

## New Inventions.

### New Mode of Joining Collars and Hoops

Mr. Samuel Pratt, of Boston, has invented a new plan of coupling collars, metals hoops and bands together. By his plan sheets of metal may be joined together to any length without rivets. Peculiar slits are made in each end of the collar ribbon, or the band of the hoop, or in the ends of the sheets of metal, which enables one sheet, or band, to dovetail into the other when a blow from the hammer joins them as effectually as by rivetting. This method of dovetailing hoops can be done faster and at less expense than by rivetting.

### Screw Water Wheel.

Mr. James B. Gladney, of Reform, Alabama, has invented a new combination of the screw and water wheel. He employs a water screw of an increasing pitch and belts its upper end with an angular bucket horizontal wheel. The water is admitted by the draft below upon that part of the screw of the least pitch and therefore it has continual action upon the threads of the increasing pitch. It is very evident that a screw of an increasing pitch must be superior to one of the uniform pitch, and whatever the results of this wheel may be, it has some novelty about it, so far as we are informed on the subject at present. Mr. Gladney has applied for a patent.

### Compensation Journal Box.

Mr. W. W. Robbins, of Milford, N. H., has invented a compensation journal box, which rests in the common concave bearings like a socket, but it laps over on the outside of the bearings and is held securely in its proper place, while at the same time, like a wheel within a wheel, it can accommodate itself to the gudgeon, if the shaft gets somewhat out of line and thus prevent torsion of the journal. He has made application for a patent.

### A Good Invention.

In our list of Patents of last week there was one granted to Mr. William Snell of Easton Pa. for a machine to form ladies and gentlemen's gaiters, half gaiters and short boots without seams, at the same time producing any size required, in all their proportions so as to fit with the greatest nicety and exactness. The machine will form any of the materials in general use; such as patent leather, calf, kip, meers, morocco, split leather or anything woolen. It dispenses with the knowledge of boot cutting and more than half the binding. Such is the simplicity that any person unacquainted with the business can use it. We are informed it will reduce patent leather boots one-third their usual cost.

### A useful Invention for the Ladies.

A Lady in this State is about to apply for a patent for an invention which is at once ingenious, useful, and exhibits inventive qualities of no common kind. It is an article of domestic furniture, which answers for a cradle, a baby jumper, a table for the child to amuse itself with its playthings and it can be transformed in a moment from a cradle to a seat with castors on it, by which the child can by its own power, use it as a walking chair, and move it from place to place simply by pushing it.

### Fireproof Wood.

A foreign journal says that Dr. Fuehs, a member of the Academy of Science at Munich, Bavaria, has discovered a composition made of granulated earth and an alkali. To obtain it, the inventor says, you must dissolve some moist gravelly earth, which has been previously well washed, and cleared from any heterogeneous matter, in a solution of caustic alkali. This mixture has the property of not becoming decomposed by fire or water.—When spread upon wood, it forms a vitreous coat, and is proof against the two elements.—

The building committee of the royal theatre have twice publicly tried the composition on two small buildings; the one which was not covered with the composition was consumed, while the other remained perfect and entire. The royal theatre at Munich has undergone this process having about 400,000 square feet, the expense of which was about 5000 francs.

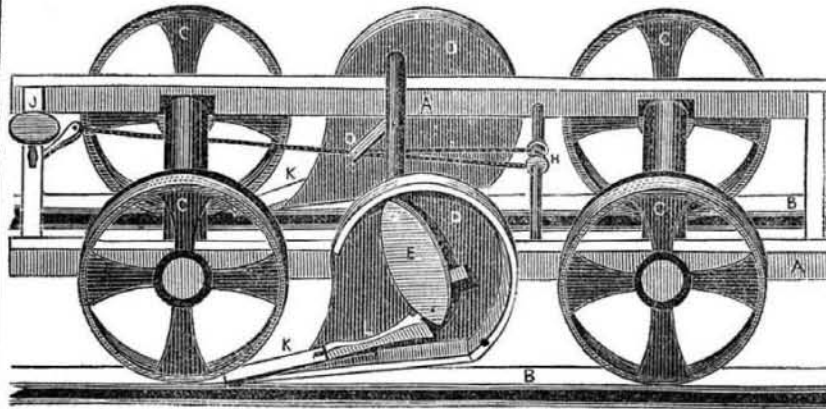
[Old things sometimes become new, and this is at least the case with the above new discovery. The composition spoken of, is that of glass, and the same as that of which artificial stone is made. Various kinds of fire-proof paints were exhibited in this city at the last Fair of the American Institute.

