April 26, 1932. T. H. CONNELL ET AL 1,855,224

RECORDING LOCK

Filed Aug. 26, 1929

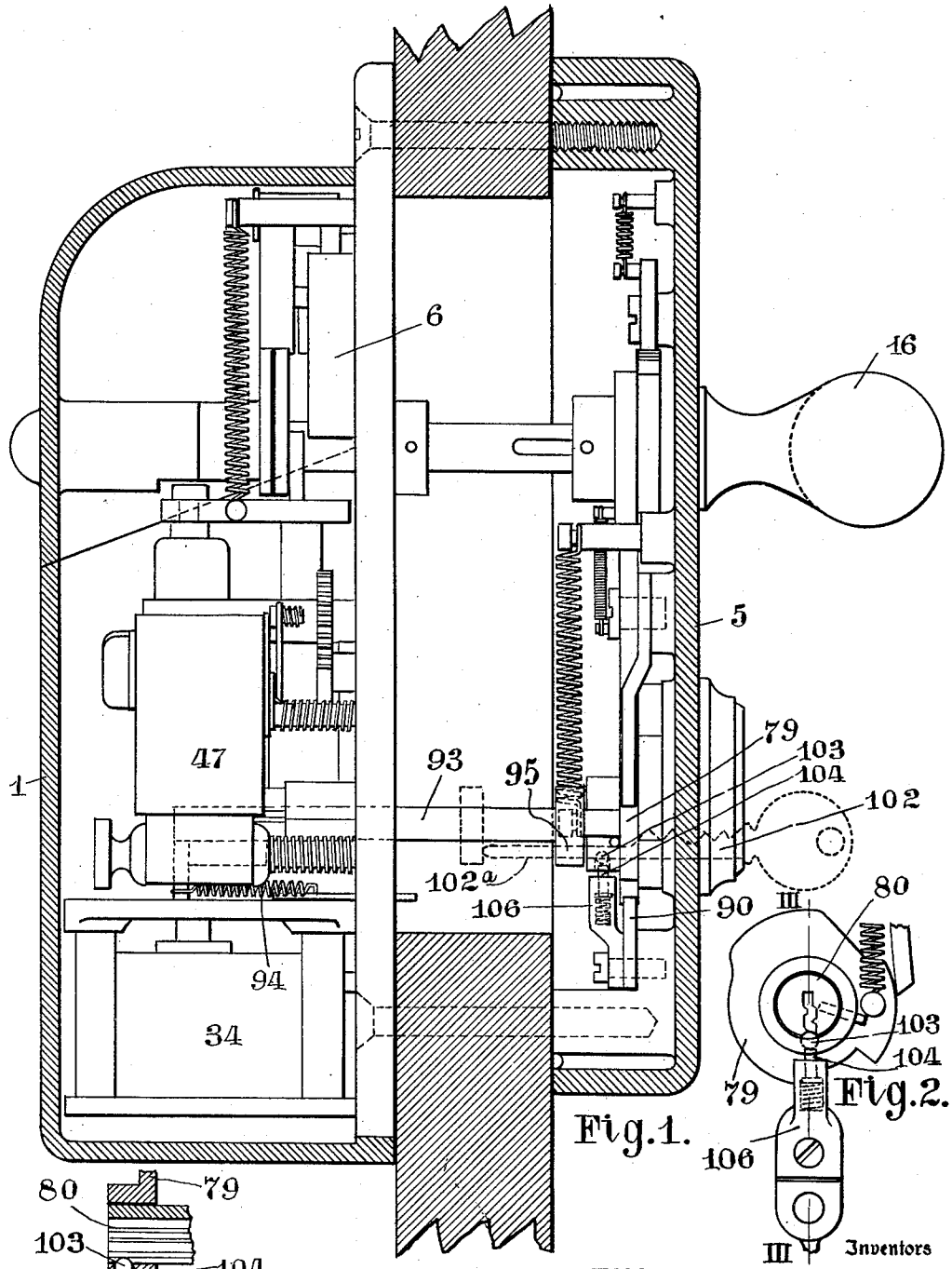


Fig.1.

Fig.2.

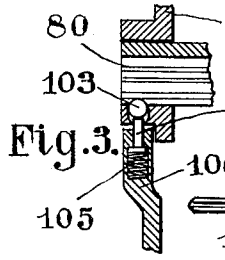


Fig.3.

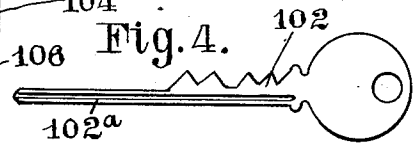


Fig.4.

