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AGRICULTURAL INVENTIONS.

Mr. Sterling A. Millard, of Clayville, N. Y., has invented a scythe blade that contains much less weight of metal and possesses equal or greater strength than the ordinary scythe blades. It is made in the usual manner from what is termed by scythe makers a "scythe rod," and is wrought and shaped in such form that a proper thickness is left to serve as the back of the blade. A longitudinal auxiliary rib or supplementary back is formed on the blade, which stiffens the scythe without requiring the same weight of metal as those of the usual construction.

Mr. George C. Winslow, of Kalamazoo, Mich., has patented an improvement in spring harrow teeth, which consists generally in hinging the harrow tooth in the forward end of a rectangular frame bolted to the harrow bar, and combining therewith a spring, which at its back end is clamped to the harrow bar by the same bolts which secure the rectangular frame, and which spring then curves upward and forward, and then down through the slot or opening of the rectangular frame, and is jointed at its extremity, near the bottom of the harrow tooth, so that its tension serves to throw the harrow tooth forward, but allows it to yield to obstruction.

A Rare Specimen Lost.

Captain Ingalls, of the schooner Chalcedony, has let slip an opportunity to make a small fortune and at the same time settle the long vexed question as to the reality of the elusive and possibly mythical sea serpent. His story, as told in the *Argus*, of Portland, Maine, June 8, runs as follows:

"Last Saturday, about one o'clock in the afternoon, we were slowly sailing past Monhegan, there being very little wind, about twenty miles southwest of the island, when we caught sight of what looked like a large schooner floating bottom up. As the object lay almost dead ahead, we made directly for it, but before we got very close a Cape Ann schooner lay to and sent a boat's crew to inspect what now plainly appeared to be a monstrous carcass of some species or other. We finally hove to, about a ship's length off, and took a leisurely survey of the thing. It was dead, and floated on the water, with its belly, of a dirty brown color, up. It head was at least twenty feet long, and about ten feet through at the thickest point. About midway of the body, which was, I should guess, about forty feet long, were two fins, of a clear white, each about twelve feet in length. The body seemed to taper from the back of the head down to the size of a small log, distinct from the whale tribe, as the end had nothing that looked like a fluke. The shape of the creature's head was more like a tierce than anything I can liken it to. I have seen almost all kinds of shapes that can be found in these waters, but never saw the like of this before.

Two years ago, off Seguin, I saw shooting through the water a thing which, I think, resembled this creature considerably, but I didn't get close enough to it to say for certain. The men from the Cape Ann schooner got on this dead creature, and one of the boys cut a double shuffle on its belly, which for all the world looked like the bottom of a schooner covered with barnacles and seaweed by the weather. We should have towed the thing to Portland had there been any wind, but as there wasn't, we steered away and left it. What sort of a sea monster this was I can't say for sure, but in my opinion it was the original 'sea serpent,' which has been seen once in a while for years past, and which, when alive, was too swift a swimmer for any sailing vessel to get alongside of."

The report of the captain of the "Cape Ann schooner" will be in order now.

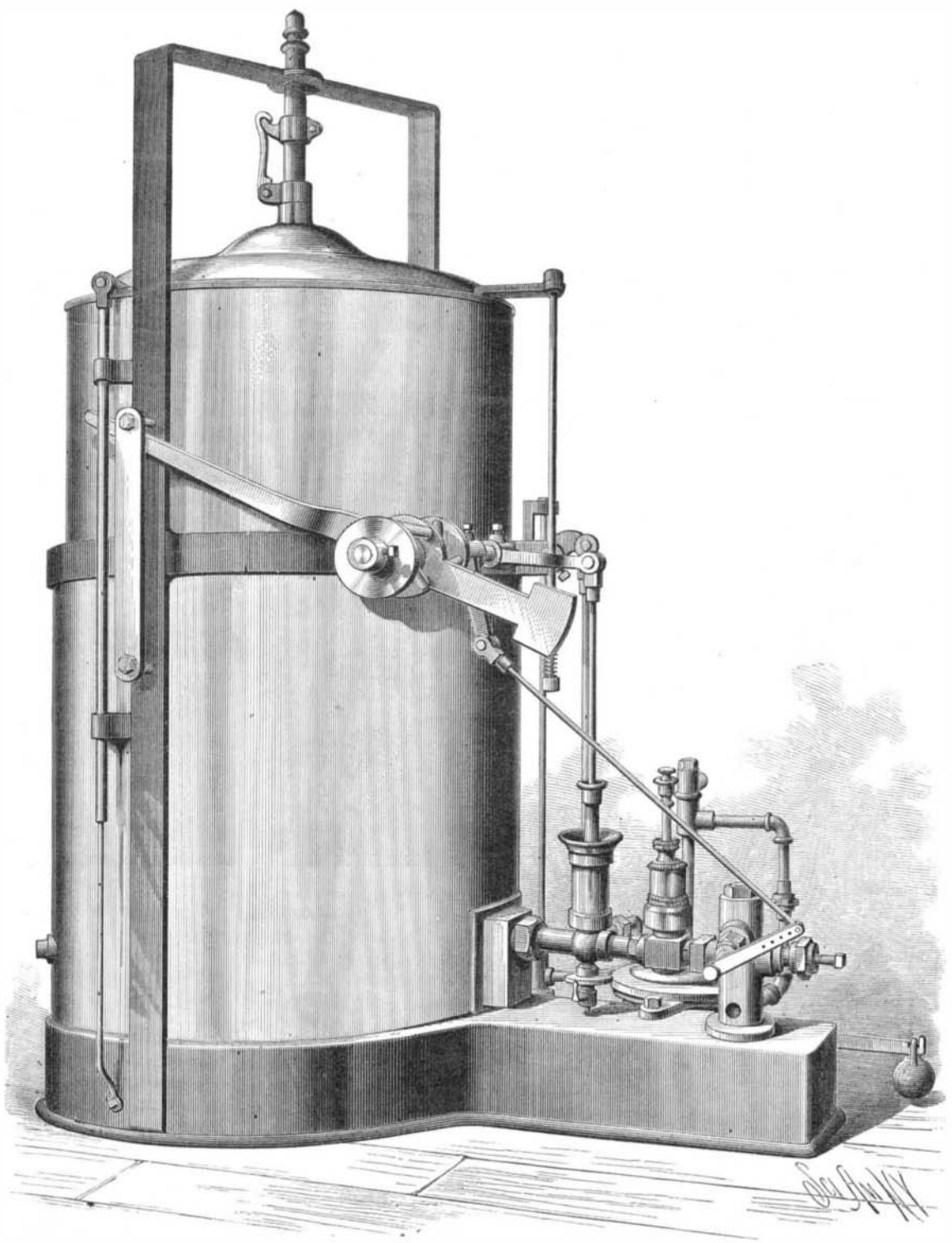
SIMPLE AND CHEAP PROCESS OF GAS MAKING.

