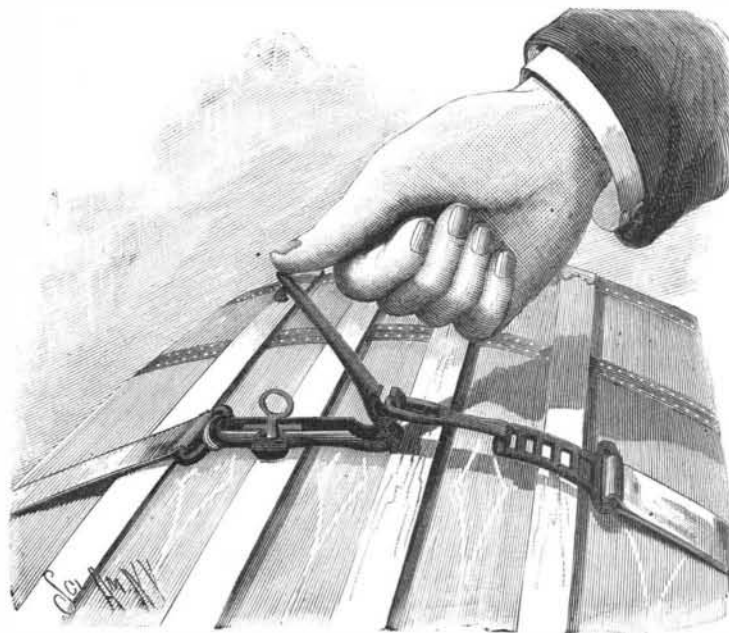


AN IMPROVED TRUNK STRAP COUPLING.

A simple and effective coupling for connecting the ends of a strap for tightening it around a trunk, box, or package, is illustrated herewith, and has been patented by Mr. Henry B. Lum, of Red Bank, N. J. The main or lock plate of the coupling has at one end a buckle or loop, for engagement with one end of the strap, the under side of the plate being recessed to receive a bolt projected by a spring, and which may be operated by a key to release a hook formed on the free end of a straining lever, pivoted at its other end to the outer end of the plate. A metal retaining ring is also adapted to be caught under the flanges of the lock plate to hold the straining lever in locked position. The straining lever is also provided at each side, toward its back or pivoted end, with a flange or lip, which overhangs the body of the lever sufficiently to engage in bent lugs on a catch plate buckle of the coupling, the outer end of the catch plate being formed with a loop for engagement with the other end of the trunk strap, whereby the two end parts of the strap may be drawn together to tighten it on the trunk or box to which it is applied. It is not essential that the catch plate buckle be used to fasten the strap around a trunk, as one end of the strap may have a hole through which the straining lever may be slipped prior to drawing down the coupling. The trunk strap to be used with this coupling may be of leather, metal, or other suitable material, annealed corset steel answering admirably therefor. The coupling is made in connection with such a metallic strap, about 1 1/4 inches wide, which can be rolled up to take less room than an ordinary leather strap, affording a powerful lock and at the same time an adequate support to sustain the heaviest trunk against breakage, and the manufactured strap is sold by Mr. W. H. Parker, Jr., of No. 149 Broadway, New York City.



LUM'S TRUNK STRAP COUPLING.

A Railway Catechism.

