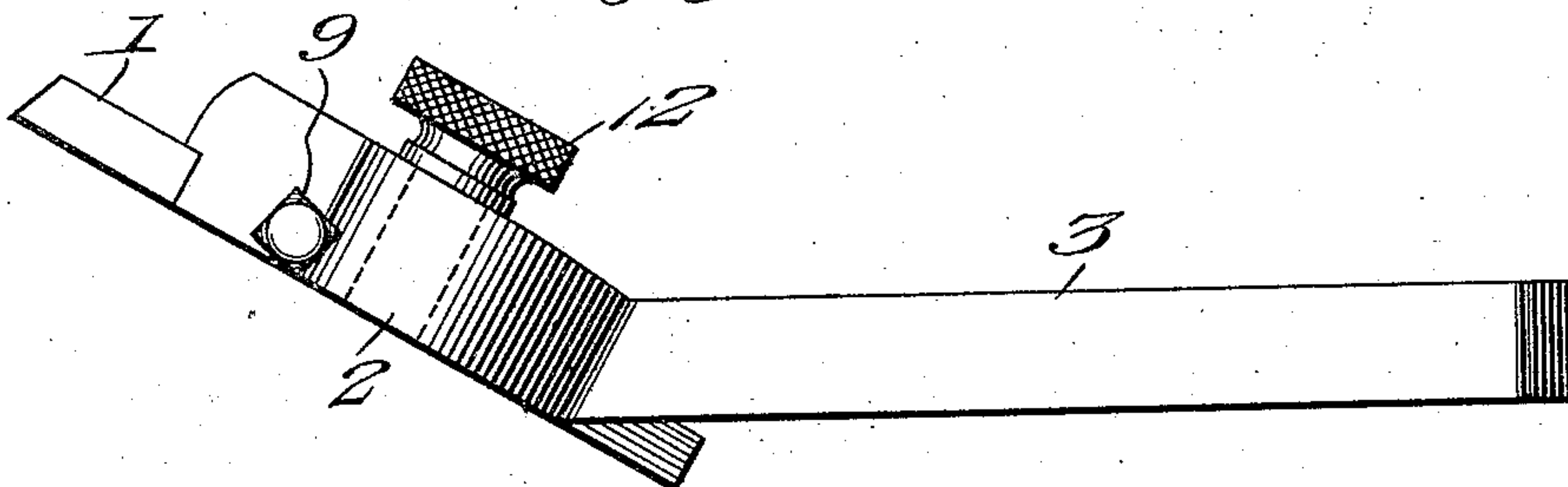


Fig. 2.

