

(No Model.)

J. POWELL.
FLOOR KEY FOR COCKS.

No. 400,944.

Patented Apr. 9, 1889.

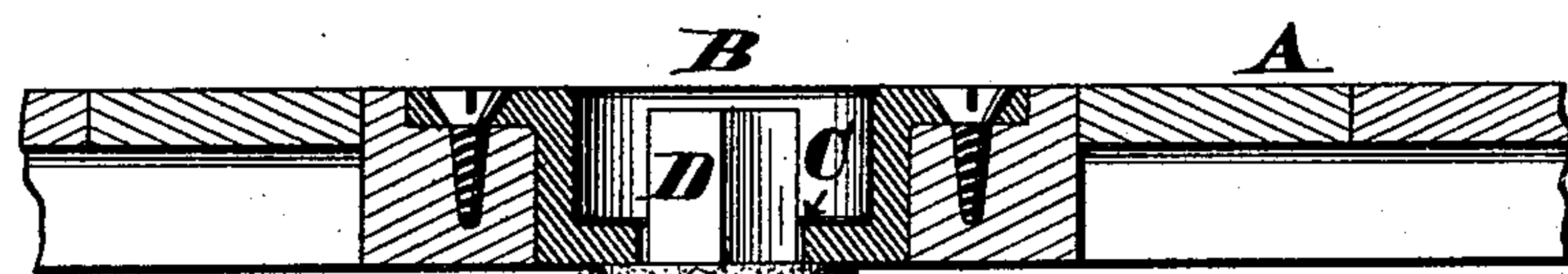


FIG. 1.

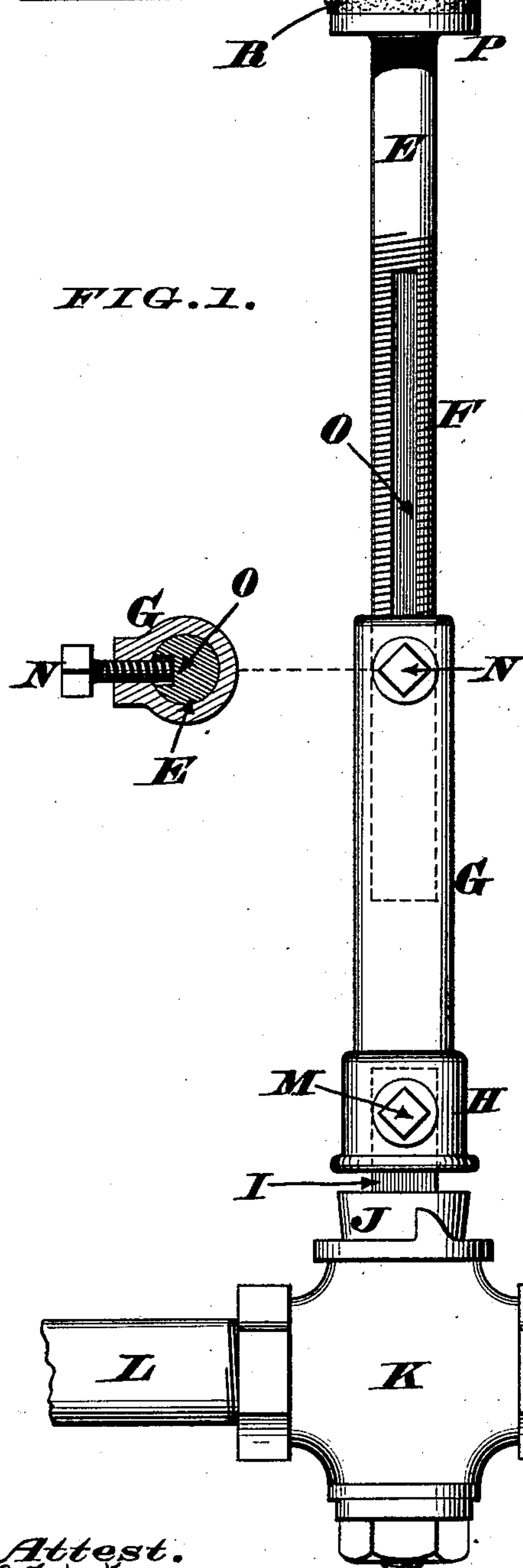


FIG. 2.