### New Method of Preserving Butter.

We have seen it stated in a number of our exchanges that "a Mr. Merryman of Springfield, Ill. has invented a process by which butter may be packed and kept for any necessary length of time, in any climate, and under any circumstances, in a state perfectly sweet, without salt or any other chemical agent."

There is no way in the world by which this can be done without "a chemical agent," except to pack the butter in an air tight vessel, extract the air by the force pump, and then seal up. This process, however, has long been known for preserving provisions for long journeys and sea voyages.

## BURLING'S RAILROAD BRAKE.



This is an engraving of the Railroad Brake invented by Mr. Benjamin Burling, of Danville, N. Y. and which we noticed last week. This engraving will at once convey a knowledge of its construction and operation. This is a semi-isometrical view which shows all the parts clearly. A, is the body of the truck. B, B, are the two rails of the track. C, C, are the wheels. D, D, are the brake boxes placed on the side of the truck. This box is covered on the outside, but the cover is removed to show the interior parts. E, is the shoulder of the brake. It is firmly secured to the brake axle F, above, and is moved when the axle moves. G, is a small arm on the axle F, in the end of which the brake chain is fastened, passing from it over the pulley H, on the stationary shaft, and communicating with the common brake wheel J. The shoulder E, is attached to a flexible arm L, forming an elbow, and this arm is attached by a joint to the shoe wedge K. This shoe wedge is forced out of the box down an inclined plane—and is now represented as being forced under

the wheels. By the combination herein represented its operation will at once be understood. By operating the brake wheel a great lever power is exercised upon the axle F, which communicates its power through the shoulder E, forcing down the shoe wedge K, under the wheels, and raising them off the track—thus arresting their motion by the power applied under them instead of the common method. Shoe brakes have been long known but they are altogether different from this.—They used to be employed on the old carrier wagons and were portable, merely clasped on the wheels, when going down a steep hill with a heavy load and after that were taken off. These old shoe brakes were no doubt adopted as being the best in principle for the specific object used. The principle of action in this brake is the same but the principles by which it is operated and the manner of its application are entirely different. We mentioned before that the inventor had made application for a patent.

### Improved Ice Cream Freezer.

As the warm season is coming on, when the demand for ice cream will be of no common kind, at least if our summer heat be as extreme as our "winter's cold," a very simple and convenient plan of operating the Can is herewith presented, which for every purpose, is a most elegant substitute for operating the cream Can by hand, a work far more laborious than many are aware of.

FIG. 1.

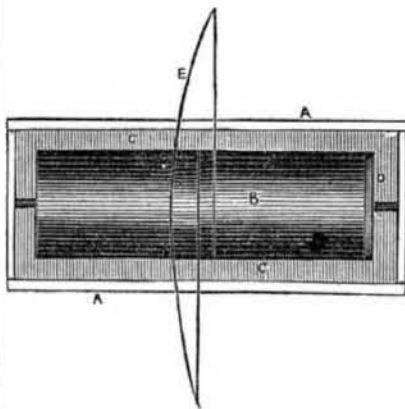
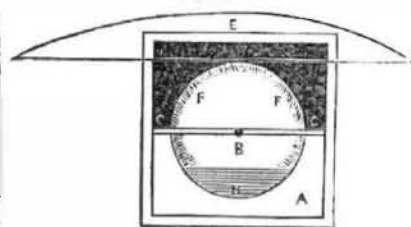


Figure 1 is a vertical section, and fig. 2, an end section. The same letters refer to like parts on both figures. A is the wooden box or chest. B, is the ice cream or freezing cylinder as it is called. C, is a shelf to keep the ice from the bottom. D, is the end or cap of the cylinder and fits on with screws. E, is a bow to operate the cylinder in the same way as operating the hand drill. F, F, shows the cream freezing on the sides of the cylinder. H, is the cream in the cylinder. The

ice and salt are put into the box and the cover is shut down, when the bow is driven by

FIG. 2.



hand the string playing through a hole on each side. A child can turn out more than an adult by hand, with this simple contrivance of Mr. J. G. Gleason, No. 82 Commercial st., Boston.