Inventors

THOMAS H. CONNELL

IRVING M. BELTZ

by Fenwick & Fenwick

Attorneys

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UNITED STATES PATENT OFFICE

THOMAS H. CONNELL AND IRVING M. BELTZ, OF COLUMBUS, OHIO, ASSIGNORS TO THE RECORDING DEVICES COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO

RECORDING LOCK

Application filed August 26, 1929. Serial No. 388,409.

This invention relates to locks, and more particularly recording locks that make a record pertaining to the manipulation of the bolt.

The object, generally, of the invention is to provide means to prevent tampering with or fraudulent manipulation of a lock of this kind.

A special object of the invention is to prevent the operation of the lock without a proper setting of the recording means, and in carrying out the invention we provide means to lock the key actuated means and thereby prevent the actuation of the bolt throwing means until the recording means has been set by a sufficient insertion of the key. The instrumentalities, according to our invention, for effecting this result consist in the provision of a lock between the key actuated means and the means for controlling the bolt throwing device, and a key having an extension thereon adapted, not only to set the recording means but to release said lock, said key being operable to release the bolt controlling means only when the recording means has been properly positioned or set by said key extension.

The invention is embodied in the example herein shown and described, the features of novelty being finally claimed.

In the accompanying drawings we have shown our invention as embodied in a recording lock like that illustrated in the patent to Ziehler and Rowe, January 16, 1917, No. 1,212,599. In said patent there is described generally a lock bolt, a bolt operating device, means for locking and releasing the means for controlling the operation of the bolt including a key actuated means and a recording means set by the key and actuated by the bolt operating device.

In said drawings—

Figure 1 is a vertical sectional view showing the interior mechanism of the recording lock modified to embody our invention.

Fig. 2 is a detail in end elevation looking toward the right of Fig. 1, of the key barrel and cam disk member of the means for controlling the operation of the bolt actuating device.

Fig. 3 is a vertical section on the line III—III, Fig. 2.

Fig. 4 is a side view of the key.

In the views 1 and 5 designate the two parts of the housing, the former carrying the recording mechanism and the latter the knob and key operated mechanism. 6 designates the bolt which is actuated by the knob designated 16. The actuation of the knob is controlled, that is locked and released, by means of suitable mechanism such as shown in the aforesaid patent, that is, it is released for actuation by the operation of the key barrel 80 and cam 79 carried thereby.

The recording mechanism includes the printing devices, a record sheet 47, a clock 34, and a sliding bar 93 having a head 95 that is held retracted by spring 94 with the head 95 near the inner end of the key barrel and so that an identifying and time record is made on the sheet 47, according to the position of said rod 93, and effected by the full insertion of the key and the subsequent release and turning of the knob.

The key, as shown in Fig. 4, has a lock barrel operating part 102, and a plain longitudinal extension 102^a having a beveled end as usual for the purpose of setting the rod 93.

To compel the proper operation of the recording devices we provide a lock adapted to prevent the rotation of the lock barrel and the cam disk until the key has been inserted into the barrel to its full barrel operating position, said lock being operated by the rod-setting-prolongation 102^a of the key. The means for preventing the release of the key barrel and cam consists of a pin 104 pressed upward by a coil spring 105, each contained in a bracket 106 screwed to a suitable portion conveniently fixed on the case 5 with the key barrel stop 90. The pin 104 is actuated by a ball 103 contained and movable in a socket in the cam beyond which the ball can be partially projected into the key-way when the key is removed by the pressure of the spring actuated pin 104 which latter then extends sufficiently into the key barrel to lock it from turning.

In practice the employes in the same establishment will each be furnished with a key

having an extension 102ª of a length different from that of the others and adapted to push the rod 93 into position to make a record, when the knob 16 is operated, to indicate that the knob was operated by the particular key at the particular time indicated. It will be observed, therefore, that no key can be used to release the cam 79 and the knob unless the identifying recording means has been pushed fully into position to operate the key barrel. In other words although, in the example shown, the locking pin 104 is depressed by the ball as soon as the extension of the key passes over it the key barrel cannot be turned to release the disk, knob and bolt until the body of the key is fully in position to operate the pin barrel and the key extension to operate the head 95 and rod 93.

It will be observed that duplication of a key without the extension cannot avail in an attempt to fradulently operate the knob.

The forms of the parts can be changed without departing from the gist of the invention as claimed.

What we claim is:

1. In means of the kind described, a main locking and releasing barrel operable by a key, a releasable locking means associated with said barrel to prevent the operation thereof by the usual bitting of the key therefor alone, said locking means releasable by a longitudinal extension of the key.

2. In means of the kind described, a main locking and releasing barrel operable by a key, a cam associated with the barrel and rotatable therewith, a releasable locking means engaging the cam to prevent the operation of the barrel by the usual bitting of the key therefor alone, said cam engaging means releasable by a longitudinal extension of the key.

THOMAS H. CONNELL.
IRVING M. BELTZ.