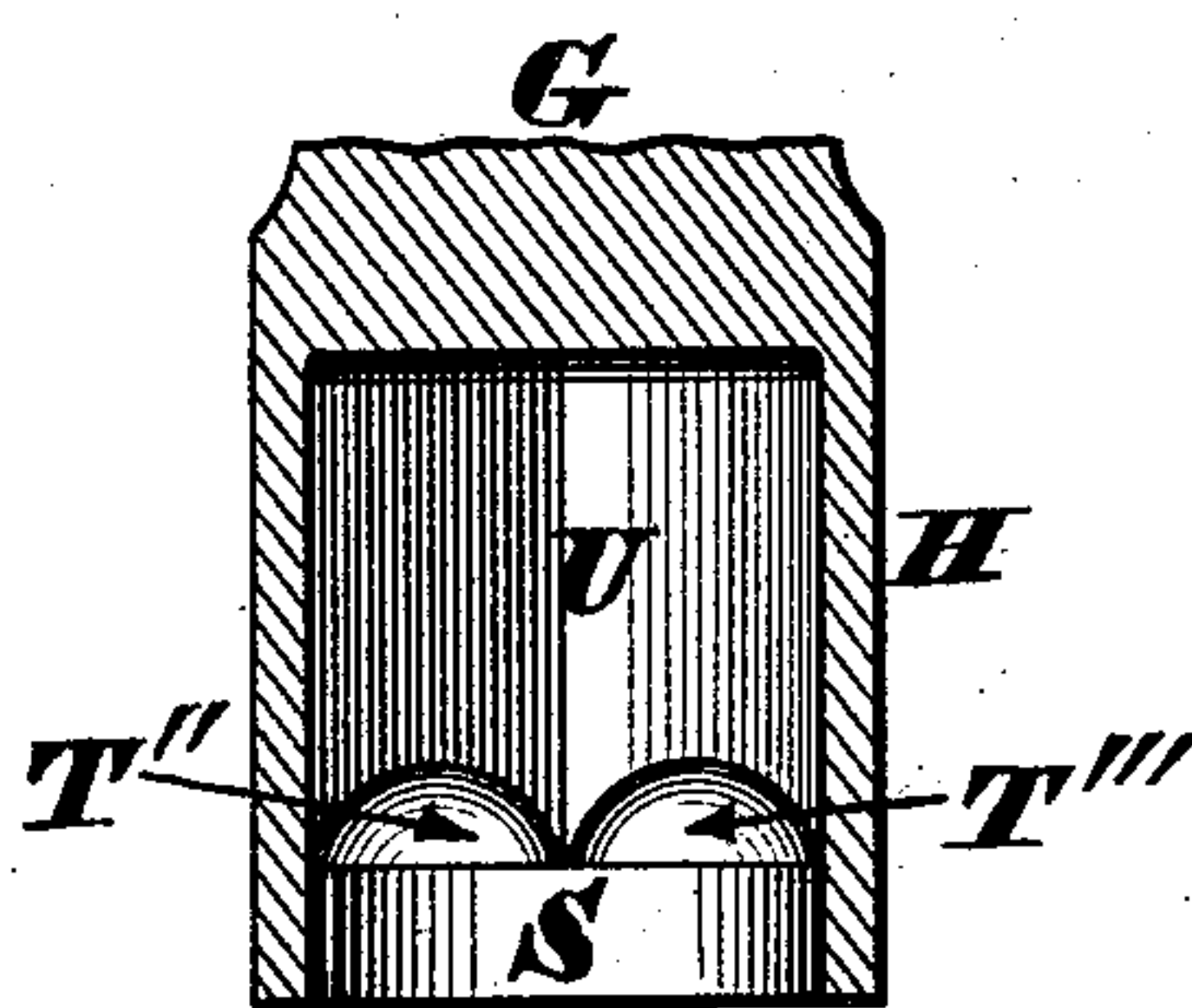
