New Inventions.

Scientific Memoranda.

MEANS OF ARRESTING THE FATAL EFFECTS OF CHLOROFORM.

An eminent surgeon of France relates two cases, in which the inhalation of chloroform proved nearly fatal: he however succeeded in reviving his patients, after all ordinary means had failed, by placing his mouth upon theirs, and forcibly insufflating the lungs by rapid aspirations and expirations. A medical practitioner in Paris states that in two instances of approaching dissolution by the inhalation of chloroform, he recalled life by thrusting two fingers deep into the throat, down to the larynx and œsophagus; a sudden movement of expiration followed, and recovery took place.

NEW OPTICAL INVENTION.

A French savant, M. Fiqueau, has just discovered a method of measuring the speed with which light travels, without any resort to the regions of astronomy. A revolving disc, with teeth (like a circular saw) is so adjusted that, knowing the number of revolutions in a second, he knows the fraction of a second which any one of the triangular spaces at the circumference of the disc occupies in passing a certain point. Two glasses are fixed opposite each other, so that the focus of the one (having a mirror) reflects a ray of light, starting from the focus of the other back to that focus again. A disc is provided to revolve at this point; and the eye. observing whether the ray appears, or is eclipsed, knows whether it has encountered a tooth of the disc, or one of the vacant spaces between the teeth; and thus elements are found for a calculation which shows the speed of light to be very nearly the same as that arrived at by the astronomical calculation of Bradley or Roemer.

PARIS ACADEMY OF SCIENCES.

At a recent meeting of this body, M. Desprets read a description of an Electrical apparatus, by means of which he obtains a heat of greater density than was ever before obtained, and that he is able to fuse substances which have hitherto resisted the action of every kind of fire.—M. Grange read a paper on that terrible disease in the Swiss valleys, named the Goitre. He stated that the cause of it was magnesia in the waters, and that it could be cured by minute doses of iodine salts. In one year, he stated, the disease would be cured.—M. Dussan read a paper on the application of manures to seeds before they were sown or planted, instead of manuring the soil. He stated that the experiment had been tried by himself with success..

NAVIGATING THE AIR.

A lecture was recently delivered in Paris upon this subject, when the lecturer took the following grounds, and astonished his audience by the profundity of his reasoning. He said, "the more imponderable the mass, the greater the power: earth is less powerful than water—water less powerful than air—air less powerful than electricity, and electricity less powerful than the soul. If we attempt to walk on a deep mass of snow, we sink; if we spread a large board over it, we can walk safely. So with air: if we make an air-ship hundreds or thousands of feet long, the sustaining power of the air may possibly act in its favor; and gas constantly generated in this machine, and steam or electricity being the motive power, it may rush round the world like a huge common carrier of heaven. What we need to redeem society, is the philosophy of analogy sternly carried into every department of life—inward and outward—spiritual and practical—in thought, industry, intercourse, faith and action."

Such are some views delivered in a lecture in that city, sometimes called the centre of the "Civilized World." There is not a Yankee boy but could overturn all the arguments.

Sash and Blind Machine.

We refer our readers to the advertisement of Jesse Leavens in another column. This machine is all that the patentee states, and we understand has given satisfaction to all who have it in use.

Clothes Without Seams.

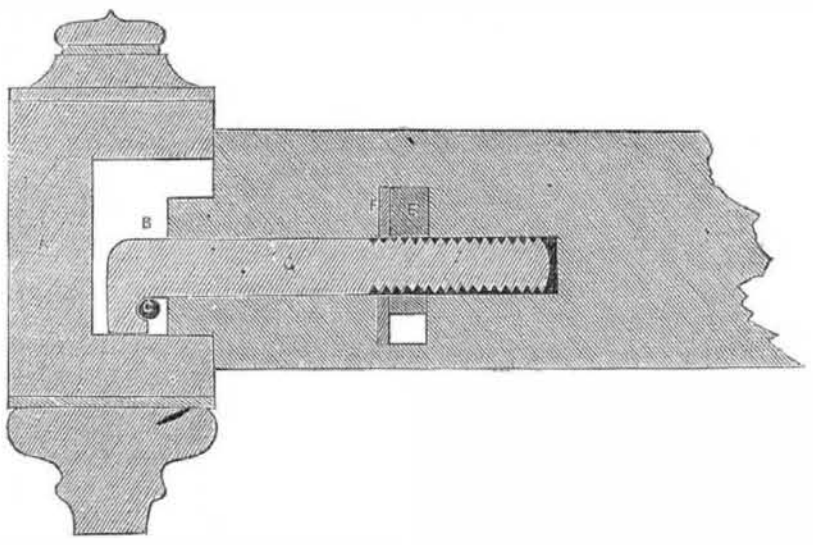
Some of the English papers say that the recent improvements in machinery justify the belief that garments will soon be finished in the loom of any size, shape or pattern that may be required.

