

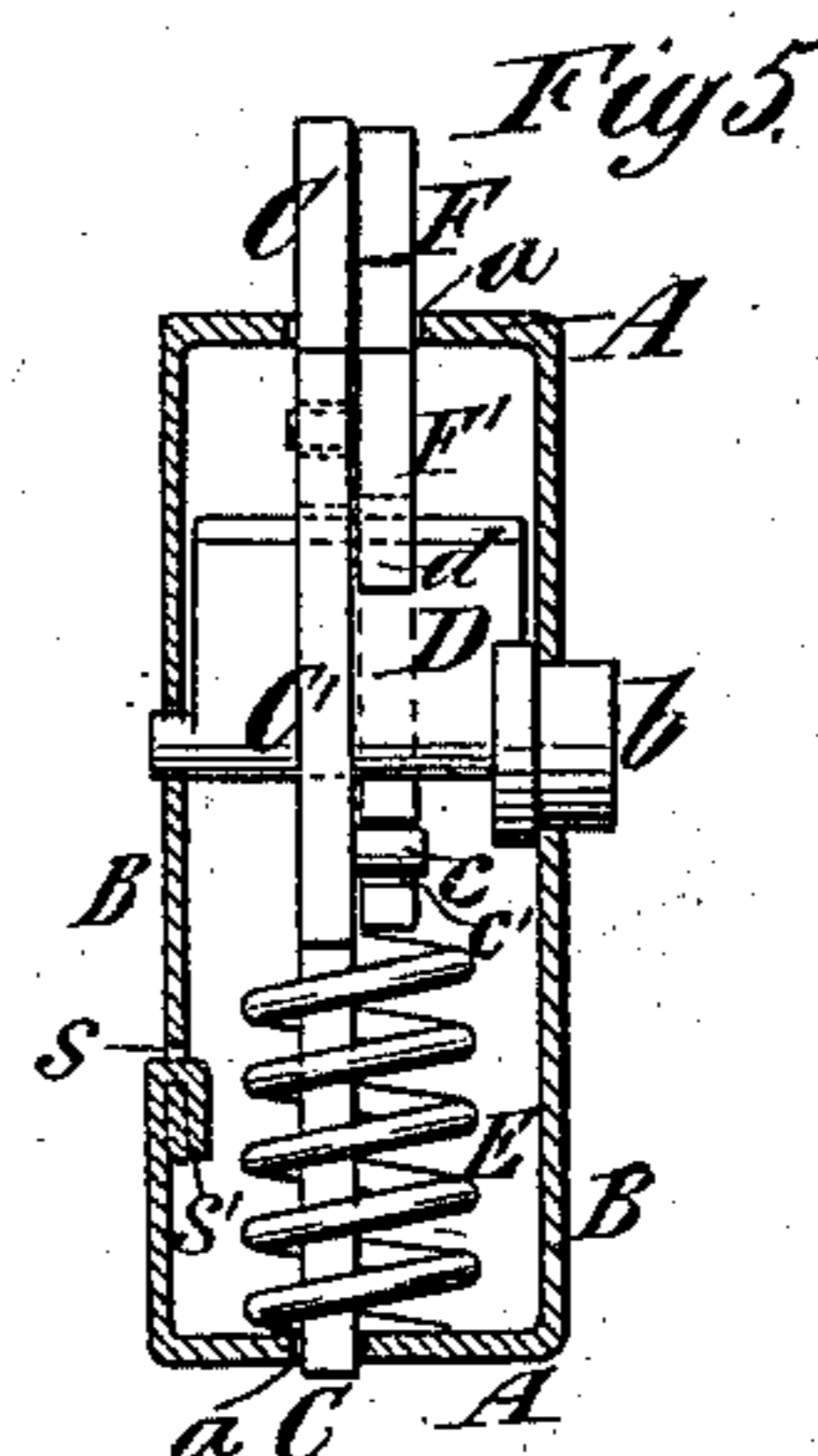
