

ELECTRICAL SPIRIT RAPPERS—INTERESTING DEVELOPMENT.

We have seen a spirit, "and such a spirit." It was none of your airy imponderable spirits, but a substantial spirit, seen with the eyes and handled with the hands. It consisted of a thin wooden box about six inches square, containing an armature and magnet which had been connected with wires to a galvanic battery. When the electric circuit was broken and closed by a button-key the magnet produced a rap in the box, and, according to the formula of those who are skilled in the interpretation of spirit language, these raps were read off as a message from the spirit world. A distinguished professor in New York was once a frequent visitor to the establishment where such spiritual manifestations occurred, and the box which we examined had been called the "professor's mother," as he communicated through it so frequently with his beloved and departed parent.

Not very long ago, a certain house, in one of the fashionable streets of our city, became distinguished for spiritual visitations. Great numbers of the curious were nightly attracted to its parlor (the fee was one dollar for each visitor), for the purpose of receiving messages from that unseen bourne from whence, it is said, "no traveler has returned." Many visitors went away quite satisfied, while others were not quite so delighted at having paid their dollars for the ambiguous answers that were given by the spirits. But among all the visitors none was so frequent and satisfied as the professor alluded to. He always paid his dollar with a cheerful spirit, and felt comforted with the entertainment. But the delusion came to an end at last. The managers of the establishment had contrived to get into debt, and after due process of law, the sheriff came one day and exorcised the spirits in a most effectual manner, for, upon the carpets being taken up, about forty spirits were dislodged in the form of little boxes such as we have described. These were placed at certain distances apart under the boards of the flooring, and some were concealed in the partition walls. The wires of the boxes formed an electric circuit, communicating with a galvanic battery in an upper room. Small buttons formed keys to open and close the circuit; these keys were placed under the carpet in situations well known to the managers. By pressing upon one of these buttons with the foot the electric circuit was closed in the same manner that a telegraph is operated, and the magnet then made a rap, generally right under the feet of the inquirer, who was always attended by an operator, who generally succeeded in learning something of the previous history of the individual. A clever French electrical mechanic in Broadway furnished these spirits to order. Those who "pulled the wires" in the spirit-rapping establishment, however, not only pulled the wool over the professor's eyes, but over the French mechanic's also. He jocularly relates that, although he furnished the spirits, he has never been able to rap his dimes for them out of the crafty fellows who managed to rap so many dollars out of their deluded dupes. We have heard of other modes whereby such rappings have been produced, but none so scientific as this.

NEW ODORLESS BURNING FLUID.

A peculiar burning fluid, for which a patent was issued to Benj. F. Hebard, of Neponset, Mass., on the 19th of February last (1861), has been the occasion of considerable inquiry as to its nature, and wherein it differs from the old burning or explosive fluids, and common coal and purified earth oils. We therefore give the following description of this new burning fluid as derived from the specification of the patent. Its composition consists of

25 gallons of fusil oil.
15 " " camphene (rectified spirits of turpentine)
5 " " kerosene—either obtained from coal or shales, or oil wells, and refined.
1 pound of the essential oil of lemons or other fragrant oil.

To prepare the composition, the fusil oil and the turpentine are poured together into a glass or stone-ware vessel furnished with a discharging valve tube at the bottom. Three gallons of water are also added and the whole stirred together for a few minutes, then allowed to settle. Several impurities with the water sink to the bottom. These are run off by the bottom valve-tube until the mixed fusil oil and turpentine only remain.

The kerosene and the fragrant oil are now added, with one gallon of water, and again stirred, and then allowed to rest. The water and some more impurities now settle to the bottom, when they are to be run off as before described. The composition which remains is the patented burning fluid.

It is stated in the patent that this oil emits no fetid odor, is in explosive, it burns in coal oil lamps, and will not grease fabrics upon which it may be spilt. It is also said to be more durable in burning than the highly refined kerosene and earth oils, and that it gives a very soft flame. The wick of the lamp is encrusted but very little in burning, and it may be raised quite high without smoking.

The main composition upon which this invention is based, is the fusil oil and the camphene. The essential fragrant oil disguises any offensive odor belonging to the fusil and kerosene oil. This is certainly a useful improvement, as it converts the hitherto fetid and useless fusil oil to a good purpose. It turns over a new leaf in the book of applied industry.

RECENT AMERICAN INVENTIONS.

Cooler and Evaporator.—This invention relates to certain improvements in that class of evaporators or coolers which are constructed of a series of pipes, laid one above the other or side by side, and having their ends connected by elbows or crosspipes, and it consists in placing the pipes so close together that each of them is supported from end to end by the next succeeding pipe, whereby the pipes are prevented from sagging down in the middle, and an unbroken corrugated evaporating or cooling surface is presented. It also consists in the arrangement of projecting angles on one or more sides of each pipe, extending within a short distance in such a manner that sufficient room is obtained for the elbows or connecting pipes, and at the same time an unbroken corrugated surface is preserved. The credit of this invention is due to John Trageser, of New York city.

