

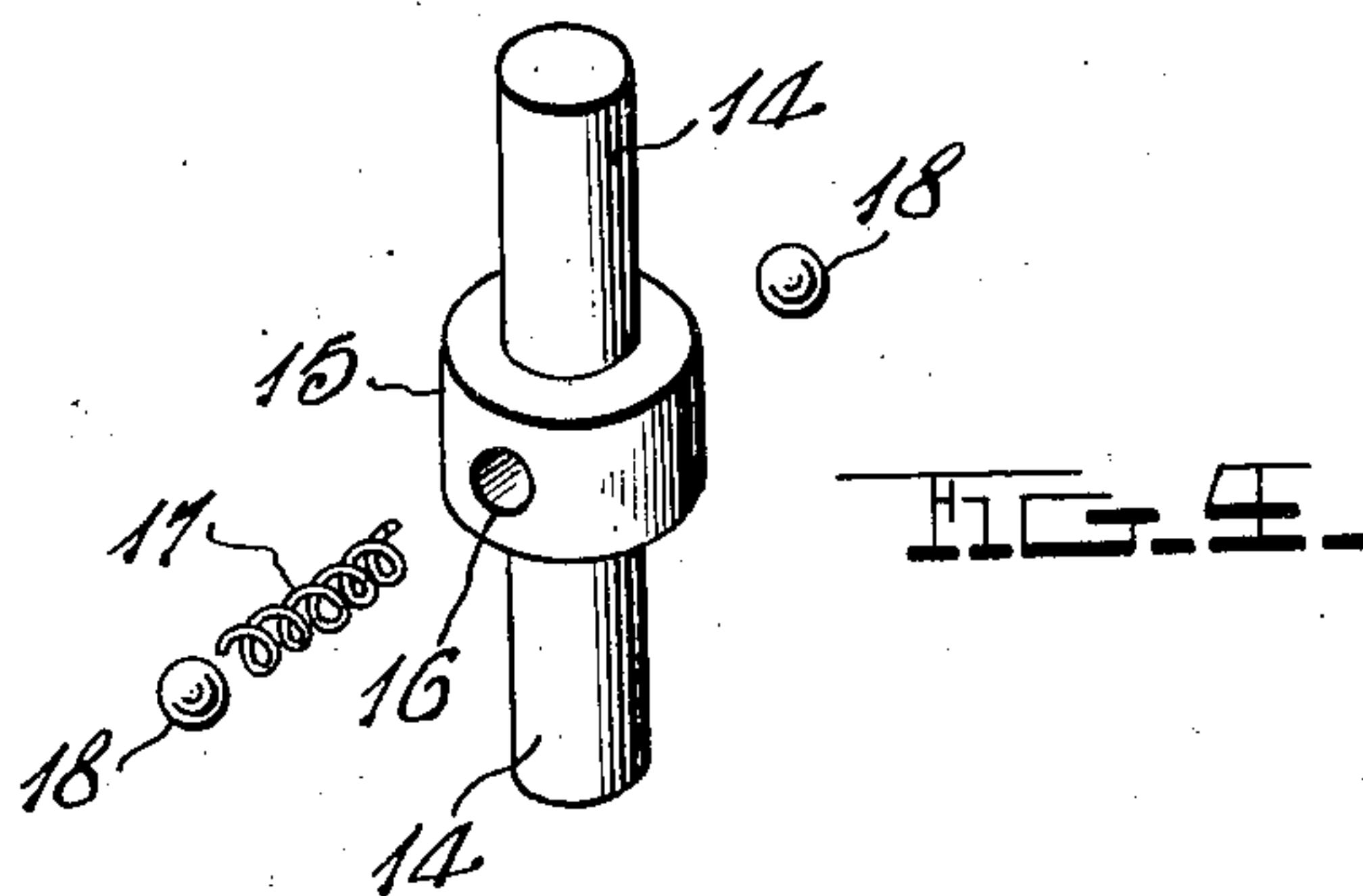
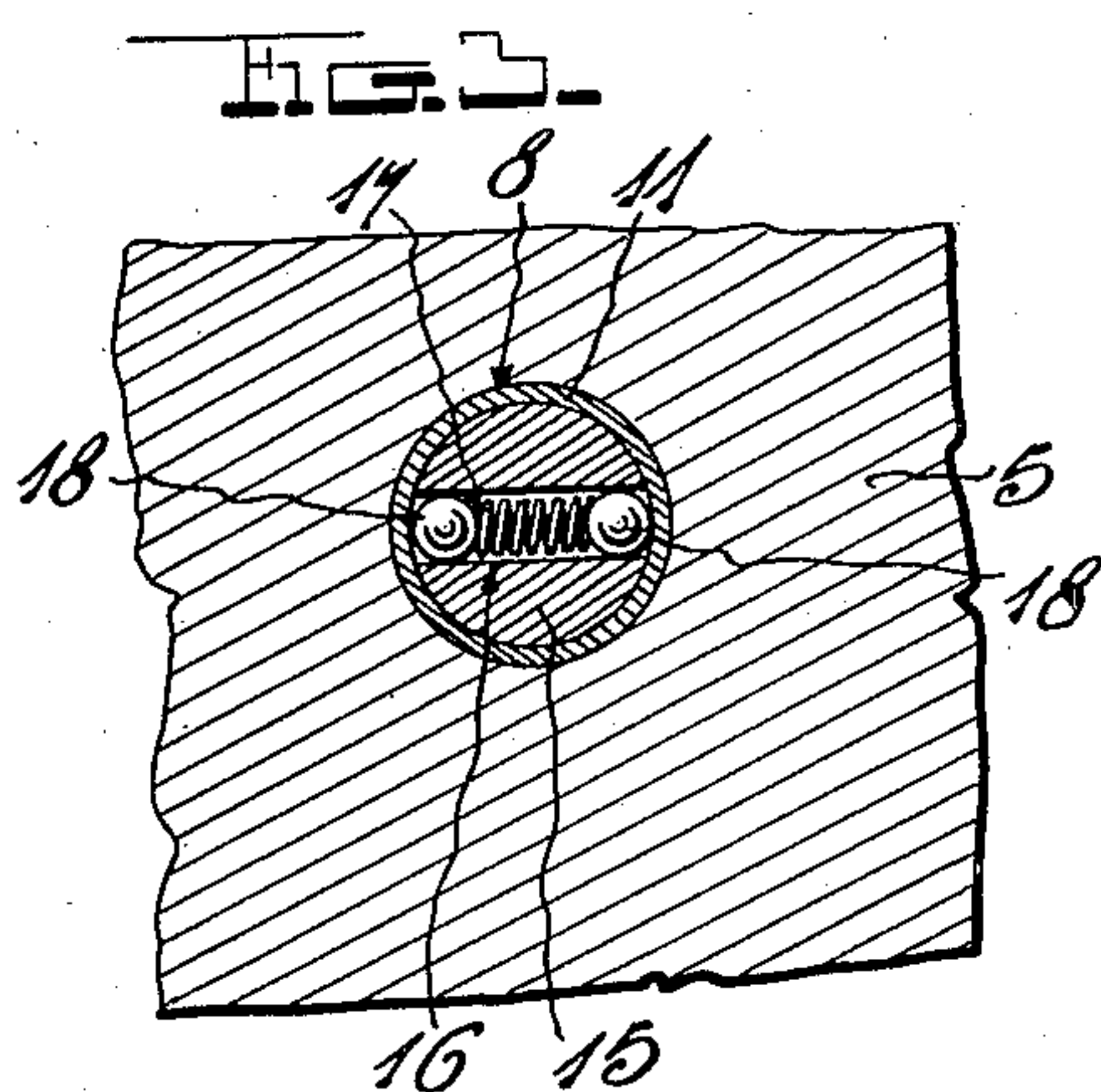