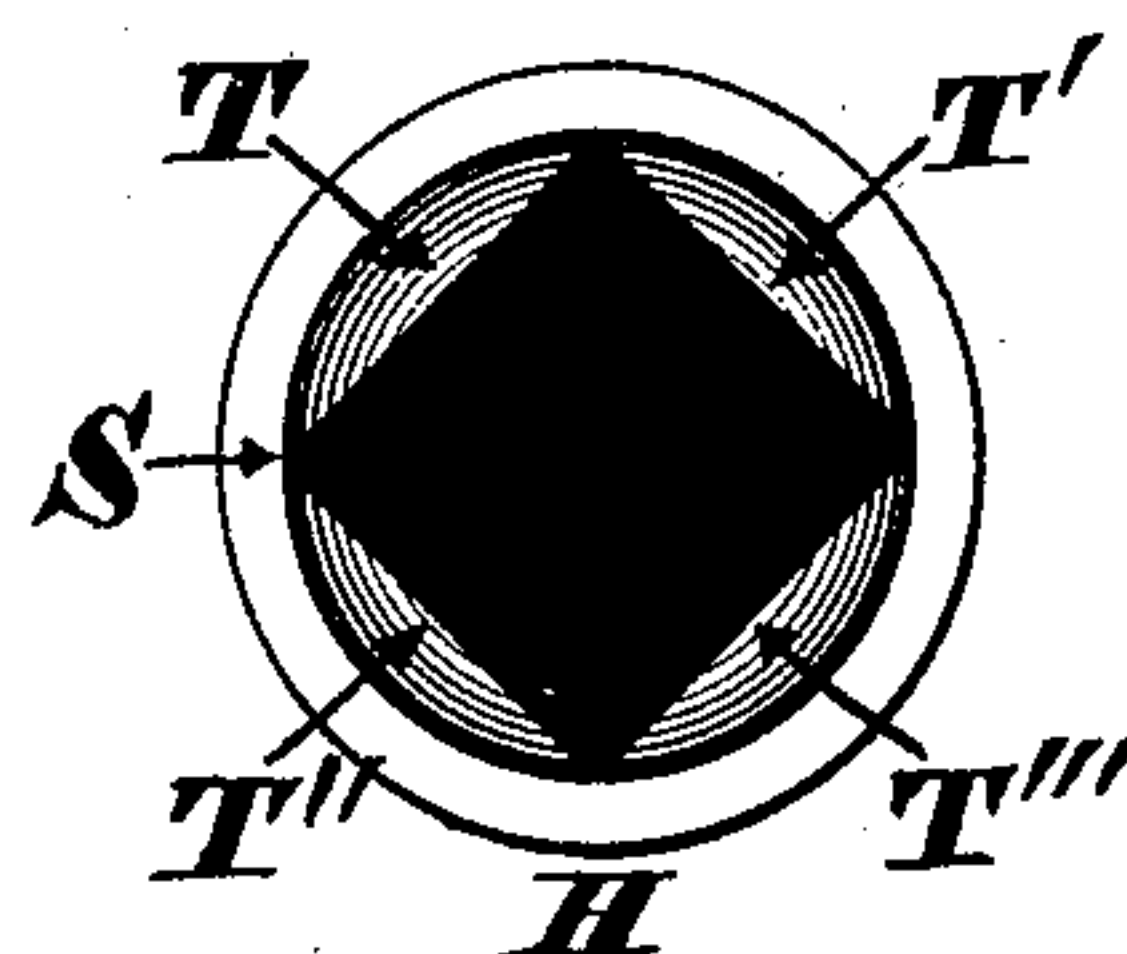