[This can be done now, but at an expense far beyond what any person would pay for the same. We have seen shirts without seams, woven with buttons and button holes, as finely finished as if by the needle, the buttons were woven too. We have seen the portrait of Gen. Taylor woven on satin.

Cure of Stammering.--New Discovery.

Dr. Boardman, now residing in this city, who, for twenty-five years had an impediment in his speech, made the discovery, that by placing his organs in certain positions, he could speak freely like other men. This disoovery he has reduced to a science, and teaches the art to those who are as unfortunate as he was. He has cured a great number, and by strict attention to the rules he lays down, it is said that any person afflicted with stammering will be able to cure themselves.

IMPROVEMENT IN BEDSTEAD FASTENINGS.---Fig 1.



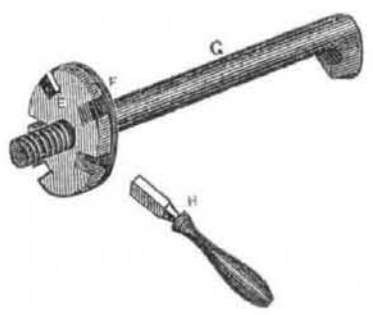
This is the invention of Mr. James Taylor of Macon, Georgia, and patented last Fall. It is a most excellent invention, as the following description of the annexed engravings will fully show. Figure 1 is a vertical longitudinal section. Figure 2 is an end view, and figure 3 is a perspective view of the fastening hook, and screw nut, E, detached; and H is a driver to operate the nut. A is the post, D, is a section of the rail attached. The tennons at the ends of the rails, are not in length and depth of the mortises in the posts; but in thickness, the tennons accurately fit the width of the mortises, C is an iron pin inserted in the mortise of the post; G is hook inserted in the end of the rail, and it has a screw on its inner end. There is a small mortise cut on the side of the rail, into which is inserted the nut E, which is fixed around the screw of the fastening hook, G. Each rail is thus arranged and constructed. F is a washer on the inside of the nut mortise and the screw hook rod passes through it. The tennons on the ends of the rails, have sufficient vertical play in the mortises of the posts, to allow the fastening hooks to pass over the pins (represented by C), and by inserting the turner, H, into the notches of the nut, E, and by turning it round, the rail is drawn forward, tight up to the post. The mortises on the sides of the rails, may have slides to close them up, to prevent any thing getting into the interior.

There is one thing absolutely required to form a good bedstead, that is the perfect and close fit of the rails to the posts; this bedstead fastening has this quality for a certainty.—There are bedsteads sold in this city in great quantities, with screws on the ends of round rails, which screw up by turning them round in thread openings of the posts. These are a bad kind of bedsteads, practically we don't like them, they are forever going wrong. I would be better to make all bedsteads with square rails. and these should be notched to receive slats of painted hard wood, which are far better than bed ropes.

Communications (*p. p.*) addressed to the inventor, at Macon, Georgia, will meet with prompt attention.

FIG. 2.

FIG. 3.



Dr. Gesner's Patent Kerosene Gas Light.

We stated last week that we would give some more information about Prof. Gesner's new Light, the patent claim of which was in the list of our last number. The information which we now present on the subject is gathered from an article addressed to the Academy of Natural Sciences, of which Prof. Gesner is a member.