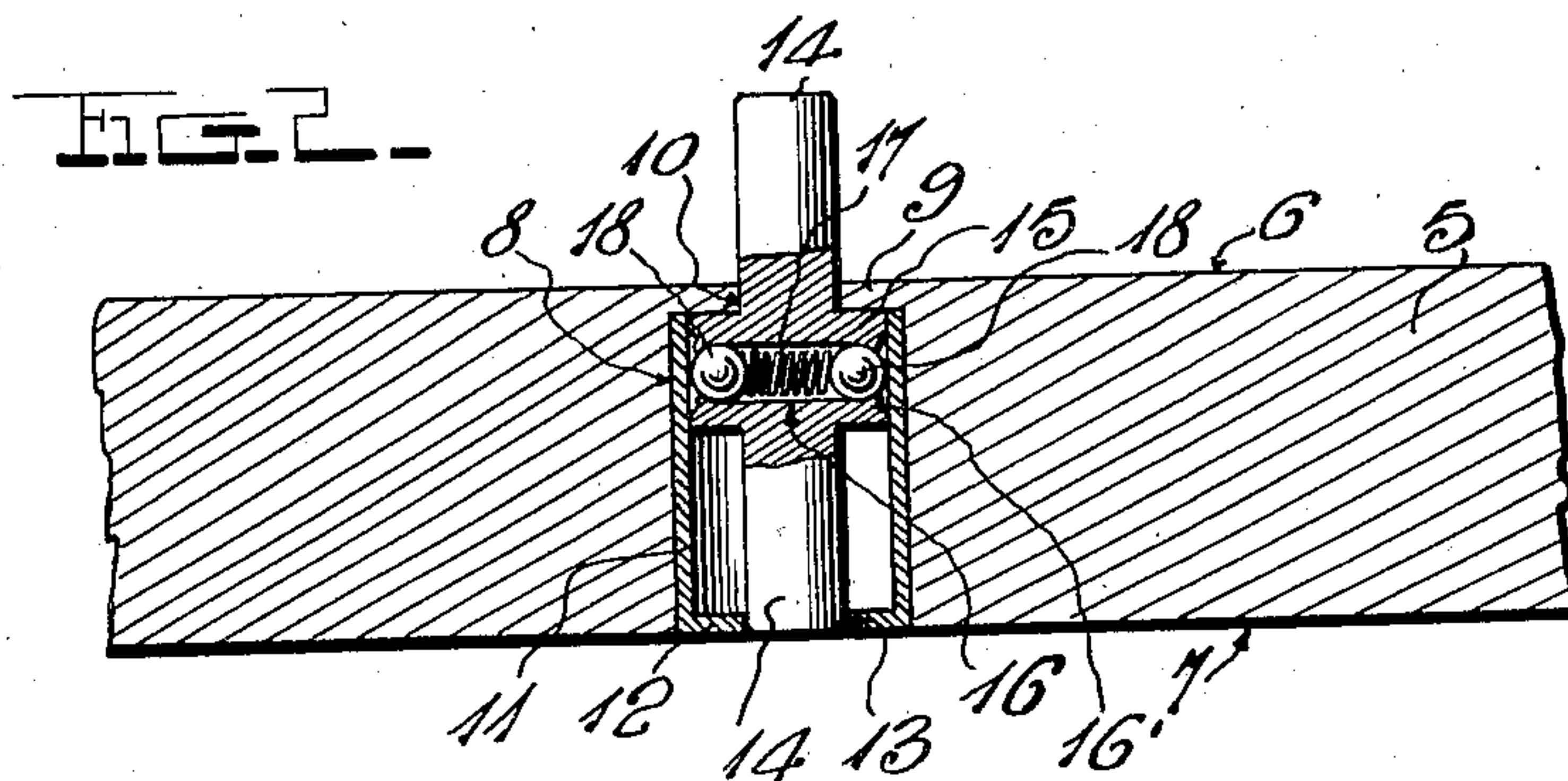
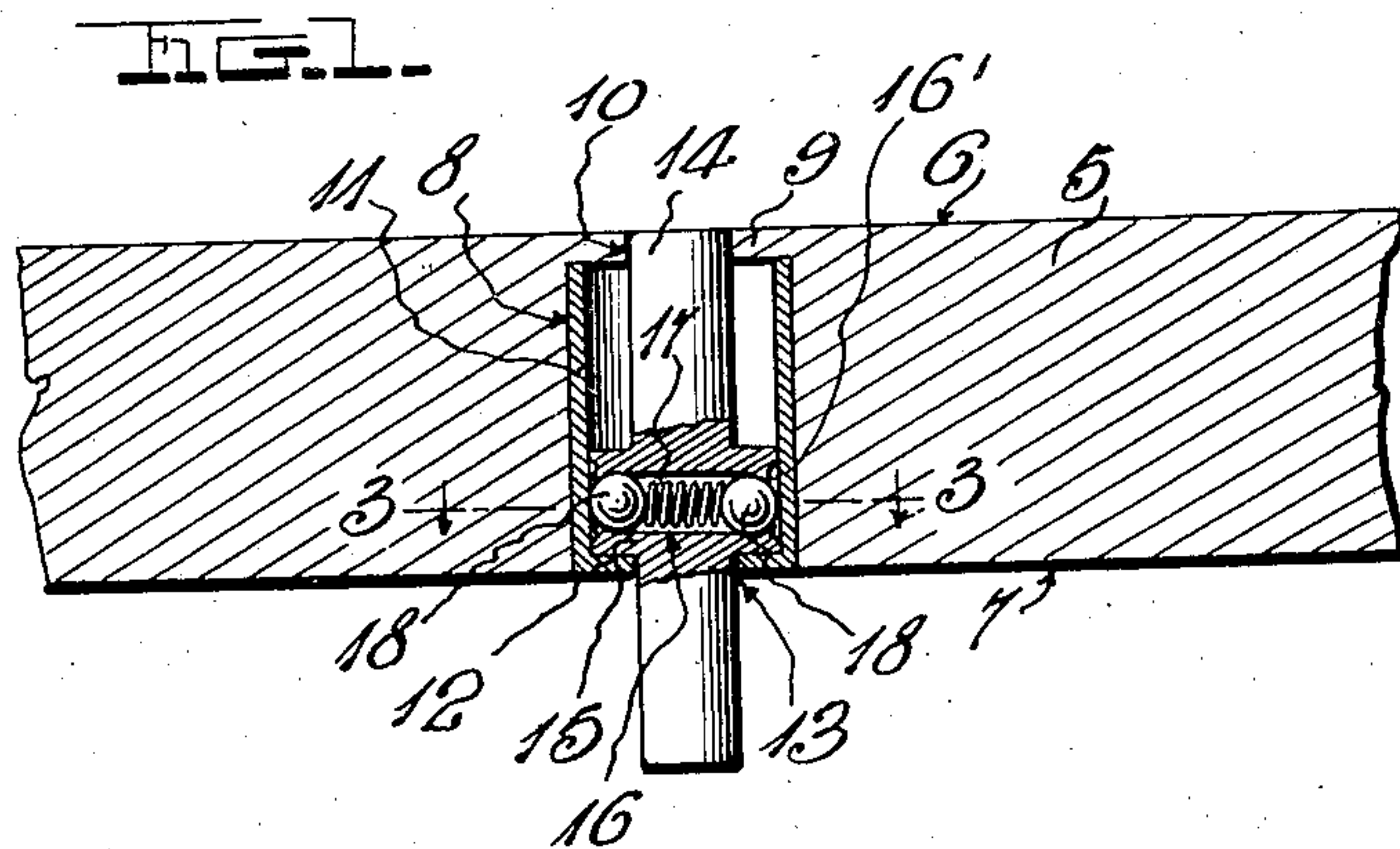
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NOISELESS STOP

