

T. F. KEATING.
Time-Locks.

No. 205,275.

Patented June 25, 1878.

Fig 1.

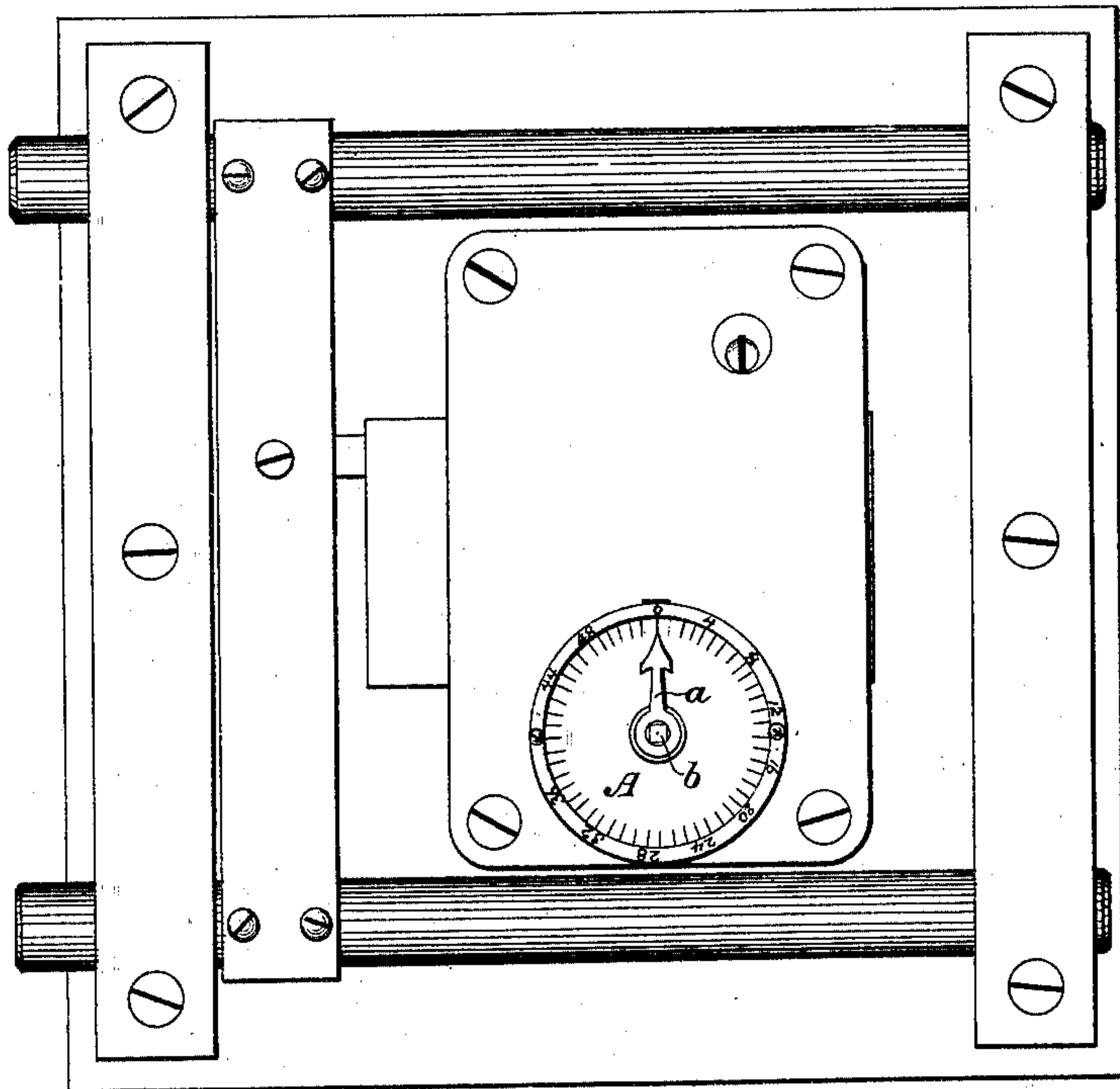


Fig 2

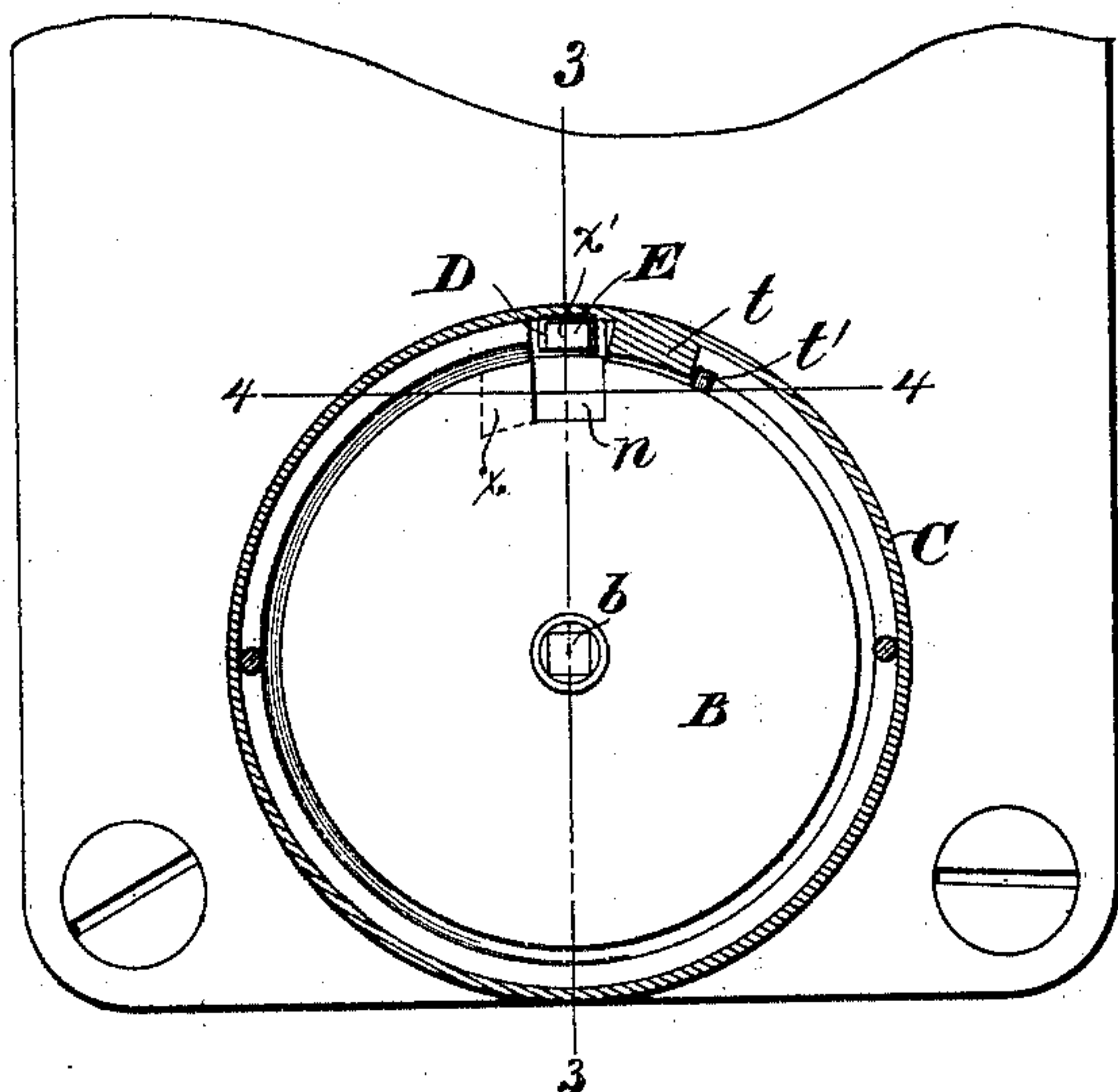


Fig 3.