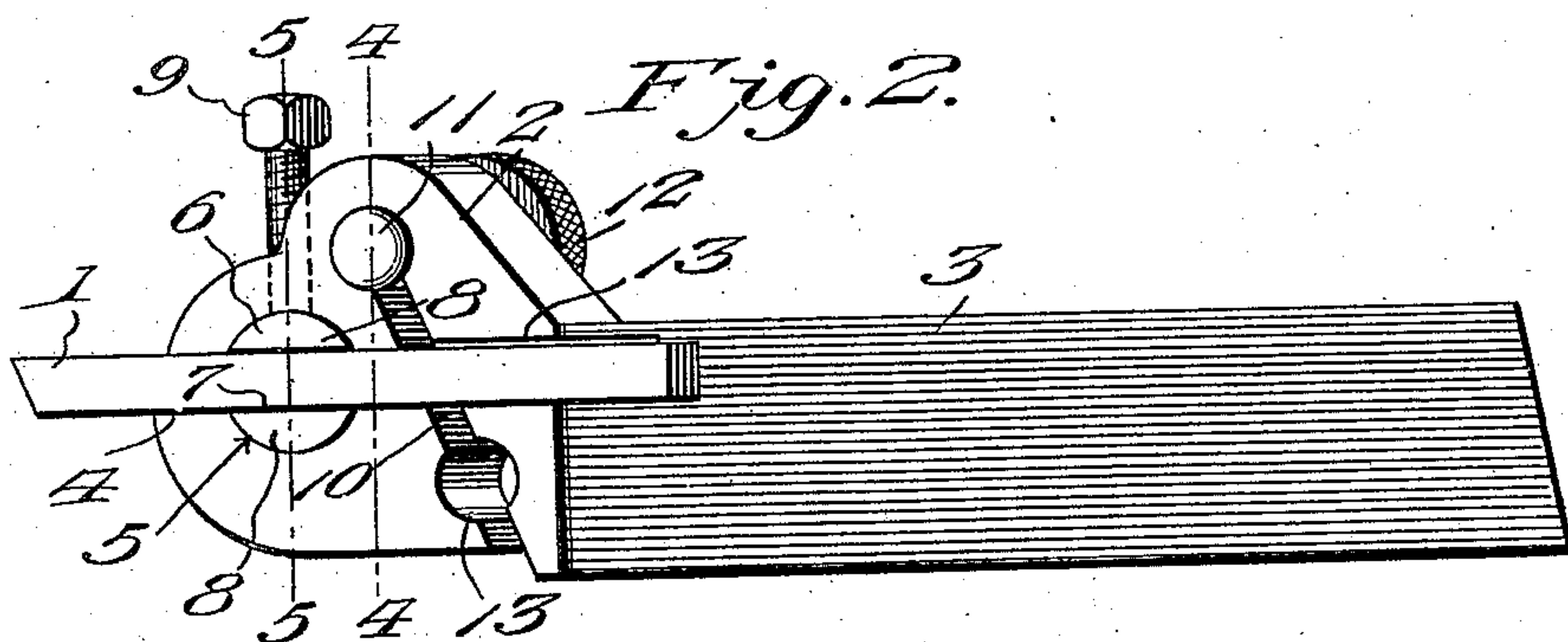
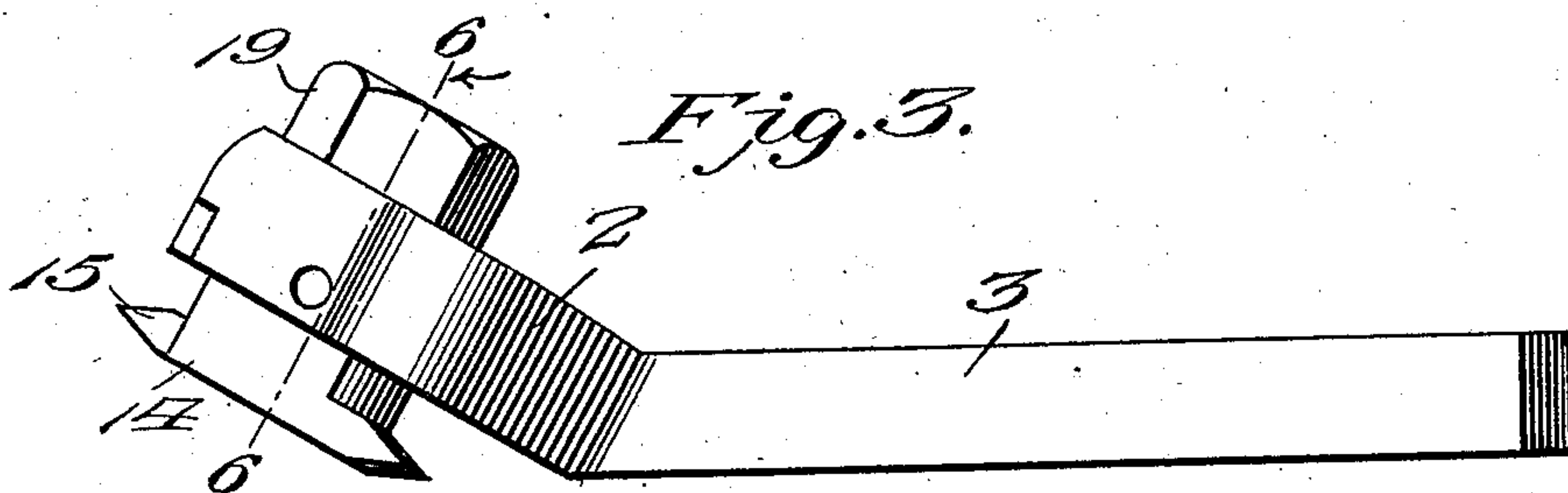