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NOISELESS STOP

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3 Claims. (Cl. 311-103)

The invention aims to provide a new and improved projectable and retractible stop designed primarily for use upon a desk top, table top or similar support to prevent books, drawing boards and other articles from sliding by gravity when the support occupies an inclined position, the construction being such that it may be quickly and easily projected to any desired extent or retracted with equal quickness and ease, all adjustments of said stop being attainable without causing noise.

A further object of the invention is to provide exceptionally simple and inexpensive, yet efficient and durable means for holding the stop totally or partially projected, or fully retracted.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing.

Fig. 1 is a vertical sectional view partly in elevation showing the stop in retracted position.

Fig. 2 is a similar view showing the stop projected.

Fig. 3 is a horizontal sectional view on line 3-3 of Fig. 1.

Fig. 4 is a perspective view of the shaft and the enlargement thereof which is slidable in the tubular casing, a spring and balls which are confined in a bore within said enlargement being removed.

Only one form of construction has been shown for illustrative purposes, and it will be rather specifically described, with the understanding however, that within the scope of the invention as claimed, minor variations may be made. Furthermore, although only one of the improved stops has been illustrated, it is to be understood that any desired number may be employed.

In the drawing above briefly described, the numeral 5 denotes a desk top, table top or other support whose obverse and reverse faces are denoted at 6 and 7 respectively. This support 5 is formed with a socket 8 which opens through one face of the support 5, preferably through the reverse face 7, the other end of the socket being closed by leaving a portion of the support 5 standing when drilling or otherwise forming said socket. This portion which is identified at 9 is formed with a central relatively small opening 10 leading from the closed end of the socket through one face or the other of the support 5, through the obverse face 6 in the present showing.