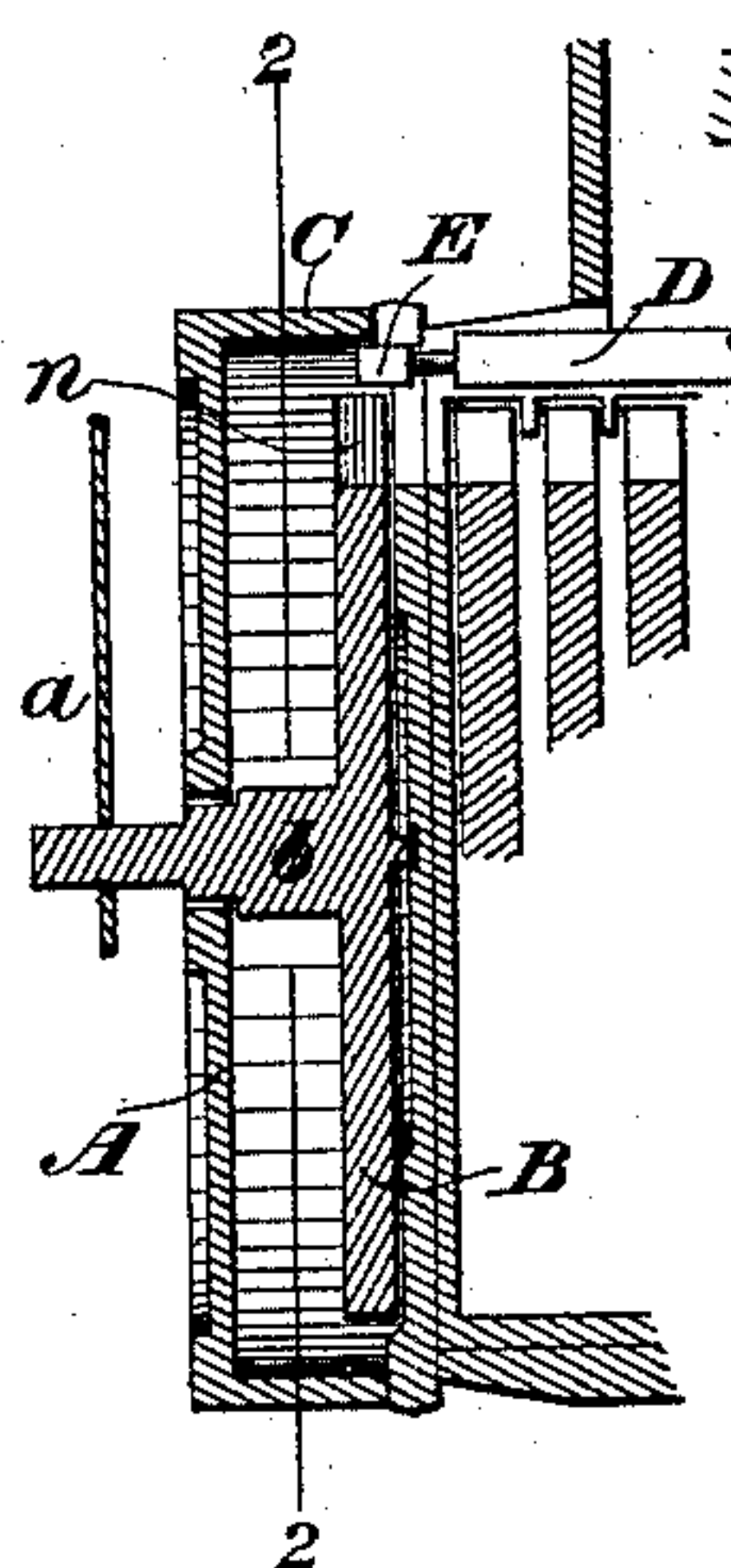