How many miles of railway in the United States? One hundred and fifty thousand six hundred miles—about half the mileage of the world. How much have they cost? Nine billion dollars. How many people are employed by them? More than a million. How long does a steel rail last with average wear? About eighteen years. What is the cost of a palace sleeping car? About \$15,000, or \$17,000 if "vestibuled." What is the cost of a high-class eight-wheel passenger locomotive? About \$8,500. What is the longest American railway tunnel? Hoosac Tunnel, on the Fitchburg Railway (4 1/4 miles). What is the highest railroad in the United States? Denver and Rio Grande, Marshall Pass, 10,852 feet. What is the highest railroad bridge in the United States? Kinzua Viaduct, on the Erie road, 305 feet high. What is the longest railway bridge span in the United States? Cantilever span in Poughkeepsie Bridge, 548 feet. What is the longest mileage operated by a single system? Atchison, Topeka and Santa Fe system, about 8,000 miles. What line of railway extends furthest East and West? Canadian Pacific Railway, running from Quebec to the Pacific Ocean. What road carries the largest number of passengers? Manhattan Elevated Railroad, New York, 525,000 a day, or 191,625,000 yearly. What is the fastest time made by a train? Ninety-two miles in ninety-three minutes, one mile being made in forty-six seconds, on the Philadelphia and Reading Railroad. What is the fastest time made between Jersey City and San Francisco? Three days seven hours thirty-nine minutes and sixteen seconds—special theatrical train, 1886. What are the chances of fatal accident in railway travel? One killed in 10,000,000. Statistics show more are killed by falling out of windows than in railway accidents.—*Frank Leslie's*.

The Agassiz Seaside Assembly.

During the past week, from August 6 to 11, the Agassiz Seaside Assembly has held its sessions at Asbury Park, N. J. The general work of each day included an excursion—botanical, microscopical, or entomological—in the morning, followed by conversaciones and lectures in the afternoon. Educational Hall was used as the place of assembly, and audiences of good numbers greeted the various speakers. The opening lecture, on Monday, was delivered by Prof. Harlan H. Ballard, of Pittsfield, Mass., president of the Agassiz Association. He spoke of the objects and aims of the association and told how to establish a chapter. On the succeeding day Rev. L. H. Lighthipe read a paper on the "Flowers of New Jersey." On Wednesday Prof. F. C. Van Dyck, of Rutgers College, held a conversazione on the use of the microscope. On Thursday Rev. G. D. Hulst, State Entomologist of New Jersey, was the lecturer, and on Friday Dr. T. O'Connor Sloane lectured on "How to Make Scientific Experiments with Simple Apparatus." On Saturday, after a highly successful session, the meeting adjourned.

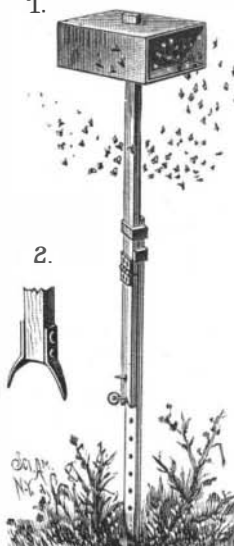
Carbolate of Camphor.

A new compound is mentioned in the *Therapeutic Gazette* to which is given the name of carbolate of camphor, and which appears to possess the antiseptic properties of carbolic acid, and the curative properties of camphor, without the cauterizing properties of the former. It is prepared by dissolving camphor in a 95 per cent solution of carbolic acid to saturation. The carbolic acid will dissolve about three times its weight of camphor, and the product is a thin, clear, oleaginous mixture, having a strong odor of camphor,

and a very faint odor of carbolic acid. To the taste it has a strong, and, at first, slightly pungent flavor of camphor, but no flavor of the acid. It dissolves readily in vegetable oils and in vaseline, mixes with sulphuric ether, dissolves salicylic acid, cocaine, iodoform, and, in the proportion of forty grains to one ounce, disguises the odor of the latter. Taken internally, in ten drop doses administered in capsules, it produces a sensation of warmth in the stomach which is not unpleasant, and which continues for an hour or two. When applied to the skin it produces a slightly warm sensation for a few moments, and when applied to an abraded surface it smart for a moment and then all pain ceases. Injected hypodermically it causes stinging, quickly followed by anæsthesia. When mixed with an equal quantity of cotton seed oil, and applied to a fresh wound on gauze or cotton, and kept well covered, no suppuration follows, nor does vesication or pain.—*American Druggist*.

AN IMPROVED DEVICE FOR HIVING BEES.

