

# H. Clark, Lock.

No. 92796.

Patented July 20, 1869.

Fig. 1.

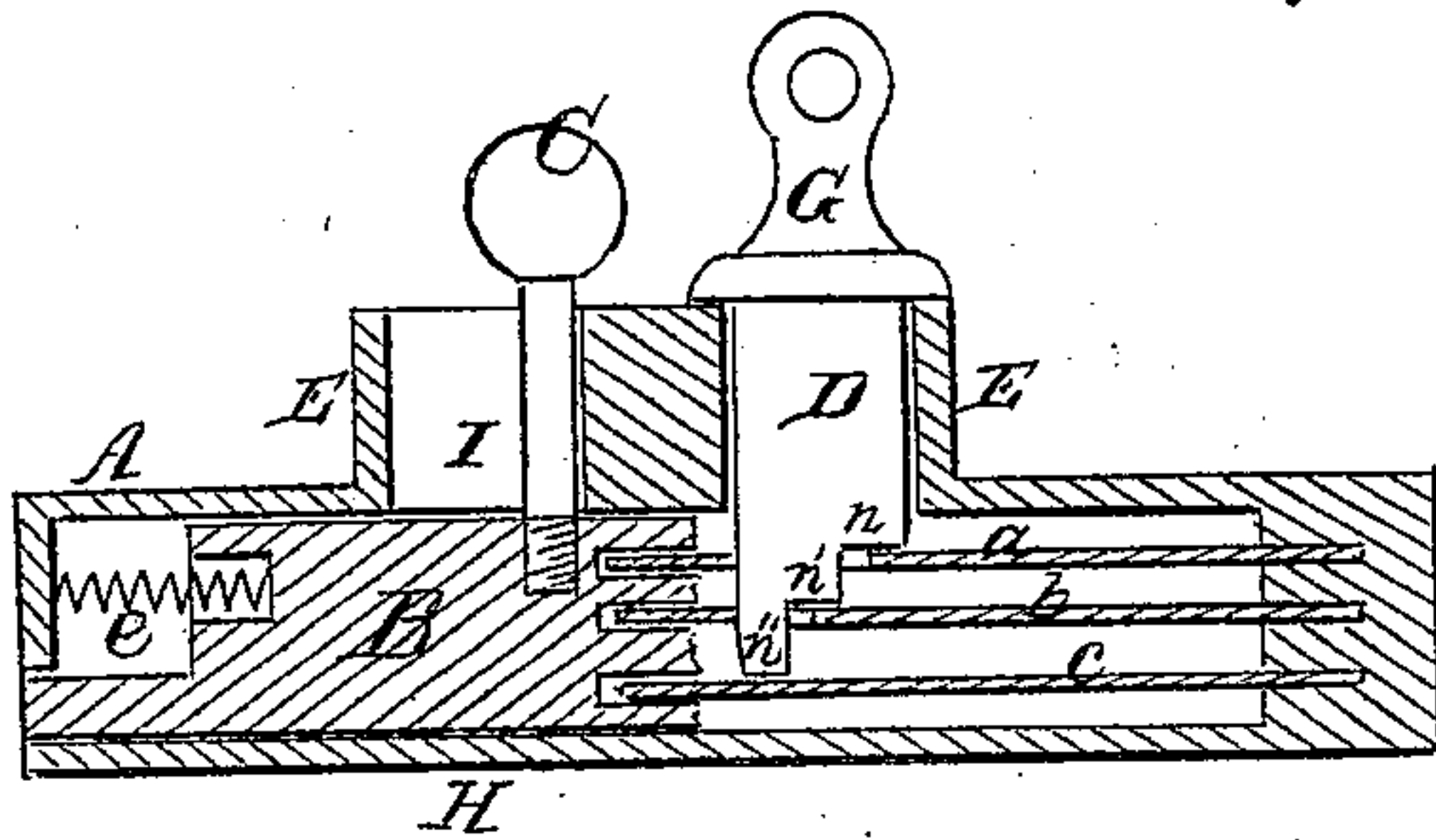


Fig. 2.