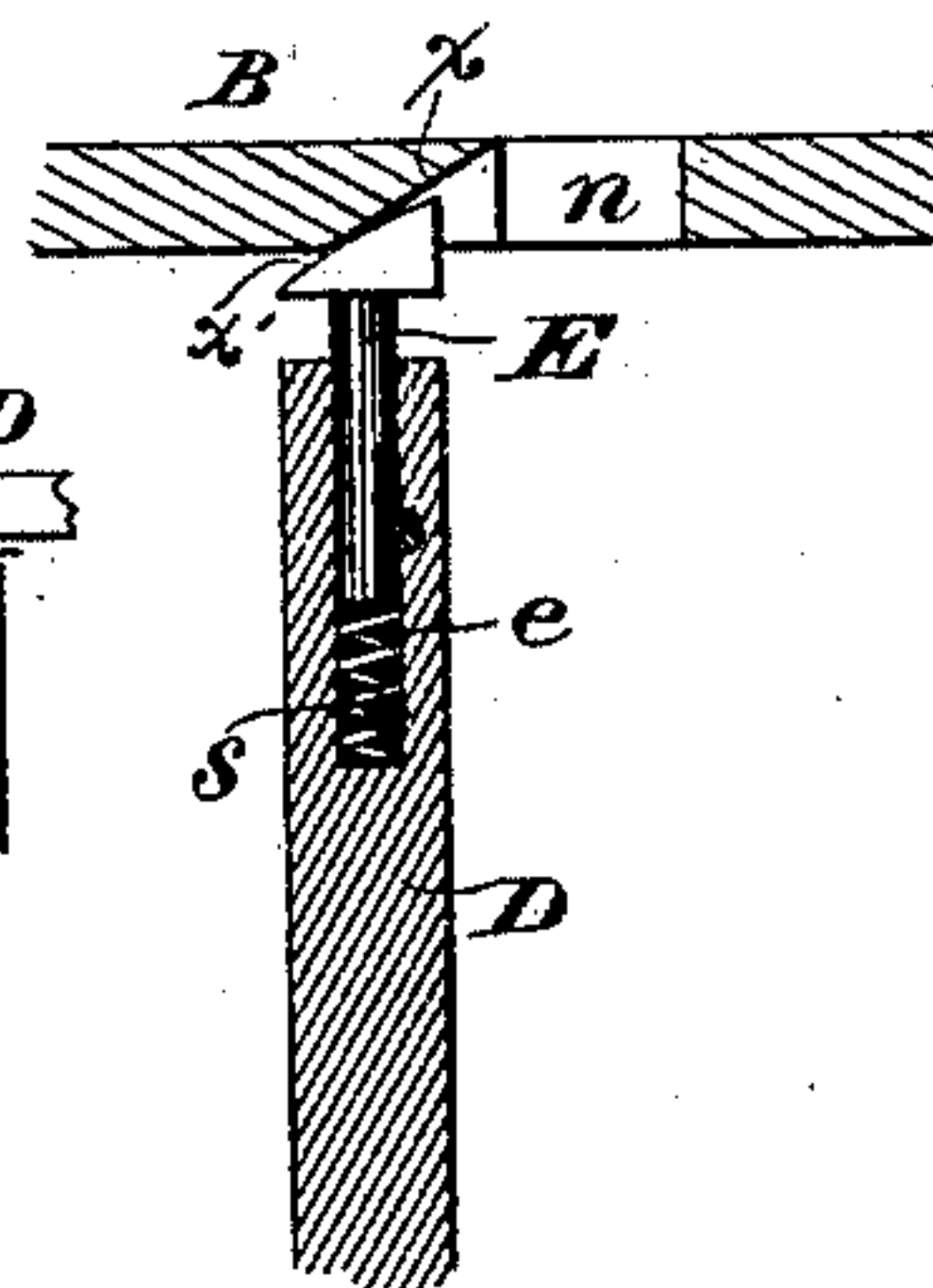


