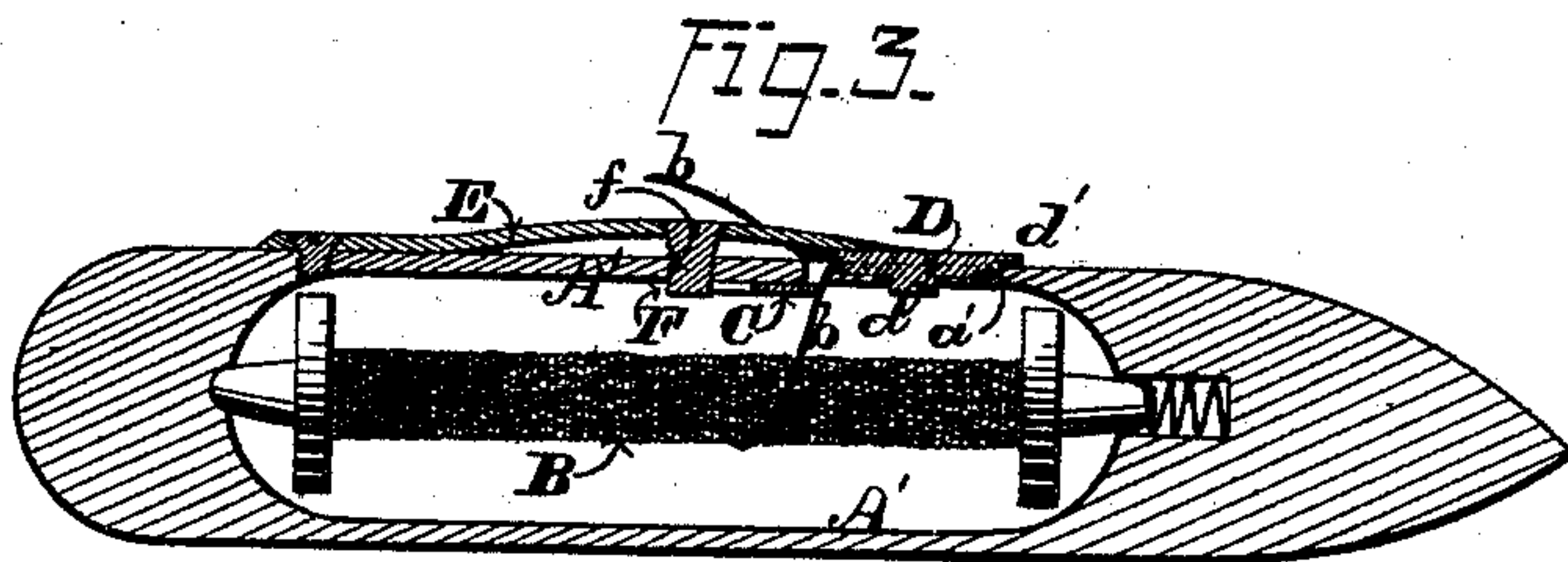
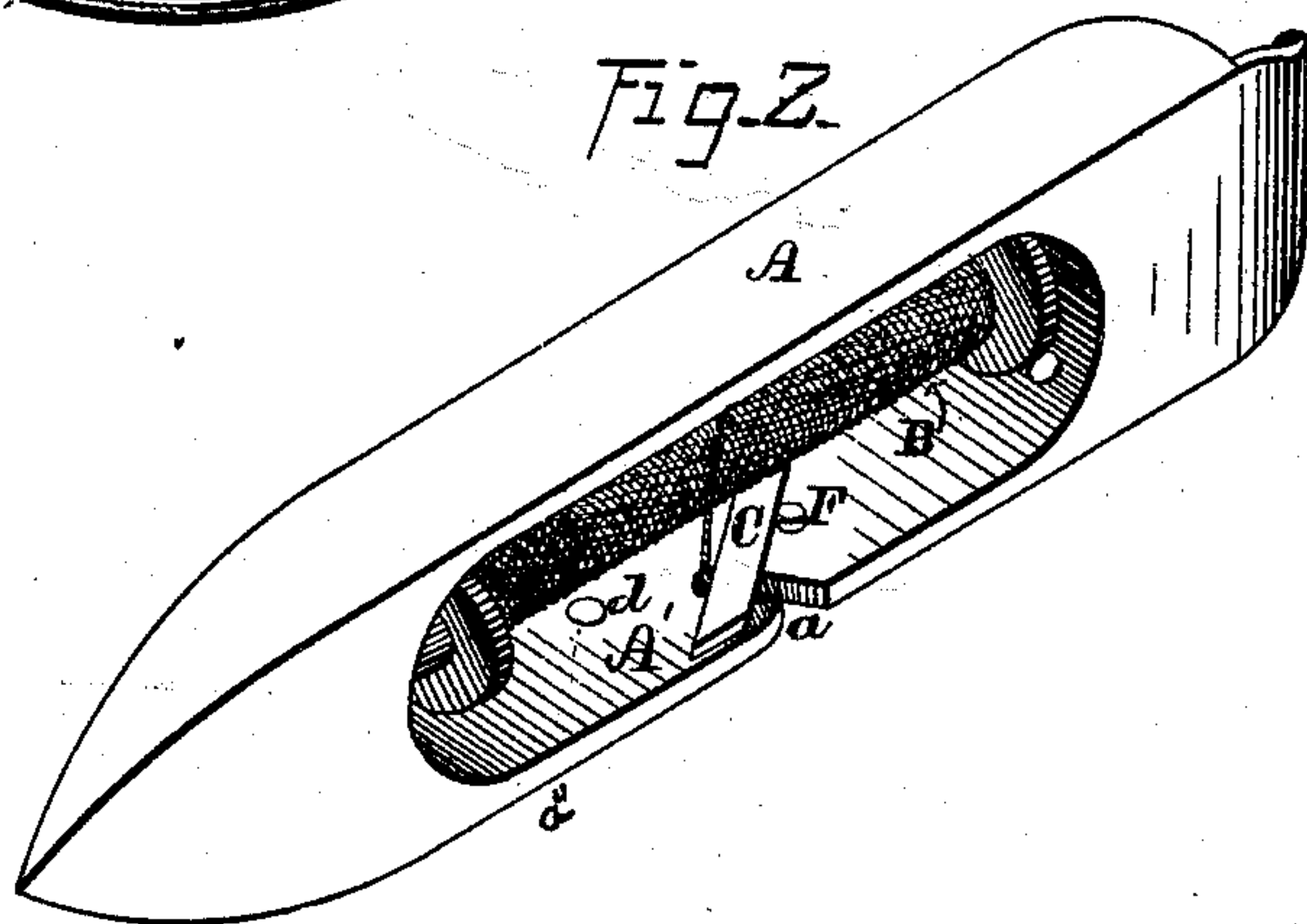
