

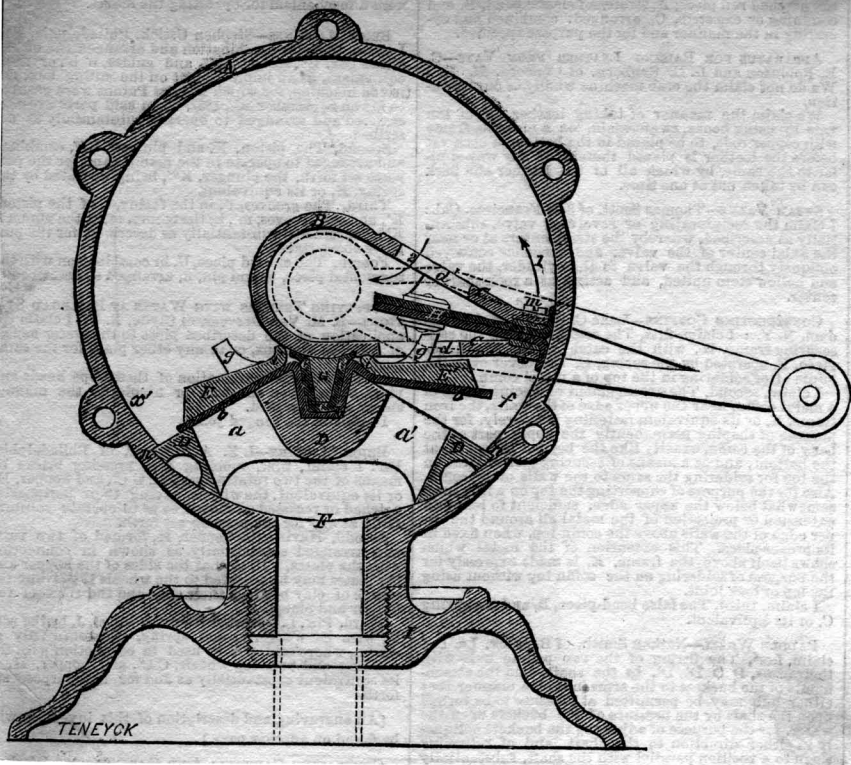


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RACE & MATTHEWS' IMPROVED OSCILLATING PUMP. 125-1



The chief features of novelty in this hydrant are that, by the peculiar arrangement of the valve, the waste pipe is opened as the induction pipe is closed, and it can be readily removed from its base without the necessity of excavating.

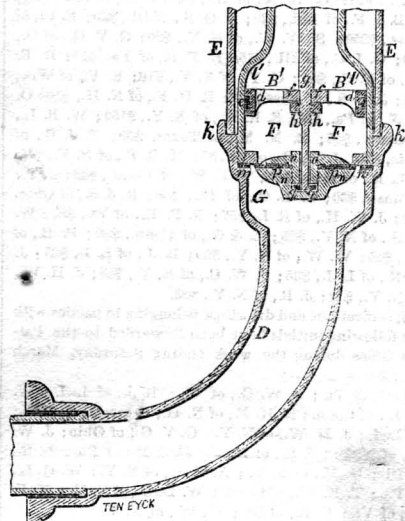
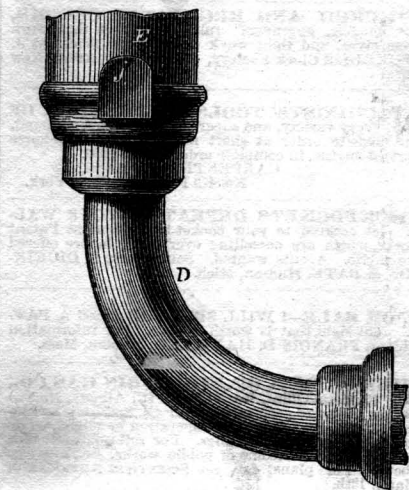
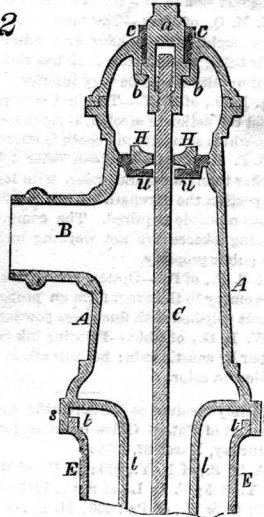
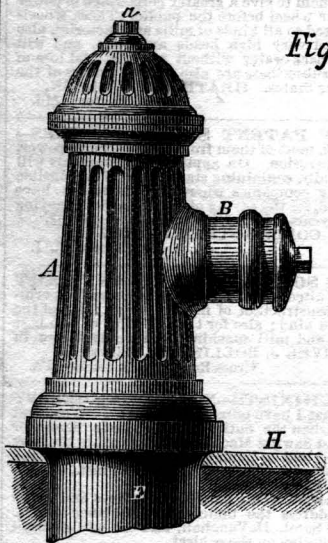
125-3