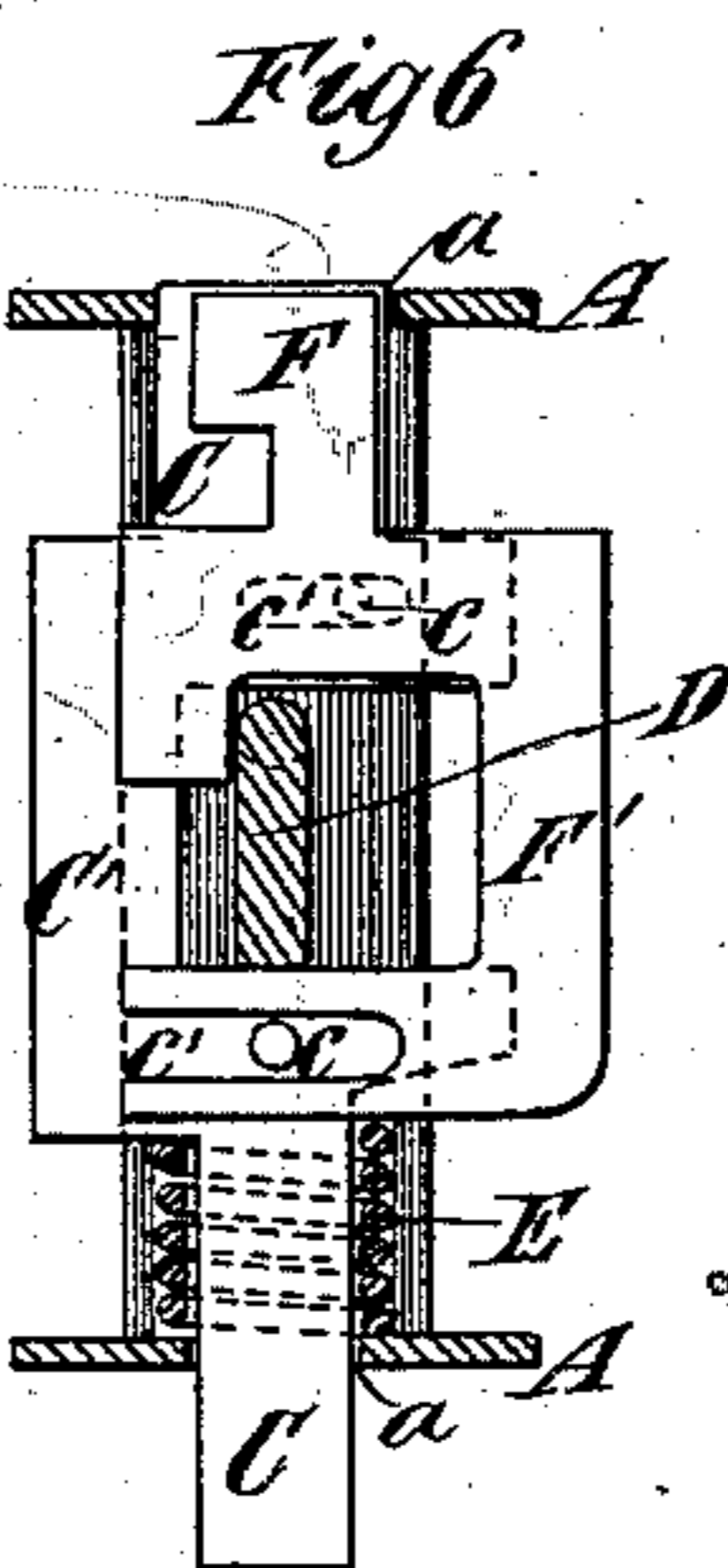