A short tubular casing 11, preferably cylindrical, is snugly fitted into the socket 8 and may

be held therein by friction or in any other desired way. One end of this casing is closed by the portion 9 which forms the closed end of the socket 8. The other end of the casing 11 is provided with a suitable closure 12 soldered or otherwise secured in place, said closure 12 being formed with a central opening 13 preferably of the same size as the opening 10. A shaft 14 somewhat longer than the thickness of the support 5, passes slidably through the openings 10 and 13 and is provided with an enlargement 15 between its ends. This enlargement fits slidably in the tubular casing 11 and corresponds in shape to said casing, being cylindrical in the present disclosure. The enlargement 14 coacts with the closed end 9 of the socket 8 in limiting the upward sliding of the shaft 14 and similarly coacts with the closure 12 in limiting the downward movement of said shaft. When the shaft is lowered, its upper end is preferably flush with the obverse face 6 of the support 5 as seen in Fig. 1, the lower end of said shaft then projecting below the reverse face 7. Whenever use of the shaft is desired to prevent a book, drawing-board or other article from sliding by gravity on the face 6, it is simply necessary to push upwardly upon the lower end of the shaft, thereby upwardly projecting the shaft to any desired extent. For holding the shaft in any position to which it may be adjusted, novel provision is made.

A bore 16 is formed entirely through the enlargement 15, transversely of the shaft 14 and preferably at right angles to this shaft. The major portion of this bore is occupied by a compression spring 17 and the ends of said bore receive two balls 18. By means of the spring 17, these balls are held in frictional contact with the side wall of the casing 11, with the result that the shaft 14 will be yieldably held in any position to which it may be slid. The shaft is not held with such pressure however, as to interfere with easy projection and retraction of said shaft as required.

Preferably the enlargement 15 is provided with slight burrs 16' at the ends of the bore 16 to hold the balls 18 in said bore before inserting the shaft 14 into the casing 11, said burrs however being so positioned that they do not prevent proper engagement of said balls with the casing wall.

The device is exceptionally simple, inexpensive, convenient and durable, may be easily installed, and after installation is in readiness for instant use whenever necessary, and when its use is not

required, it may be conveniently depressed to an out-of-the-way position.

As the details disclosed in the drawing have proven to be advantageous from numerous stand-
 5 points, they may well be followed. However, attention is again invited to the possibility of making variations within the scope of the invention as claimed.

I claim:

- 10 1. In combination with a desk top, table top or similar support; a short tubular casing mounted in said support and of a length no greater than the thickness of said support, a shaft having an enlargement between its ends
 15 slidable within said casing, said shaft being somewhat longer than the thickness of said support to allow it to be pushed by hand and projected beyond either the obverse or the reverse face of said support, means closing the ends of said casing and co-operable with said enlargement to
 20 limit the sliding of the shaft, and yieldable means carried by said enlargement and frictionally engaging the side wall of said casing to hold said shaft in any position to which it may be slid.
- 25 2. In combination with a desk top, table top, or similar support, said support having a socket which opens through one of its faces and having a central relatively small opening from said socket to its other face; a short tubular casing
 30 fitted into said socket and having one end closed

by the end wall of said socket, the other end of said casing being provided with a closure having a central opening, a shaft passing through both of said central openings and of a length greater than the thickness of said support to allow it to
 5 be pushed by hand and projected beyond either the obverse or the reverse face of said support, said shaft having an enlargement slidable in said tubular casing for limiting the sliding of said shaft in either direction, and yieldable means
 10 carried by said enlargement and frictionally engaging the side wall of said casing to hold said shaft in any position to which it may be slid.

3. A stop of the class described comprising a short tubular casing to be inset in a table top,
 15 desk top or similar support in a position at right angles to the obverse and reverse faces of said support, a shaft of a length somewhat greater than the thickness of the support, said shaft having an enlargement between its ends fitting slid-
 20 ably in said tubular casing, said enlargement having a bore formed entirely therethrough transversely of said shaft, a compression spring occupying the major portion of said bore, and two
 25 balls occupying the ends of said bore respectively, said balls being held in frictional contact with the side wall of said casing by means of said compression spring to hold said shaft when slid
 to project beyond either face of said support.

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