

**IMPROVED FRUIT EVAPORATOR.**

The annexed engraving represents a very simple and efficient fruit evaporator, recently patented by Mr. William H. Reed, of Cliffdale, Ill.

This apparatus consists of a reel adapted to receive in its double arms a series of fruit crates, the reel being supported on a shaft in a heating chamber, and rotated so as to bring the crates successively over the heater and to create a current of air which rapidly carries off the moisture from the fruit. The heating chamber is fitted with a ventilator at the top, and air inlets at the sides, about the shaft. The bottom of the furnace at the sides is filled in with fire resisting clay to carry the heat of the furnace directly up to the reel without great loss by radiation. There are air supply openings with dampers at the lower part of the heating chamber for supplying the amount of air required.

The chamber may be heated in various ways, either by a furnace, as shown in the engraving, or by means of a stove or by steam. The crates which fit into the radial arms are provided with wire gauze sides, so that the air has access to all sides of the fruit as it is carried around by the reel.

The capacity of this machine may be increased by extending the shaft and adding sections to the reel. In this case the sections are geared so that any one may be stopped or revolved without interfering with the others.

This evaporator is very rapid in its operation, and produces uniform evaporation without shifting the crates, and without special attention. The reel is revolved by suitable power or by hand.

Further information in regard to this invention may be obtained by addressing the inventor as above.

**To Detect Alcohol in Oils.**

To detect alcohol in oils, take a slim glass tube eight or ten inches in length, closed at one end, and as large as your finger. Put in an ounce or two of oil, paste a piece of paper on the outside of the glass, so that its lower edge will be even with the top of the oil, then add two or three times as much soft water, and shake well for a few moments. When it has settled, in an hour or so, the water will have absorbed the alcohol from the oil, which will show proportionately below the line first fixed.

**HERRINGTON'S SYSTEM OF TRANSPORTATION AND DELIVERY.**

A ready means of transporting articles for short distances is shown in the engraving. The device is more particularly designed for receiving and delivering parcels of goods, groceries, provisions, milk, etc., but it may be used to great advantage in manufactories and in many other places. The apparatus is so simple as to scarcely need description, consisting of a carrier, a wire or cable upon which the carrier runs, and a device at each end of the wire or cable for raising and lowering it to secure the elevation necessary to cause the carrier to run along the wire or cable. At each end of the cable there is a catch which retains the carrier at the end until the opposite end of the wire is lowered, when the wire becoming taut disengages the latch and releases the carrier. The article to be transported or delivered is suspended from the carrier and is moved along the wire by its own gravity.

In the present case the article being delivered is milk. The can is suspended from a hook on the carrier, and when the street end of the wire is raised by means of the cord running over the pulley on the post, the carrier moves forward toward the house end, where it is arrested by a rubber buffer and is retained by the spring catch before referred to.

Fig. 2 shows the arrangement of the pulley, carrier, catch, and buffer.

If the person at the house desires to operate the carrier, the method is the same as that already described.

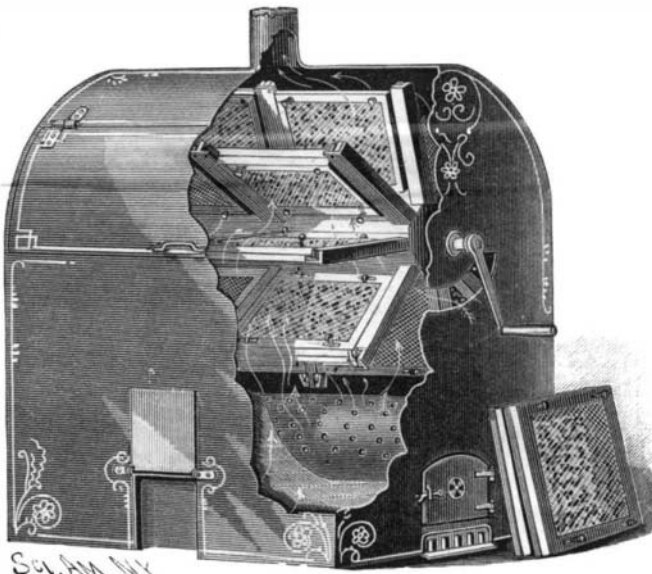
This device is very simple, easily constructed, and applicable to a great number of uses. It is capable of saving a great deal of labor, and may be profitably introduced in many places.