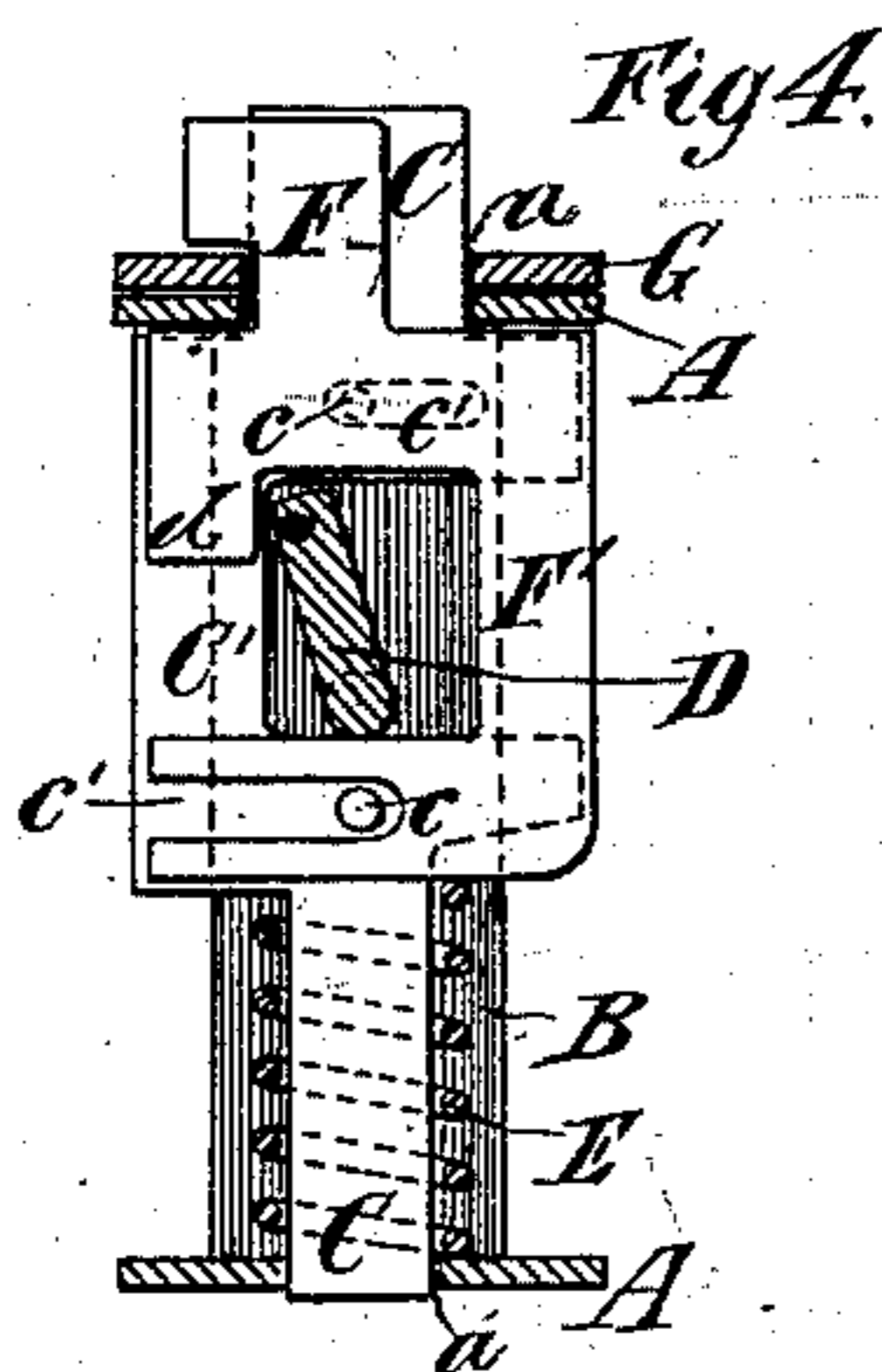
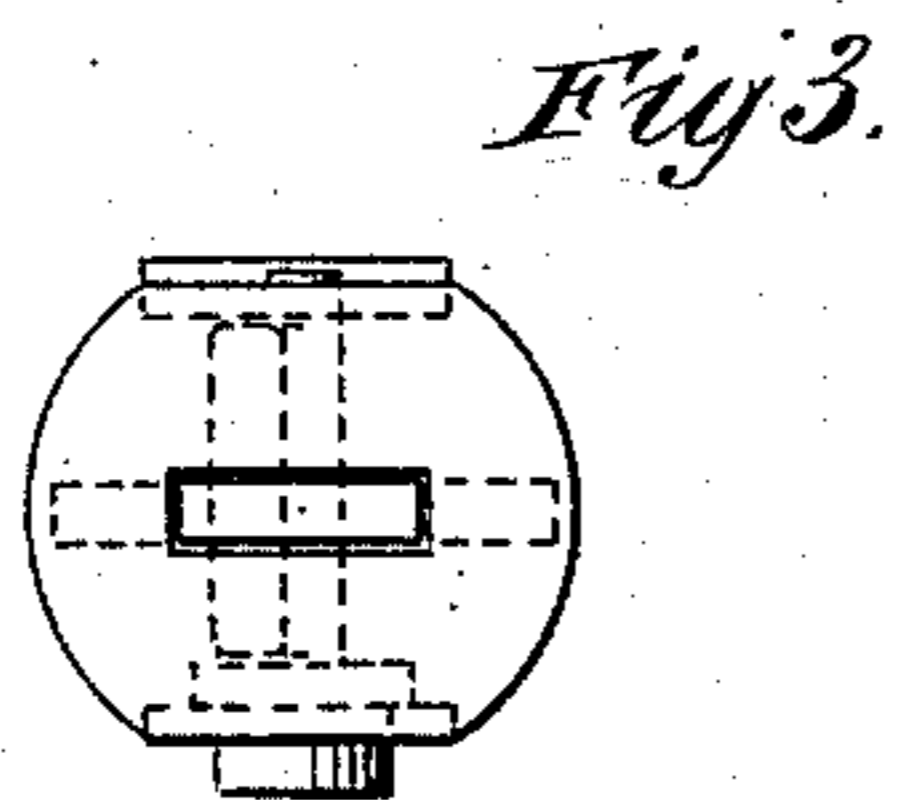
