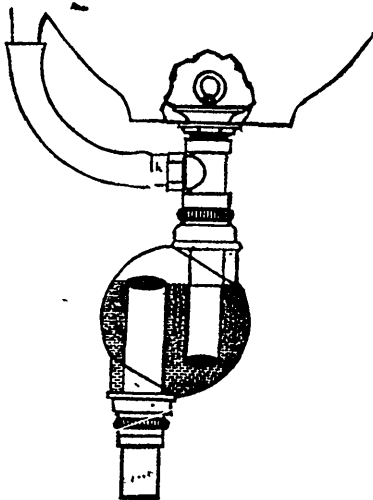


ESSENTIAL FEATURES OF HOUSE DRAINAGE.

Below are some extracts of a practical character on essentials of house drainage, from a paper by Rudolph Hering, civil and sanitary engineer, of New York city, from a paper read at the late meeting of the American Public Health Association at Detroit. (For the large figure representing the drain, soil-pipes and connections we are indebted to the *Sanitary News*, of Chicago.

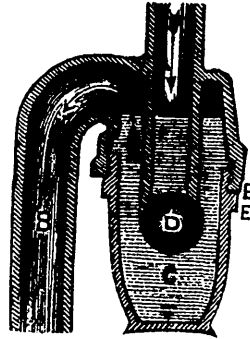
In a perfect system of house drainage, all traps should have a depth of seal in proportion to their liability to siphonage, a question which can be determined in each case, and varies from $1\frac{1}{2}$ to 3 inches. Among all the many styles of traps, those consisting merely of a bent pipe, and having the same water section at every point, are the best, for they permit the quickest flow and the least possible retention of matter. At the same time they are the most readily siphoned and should have separate ventilation in almost every case. The desire to prevent siphonage



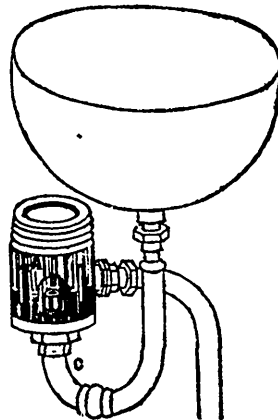
has brought about many devices more or less complicated. I shall only refer to a few of the most common.

The so-called D trap and the bottle

trap are objectionable on account of offering a good chance for deposit. The latter has the advantage, however, that it is hard to siphon when kept clean. When given a rounded bottom it is less apt to store deposit.



Bower's trap, where a floating rubber ball serves to close tightly against the receiving pipe, is a better device, but it also needs occasional cleaning. Its resistance against siphonage is not complete, and it requires ventilation where exposed to considerable suction.



MERCURY SEAL TRAP.

Cudell's trap operates on a similar principle, but a metal ball is used instead of a rubber one. It is more readily siphoned than Bower's trap.

A better anti-siphonage device however is Nicholson's trap, as it effectually main-