### Medical Discovery.

It has been ascertained that the true source of scorbutic disease, as it shows itself in our ships and prisons, is the want of potash in the blood; that salted meat contains little more than half the potash in fresh meats; and that, while an ounce of rice contains only five grains of potash, an ounce of potatoe contains 1,875 grains, which accounts for the great increase of the disease since the scarcity of the potatoe. In patients under this disease the blood is found to be deficient in potash: and it has been ascertained by repeated experiments that whatever be the diet, such patients speedily recover if a few grains (from twelve to twenty) of some salt of potash be given daily. Limejuice is regularly ordered in the navy, as a specific for the disease, and the reason of its efficacy is not the acid, but the amount of potash, being 846 grains in an ounce. On these facts, it seems possible to find a slight, but very salutary

improvement in the navy. Let a portion of tartrate of potash be ordered regularly to be mixed with the limejuice that is given out for use; and let arrangements be adopted for boiling the salt meat in steam. A large portion of the salt would thus be eliminated and the food made more wholesome. A similar course might be adopted in work-houses and prisons. If so simple a remedy is in our hands, it is criminal to neglect it.

### Preservation of Life from Shipwreck.

"Some two months ago," (says the London Standard,) "public attention was drawn to a series of experiments on the floating properties of shredded cork, when used for the stuffing of seamen's beds, bolsters, and every other kind of squab or cushion in ordinary use on board ship, and applied as a means of preserving life in cases of shipwreck or sudden casualty. It will be recollected that these experiments took place in the serpentine, in the Thames, both at Chiswick and Blackwall, and subsequently in her Majesty's dockyard at Woolwich last spring, in the presence of Admiral Sir G. Bremer, and other naval authorities. The success of the experiment was complete, demonstrating satisfactorily the adaptation of the material, for the first time exhibited in so useful a form, to the humane purpose of saving life under circumstances where human aid has hitherto been considered unavailing."

[We can beat that in New York. We have not only life preserving hammocks but full life preserver dresses for sale, in which a man might go to California dry shod carrying his knapsack well lined with beef and bread through the Gulf and round the Cape, were it not for those grim visaged rascals, the Caribbean sharks.

### A Strange Carriage.

A New Carriage has recently appeared on the State Road, in Ohio, between Canal Dover, and New Philadelphia, which is a novelty undoubtedly. The vehicle consists of a large hollow wooden wheel, fourteen feet in diameter and six feet wide. The horses are placed inside, and propel it along in the same manner that a caged squirrel makes its wheel to revolve. Slat are nailed on the inside floor of the wheel, by which the horses obtain foot-hold. In the centre is a small iron shaft, from which depend hangers which support four comfortable sofas for passengers; the wheel thus revolves freely, the seats remaining in equilibrium.

There is a very simple arrangement for guiding this huge wheel, but we venture to predict, that it will soon be numbered with the things "that were."

### New Mode of Washing.

A Mr. Tibbets advertises in the Mobile papers that he has made a discovery of a chemical nature, by which a large washing of clothes, say five hundred pieces—may be done by one person in twenty five minutes, without any machine, or any rubbing, and without any injury to the clothes. The Editor of the Register says, that the experiment was tested at the American Hotel in that city, in the presence of a number of persons, and with the most complete success; and adds, that a knowledge of the ingredients employed in preparing the water, enables him to say that their use can work not the slightest injury to the clothing.

[All fal-de-ral, we believe. The grease in clothes can be removed only by some alkaline solution, and the dirt must be removed by washing. It no doubt can be removed quicker by first softening it, or separating its combination with the clothes, but after this it has to be rinsed and washed away with clean water.

### A New Sea Signal.

Some persons on board of a Canal boat were carried out in the Lake during the recent great flood at Chicago and having nothing on board to use as a signal to the boat sent to tow them in, conceived the idea of holding up a window so as to reflect the rays of the sun in the right direction. The light was seen by the crew of the steamer, and the whereabouts of the canal boats was by this means alone ascertained, as her hull was not in sight.

This is a case which fully proves necessity to be the "mother of Invention."