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

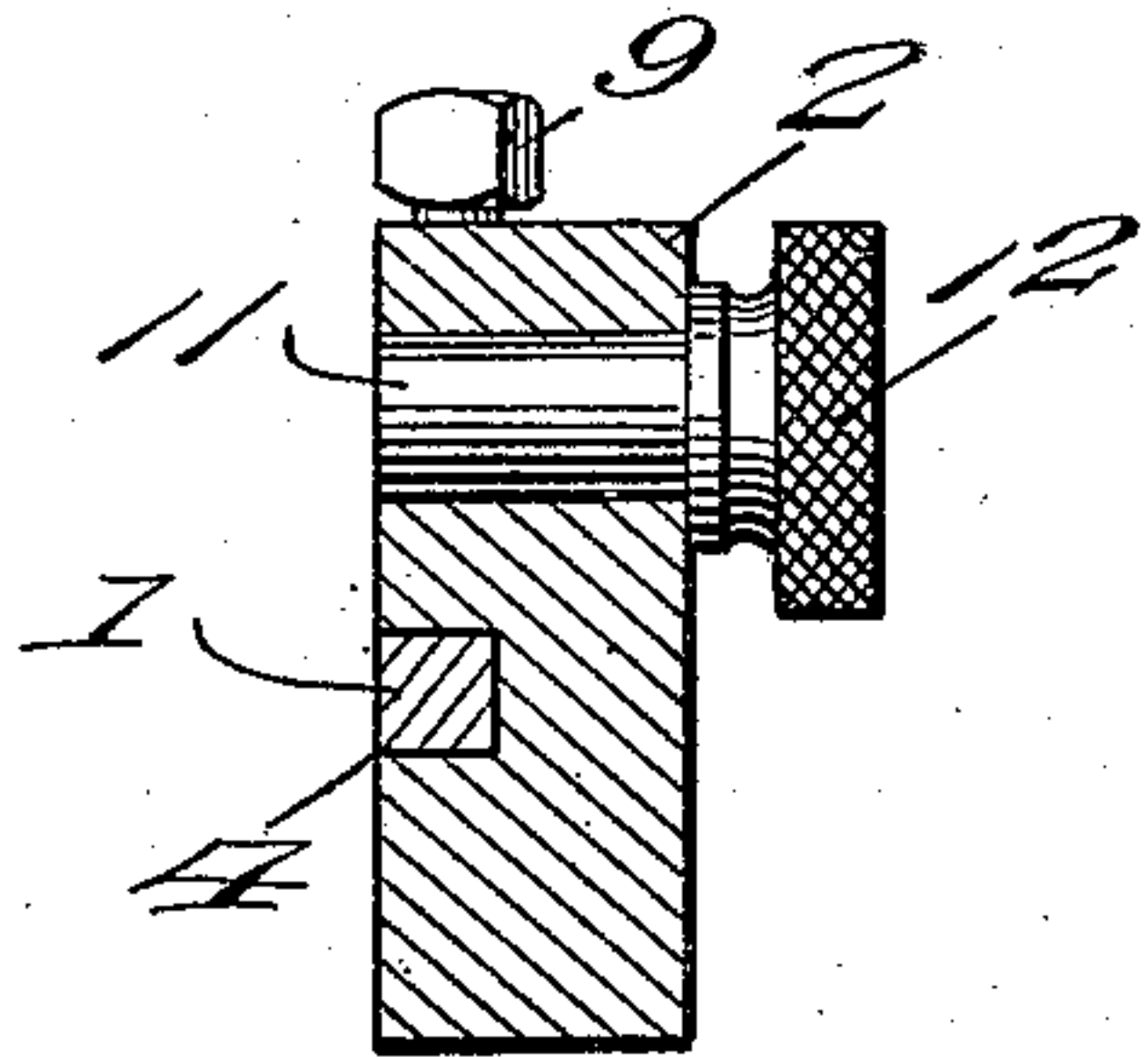


Fig. 5.

