

other convinced themselves that by so doing they ventilated the drains. A little consideration will convince you that this is not to be depended upon, even when you have both an upcast and a downcast pipe, as the air or gas remains in these pipes and merely balances itself, as I will show you. It remained for Mr. Banner to design and complete the true and only perfect system. After many experiments and much thought, Mr. Banner at last hit upon a plan so simple and so effectual, that the wonder now is that it was not discovered and applied long ago, and already we have many would be imitators. Following natural laws, Mr. Banner found that you cannot empty a drain or pipe, but must fill it with something else. To create a vacuum in a drain or pipe in constant use was simply an impossibility. So Mr. Banner emptied his drain of sewage gas, and refilled it immediately and simultaneously with something else, that something else being fresh external air. In other words, we withdraw the sewer gas from the house drain and soil-pipe, and never afterwards allow it to become sewer gas, by constantly replacing the air within all the pipes with fresh external air, not at intervals only, or in any uncertain fashion, but constantly and effectually. To do this, a thing very many had tried at, Mr. Banner found that merely pulling away and drawing at the top of a closed pipe was of no avail whatever, and in that knowledge and the means of overcoming it lies at once the simplicity and yet the very pith and essence of his invention, namely the inlet and cowl.

The cowl really and constantly creates an exhaust, and it is admitted to be at once the most simple yet most powerful ventilator extant, and we claim for it that it acts with perfect effect during all the varying influences of wind and weather, as is so unmistakably demonstrated by the model before me.

As to the traps, they are the only two forms which are traps and yet not cesspools.

One great economy in using the Banner system I have not yet mentioned; by its adoption only one trap is necessary, and all others are at once abolished, and with them all the dangers inseparable from their use.

As far as the traps under closets are concerned, it seems almost as though human ingenuity had been perverted to manufacture evils, for as closets ordinarily exist they cannot be otherwise than impure, and, consequently, dangerous; and I believe I am quite within the fact when I assert that those filth receptacles so generally put below water closets have been the unknown and unsuspected cause of the ill-health of thousands. By adopting the Banner system, at a less expense than any of the existing systems, perfect immunity from sewer-gas is ensured. Fresh external air is always being drawn in at the inlet and along the drain-soil and other pipes while the trapping is perfect, yet so simple that it can be inspected by anyone. I do not wish to be combative, but I must assert that no system is so simple and yet so perfect as the Banner system.

With the Banner combination of cowl-trap and inlet, sewer-gas