Mr. G. H. Herrington, of Wichita, Kas., is the patentee of this invention.

To prevent mould on the top of glasses of jelly lay a lump of paraffine on the top of the hot jelly, letting it melt and spread over it. No brandy paper and no other covering is necessary. If preferred, the paraffine can be melted and poured over after the jelly is cold.

**Arago's Little Joke.**

One day at the Academy of Sciences they had a long and tiresome session. Arago thought he would go out and take the air. At the foot of the stairway there was a leather bowl, upon which the rays of the sun were hotly beating. Arago turned the bowl round, and, rushing up stairs, told the distinguished assemblage that he had just met with something that was very mysterious. "That leather bowl," he said, "at the foot of the stairway is cool upon the side which presents itself to the sun, but warm upon the other side." The scientists descended in a body and substantiated this assertion. They took the inclination of the sun, the hour, the minute, the second, and a vast array of other details. They made calculations, and several

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weeks afterward each of them presented a paper explaining the phenomenon, Arago himself taking care to send in his explanation with the rest. There is no knowing how far the discussion might have gone had it not been for the door-keeper, who, having seen Arago turn the bowl, and pitying the worthy gentlemen who were so much worried, cleared away the mystery.

**Studies on Milk.**

The author comes to the conclusion that human milk and cow's milk contain the identical albuminoids. Human milk contains, however, a smaller proportion of albuminoids, and especially of caseine. All the albuminoids held in solution in milk can be separated by dialysis (with chloroform water) from the undissolved caseine and from the butter. A part of the undissolved caseine forms the covers of the milk-

**Poisonous Effects of Petroleum Smoke.**

A curious instance of poisoning from the smoke of petroleum is reported in the *Neue Freie Presse* of Vienna. A workman's wife brought to a local hospital a child eighteen months old who had been seized early in the morning with violent convulsions, and had subsequently become unconscious. She also stated that her husband, on awakening, had been taken with cramps, and had an uneasy sensation in his upper and lower extremities, accompanied by headache, from which she was also suffering. The singular color of the child and the results of careful examination led to the conclusion that there had been acute poisoning from smoke gases. It was then discovered that in the small and ill-ventilated bedroom occupied by the parties in question a petroleum lamp was used as a night lamp, the flame being reduced as much as possible. The wick had, however, been left projecting without the protection of a glass cylinder. In this way the flame of course emitted smoke. The father (himself a delicate man) was also found to exhibit symptoms of poisoning. By the exertions of the medical men in charge of the cases, both the father and the child have progressed so far toward recovery that their restoration to health is confidently expected.—*Lancet*.

**Frogs.**

A Louisville (Ky.) scientist, according to the *Electric World*, sings the praises of the frog, and incidentally refers to the part the humble batrachian has played in the development of electrical science: "Even in the benighted age in which Galvani lived it had been discovered that frogs' legs were good to eat. He had a pair of them hanging on a copper hook, and occasionally the wind would blow them against an iron railing, and they would jerk convulsively whenever contact was established. Galvani noticed it, and set his wits to find out the cause. Everybody knows the history, although it is a long one, and everybody knows that from that simple occurrence, and through the defunct frog's instrumentality, we have the telegraph monopoly, the telephone, with the wires crossed half the time and the other half something the matter with the transmitter, the electric light, which doesn't burn on cloudy nights, and many other blessings of life. The world owes all those things to the simple fact that a frog's hind legs are good to eat."

**Tobacco Insecticide.**

The *Repertoire de Pharmacie* quotes, upon the authority of Dr. Nessler, a recipe for an insecticide which is said to have a great reputation among German horticulturists. It consists of soft soap, 4 parts; extract of tobacco, 6 parts; amylic alcohol, 5 parts; methylic alcohol, 20 parts; water to make 1,000 parts. The extract of tobacco is made by boiling together equal parts of roll tobacco and water for half an hour, adding water to make up for what is evaporated.

The soft soap is first dissolved in the water with the aid of a gentle heat, and the other ingredients are then added. The mixture requires to be well stirred before it is used, and is applied by means of a brush or a garden syringe fitted with a small rose.