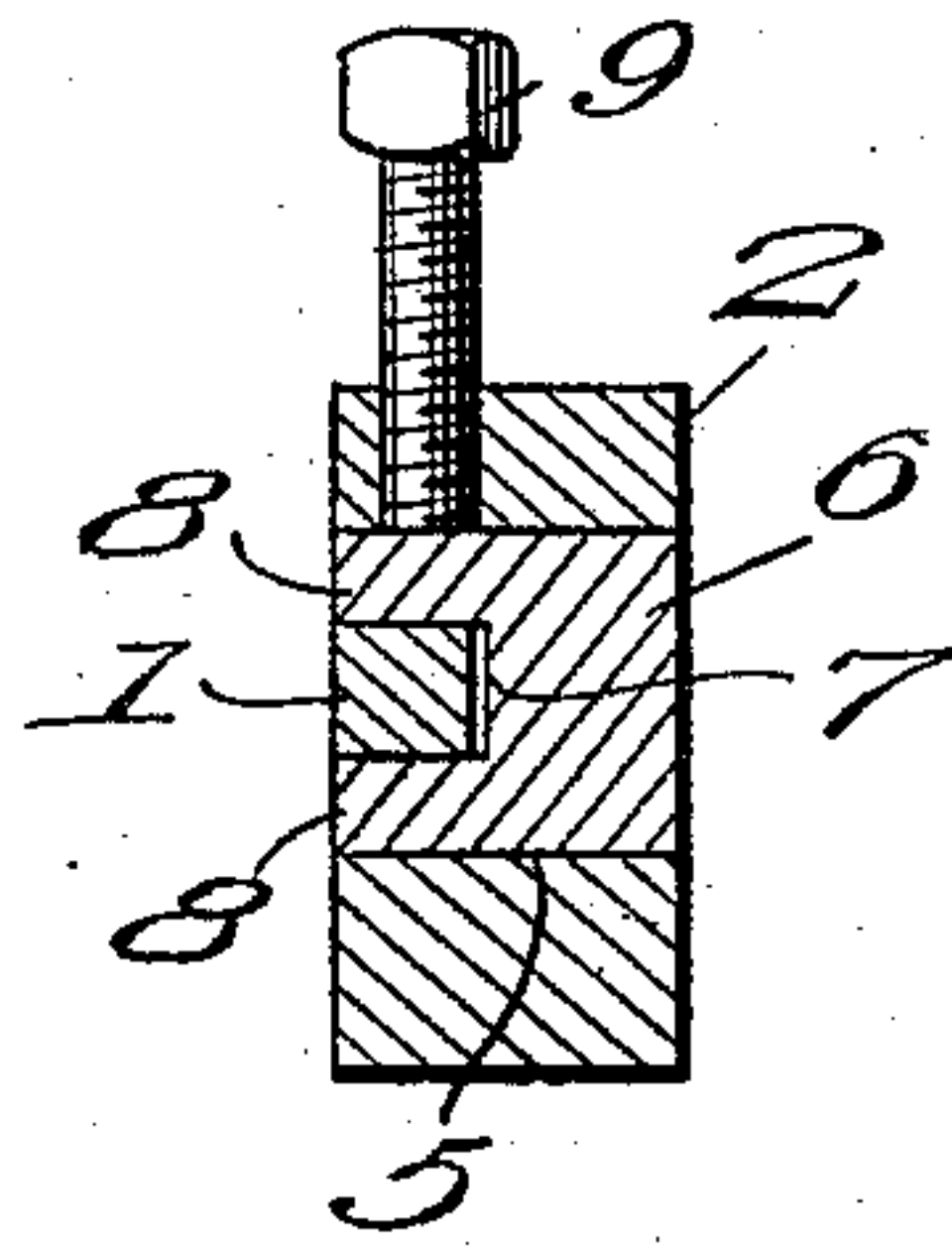


Fig. 6.

