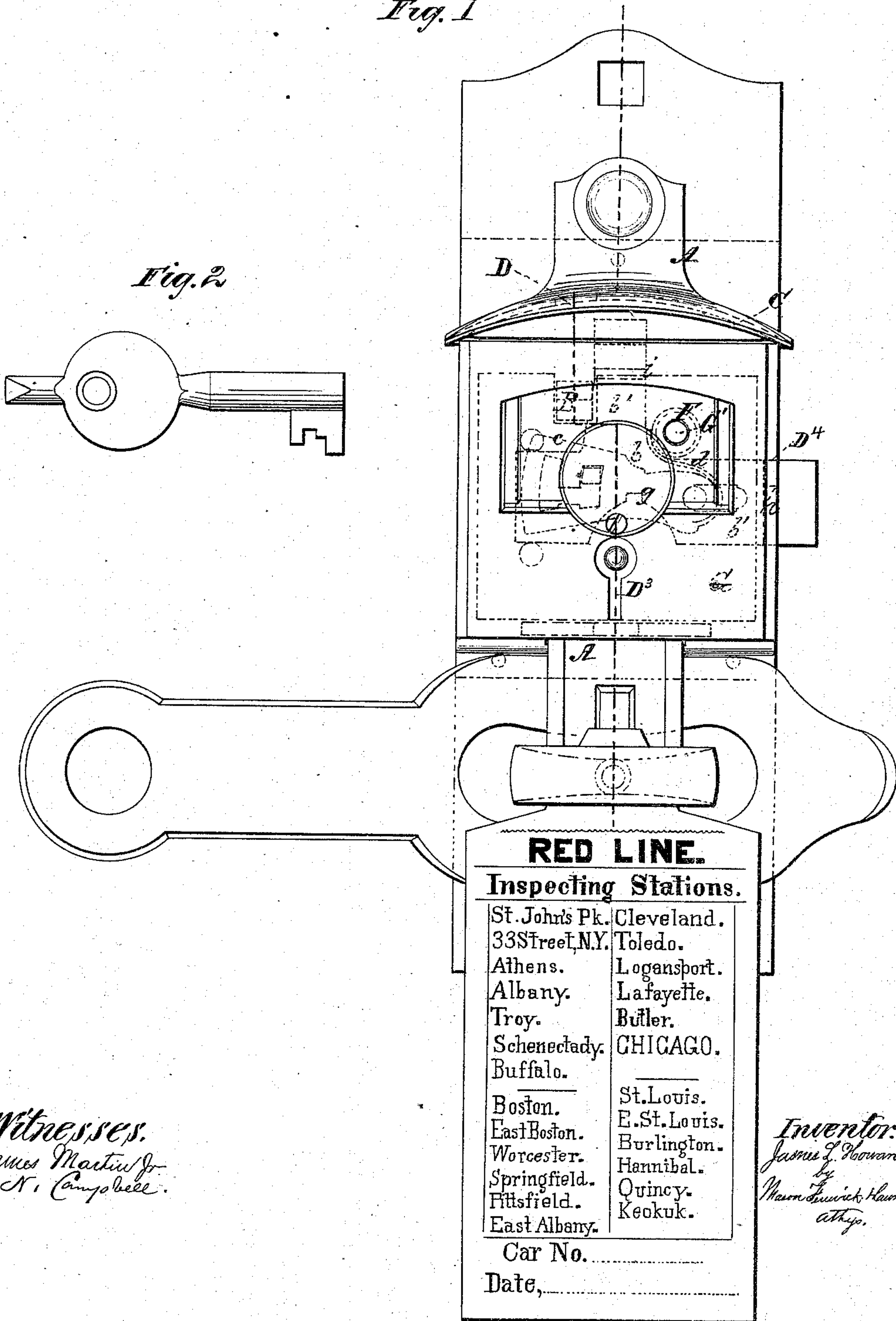


J. L. HOWARD.
Seal and Indicator Locks.

No. 158,174.

Patented Dec. 29, 1874.

