

DETACHABLE MILK CAN REFRIGERATOR.

On the upper part of the milk can fits a case, the lower edge of which is recessed to receive the handles. Hinged to the top of the case is a cover, which is raised by a spring and held closed by a spring catch, as shown in the engraving. By pressing upon a properly arranged knob the catch may be disengaged, when the cover will be instantly raised by the spring. The case is held in place by bolts, which may be placed across the recesses, so as to be below the handles on

**DOUGLAS' DETACHABLE MILK CAN REFRIGERATOR.**

the can. When in use, the case is filled with ice, which keeps the upper part of the can cold. As the ice melts the water escapes through the loose joint between the case and can, and runs down the can body, which is thereby kept cool. When not in use, the case can be detached and laid aside.

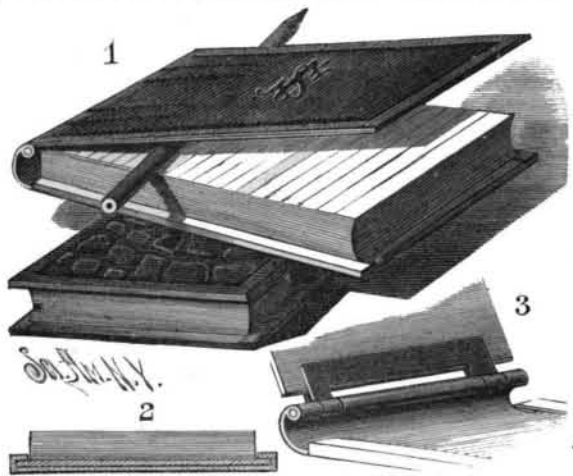
This invention has been patented by Mr. James Douglas, of Cornwall-on-the-Hudson, N. Y.

Examination of Mixed Tissues and Yarns.

The author determines actual solids on 2.5 grms. by drying at 100° in a special apparatus. The fat is obtained by extracting 15-20 grms. of the sample, gently dried, with the purest petroleum ether, evaporating, and weighing the residual fat. Soaps, resin, alkali, pigments, etc., are obtained by extracting the sample freed from fat, first with boiling water and then with a mixture of two parts absolute alcohol and one part ethylic ether. The residue is dried at 100° and weighed. To determine wool, this residue is steeped for 12 hours in a cold acid containing 60 per cent of sulphuric anhydride, carefully transferred to three times the volume of cold water, filtered, perfectly washed with hot water, and weighed as wool. The difference is cotton, linen, hemp, or silk waste.—A. Gawalowski.

WRITING TABLET.

The engraving represents a tablet for receiving and holding paper for writing purposes, which is the invention of Mr. Clarence Selah, of Ewing, Neb. The two side edges of the metallic back are folded, as shown in Fig. 2, to form a recess to hold a lining of paper or other flexible material suitable for a pad to write upon when a single sheet of paper is used, and upon which to place a quantity of paper. One end of the back is folded over and inward to receive a wire which stiffens it, and serves as a journal to receive the spring hinge clamps which hold the blotting cover. The action of the hinges is such as to adjust the blotter to the various thicknesses of paper, from one to a number of sheets. One construction of the spring hinge is clearly shown in Fig. 3; in this the blotting cover is firmly

**SELAH'S WRITING TABLET.**

held in position, and is not liable to injury, as the entire edge is clamped.

How to Remove Rusty Screws.

A Russian plan is to heat a flat iron bar to a cherry red and press it in the head of the screw for a couple of minutes, after which the screw becomes loosened, and is easily extracted with a screw driver.

Oleomargarine.

As noted in our last issue, Congress passed, and the President has signed, the bill aimed to cripple the oleomargarine industry by imposing a special tax of two cents a pound on the article, while all other food products go free. Says the *American Analyst*: In 1884, when the oleomargarine bill "to prevent deception in the sale of dairy products" was pending in the New York Legislature, the opinion of the Hon. William M. Evarts was sought as to the constitutionality of the proposed law. He declared unequivocally that it was not constitutional. The following is an extract from his opinion rendered two years ago:

"If this act shall be construed, not as protecting the public against 'deception in sales of dairy products,' but as protecting dairy producers in a monopoly of human food, against the manufacture and sale of the genuine products of other oleaginous substances suited as wholesome human food, in greater or less degree, to compete with or take the place of dairy products, I am of opinion that such legislation is repugnant with our Constitution. Legislation in this sense no longer adheres to the protection of guaranteeing a lawful product against simulation and deception, or protecting the public against fraud and imposition, but stands upon the avowed and unlimited discrimination in favor of monopoly, to the injury of other honest and useful producers and the oppression of the public. It is quite plain that the moment this legislation departs from the theory and justification of this act as limited, to 'prevent deception in sales of dairy products,' no proscription, on the mere ground of protective monopoly, of one industry can be limited by any rule of discretion in this line and style of discrimination. Hitherto, until recently, the maxims and instincts of public liberty have discounted all such methods of legislation. I am unwilling to tolerate the pretension that the provisions of our constitution offer no barrier to such an innovation upon freedom and equality as the creation of monopolies at the discretion of the Legislature."