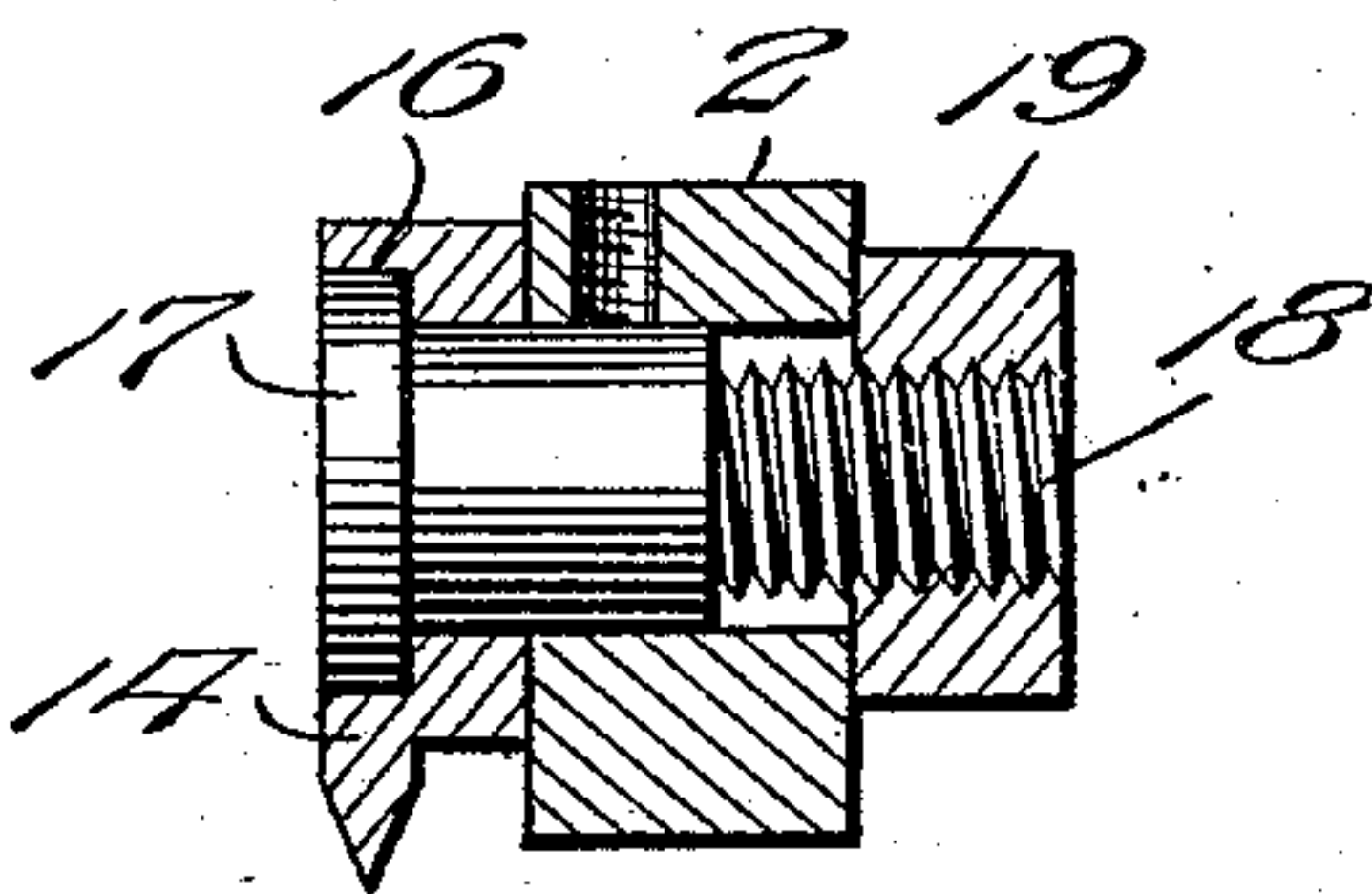


Fig. 7.