Fig. 1



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Fig. 3

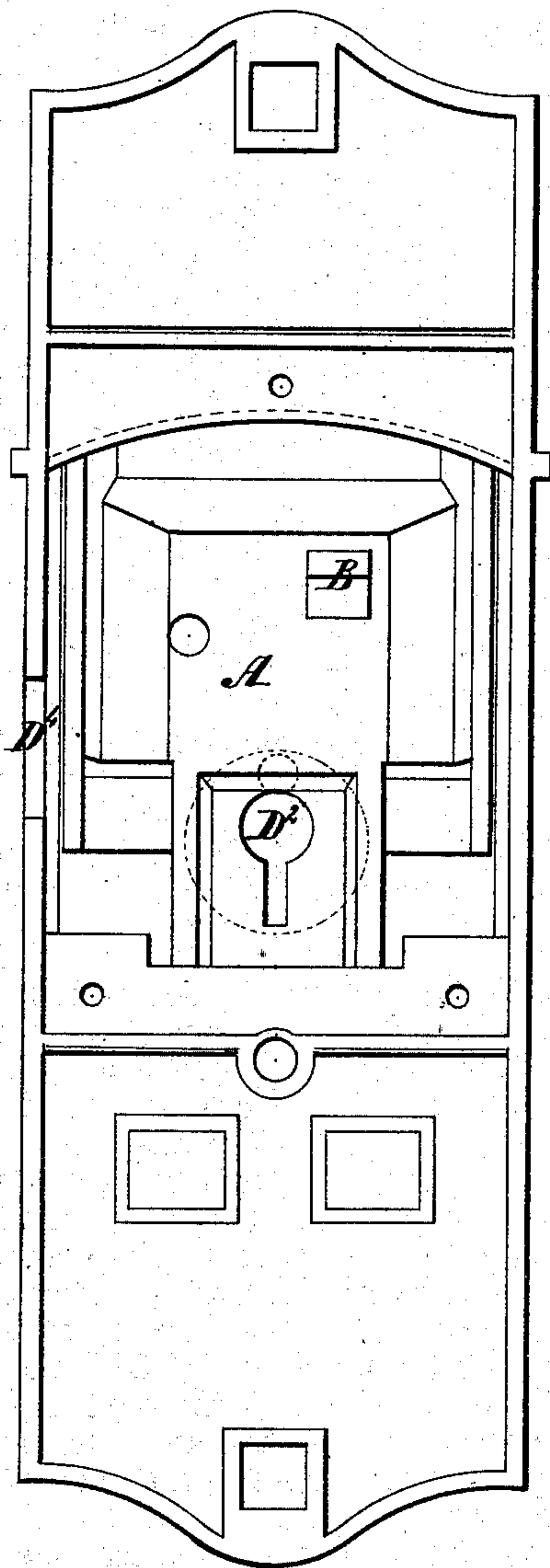


Fig. 5

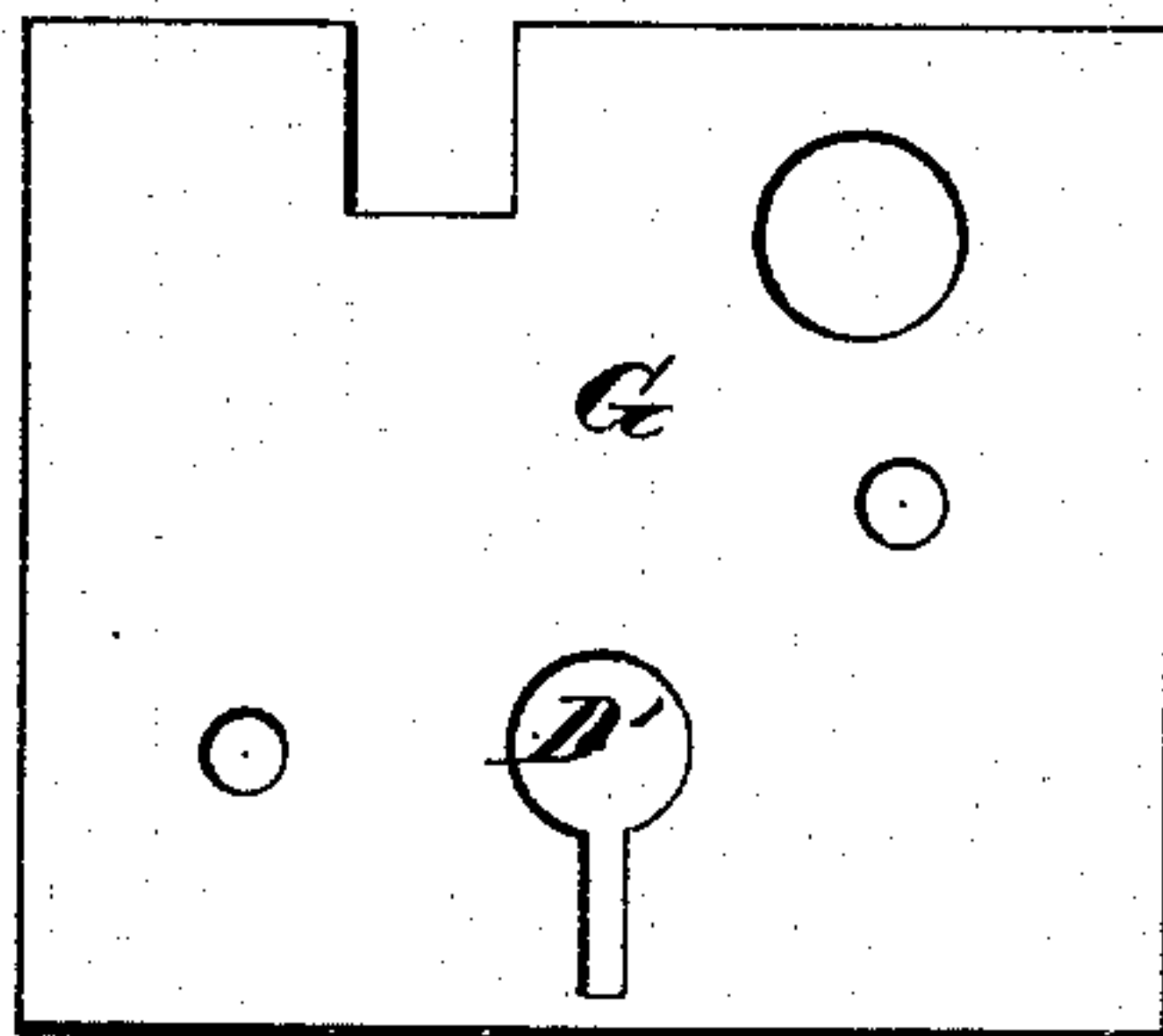


Fig. 4

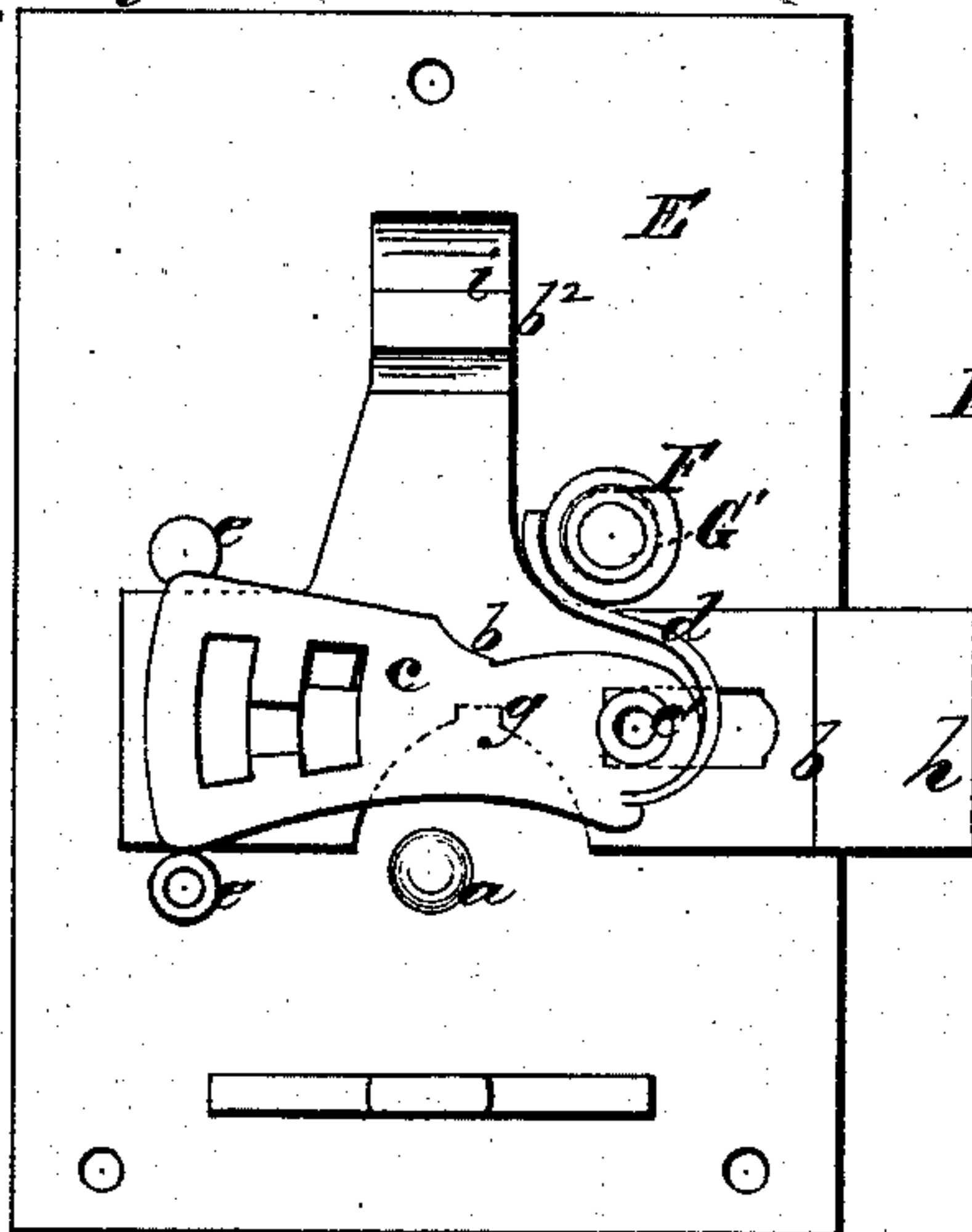


Fig. 6

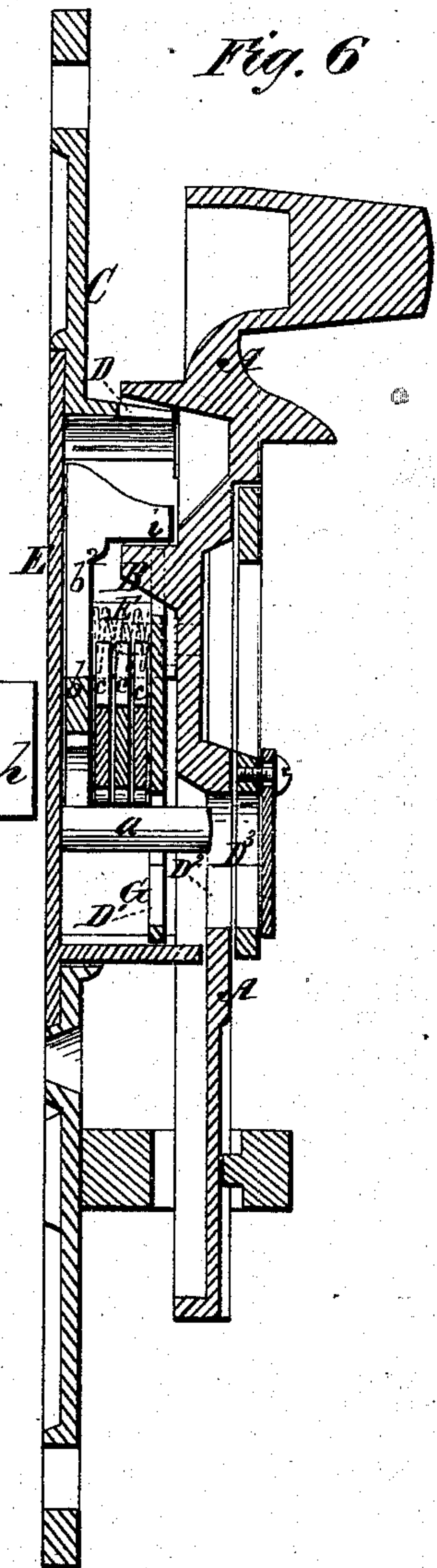
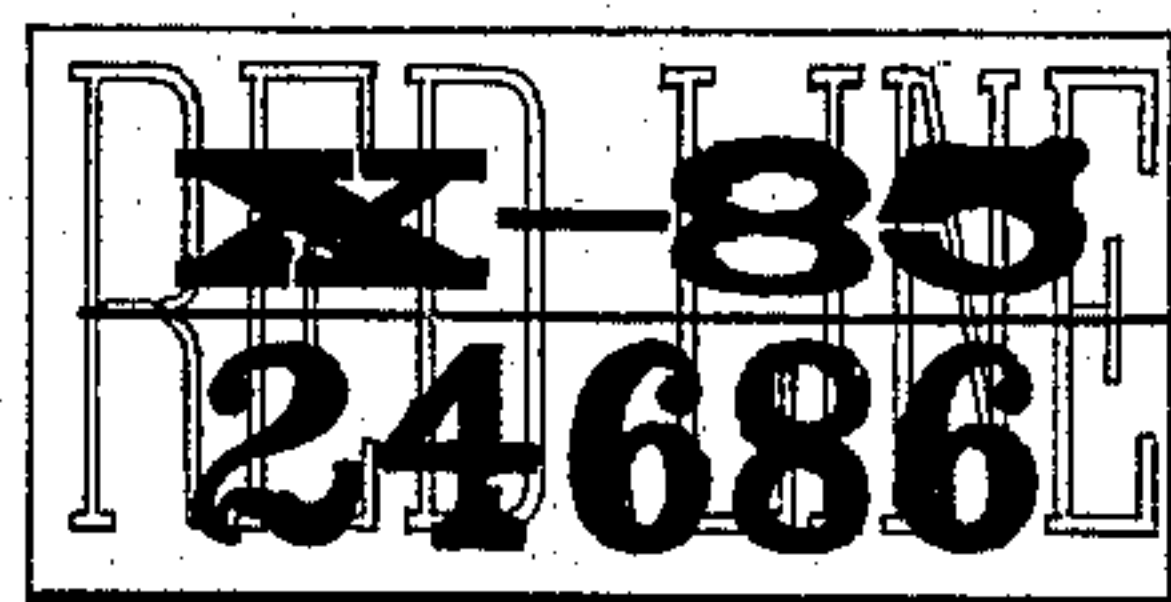


Fig. 7



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UNITED STATES PATENT OFFICE.

JAMES L. HOWARD, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN SEAL AND INDICATOR LOCKS.

Specification forming part of Letters Patent No. 158,174, dated December 29, 1874; application filed October 26, 1874.

To all whom it may concern:

Be it known that I, JAMES L. HOWARD, of Hartford, county of Hartford and State of Connecticut, have invented a new and useful Improvement in Seal-Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front elevation of a seal-lock with the improvements as patented by me June 16, 1874, and with an auxiliary and indicating lock added thereto. Fig. 2 is a side view of the key. Fig. 3 is a back view of the case and bolt, the auxiliary and indicating lock being separated therefrom. Fig. 4 is a front view of the auxiliary and indicating lock, having its front or innermost plate removed. Fig. 5 is an elevation of the said innermost plate of the auxiliary and indicating lock. Fig. 6 is a vertical section in the line *x* of Fig. 1. Fig. 7 is a front view of one of the glass seals used on the lock.