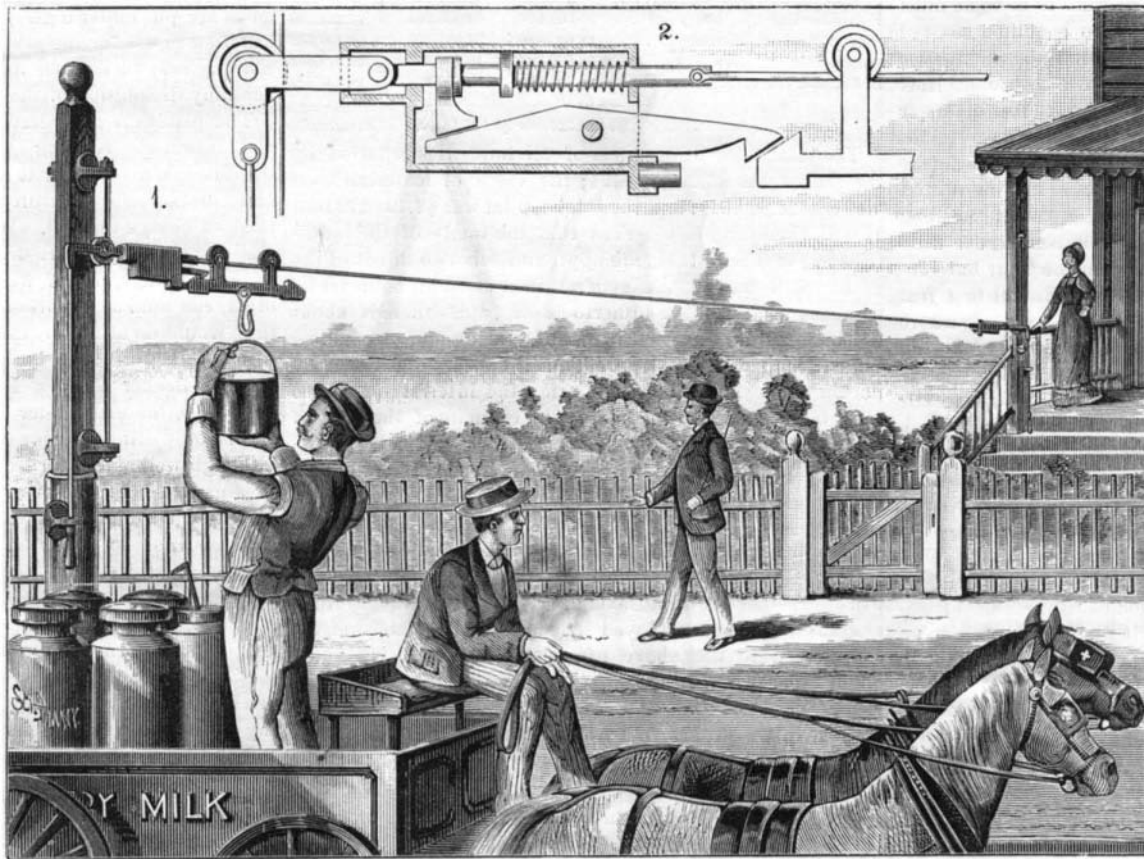
**An American Example in Australia.**

*Frearson's Weekly*, Adelaide, South Australia, gives several illustrations of railway viaducts, including the Kinzua viaduct on the Erie road, and in describing those on the Nairne line, Australia, says:

Many of our readers may not be aware that the viaducts on our Nairne line are modeled after the celebrated Kinzua viaduct. It is on the New York, Lake Erie, and Western Railroad, and is situated in the middle of McKean County, Pa., four miles from Alton, the present terminus of the Bradford branch of the Erie road, and crosses the Kinzua Creek at an elevation of 2,100 feet above sea level. It was Mr. O. W. Barnes, of New York, who two years ago

proposed to cross the valley by an immense viaduct. He was at that time chief engineer of the Bradford branch of the Erie, and was ably aided by his energetic assistant, Mr. Charles Pudsley. The length of this structure is 2,051 feet clear of the abutments, the height 301 feet from the bed of the stream to the base of rail.

It is asserted that the largest ivory factory in the world is at Centrebrook, Conn., where sometimes \$125,000 worth of ivory is bleaching

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globules, and is separated out in the cream; the other portion remains in the skim milk. The milk globules swell up if shaken with ether. The digestibility of any milk is inversely as the quantity of caseine which remains in the skim milk. Hence, Dr. Biedent's suggestion that only cream should be used for the earliest nourishment of young children brought up by hand is perfectly justified. The caseine of human milk, as well as of cow's milk, has always an acid reaction. In human milk there is only a small quantity of butter in a free state.—*H. Struve*.