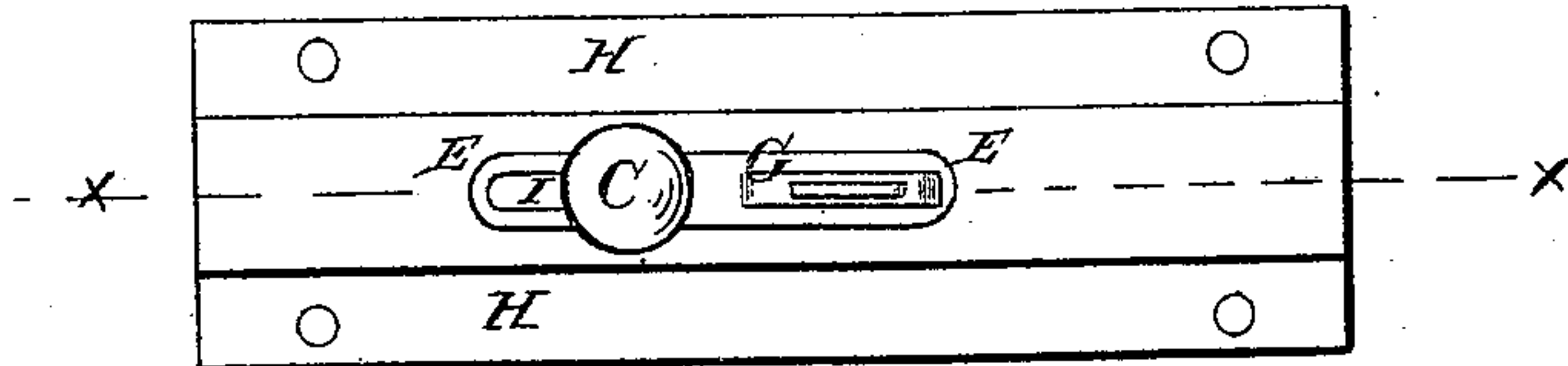


Fig. 3.

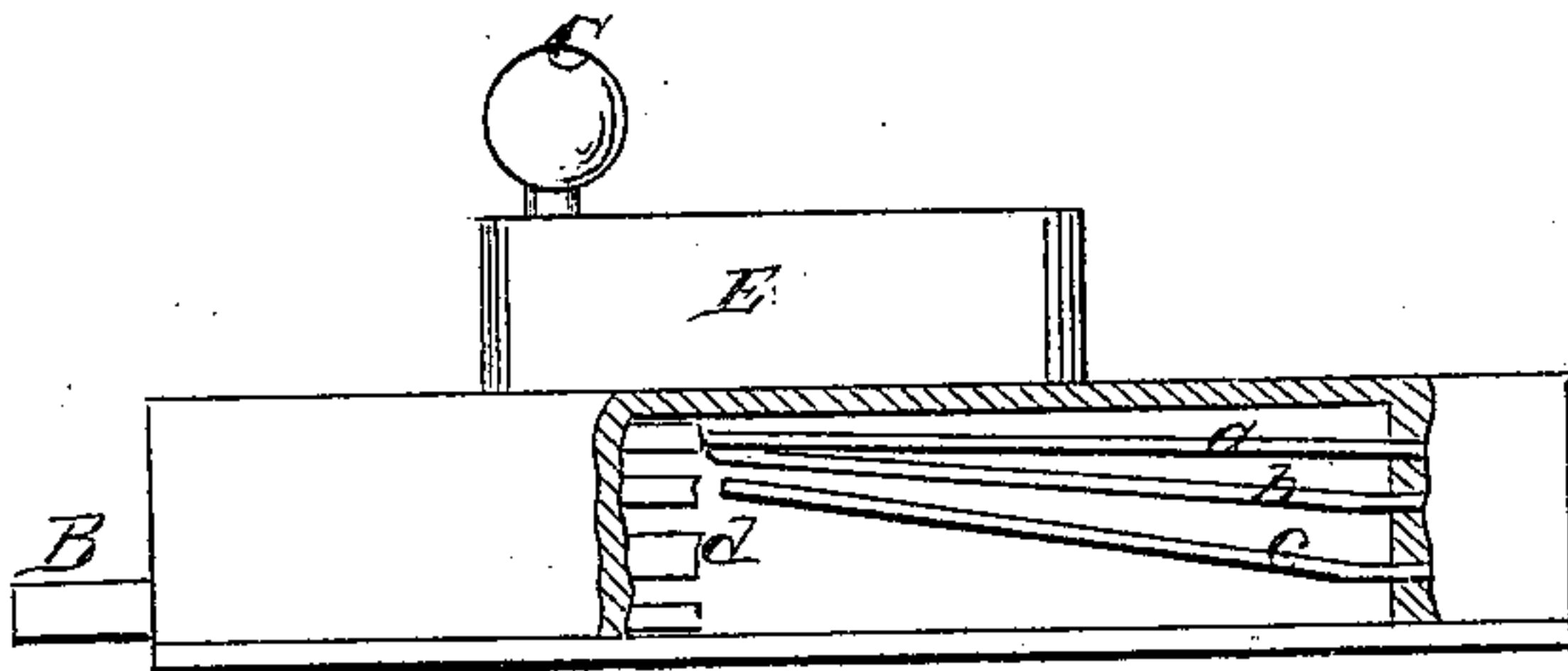
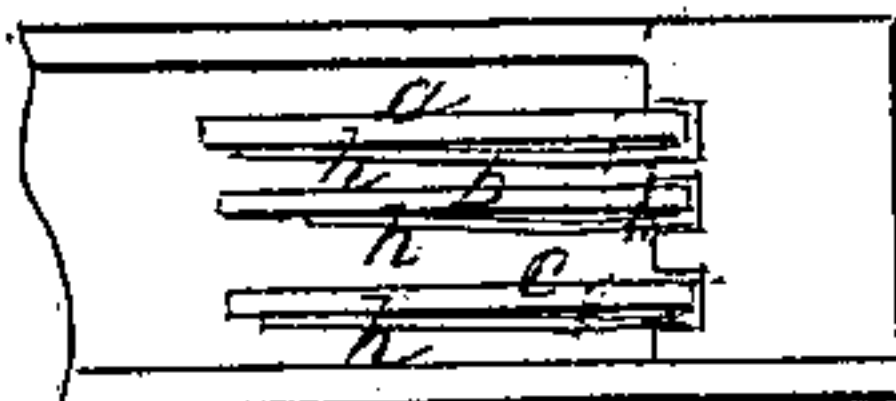