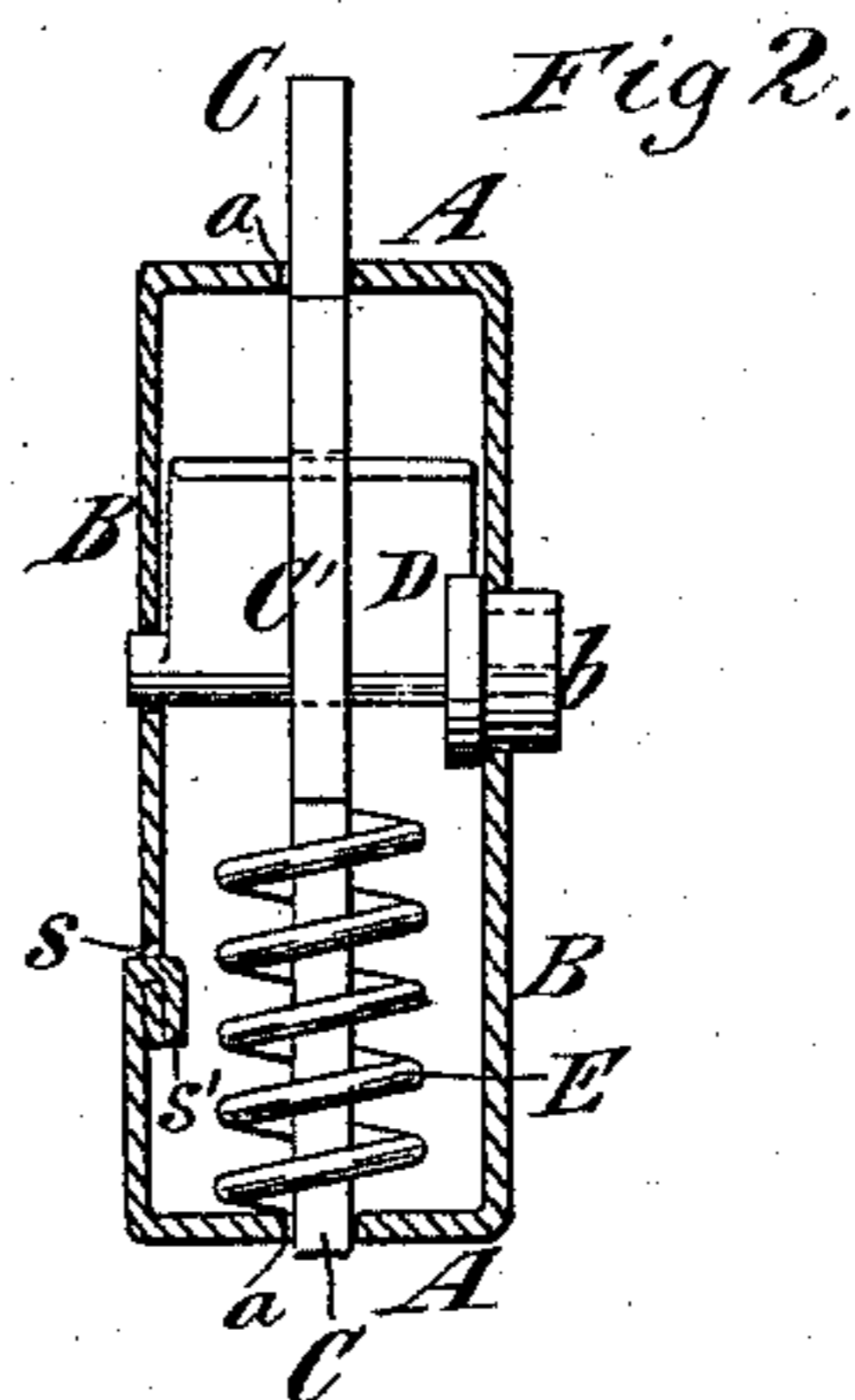