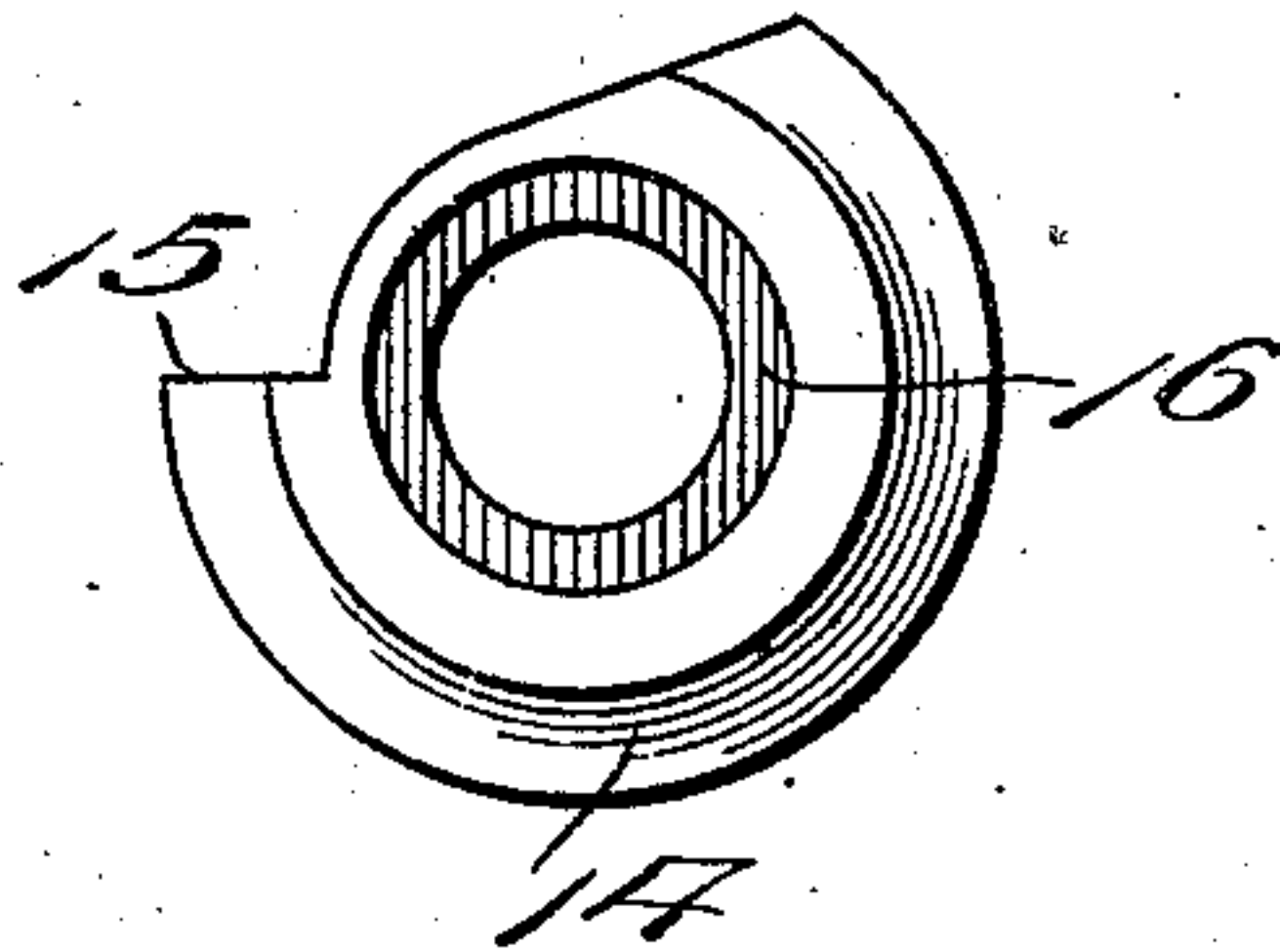


Fig. 8.

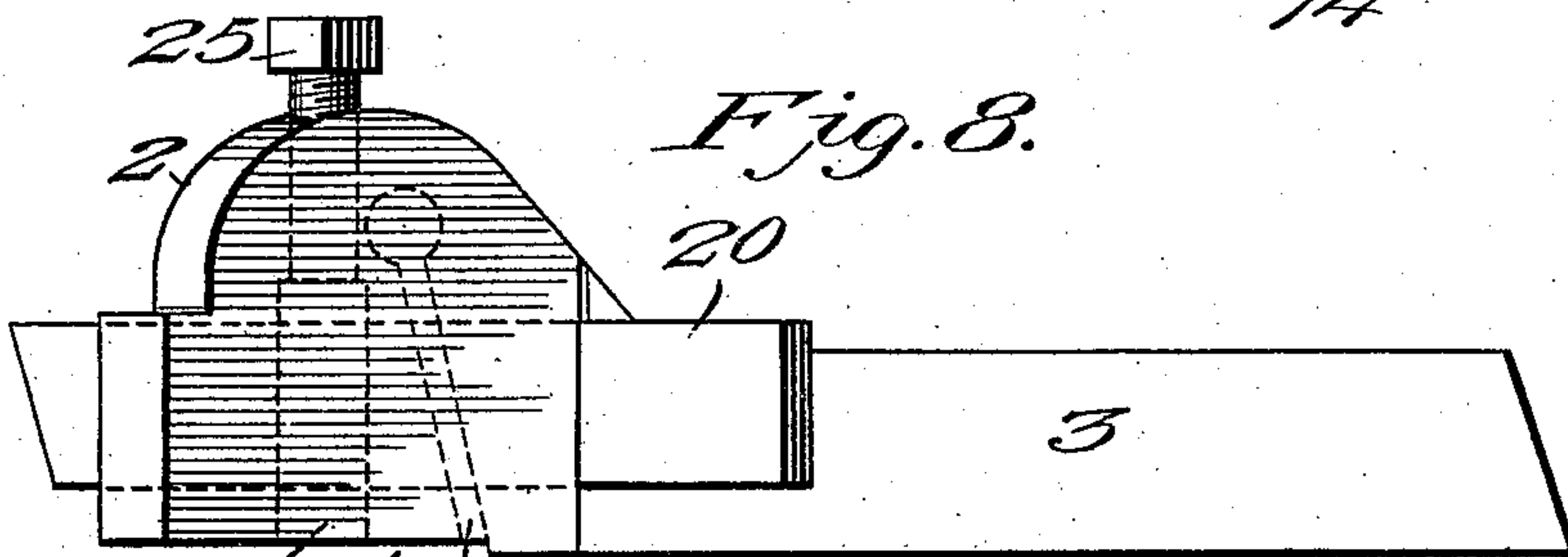


Fig. 9.