Forgetful, apparently, of his strong language of 1884, Mr. Evarts, a few days ago, in the United States Senate, made a strong speech in favor of a bill, not framed merely to protect the public from deception, but imposing a restrictive tax upon oleomargarine, intended to protect dairy producers in a monopoly of human food such as he denounced so vigorously in the extract above quoted. To show the inconsistency of Mr. Evarts' attitude in the premises, we give the following brief extract from his recent senatorial speech:

Mr. Evarts described the condition of alarm into which the dairy interests of the country had been thrown by the introduction of oleomargarine, and said he would have supposed that, on the mere statement of that existence of things, everybody would have sympathized with this interest, so vast, so simple, so necessary, and so historical. The question was whether one good and honest product, one good and honest trade, one good and important element of foreign commerce, was—in its body and substance—to be attacked by fraud, and reduced, not only in its gain, but threatened in its existence. He argued that, within the eye of the law, the bill was constitutional. The Senate was now to confront the question whether this mischief, this injury, this stigma, this danger to trade abroad and at home, should be suffered to exist because of a difference between the two houses as to the amount of the tax. He himself should forego his own judgment as to what the tax should be, and would accept the bill as passed by the House. In conclusion, he made a strong appeal for sympathy in behalf of the great class of dairy farmers.

The "attack by fraud" upon the dairy interest is a gratuitous assumption by Mr. Evarts. The oleomargarine interest, sustained by Professor Atwater and the entire scientific skill of the land, is strongly in favor of the adoption of the severest measures, if needful, for protecting the public against fraud and deception; but they maintain, as Mr. Evarts also did so earnestly in 1884, that the legislation now sought for stands—to use his own words—"upon avowed and unlimited discrimination in favor of monopoly, to the injury of other and honest producers, and the oppression of the public."

The Attractiveness of M. Eiffel's Proposed Tower.

The iron tower which is to form the chief attraction of the Paris Exhibition of 1889 is already beginning to fill the Parisian mind with apprehension; and a savant explains in the *Moniteur* the curious phenomena which will be produced by this immense mass of iron rising to a height of 300 meters. He says that the enormous blocks of iron running north and south will become polarized, and that this polarization will soon invade the whole column. Then who knows whether the four lifts with their continual friction will not increase the magnetic influence a hundred fold? In this case, all articles for a mile around will be attracted to the tower, and will adhere to it as a needle does to a magnet. If the troops quartered in the *Ecole Militaire*, hard by, be

called out to drill, it will be all in vain for the commanding officer to shout "*En avant*," if they are paraded with the column behind them; they will irresistibly be drawn to the rear, with exception of the drummer, who does not carry a rifle. All the houses in Paris will suffer from a St. Vitus's dance, and, gradually attracted toward the Champ de Mars, will finally find themselves stuck to the tower. As for locomotives entering Paris, it will be found impossible to stop them at the various termini; they will rush through Paris, and dash themselves to pieces against the center of attraction. These and other evils, we are told, will follow the erection of the great Eiffel tower; but then the *Moniteur* is opposed to the anniversary of the capture of the Bastille being observed, and may have exaggerated the consequences.—*St. James' Gazette*.

PROTECTIVE GARMENT.

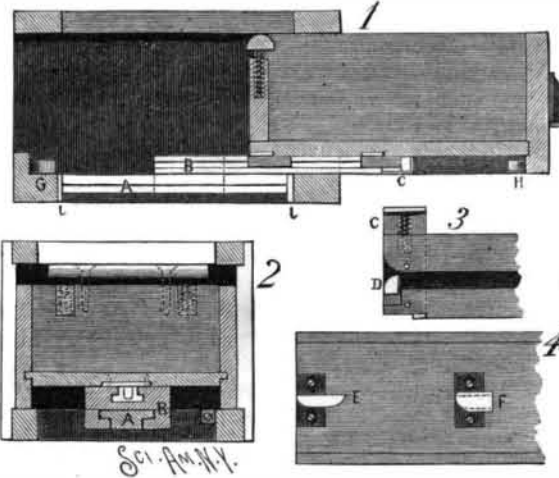
This garment, the invention of Mr. G. W. Hill, of 388 Pearl Street, New York city, is designed to protect parts of the body from the influences of cold and moisture. It consists of one or more pockets, B, open along one edge, D. In these, waterproof paper, E, is placed. As shown in the engraving, the pockets are to be worn for the protection of the chest and back, and are connected by shoulder straps. The paper is of approximately the same form as the pocket, and being rendered waterproof in any suitable way, will be unaffected by perspiration and will not be permeated by water from without. It also effectually excludes cold, and protects the body from sudden changes of temperature.

**A Bee in a Telephone.**

The experience of telegraph operators, inspectors, and linemen brings them into close acquaintance with all sorts and conditions of faults in connection with their work; the variety of these faults is wonderful, many stranger than fiction. One of the most curious in connection with telephony which we (*Mechanical World*) have ever known has just happened within the last few days at a place called Moss Bay. The lineman's attention was called to the circuit in question, as hearing was difficult; on listening at the telephone, he heard a "sort of booming which came on intermittently, very much resembling the distant roll of the tide, and which rendered speaking and transmission of work almost impracticable." Having satisfied himself by the usual methods that the instrument was right and the line free from induction, and that it was not picking up vibrations, the conclusion was arrived at that the fault must be in the general office, Moss Bay. An examination of the telephone apparatus disclosed a novelty. A huge bee was inside the telephone, and in trying to make good its escape, it had become fixed between the sounding board and the microphone, and it had hummed to the extent of interfering with the human organs on that circuit. How the bee came there the lineman cannot say, whether by accident or design he knows not, but the bee was the cause of the fault. In concluding his report, the lineman candidly states: "I have met some very tedious and technical faults in connection with various telephone apparatus, but I never was done with a bee before."

DRAWER CHECK AND SUPPORT.

In our issue of July 31 we described and illustrated

**FRAZER'S DRAWER CHECK AND SUPPORT.**

a drawer check and support, the invention of Mr. S. J. Frazer, of 69 Worthen Street, Lowell, Mass. In Fig. 3 of the engraving there was an error, which, although apparently slight, most materially affected the operation of the drawer. The stop, D, was there shown square, but one corner should have been well rounded, as here drawn, so as to admit of the drawer going in in the usual way.