When a current of air is passed over the surface of gasoline it becomes carbureted or charged with its vapors to saturation. Air thus charged is somewhat heavier than pure air, and when passed through an Argand or bat's wing burner, it burns with a brilliant white flame. Nothing would seem easier than to make a machine that would force a current of air through, over, or on some material saturated with gasoline, and this apparently simple process has led many into attempts to make a successful gas machine. Many fortunes have been spent by the unscientific in the chase after this, to them, *ignis fatuus*. The stumbling block which has wrecked so many enterprises in this line has been the cold produced by the evaporation of the gasoline. One pound of gasoline, in passing from a liquid to a vapor, requires about as much heat as would be required to melt two pounds of cast iron. It is therefore obvious that where no heat is supplied, the gasoline, air, and machine must soon become very cold when any considerable quantity of gas is being made. The heat must come from somewhere, and as none is supplied, it is taken from the apparatus, air, and gasoline, making them very cold. A beautiful and simple experiment to illustrate this refrigeration can be made as follows: Place a gill of water in a common washbasin, then pour over it one pint of light gasoline; shake the basin, and blow the liquids vigorously, when very soon the basin will become intensely cold—the water will freeze, and may be taken out in the form of a snowball. If the water and basin are hot, and the experiment performed in a hot room or in the sun, it is much more striking.*

This refrigeration operates upon the gas as follows: Air will take up and hold in suspension any volatile liquid in proportion to the square of its temperature, so that when the temperature of the gasoline and air have fallen off one half, the quantity of gasoline in the air has fallen off three quarters, and the light is destroyed. The quality of the gas in such machines varies from a rich smoky flame to a pale blue and blowing flame in a short time. Every change of quality in the liquid, temperature of the apparatus, or number of burners used causes a vexatious change in the quality of the gas. If heat is applied at the right time and in the right quantity it is not so bad, but too much heat, or neglecting to regulate it properly, converts the machine into a still, the condenser of which is the pipes of the building lighted, when danger is added to vexation. About ten years ago a machine was illustrated in these columns that obviated all these troubles; it was the invention of the well known mechanical engineer, Hiram S. Maxim, of this city. His machine was on an entirely new principle, and has since gone into general use. It was intricate and somewhat expensive, but it performed its work well. Messrs. A. T. Stewart & Co. use them largely in their mills and hotels. Mr. Maxim made one of six thousand burner capacity for the Grand Union Hotel, Saratoga Springs, it being the largest gas machine ever built. It has supplied gas of an unvarying quality for six years, and is as good as new to-day.

To reduce the cost as far as possible, Mr. Maxim has designed a new machine on another principle, which we herewith illustrate. Fig. 1 shows the machine in perspective, and Fig. 2 is a sectional view. The vertical cylinder is a common gas holder of sheet brass. It is 36 inches in diameter for a thousand burner machine. The operative parts of the machine are best shown in the sectional view, which represents the portion of the machine called the injector. A is a steam chamber supplied with four or more pounds of steam through the pipe, K. B is the gasoline supply pipe, and C the air supply. D is an index valve. The operation is as follows: Steam being in the chamber, A, the descent of the holder opens the valve, M, and allows the steam to

[*Continued on page* 4.]



MAXIM'S NEW GAS MACHINE.

* This experiment should not be tried in the vicinity of a gaslight or fire.