

this anomaly they attempt to account for by charging the gas company with fraud. If such things occur at all, may they not in some cases arise from the same or similar causes referred to in the following communication to the *London Gas Light Journal*:

As gas has become one of the necessities of life, and superior to every other artificial light, and at the present increased rate of consumption doubles itself in every seven years, it behoves all of us to make it as secure from danger as we possibly can. I could give you several cases where gas-pipes have been gnawed away by rats or mice. I will give you one instance in particular. A short time ago I was called upon to examine a gas-meter where the consumption had been three times as much as the corresponding quarter. I asked if they had increased the number of lights, or had larger burners put on, or if they had any escape in their fittings. Their reply was the number of lights was the same, and they had no escapes. I then took the index of the meter, and ordered them not to light the gas till my return. After a few hours absence I again looked at the index of the meter and found it had registered 150 feet. Of course, they at once condemned a meter that would register whether the gas went through it or not. In order to convince them, I ordered all the pipes to be examined, and in the attic, where a pipe was laid, the rats had gnawed through it; there was plenty of ventilation, which accounted for the gas not smelling. About three years ago I had gas put into my room; the pipe was laid between the joists, and to my surprise I soon found out that the rats were constantly gnawing at it; it behoved me, therefore, to find out a remedy or give up the gas. I had the boards taken up and the pipes coated with coal-tar varnish; the rats did not come for six months after. Although I can now often hear them gambolling about, I have not heard one nibble at the gas-pipe. I believe if all gas managers would insist upon their pipes being varnished, there would be fewer complaints from the public, and, what is better still, fewer explosions.

Gas Light Improvement.

Any of our readers who burn gas can test for themselves a simple device by which a Mr. Scholl of London proposes to increase the illuminating power of a common gas burner by more than 50 per cent. Hold a strip of thin sheet brass or other metal, one third or half an inch wide, in the center of the flame, splitting its thickness (not its breadth) and nearly touching the two holes whence the gas issues, so as not to obstruct the passage, but to divide the jets and check the velocity of their upward current. The division and the check will favour a more intimate access of oxygen to the gas, and hence a more perfect and brilliant combustion. Mr. Scholl uses a platinum strip resting in slits in a brass ferrule fitted over the burner tube.

Orchard Culture.

1. We believe in selecting a good site.
2. We believe in a thorough preparation of the soil.
3. We believe in enriching the soil according to its wants.

4. We believe in planting none but good trees.
5. We believe in planting trees not more than two or three years old, if bought at the nursery.
6. We believe in "setting" said trees after the most approved manner.
7. We believe in pruning and training said trees.
8. We believe in setting the branches low down on the trunks.
9. We believe in keeping those branches and trunks free from moss, caterpillars and all other pests.
10. We believe in cultivating orchards.
11. We believe it to be a great fallacy to suppose that cultivating an orchard means to grow crops in it.
12. We believe the perfection of orchard culture consists in giving up the soil exclusively to the trees.
13. We therefore believe in excluding all grass, roots, weeds, cattle, mice, borers, and every "unclean thing."
14. We believe that orchard trees may sometimes be profitably root pruned.
15. We believe that this should not be done "promiscuously" with a plow.
16. We believe that orchards may be cultivated without injuring the roots of the trees.
17. We believe that orchards may be planted in too rich a soil, and make too rank a growth, thereby becoming unfruitful, and also liable to "winter killing," and other ills.
18. We believe in checking this redundancy of growth.
19. We believe this may be done in various ways, such as summer pruning, root pruning, laying down to grass, growing crops, &c.
20. We believe that summer pruning and root pruning are the most direct, certain and satisfactory modes of accomplishing the end proposed.
21. We believe that grass robs the tree of nourishment very little if any less than some root crops.
22. We believe that an orchard in grass suffers much more in time of drouth than one well cultivated.
23. We believe that an orchard laid down to grass, and kept so, should be top-dressed from time to time.
24. We believe that lime, ashes, ground raw bones, compost of muck, &c., are capital top-dressing.
25. We believe that orchards laid down to grass should be plowed up at the first sign of "giving out."
26. We believe that old and decaying orchards in grass may often be renovated and made good by manure and cultivation.
27. We believe that a cultivated orchard yields fairer and better fruit than one not cultivated.
28. We believe it is a great mistake to except fruit trees from the universally recognized laws of cultivation.—*Horticulturist*.

Dr. de Briou, of Paris, has succeeded in producing an enamel paint, made from india-rubber, which, though of film-like consistency when applied to iron, renders it absolutely proof against atmospheric action. The invention is thought highly of by the Academy of Science.