

to printer; and correcting of "proof" by the Secretaries of the Association, before going to press. With so many errors—which it is almost impossible for the reporters to avoid, in the midst of so much hurry and confusion—it is simply an annoyance to a large number of competitors, and affords no reliable information to the public, to have the list thus published.

EARLY DISCOVERIES IN GAS LIGHTING.

(Communicated.)

We owe many of the comforts of civilized life to the chance idea of persons whose names are forever lost to the world. Such will be the case with the originator of the now splendid mode of illuminating our streets and buildings with carburetted hydrogen gas, unless a copy of a pamphlet hereafter alluded to, shall be found in the library of some scientific antiquary.

One of the persons (the only survivor) who fitted up the first experimental apparatus for lighting buildings, is now living near Niagara Falls, in Canada. He gives the following account of its discovery, which may be interesting to some readers:—In the year 1807, being then 15 years of age, I purchased at a book stall a pamphlet entitled "Observations on the identity of light, heat and electricity, by a lieutenant in His Majesty's Navy; being meteorological observations made during a cruise in the Mediterranean." In the preface the author said he was frequently at a loss for a light to record his observations, made chiefly during his night watch, as the captain had ordered that no candle or lamp should be allowed to burn on board after 8 o'clock. To obtain a light without disobeying orders he procured a hand grenade, in which he put a small quantity of coal, and in the fuse hole a pistol barrel; when he required a light he placed the grenade on the cook's fire, and the gas escaping from the touch hole furnished him with the light needed.

On reading the above, I immediately procured a tobacco pipe, filled the bowl half full of coals, covered the end with a button and a lump of glazier's putty, and placing it between the bars of the grate soon had a jet of flame that burnt for some minutes at the other end. This new light was the wonder and amusement of my companions; one of them, a boy about 17 years of age, the son of Dr. Parks who then kept a drug store in Mary-le-bone lane, one door from Oxford street, London, suggested the making an experiment on a larger scale; and upon our application the Doctor permitted us to try the experiment of lighting his shop, and gave us an old still head for the experiment. We then

procured a brass lamp, soldered a halfpenny on the top and drilled a hole at the bottom, and five or six small pin holes round the bulb, and screwed it to the top of the shop counter; previously soldering about six yards of Lead pipe to its bottom, carrying the pipe through the floor into an apartment in the basement, and soldering it to the still head. In the fireplace we then fixed up an iron pot in brick work, and put in it about a pint of coal, fixing the still head on with a thick layer of wet clay. On lighting the fire under the pot a dense volume of smoke and vapour filled the shop, sufficient to suffocate every body in the building; but we dare not pull down the apparatus for fear of firing the premises. We therefore drew the fire from under the pot, leaving the apparatus to cool gradually. When the smoke began to abate a light was applied to the lamp, and a jet of flame from each of the small holes burnt for some time. After a consultation with the Doctor, we agreed not to give up the experiment, but to cut the pipe and solder a tap between the parts, and another in the still head over the pot. When the fire was lit under the pot, the first distillation escaped up the chimney, and was found to be unflammable; but in a short time it burned with a clear flame. The tap in the pipe was then opened and the one over the pot shut, and the lamp in the shop burnt with a circle of jets, to the wonder of the neighbourhood. In about a week the holes were so choked with tar that we had to take the apparatus down to clean it, but we again cut the pipe and inserted a tin cannister to catch the tar before it reached the burner. This partially succeeded, but in three weeks our burners were as badly choked as before; we then again cut the pipe, passing the ends through the top of a small barrel, three parts filled with water; the one next the burners above the surface, and the other below the surface of the water, so that the gas had to pass the water before it could reach the burner. This last experiment was perfectly successful, and soon attracted the notice of the neighbours. Many persons visited the store to see the new light, as it was called, and complimented "the boys" on their ingenuity; among them was a chemist who kept a drug store at the corner of the Albany and Piccadilly, who after obtaining all the information "the boys" could give him, fitted up his shop with a handsome chandelier in the centre, and a device in each window, which for some time attracted the public and obstructed the thoroughfare from dark till the putting up of the shutters. This was soon followed by a Mr. Hudson, a druggist in the Haymarket, who fitted up his shop in a similar manner. The third was a druggist in Wymore Street;