

liery, where it may be remembered, in March, 1847, an explosion of fire-damp caused the loss of no less than seventy-three lives; and about two years since, a similar accident occurred at the Darley Main."

Here carelessness or ignorance in the manufacture of a penny-worth of wire, led in these two instances to the sacrifice of 151 lives, which a little attention to the structure of the safety-lamp would have prevented.

Similar accidents often occur by descending wells, or entering caverns, in which carbonic acid gas, being heavier than the air, often settles. This gas immediately destroys life. We sometimes meet with statements like the following, taken from a late paper:—"Death of two men from entering a well. On Wednesday last, two men were killed by entering a well for the purpose of cleaning it. One man had descended to within a few feet of the bottom, when he suddenly fell. A second man immediately went down to his assistance supposing some accident had happened, but when he had arrived at the same place, he also fell, apparently dead. The neighbours were called to their assistance, but when they were taken out, life was extinct." Another—

"Death of two young ladies. Two young ladies, of the name of Grant, one about eighteen and the other twenty, were found this morning, one dead, and the other too far gone to be restored. The night being cold, a kettle of coals was placed in their bedroom, which was doubtless the cause of the fatal accident."

In both cases, carbonic acid gas was the fatal instrument of death. In the first, a simple experiment might have prevented the casualty. Had a lighted candle been let down into the well, the light would have been extinguished, which would have been a warning that the air was too impure to support life; for when a candle will not burn, animal life cannot subsist. A few pails of water thrown into the well, or boughs of a tree with the leaves on let down and drawn up a few times, would expel most of the gas, and render it safe to descend. In the other case, a knowledge of the fact, that in combustion, whether of candles, lamps, wood or coal, this same destructive gas is given off, would have been a sufficient caution against burning any quantity of coals in the open room.

But from many other causes, where life is not in immediate danger, the health is gradually but easily undermined. One almost universal source of shortening human life, is the impure air of our dwellings. How often does it occur, that those who enter upon the winter in good health, or not very poor health, are sickly, or die in the spring? A lady, an acquaintance of mine, never complains of poor health in the autumn, but does invariably in the spring. While there may be some other circumstances leading to this result, who can doubt that want of ventilation of our dwellings is the prime cause? From November till April the window is not thrown up, or if it be, the door is shut, thus preventing a free ventilation of air through the room. To secure perfect ventilation, the top as well as the bottom of the window

should be opened; this is seldom done. There is no pure air admitted for six months, except when through the kind consideration of the builders, openings are left around the windows—a not unrequent occurrence. But the advantage which nature would take of this oversight of the artist, is prevented by the vigilance of the housekeeper, who with knife and listing effectually secures every entrance to her palace. This impure air, with the dust constantly floating in the most carefully kept room, completes the work of destruction. Let any one examine a room when the sun shines brightly into the window, or try the experiment of writing his name on any article of furniture ten minutes after the dusting of the room, and he will be astonished at the number of the particles of the carpet, feathers, &c., taken at every breath into his lungs. The same is true of many churches. As if the very air in them was consecrated, it is carefully kept from year to year, and from generation to generation, with all the accumulated impurities arising from lamps, candles, and respiration.

These remarks might be extended to the condition of our large towns and cities, where every tree which would take up the carbon thrown off from thousands of lungs and fires, is carefully cut down by our kind city-fathers;—to the many sources of disease, in the dirty lanes and sinks, where all the pestilence-breeding filth is thrown. But time would fail to multiply the instances which would occur in every-day life, where health and happiness might be promoted, disease and accident prevented; as in a-lopping clothing to the various seasons of the year, to different constitutions and circumstances, to different ages and conditions; the choice and preparation of food; the care of children; cleanliness exercise, &c.

[To be continued.]

NEW CLEANSER FOR FLOURING MILLS.—Mr. F. R. Benton, a millwright of Milwaukee, has invented a highly ingenious machine, to which he gives the above name. It is for the purpose of taking the bran as it comes from the bolt and cleaning it of the flour which adheres to it, and which, without the adoption of some such process, is wasted, and also for separating bran and shorts. The machine is in the form of an upright cylinder, about four feet high and two feet across, within which are two revolving cylinders curiously fitted up with wire cloths of various fineness, perforated sheet-iron plates, &c. &c.

The bran is brought by an elevator to the top of the cylinder and passes through a shaking sieve, which throws out the large lumps, that might clog the machine, down among the revolving cylinders. A current of air is driven up from beneath into the centre of the cylinder inside the revolving part, and by the operation of this current of air and the revolving of the mechanism, the bran, shorts, and two kinds of flour are passed off into separate receivers. The coarser flour is passed back into the elevator to go through the machine again, and the fine passes down into the bolt. A hammer constantly raps on the top of the revolving sieves to keep them clear from being clogged up.

We can give but an imperfect idea of this ingenious invention; it is simple, yet accurate in all its movements, and seems admirably adapted to the use for which it is designed. Three other machines for a