The engravings illustrate a perspective (Fig 1) and sectional (Fig. 2) view of the hydrant. A is the case, the upper part of which can be of any appropriate ornamental form provided with one or more horizontal nozzles, B. The lower part of the case, *l*, is smaller in diameter than the upper, and is cylindrical; this part is below the surface of the ground. The lower part of *l* is widened out at *l'*, and an annular valve, B', is fitted into it. This valve is formed of a flat ring, *d*, grooved on its surface to receive a packing, *e*, of leather or other suitable material. The ring, *d*, has a crossbar, *f*, having a hub or boss through which the rod, C, is fitted; this rod, C, has a shoulder *g* upon it, that serves as a bearing to the upper side of the boss. A nut, *h*, on C, under the boss, firmly secures B' to the rod. A screw passes through *d* at a point directly opposite the waste opening in *l*. The lower end of *l'* has a screw thread formed upon it, and it is screwed into the head of the bent pipe, D, that communicates with the "main," and is permanently secured in the ground. An annular piece of packing, *m*, is interposed between *l'* and D. An annular valve seat, F, is also screwed into the lower part of *l'*. G is a valve formed of two parts, *n* and *o*; the part *n* is of cup form, and contains a nut, *g*, by which G is secured to C. The other part of the valve, *o*, is a cap that is screwed down upon a packing, *p*, which, when the valve is closed, bears against the seat, F. The valve, G, can turn freely on C. Around the outer side of *l'* a groove is made in the same plane as the lip of the waste opening, *j*

RACE & MATTHEWS' HYDRANT. 125-2

Fig. 1

Fig. 2



in *k*. A and E are attached to each other by means of flanges, *s* and *t*. In the upper part of A, a cap, H, is screwed, and secured into a recess, *u*, in which a packing is placed, thus forming a stuffing box. The upper part of rod, C, has a screw thread worked on it, and this screws into a cap, *a*, that rests by a flanch on *b*, and is held secure by a nut, *c*. A wrench applied to *a* will operate G, and by moving it one and a half inches, the full capacity of the hydrant is let on. The top, *a*, is made so as to require a peculiar wrench, thus forming a key.

125-4

The operation is as follows:—By applying the wrench to *a*, the rod, C, can be raised or lowered. When it is raised, the valve, G, bears against its seat, F, and water from the "main" cannot pass into the case, A, of the hydrant. When the valve, G, is closed, the valve, B', is above the opening, *j*, and therefore any water in the case can pass out. When the rod, C, is lowered, the valve, G, is opened, and the valve, B', closes the opening, *j*, while the water from the "main" passes up through it into case, A, and through the nozzle, B. In case any of the parts require to be repaired, the whole hydrant may be raised, the jacket, E, remaining stationary; this is done by turning the case, A, which unscrews *l* and *l'* from *k*.

This excellent hydrant is the invention of Washington Race and S. R. C. Matthews, of Seneca Falls, N. Y., and it was patented January 28, 1858. Further information may be obtained by addressing Messrs. Race & Matthews, as above.