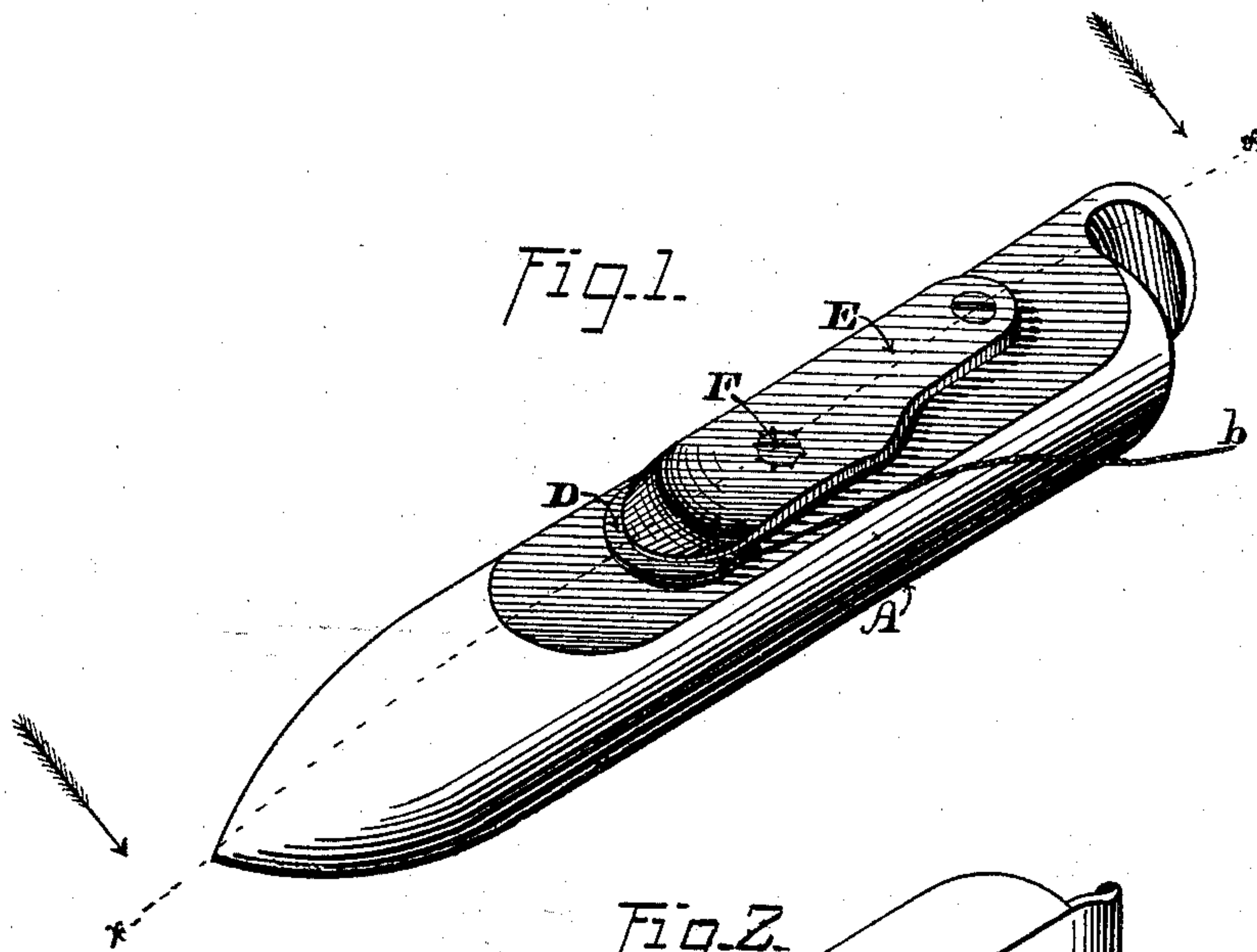