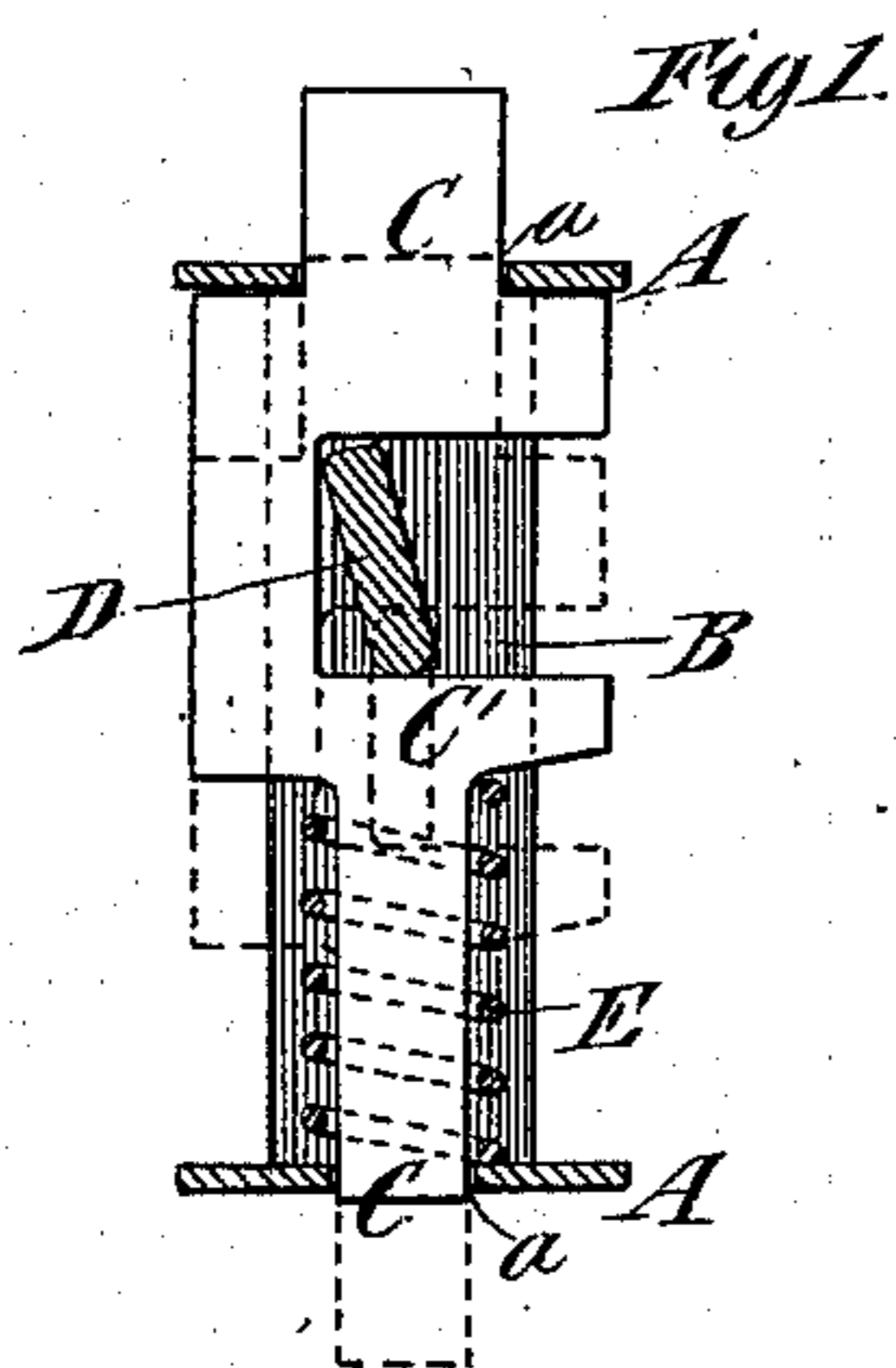
(Model.)