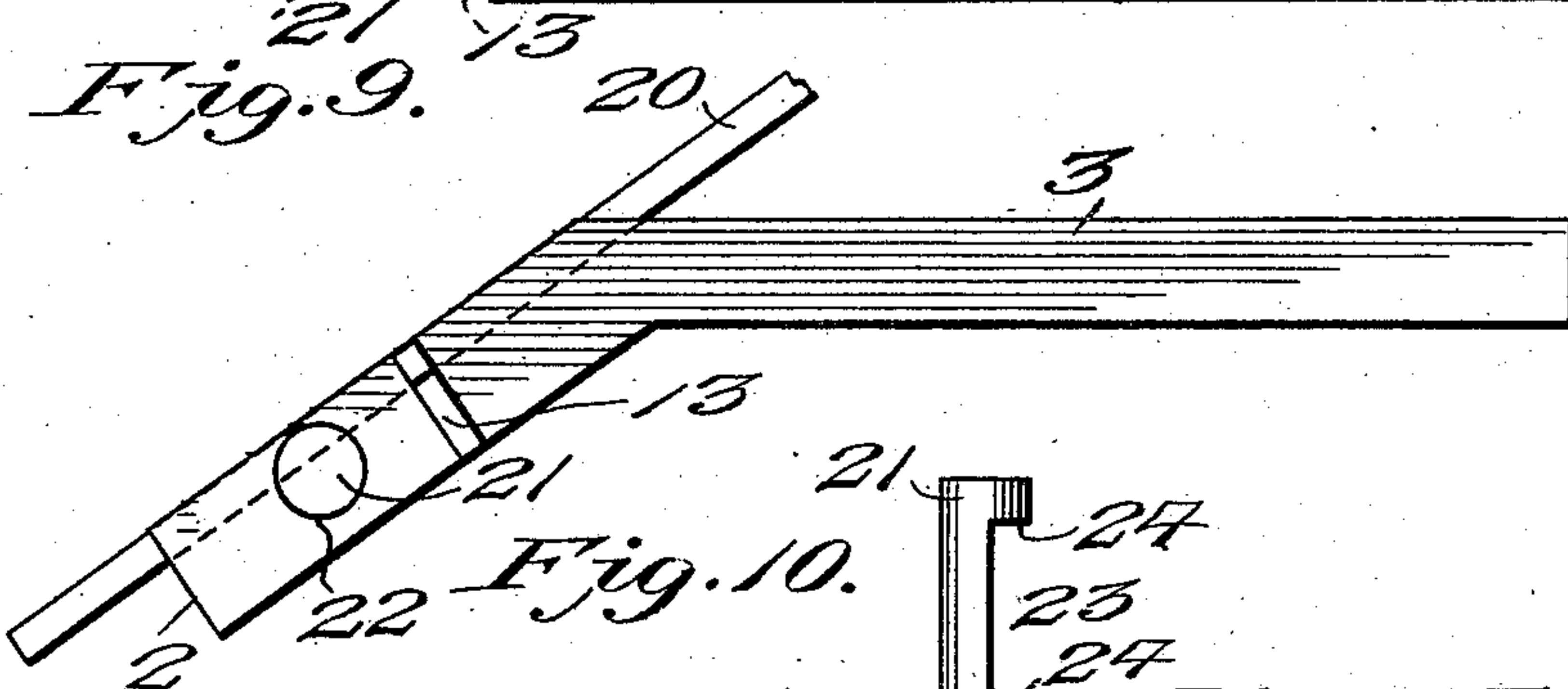
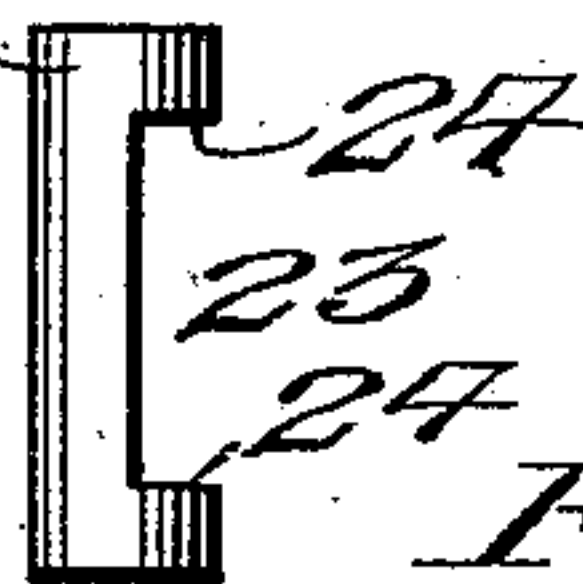


Fig. 10.



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TOOL FOR LATHES.

No. 849,940.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed May 12, 1906. Serial No. 316,560.

To all whom it may concern:

Be it known that I, FRANK F. TIFFT, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented new and useful Improvements in Tools for Lathes, of which the following is a specification.

This invention relates to tools for lathes; and the object of the invention is to provide a tool embodying a spring-holder for the cutting-bit, or, in other words, a bit-holder which is so constructed as to provide a spring action to enable the cutting-bit to yield under the stress of its work and obviate tearing and injuring the work in connection with which it is being used.