Fig 4.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. **205,275**, dated June 25, 1878; application filed May 3, 1878.

To all whom it may concern:

Be it known that I, THOMAS F. KEATING, of the city, county, and State of New York, have invented an Improvement in Locks, of which the following is a specification:

My improvement is particularly useful as applied to safe or vault locks.

It consists in the addition of an independent tumbler to any dial or round-tumbler lock, said tumbler to be operated by time mechanism to bring its notch in position to receive the fence or dog at a predetermined time, in conjunction with the ordinary tumblers, or it might be in conjunction with a single tumbler operated by the spindle from without.

It also consists in the construction of a peculiar fence or dog of two separate parts, one yielding with respect to the other, in combination with other operating parts, as hereinafter particularly set forth and claimed.

Omitting any description of round-tumbler dial-locks, or of time mechanism for revolving an extra tumbler, both of which are entirely familiar to those skilled in the art to which my invention appertains, I confine my specification of particulars to the form of embodiment of my invention exhibited in the accompanying drawings, in which—

Figure 1 represents the inner face of a safe or vault door with ordinary sliding bolt-work and a Yale dial-lock, to which are applied an inside dial and an extra tumbler to be operated by time mechanism; and Figs. 2, 3, and 4 represent details, to which references are made below by letters.

A indicates a fixed dial, and *a* a movable pointer; but I might employ a movable dial and a fixed pointer. B indicates an extra tumbler, secured on the arbor *b* over the cap-plate of the tumbler-case, or in coincidence with the dial-lock tumblers. Time mechanism of suitable size and of the usual character, that I have not represented, is to be geared to the arbor *b* to operate the extra tumbler. The dial is provided, as I have illustrated it, with a flange, C, and it may form a cap or inclosure for the extra tumbler and time mechanism. D indicates the ordinary fence or dog of the dial-lock, which I elongate by means of a yielding extension or plunger, E, secured to the fence in any suitable manner, but preferably as il-

lustrated—viz., by resting in a socket, *e*, in the fence, at the bottom of which socket is a small coiled spring, *s*, which tends to keep the plunger projected or thrust outward. I provide an incline, *x*, on one side of the notch *u*, and a corresponding incline, *x'*, on the outer end of the plunger or extension of the fence, the object of which is, that as the tumbler is turned in the direction for locking, when the fence is in the notches, it will ride over and press down the plunger, which will then bear against the inner face of the tumbler until the fence is thrown out of the notches by the spindle, when it will be thrust outward by the force of its spring, and will bear against the periphery of the tumbler until the time mechanism has brought the notch *n* in coincidence with it. I also provide a suitable stop to prevent the tumbler from being revolved by the time mechanism beyond the point of coincidence with the plunger—such, for example, as shown at *t*, which represents a stump on the flange of the dial, and at *t'*, which represents a pin projecting from the periphery of the extra tumbler, which impinges at the proper time against the stump.

The dial is graduated from 0 to 48, and the time mechanism may be geared as usual, so as to revolve it once in forty-eight hours. The adjustments are such, in this instance, that when the pointer is at zero the notch *n* of the extra tumbler will be coincident with the plunger, which will enter it when the dial-lock is operated by its spindle.

The effect of my attachment to the dial-lock, it will now be understood, is simply to prevent the operation of the fence of that lock for a certain period—that is to say, until the time predetermined, when the extra tumbler is revolved by the time mechanism to bring its notch in coincidence with the plunger or extension of the fence.

I thus provide, at small cost, a time attachment for dial-locks used on fire-proof or burglar-proof safes or vaults, that can be easily attached where there are one or more dial-lock mechanisms, and where there may not be room for the application of other classes of time-locks.

I prefer to provide that the winding of my time mechanism will carry the extra tumbler

around a distance corresponding to the time indicated by the dial that it is desired to have elapse before the notch will arrive in coincidence with the fence-extension, as is well known in time-locks; but this is not indispensable.

Instead of adding to the tumblers of a dial-lock, as I have above described, it is obvious that my invention, in substance, might be carried out by taking off one or more of the tumblers of such lock, and thus effecting the relative lengthening of the fence, as compared with the depth of the tumbler or tumblers remaining; and in some cases it may be found most convenient to use my invention in this manner.

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

1. In combination with the tumblers of a complete tumbler-lock, to be set for locking

or unlocking, at will, from without, in the usual manner, a single independent time-tumbler having no connection with the ordinary lock-tumblers, and to be set up by time mechanism from within, substantially as and for the purpose specified.

2. The combination of a lock containing an elongated fence and an extra time-tumbler, substantially as described.

3. In combination with the fence of a tumbler-lock, the spring-plunger provided with an incline, x' , and the extra tumbler having the incline x , substantially as described.

In testimony whereof I have hereunto subscribed my name.

THOMAS F. KEATING.

Witnesses:

E. BARDWELL,

D. H. SMITH.