The object of my invention is to render seal-locks more safe and yet convenient, and also to make compound seal-locks indicate when the staple-hasps have been released from the keeper of the auxiliary lock. The first of these named objects I accomplish by combining a tumbler or other lock with the bolt which secures the hasp upon the staple, in such a manner that a keeper or stop of the tumbler-lock will stand opposite a stop or projection of the hasp-bolt, and aid in its work the spring-pin, which holds the hasp-bolt locked during the time that the indicator of the tumbler-lock is held in its case, and, when the said indicator is thrown out of its case by the action of a key, will cease its connection with the hasp-bolt, and leave the said bolt free to be moved up and down when the seal is broken, and the spring-locking pin is forced out of connection with the bolt. The second object I secure by shooting the indicator of the tumbler-lock out through the hasp-bolt case or frame, and leaving it exposed to sight, so that it shall be seen, and, when seen, serve to indicate that the lock proper is unlocked and its keeper or stop free from the hasp-bolt.

The hasp-lock represented is similar in its general construction and operation to my

aforesaid patented seal-lock, and, therefore, need not be particularly described here.

On the hasp-bolt A I have formed a projection or stop, B, and in the upper side of the seal and lock and bolt-case C a passage, D, is provided for this projection or stop to pass through as the bolt is moved up and down, and through the side of the bolt-case a passage, D¹, for the indicator, and in the front a key-hole, D², are formed. On the movable back plate E of the case the socket F for the spring locking-pin G' and its spring is constructed, and in it the pin and spring are placed, as shown. This plate E, which in this instance is the back plate of a tumbler-lock, has a key-pin, *a*, a sliding keeper-plate, *b*, tumblers *c*, springs *d*, and a guide and axial pins, *e e e'*, arranged upon it as shown, or in any suitable manner, for forming a lock which has a plate, *b*, and a keeper or stop, *i*, operating as presently described. The keeper-plate *b* is formed with a notch, *g*, in its edge for the key to catch into, and with an arm, *b*², the terminus of which is increased in thickness, so as to form a hook-shaped projection or keeper, *i*, for the hasp-bolt, the end *h* of the plate *b* serving as an indicator to show when the lock is unlocked. This plate *b* is fitted by means of an oblong slot upon the axial pin *e'*, and the tumblers are pivoted on this pin above the plate. The parts of this lock are covered by a key-hole plate, G, the key-hole D¹ of which coincides with the key-holes D² D³ of the seal-bolt and lock-case C, when the auxiliary lock thus constructed is inserted into the case C, and screwed by its flanges to the back of said case, as shown in Fig. 6.

To unlock the seal-lock after a seal has been properly adjusted in the seal-case, and the spring-pin and auxiliary lock have been locked, pass the key in through the key-holes D¹ D² D³, and turn it, so as to move the keeper *i* on one side of the projection B, and out of the way of the said projection. Now, break the seal and press back the spring-pin and slide up the hasp-bolt.

The proposed plan of using the compound lock is as follows: If a car or train of cars having their locks on are loaded in Washington by the Baltimore and Ohio Railroad, and going to Cincinnati, and Wheeling being the

end of their line, and starting with the seals in, and tags attached, and locked with the key, on arrival at Wheeling the inspector will punch at Wheeling on the tags, showing the seals to be untouched, and then inserting his key will unlock the locks, leaving the seal as the protection beyond their line, and so preventing the breakage of the lock if no key is had at Cincinnati. On arrival at Cincinnati the inspector at a glance knows that the auxiliary lock is unlocked from the exposed condition of the indicator, and he is saved the delay and inconvenience of inserting the keys to determine whether locked or not, which is a matter of some importance when we consider the rapid movements which are necessary on railroads.

What I claim as my invention is—

1. The combination of the keeper *i* of the

auxiliary lock, the locking-pin *G'*, and the sliding bolt *A*, which slides through the seal and lock-case, and is constructed with a seal-cavity, a stop, *B*, and a locking-pin passage, *F*, substantially as and for the purpose described.

2. The movable part *b* of the auxiliary lock, having its part *h* constructed to move in an opening through the outer case, and become exposed, and serve as an indicator, when the lock is unlocked, in combination with the keeper *i* of said movable part *b*, which serves as a keeper for a stop on a seal-lock bolt when the lock is locked, substantially as described.

JAMES L. HOWARD.

Witnesses:

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GEO. H. CASEY.