C. A. LUDLOW.

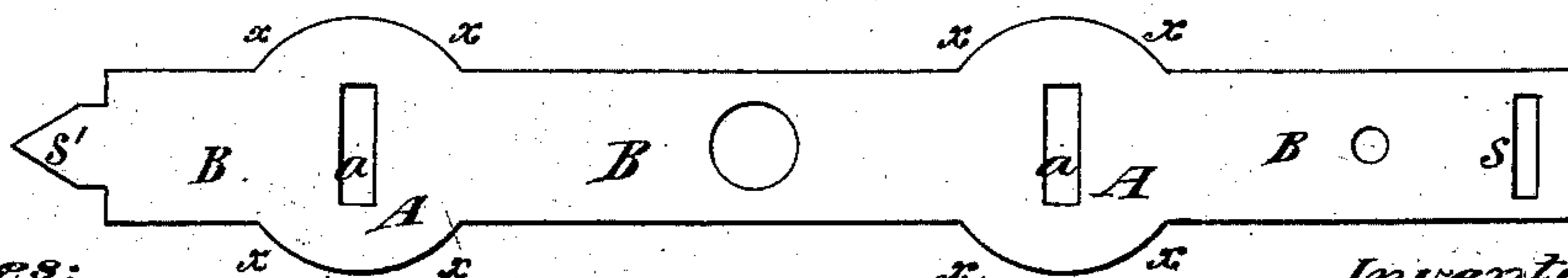
LOCK.

No. 283,125.

Patented Aug. 14, 1883.



*Fig 7.*



Witnesses:  
*John Maynes*  
*Ed L. Moran*

Inventor:  
*Charles A. Ludlow*  
*by his Attorneys*  
*Benjamin Brown*

# UNITED STATES PATENT OFFICE.

CHARLES A. LUDLOW, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO WALTER LIPE, OF NEW YORK, N. Y.

## LOCK.

SPECIFICATION forming part of Letters Patent No. 283,125, dated August 14, 1883.

Application filed March 10, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. LUDLOW, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Locks, of which the following is a specification.

My invention relates to locks the frames or cases of which are of such form that they may be readily inserted into holes formed by ordinary augers or boring-bits; and the principal object of my invention is to provide a lock which can be made and sold at a very low price.

The invention is applicable to locks wherein bolts having a sliding movement only are employed, and which are used for drawers, doors, and other like purposes, and also to locks where hooked bolts are employed, and which are used for piano-cases, the covers of sewing-machines, and other like purposes.

The invention consists in the combination, with the bolt or bolts and tumbler of a lock, of a skeleton case or frame composed of circular end portions or disks slotted for the passage of the bolt or bolts, and side pieces or portions connecting said end portions or disks and forming bearings for the journals of the tumbler, the lock being capable of being inserted into a hole formed by an ordinary auger or boring-bit.

In the accompanying drawings, Figures 1 and 2 are sectional views in planes at right angles to each other of a lock having a single sliding bolt and embodying my invention. Fig. 3 is a plan or end view thereof. Figs. 4 and 5 are sectional views in planes at right angles to each other of a lock having a hooked bolt and embodying my invention, the bolt being shown as locked. Fig. 6 is a view similar to Fig. 4, the bolt being unlocked; and Fig. 7 is a plan of the blank from which the whole frame is formed.

Similar letters of reference designate corresponding parts in all the figures.