A. PEELER.

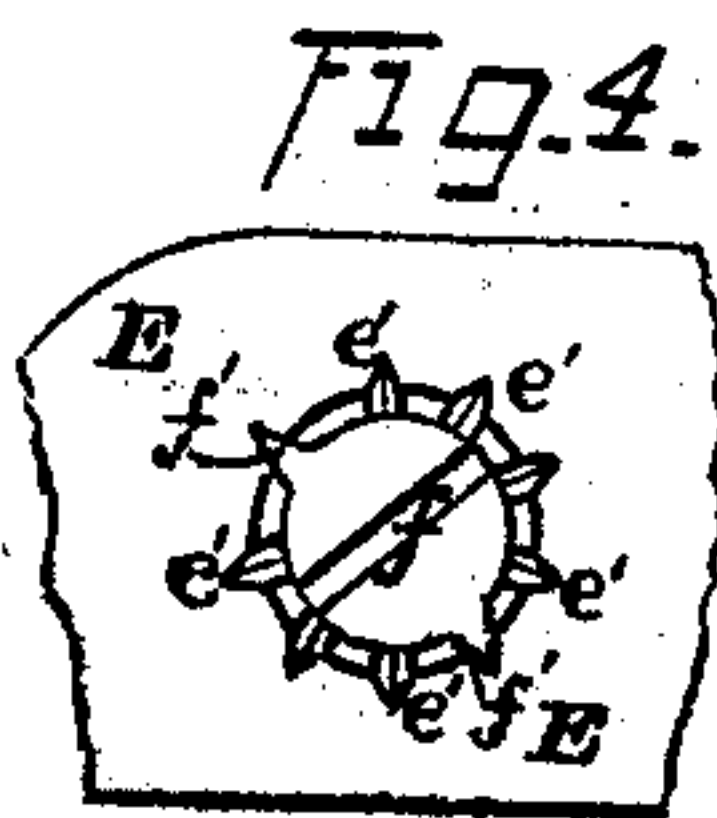
SEWING-MACHINE SHUTTLE.

No. 171,163.

Patented Dec. 14, 1875.



WITNESSES=
Jas. E. Hutchinson.
John R. Young



INVENTOR.
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UNITED STATES PATENT OFFICE.

ABNER PEELER, OF FORT DODGE, IOWA, ASSIGNOR TO I. F. OLESON AND
H. A. DERING, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINE SHUTTLES.

Specification forming part of Letters Patent No. **171,163**, dated December 14, 1875; application filed
June 10, 1875.

To all whom it may concern:

Be it known that I, A. PEELER, of Fort Dodge, Webster county, State of Iowa, have invented certain new and useful Improvements in Sewing-Machine Shuttles; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the upper side of my improved shuttle. Fig. 2 is a like view of the lower side of the same. Fig. 3 is a longitudinal section upon line *xx* of Fig. 1, and Fig. 4 is an enlarged plan view of the tension-spring and its adjustment-screw.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to enable a shuttle to be easily and quickly threaded, and to increase the uniformity and efficiency of the tension of the same; to which end it consists, principally, in the construction and combination of the tension-wheel and shuttle, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for adjusting the pressure of the tension-spring, substantially as is hereinafter shown. It consists, further, in the means employed for confining in position the thread as it passes from the spool to the tension-wheel, substantially as is hereinafter set forth. It consists, finally, in the tension mechanism, as constructed and combined with the shuttle, substantially as is hereinafter shown and described.