Fig. 4.



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H. CLARKE, OF BALTIMORE, MARYLAND.

Letters Patent No. 92,796, dated July 20, 1869.

## IMPROVEMENT IN DOOR-LOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, H. CLARKE, of Baltimore, in the county of Baltimore, and State of Maryland, have invented a new and improved Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view of my improved lock, the section being taken through the line *x x* of

Figure 2, which latter is a front view of the same.

Figure 3 is an exterior side view of the lock, with a portion of the case broken away, to exhibit the internal mechanism, which latter is shown in position when the bolt is thrown out.

Figure 4 is a detail view of a modification in the spring-wards.

Similar letters of reference indicate corresponding parts.

This invention relates to push-key or profile-key locks; and consists in the arrangement of the mechanism herein described.

In the drawings—

A is the lock-case, preferably of metal, and

B, the bolt, sliding freely therein.

The rear or inner end of this bolt is slotted or toothed, as shown, to admit the ends of the spring-wards *a b c*, &c., when the bolt is shot back, in the act of unlocking the door or cover, or to whatever the lock is affixed.

C is the knob, by which the bolt is pushed out, in the act of locking.

*e* is a spring, to return or shoot the bolt back when the key is inserted.

The spring-wards are arranged in rear of the bolt, in such a manner that their ends will be presented toward the toothed end of the same; and the manner in which the lock operates will now be shown.

The key D is a thin plate of metal, having a convenient handle, G.

The front edge of the plate is formed with a profile of steps or shoulders, *n n' n''*, each of which is fitted to encounter its respective spring-ward, and to hold it in its proper position for entering the adjacent slot in the end of the bolt, so that the latter may be shot back.

The spring-wards are inclined, as shown in fig. 3; that is to say, when the bolt is pushed out, the ends of the said wards will escape from the slots in the bolt, and, being bent toward the key-hole, will spring toward it in the position shown.

The ward *a*, being longer than the others, catches under the tooth nearest the key-hole. The other wards, being bent toward the key-hole, are out of line with their respective slots, and can only be placed

parallel with each other, by inserting the key, which latter, when inserted, bears the wards out to their proper relative position.

The shoulder *n* bears against the first spring-ward, and moves it from under the end of the first tooth.

The other wards will then be at their proper places to enter the slots, and allow the bolt to shoot back in obedience to the force of the spring *e*.

The spring-wards, all but the last one, *c*, are slotted, as shown, so that each shoulder of the key-plate D may encounter its respective ward.

The stem of the knob C slides in a slot, I, in the key-hole plate E.

H H are flange-plates, for affixing the lock-case firmly in the wood of the door or other place to which it is to be attached.

In figs. 1 and 3, the spring-wards are shown affixed rigidly in the end of the case, and being bent toward the key-hole, act with their own force to return to that position when the bolt is pushed out; but at fig. 4 a modification is shown, wherein the wards are straight plates of metal, pivoted or hinged in the end of the lock-case, and each provided with a separate spring, *h*, to actuate them toward the key-hole.

The ends of the teeth are notched, as shown at *d*, to insure the catching of its respective ward against it, should an attempt be made to pick the lock; and it will be obvious, that unless the several wards are brought to their proper position, with reference to the slots, when the first ward *a* is pushed from under the first tooth, the bolt will shoot back a short distance, which distance is the difference in length of the first ward with the others, and one, at least, of the teeth will catch against its own or the next adjacent ward, and the bolt be thus held from shooting back.

When the lock has thus been tampered with, the owner of the proper key can perceive it upon inserting his key, for in that case the wards will not yield readily to the push of the key, as one or more of the wards will be caught in the notches of the teeth, as before described, unless the person who has tampered with the lock, has taken the precaution to push the bolt outward, and thus liberate the wards from the notches before leaving it.

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

The herein-described arrangement, with reference to each other, of the flanged case H, slotted key-hole plate E, knob and stem C, bolt B, having the notched and recessed end *d*, the spring *e*, and slotted spring-tumblers *a b c*, for the purpose specified.

H. CLARKE.

Witnesses:

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MARY M. CLARKE.