The frame of the lock is composed of four portions, plates, or disks—namely, two end portions or plates and two side portions or plates. A A designate the end portions, plates, or disks of the frame, which are round, and B B designate the side portions thereof.

The portions A and B of the frame are, as here shown, all formed integral from sheet or

plate metal. I first stamp or cut out a blank of the form shown in Fig. 7, and then bend it on the dotted lines *xx* into the form of a rectangular frame. The ends of the blank may have a slot and tongue, *ss'*, for securing them together, or they may be connected by a rivet. This construction of frame is very simple; but, if desired, the portions A B may consist of separate plates, riveted or otherwise secured together.

The lock can be inserted into a round hole bored with an ordinary auger or boring-bit. The end portions, A, have in them slots *a*, in which the bolt C moves, and the said bolt is formed with a yoke, C', between the end portions, A.

Referring now to Figs. 1, 2, and 3, D designates the tumbler, which is journaled in the side portion, B, and in one end of which there is formed a socket, *b*, for the insertion of a square-ended or a flat key; or the tumbler may be otherwise formed to receive a key of any form. The tumbler D works or turns in the yoke C', and by its action moves the bolt C.

E designates a spring which is arranged on the bolt between the yoke C' and one of the end portions, A, and this spring serves to impel the bolt outward or upward into a locking position. When the bolt is to be locked, the tumbler is turned into the position shown, and the spring impels the bolt into its keeper. (Not here shown.) The bolt is withdrawn by turning the tumbler half round, so that it will move the yoke and bolt inward against the action of the spring.

If desired, the spring might be employed to impel the bolt inward, or to unlock it when the tumbler is turned to permit of it; or, if desired, the spring might be dispensed with entirely.

The arrangement of the bolt C, yoke C', tumbler D, and spring E in Figs. 4, 5, and 6 is the same as above described with reference to Figs. 1, 2, and 3. In connection with the bolt C, however, I employ a hooked bolt, F, provided with a yoke, F', which is connected with the bolt C, so as to move longitudinally with it, but which may move laterally relatively to said bolt C. The yokes C' and F' as here shown are each provided with a pin, *c*, working in a slot, *c'*, in the other, and hence

the yoke F' may be moved in the direction of the length of said slots. When the tumbler D is turned to the position shown in Fig. 6, the two bolts C F are drawn in against the action of the spring E; but when the tumbler is turned toward the position shown in Fig. 4 the two bolts are first moved through the keeper G, and the tumbler then strikes against an ear or lug, d, on the yoke F' and moves said yoke and the hooked bolt F laterally, so that the bolt will catch on the keeper G and hold it, as shown in Fig. 4. When the tumbler is turned to unlock the bolts, it first acts on the right-hand side of the yoke F', and moves it laterally, so as to free the hooked bolt F from the keeper G, and then acts on the lower portions of the yokes to draw down the bolts. This form of lock is adapted for locking piano-cases and sewing-machine covers, and for other purposes.

The several parts of my lock can be very cheaply produced either by stamping or punching them out of sheet metal or by casting them, and the locks can be made and sold at a very low price.

I am aware that locks have been made of such form that they may be inserted into holes bored with ordinary augers or boring-bits, and hence I do not claim such a lock, broadly, as of my invention. The cases or frames of such locks have, however, been formed of pieces of tubing,

closed at the ends by heads, and are objectionable because of the cost of so making the cases or frames, and because no part of the lock mechanism is accessible; nor can it be even seen or examined without opening the tubular case and withdrawing the mechanism therefrom. By making the frame of two end portions, disks, or circular plates and two side plates or portions I form a skeleton frame, which can be very cheaply produced, and which enables all the mechanism of the lock to be seen without withdrawing it from the frame. The end portions or disks fit snugly in a hole bored with an ordinary auger or boring-bit and properly hold the lock against movement sidewise.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the bolt or bolts and tumbler of a lock, of a skeleton case or frame composed of circular end portions or disks slotted for the passage of the bolt or bolts, and side portions or plates connecting said end portions or disks and forming bearings for the journals of the tumbler, the lock being capable of being inserted into a hole formed by an ordinary auger or boring-bit, substantially as described.

CHAS. A. LUDLOW.

Witnesses:

FREDK. HAYNES,  
ED. L. MORAN.