During the past year, the attention of the Earl of Dundonald, formerly the celebrated Lord Cochran, was directed to the improvement of some sugar and coffee estates in the West Indies, and employed Dr. Gesner, Professor of Chemistry and Geology, to make experiments with the celebrated asphaltum of the Pitch Lake of Trinidad. In conducting the experiments, Dr. Gesner discovered that by dry distillation, the asphaltum, like coal or rosin, was capable of yielding large quantities of carburetted and bicarburetted hydrogen gases, now universally employed for the supply of light. But from its peculiar nature, there was a difficulty in applying the material to that purpose by any known process of manufacture.

The Dr. says, in the article referred to, "It is remarkable that so rich a hydro-carbon as asphaltum should have been so long overlooked, in reference to its capabilities for affording light. It has been tried for fuel, pavements, and for other purposes, both in Europe and the United States, but without success. For what purpose nature had formed such vast quantities of bituminous matter, which still continue to flow from the earth, was a problem not readily solved, until this discovery, which brings it into operation for illuminating purposes, to which it is admirably adapted.

In the analysis given by the chemists of Europe, of the bitumen of Trinidad, there is great diversity. Some have stated that it contains 20 and even 30 per cent. of silex, when in fact it seldom contains 10 per cent. of silica. The specimens submitted to their investigations must have been taken from the beach forming the great pitch lagoon of the Island, where the sand of the shore is frequently mixed with the bitumen."

By his experiments he has discovered that the bitumen of Trinidad yields 65.5 of volatile matter, and 36.57 of carbon, while the best cannel coal yields only 44.00 of volatile matter, and 52.60 of carbon—a great difference indeed. Coal also contains sulphur and nitrogen, while the asphaltum is perfectly free from these deleterious ingredients, and it is therefore far better adapted for illuminating purposes.

When this bitumen is melted it separates itself from its earthy matter, and when it cools it is lusterous, and partakes of the nature of oil and wax, from which circumstance the Dr. calls it "*Kerosene*." But it does not require this preparation to make gas. As it has no sulphur in its composition, it will not corrode the metals in its manufacture, nor will it give out any of those noxious vapors so well known to us Yorkers as connected with coal gas. It gives off its gas in one-fourth less time than coal, and yields double the quantity, weight for weight.

He says:—

"According to the lowest estimate, the inhabitants of the city of New York would save $74,000 a year, in the quantity of gas they now consume, by using bitumen instead of coal for gas, in the cost of material alone. This saving would be independent of the cost required to manufacture coal gas, as compared with that derived from kerosene, or bitumen, and the light would be far superior to that now supplied.

The cost of the material (coal) that now supplies gas for New York, must be estimated at $1 for every 1000 cubic feet of gas. The bitumen may be abundantly supplied for $5 per ton. The cost of bitumen, therefore, to supply 1000 cubic feet of gas, would be only $0,38. At a moderate calculation, by substituting bitumen for coal, the gas may be supplied to the consumer at less than one half of its present cost, and the manufacturer still make a profit. By using bitumen and the patent retort, the actual cost of manufacture of 1000 cubic feet of gas need not exceed five cents.

The inquiry at once presents itself, what are the resources of bitumen or asphaltum. This inquiry will be perfectly satisfied by referring to an able work written by R. C. Taylor, Esq. The lake of bitumen of Trinidad is altogether inexhaustible; or, as stated by that author, "might furnish abundant supplies for the whole world." Besides the abundance of this mineral along the whole coast of South America, Mexico and Texas, it abounds in the Island of Cuba, where a single stratum, six miles from Havana, is no less than 144 feet in perpendicular thickness.

Treating of the bitumen of Barbados, Mr. Taylor says: "It could be employed in the production of gas, of which it would furnish a large quantity of a very rich quality, even exceeding that of Cannel coal." "The best for that purpose hitherto known." But no discovery had been made by which this material could be applied to the general purposes of illumination, until the present. The above author states that "We know not if any practicable employment of a mineral substance here so astonishly abundant, has yet been engaged, or undertaken. It was surely not placed there in vain." The discovery and improvement now introduced, call into operation this hitherto worthless substance."

This is certainly a valuable discovery induced, and Prof. Gesner has been exhibiting the gas in this city, as made from his newly invented retort, and it has been highly admired. It is also well adapted for the manufacture of the gas on a small scale, and this rendered it of very great importance to the introduction of gas lighting into villages.

The best way of advertising an invention is to publish an engraving of it in the Scientific American.