In the annexed drawings, A represents a shuttle of ordinary construction, provided with a recess, A', that is open at one side, and receives a bobbin, B, all in the usual manner. Within the upper wall of the shuttle A, near its longitudinal center, is provided a narrow slot, *a*, which extends from the front side diagonally inward and toward the front end of said shuttle, as shown by Fig. 2, while upon the lower or inner face of said wall is secured one end of a bar, C, that from thence extends forward and outward in a line which has substantially a right angle to that of said slot. Within the upper face of the shuttle, midway between its front and rear sides, and forward

of the slot *a*, is provided a circular recess, *a'*, that receives and contains a correspondingly-shaped disk, D, which disk is pivoted within said shuttle by means of a central stub, *d*, that extends downward into a suitable opening, *a''*, is caused to closely fill said recess, and is provided with a flange, *d'*, which extends horizontally outward from its upper face over the face of said shuttle contiguous to said recess. A flat spring, E, is secured at one end upon the upper face of the shuttle near its rear end, and from thence extending forward has its front end resting upon the upper face of the disk or wheel D. A screw, F, passing downward through the spring E near its longitudinal center has its lower threaded end contained within a correspondingly-threaded opening in the upper wall of the shuttle A, and furnishes a means whereby the pressure of said spring upon said wheel may be increased or diminished. In order that the screw F may be prevented from being turned by accident or from jarring while the shuttle is in use, its head *f* is provided with one or more radial points, *f'*, while within the sides of the recess *e*, that receives and contains said head, are provided a number of correspondingly-shaped notches, *e'* and *e'*, each of which will receive said point when the latter is caused to coincide therewith, said parts operating to lock said screw in place, except when the same is turned by means of a screw-driver, in which event the spring will be forced downward as said point passes from one notch to another.

The operation and advantages of this improvement are as follows: The thread *b* from the bobbin B is passed over the forward end of the bar C, thence rearward between said bar and the upper wall of the shuttle, until it reaches the slot *a*; from thence through said slot said thread is passed forward and around the wheel D, and is contained between the flange *d'* and the upper face of said shuttle. From the wheel D the thread *b* passes rearward, and in order that it may leave the same without abrasion, a groove, *a''*, extends upward and rearward from the recess *a'* at the point where said thread leaves said wheel, and furnishes a channel in which perfect freedom

of motion is allowed. As the tension upon the thread *b* is produced by its friction between the lower surface of the flange *d'* and the upper surface of the shuttle, it follows that, by increasing or diminishing the pressure of the spring *E* upon the wheel *D*, such tension will be correspondingly changed. A certain amount of tension will be caused by the friction of the wheel *D* within its bearings; but as the same is constant and much within the requirements of the shuttle, it will not interfere with the adjustment of the tension.

I am aware that a slot extending diagonally from the open side of a shuttle toward its outer side within its upper wall, and a bar secured upon the lower face of said wall and extending across said slot in a line with the motion of said shuttle, is not new. The arrangement, upon my shuttle, of the bar *C* obliquely to the line of motion and at nearly a right angle to the slot *a* is necessary, in order that the thread may be prevented from becoming accidentally displaced from said slot.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the shuttle *A*, provided with the recess *a'*, the wheel *D*, fitted into and pivoted within said recess, and pro-

vided with a flange, *d'*, which extends over the contiguous upper surface of said shuttle, substantially as and for the purpose specified.

2. In combination with the tension-spring *E*, provided with a recess, *e*, that has radial notches *e'* and *e'* around its sides, the screw *F*, provided, upon the periphery of its head *f*, with one or more radial points, *f'*, which may be caused to engage with any one of said notches, substantially as and for the purpose shown.

3. In combination with the shuttle *A*, provided with the diagonal slot *a*, the bar *C*, secured at one end to or upon the lower face of the upper wall of said shuttle, and extending diagonally across said slot, substantially as and for the purpose set forth.

4. In combination with the shuttle *A*, provided with the slot *a* and recess *a'*, the bar *C*, the flanged wheel *D* *d* *d'*, the spring *E* *e* *e'*, and the screw *F* *f* *f'*, said parts being constructed to operate in the manner and for the purpose shown and described.

In testimony whereof I have hereunto set my hand this 4th day of May, 1875.

ABNER PEELER.

Witnesses:

R. W. JOHNSON,
ISAAC GARMOE.

1.2 5 words.