Case Hardening.—This invention consists in the employment or use of fused lead, or other suitable material, in combination with cyanide of potassium, or any other suitable cyanogen compound, such as cyanide of ammonia and with carbon, in such a manner that the iron articles to be case hardened are exposed to an atmosphere of condensed cyanogen gas, and that the influence of said gas on the iron is facilitated to such an extent that it can be made to penetrate to any desired depth. The patentee of this invention is E. P. Weston, of East Corinth, Maine.

Car Coupling.—This invention relates to that class of car couplings which are termed self-coupling, and consists in attaching to the bolt a sustaining rod or bar so arranged in relation with the draw head that it may be acted upon by the shackle or link of an adjoining car as it enters the draw-head, and made to release the bolt so that the latter may drop into the link and couple the cars. The invention also relates to a novel and improved means for sustaining the shackle or link in the drawhead, so that the former may be retained in a horizontal position and in line with the draw-head of an adjoining car, that it may enter the same as the two cars approach each other, and insure the connecting together of the same. This invention is patented by A. H. Trego, of Lambertville, N. J.

Pressure Gage.—This invention relates to that class of pressure gages in which the pressure of the steam or other fluid is received on a flexible plate. It consists in the combination for the purpose of transmitting the movements of the plate to the index, of a lever and a screwed or spirally grooved spindle. It also consists in a certain mode of providing for the movement of the lever to adjust or correct the gage. This is the invention of R. Finnegan and A. F. W. Schulte, of New York city.

Tanning.—This invention consists in the employment or use of the root and other parts of the plant known by the name of red root (*Ceanothus Americanus*) as a substitute for tanning bark for the purpose of tanning skins and hides. The patentee of this invention is Henry McKenzie, of Talladega, Ala.

Bell-ringing Device.—The object of this invention is to obtain a device by which a large or turret bell may be rung and struck at a different point at each blow, the hammer or hammers traversing around or having a rotary movement. By this means the bell will not

be liable to crack, as all parts of its lower end are subjected to equal concussions; and the invention admits of any one ringing the bell, as the turning of a crank wheel is all that is required to effect the result, and a very moderate application of power is required for the purpose. The credit of this invention is due to Rhodolphus Kinsley, of Springfield, Mass.

Traction Engine.—The object of this invention is to overcome the difficulty attending the necessary slow movement of traction engines while at work, to wit, the difficulty of throwing the crank past its centers. The invention, although applicable to any traction engine which may be required to move slowly at certain times, is more especially designed for steam cotton picking devices, formerly patented by this inventor. The invention consists in the employment or use of springs constructed of india-rubber, or other suitable elastic substance, applied to the crank to effect the desired end. This is the invention of John Griffin, of Louisville, Ky.

Machine-made Unfermented Bread.

Raised bread, resembling common loaves made from fermented and baked flour, is manufactured at present upon a somewhat extensive scale on the corner of Fourteenth-street and Third avenue, in this city. The flour and water for making a batch of bread, are run into a large globular cast-iron vessel, and thoroughly mixed by a stirrer revolving inside, and driven by a steam engine. The lid of the iron vessel is then rendered perfectly air tight, and all the air is extracted by an air-pump when the flour is thoroughly wet.

The mixed flour is thus expanded and rendered porous. Carbonic acid gas, under a considerable pressure, is now admitted among the dough, which is still continually stirred, until the whole mixture is charged with the gas. When this is effected, the operator takes his seat at the table under the vessel, and piles of tin pans are laid at his side. A tube projects down at the bottom of the iron vessel containing the dough. The operator now shoves a pan under this tube, opens the cock, when the pressure of the gas inside forces out the mixed dough in a stream, and the pan is filled in half a second. The pans are handed to the baker, who instantly places them in the oven. From the time the flour is placed in the iron vessel to be mixed, until it comes from the oven in the form of bread, the time occupied is only one hour. This is a rapid method of making bread, and as the labor is mostly performed by machinery, the cost of its manufacture is less than for making fermented bread. We have seen raised bread made by charging the water with carbonic acid gas, instead of charging the dough, but the bread by the latter method we consider much the better. We understand that there is now a very large demand for this bread, and that the machinery is kept running day and night to supply it. The taste is slightly different from bread made by fermentation. There are no fears of the dough becoming sour during warm weather by the carbonic acid gas process.

The inventor (Mr. E. Fitzgerald) of this system of bread making, has also devised an apparatus which will soon be applied, by which the loaves will be weighed by self-acting mechanism, and the pans filled with the dough, at one continuous operation.

Suspension Grenades for Forts and Houses.

Wherever there is original genius there will not be wanting occasions for its display. This was the case at the siege of Fort Sumter. There were no elevating screws for the guns, but Major (now General) Anderson found a substitute in wedges made out of common plank. And when expecting a night attack by a storming party, he found a most destructive means of defence and offense in grenades made of the shells which the old conspiracy War Department had furnished in abundance, but without fuses to use them in cannon.

Numbers of these shells intended for cannon firing were packed with powder, and common fuses containing percussion powder were placed in the holes. The wire of each fuse was then attached to a strong cord, and the shells were suspended carefully over the walls where they hung perfectly safe for action. By drawing the cord quickly—giving it a snap—the percussion powder of the friction fuse became ignited, and the shell exploded. Had a storming party attacked the fort at night, these shells would have scattered death and destruction among their ranks.