FIG. 3.



Attest.
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FLOOR-KEY FOR COCKS.

SPECIFICATION forming part of Letters Patent No. 400,944, dated April 9, 1889.

Application filed January 21, 1887. Serial No. 225,028. (No model.)

To all whom it may concern:

Be it known that I, JAMES POWELL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Floor-Keys for Cocks, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to that class of longitudinally-extensible keys or wrenches in which the lower or socket end engages with the turning-plug of a stop-cock, while the opposite or upper end of the implement is adapted to receive the socket of a customary hand-key; and the first part of my improvements comprises a specific combination of devices wherewith this longitudinal extension is readily effected. The aforesaid combination includes a nut-section having a socket at its lower end to engage with the turning-plug, an upper or screw-threaded section that engages with the nut-section, and a clamp-screw that unites said sections, so as to hold them securely at any specific adjustment. This clamp-screw is tapped transversely in the nut-section and near the upper end thereof, the point of said screw being inserted in the longitudinal groove of the adjustable or screw section, in order that any turning of the latter, either to the right or left, will cause a similar turning of the nut-section and the plug to which it is attached. The screw-section has a square arbor at its upper end to receive the ordinary hand-key, wherewith the cock is opened and closed, the adjustment of the screw-section being very conveniently effected after the clamp-screw has been unslackened, as hereinafter more fully described.

40 The second part of my improvements consists in providing the lower end of the key with a peculiarly-shaped socket, that enables the ready engagement of the implement with the turning-plug of the cock, as hereinafter more fully described.

50 In the annexed drawings, Figure 1 is a side elevation showing my floor-key applied to an ordinary cock, the arbor of the implement being housed within a pitted plate and a transverse section of the implement being seen at the left of the illustration. Fig. 2 is an en-

larged axial section of the socket at the lower end of the implement. Fig. 3 is a plan of said socket.

Referring to Fig. 1, A represents either the floor, wall, or partition of a building, and B is a pitted plate let into the same, the bottom of said pit being pierced at C to permit the ready turning of a square arbor, D. This arbor projects from the upper end of a screw-section, E, the principal portion of which has a male thread, F, chased around it, which thread engages with the lower or nut section, G. This nut-section has at its lower end a socket, H, adapted to engage over the square I of the turning-plug J of an ordinary cock, K, to which the pipes L L' are attached. M is a bolt or screw tapped into the socket H for the purpose of coupling it to the square I. Tapped in the nut-section G, and near the upper end thereof, is a clamp-screw, N, whose point traverses the longitudinal groove O of the screw-section E.

P is a collar at the upper end of this screw-section, and, if preferred, a flexible washer, R, may be interposed between said collar and the plate B.

Socket H of the nut-section G is constructed as seen in Figs. 2 and 3, which illustrations show that the extremelower end of said socket has a cylindrical bore, S, extending up a suitable distance, which bore is then counter-bored, thus producing four concaves, T T' T'' T'''. These concaves lead into the square chamber U of the socket, and serve as guides that greatly facilitate the application of the latter to the turning-plug of the cock, which insertion of the plug is sometimes quite difficult, especially when the cock is situated in a dark cellar.

90 In applying this implement the plate B is so fitted in the floor as to cause the center of opening C to be in line with the axis of the turning-plug J. The bolts or screws M N are then slackened and socket H is fitted over said plug, after which act the lower screw, M, is tightened, so as to couple the nut-section G to said plug. Section E is now unscrewed from section G, which can be readily effected, because the point of the clamp-screw N is not inserted in the groove O of the upper section; but as soon as said section has been suffi-

ciently advanced to bring its collar P or washer R in contact with the under side of plate B the clamping device N is then screwed up very tight, so as to cause its point to bear firmly within the groove O. It is evident that this act couples the upper section, E, firmly to the lower section, G, by which arrangement any turning of the arbor D, either to the right or left, will cause a corresponding turning of the cock-plug J. Consequently the cock can be opened or closed by any person in the room where the plate B is located.

I am aware that extensible rods for hydrant-cocks, &c., are not new, as such devices are seen in a number of patents. Therefore my claim is not to be construed broadly, but is limited to the specific combination of parts herein described.

I claim as my invention—

1. The combination, in a longitudinally-extensible cock-key, of the nut-section G, having a socket, H, and clamp-screw N, and the screw-threaded section E F, engaged with said nut-section G, this section E F being provided with a turning device at its outer end, and having a longitudinal groove, O, that admits the point of said screw N, as described.

2. A cock-key provided with a socket whose outer end has a cylindrical bore, S, terminating with four concaves, T T' T'' T''', where the inner end of said bore joins the square chamber U, as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES POWELL.

Witnesses:

JAMES H. LAYMAN,
SAML. S. CARPENTER.