The invention hereinafter described is particularly adapted to thread-cutting purposes and is also adapted for use as a cutting-off tool.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a plan view of a tool embodying the present invention. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view similar to Fig. 1, showing another form of bit held by the holder. Fig. 4 is a vertical cross-section on the line 4 4 of Fig. 2. Fig. 5 is a vertical cross-section on the line 5 5 of Fig. 2. Fig. 6 is a vertical cross-section on the line 6 6 of Fig. 3. Fig. 7 is a plan view of another form of bit. Fig. 8 is a side elevation of a slightly-modified form of holder. Fig. 9 is a bottom plan view of the same. Fig. 10 is a plan view of the clamp used in connection with the construction shown in Figs. 8 and 9.

Referring to the drawings, 1 designates the cutting-bit, which is supported and carried by the holder of this invention, the said holder embodying a head 2 and a stock or shank 3, the said head and stock being of any desired size and general dimensions.

Under the preferred embodiment of this invention the head 2 extends at an angle to the stock 3 and is formed in one side with a groove or seat 4, in which the cutting-bit 1 is placed and held. In line with the groove 4 the head 2 is apertured or provided with a round hole 5, extending transversely through the same and communicating with the groove or seat 4, said aperture 5 being adapt-

ed to receive a bit-holding plug 6, which is bifurcated or slotted, as shown at 7, to form oppositely-arranged jaws 8, between which the bit 1 is held, pressure being applied to the jaws 8 to hold the cutting-bit 1 by means of a clamping-screw 9, passing, preferably, through the top of the head and having a threaded engagement therewith, the inner end of said screw impinging against the bit-holding plug 5, so as to press the jaws thereof into firm engagement with the cutting-bit.

The main feature of this invention resides in providing the head with a slot 10, which under the preferred embodiment of the invention extends from the bottom of the head upward to a point near the top, said slot being enlarged at its upper or inner end to receive the round shank 11 of a plug embodying a knurled or milled head 12. At a point near the open end of the slot 10 the latter is provided with another enlargement 13, also adapted to receive the shank 11 of the plug above described, the said plug constituting a solid filling or abutment between the two portions of the head divided by the slot 10, so as to prevent the springing action of the outer portion of the head. When the plug 11 is removed, the outer portion of the head in which the bit-holder 5 is located is adapted to yield toward the fixed portion of the head, thereby allowing the point of the cutting-bit to spring downward and yield away from its work, so as to prevent tearing and injuring the work in connection with which the tool is being used. As previously indicated, by inserting the plug in the hole 13 this spring action is done away with. By inserting said plug in the enlarged inner end of the slot 10 a certain amount of spring action is provided for, and by removing the plug 11 entirely from the head the greatest degree of spring action is provided for. In this way the degree of spring in the head of the tool may be regulated to suit the requirements. The inner end portion of the groove or seat 4 is preferably enlarged or made wider, as shown at 13, to give the necessary clearance for the bit and admit of the requisite movement of the inner end portion of the bit to compensate for the yielding action of the outer cutting extremity of the bit.

Instead of employing the straight bit 1 shown in Figs. 1 and 2 a circular or disk-shaped bit 14 may be employed, as shown in Fig. 3, the said bit being illustrated in detail in Figs. 6 and 7, wherein said bit is seen to

comprise a cutting-point 15 and a circular recess 16 in its outer face, which is adapted to receive the head 17 of a screw 18, which passes through the aperture 5 in the head of the holder and is held in place by a nut 19.

In the construction illustrated in Figs. 8, 9, and 10 the head is made somewhat larger to receive a wide flat cutting-bit 20, the groove or seat for said bit being made to correspond in size, and a special clamp 21 is provided, the same being in the form of a slidable cylindrical plug which fits in an opening 22, extending vertically through the angular end portion of the head; said clamp being recessed, as shown at 23, to provide oppositely-located shoulders 24, which bear against the top and bottom edges of the cutting-bit, the upper shoulder 24 being forced into firm engagement with the bit by means

of a clamping-screw 25, corresponding in location and arrangement with the clamping-screw 9, hereinabove described.

I claim—

1. A bit-holder provided with a slot adapting the bit-carrying portion of the holder to yield, and a plug insertible at different points in said slot for regulating the spring action of the bit-holding portion thereof.

2. A bit-holder embodying a head having a slot provided at intervals with enlarged portions, and a plug removable from and insertible in the enlarged portions of said slot.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK F. TIFFT.

Witnesses:

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