A practical and inexpensive device whereby bees that swarm on the limbs of trees, or in other high places, may be conveniently hived, is illustrated herewith, and has been patented by Mr. William J. Daniel, of Jeffersonville, Ky. It is constructed with a standard having points on its lower end to take a firm hold on the ground, as shown in Fig. 2, and a guide loop near its upper end for holding a sliding box or hive supporting section. The sliding section has a loop to clasp the standard, and at its lower end has a hinged extension piece, which serves as a handle for sliding the upper section, this extension piece having a sharp pin to strike into the upper section for holding the piece in folded position. The sliding section is held at any desired place by inserting a pin beneath it in holes provided therefor in the standard.



DANIEL'S DEVICE FOR HIVING BEES.

THE total eclipse of the moon, on the night of July 22, was very generally studied by the astronomers connected with our colleges. At Amherst many photographs of the total eclipse and other phases were obtained with the large telescope. Professor Todd found that scores of faint stars were occultated by the moon during the progress of the eclipse, and that the illumination of the moon's surface during totality was much less than usual. It was irregularly illuminated, except near the time of central. The eclipse, when in the middle, was a large dark area, surrounded by a nearly perfect ring of light. At no time did the moon disappear from view, as it did during the eclipse of 1761, when no part could be seen, either with or without a telescope. The copper color was visible, but not so intense as ordinarily.

A Hypnotized Man Turning Robber.

May one who is free from vicious tendencies be made to commit a crime, while hypnotized, which he or she, with full command of faculties, would regard with abhorrence? Experiments both here and abroad have abundantly illustrated the wonderful power possessed by the operator over his subject; the latter wholly subordinating his will: acting, speaking, and, to all appearance, even thinking and seeing as directed. A recent investigator, M. W. A. Croffut, would seem to have gone a step further on the road to practical accomplishment by inducing his subject to actually rob a house; a pre-arrangement, of course, the agent, however, having no knowledge of this. This agent, whom Mr. Croffut describes, in a recent paper, as of known probity, set out, while in a hypnotic state, to rob a neighboring house, which, together with the means of entrance, was fully described to him; being told that a heap of gold was to be found in a certain apartment. The operator's assistant accompanying him declares that, after gathering up the imaginary treasure and putting it in the bag provided him, the subject proceeded to purloin other articles, so thoroughly aroused was his cupidity, and getting safely out evinced an inclination to fly with the treasure instead of returning and dividing with the operator, as was agreed. Another subject, under similar influence, took a pistol, supposed to be but not really loaded, and, aiming it at his heart, as directed, pulled the trigger. If from these and similar investigations it should become apparent that all manner of real crimes may be committed by innocent persons while in this hypnotic or mesmeric condition, and if the vicious, having such power as that evidently possessed by Mr. Croffut and others, should actually employ the unsuspecting and unsuspected as their agents, how would society protect itself? How could the innocent agents be distinguished from those not under such influence, but setting up the claim when caught only to avoid punishment? A really honest clerk, with the keys of his employer's office and safe in his possession, might be made, should he fall under such influence, to commit a burglary; the heir to an estate might be induced to kill himself; a trustworthy servant to commit murder or arson. These are interesting psychological questions; questions, it may be said, which are by no means beneath the dignity of science to inquire into.

Prospects for Sugar on the Pacific.

The whole of the Pacific States and Territories can, no doubt, produce six to seven million tons, enough to supply 50 per cent more than the present consumption of all civilized countries. That consumption, though, is increasing very rapidly, and it doubles in the United States in about twenty years. Thus in that time it would absorb all the possible production of the State. The value of 3,110,000 tons of sugar would, at 5 cents per pound, be close on three hundred and fifty million dollars per annum. To obtain it one has to go abroad. Besides the return to the farmer, the industry gives steady employment at the rate of about one man to every 30,000 pounds of sugar. The total product of all the sugar lands in California would, therefore, give work to not less than 230,000 men, representing a population of 1,600,000, including traders, manufacturers, wives, children, etc. It would, besides, give support to a great and varied industry. It would need 21,000,000 barrels to contain the sugar, and thus give support to a vast cooerage industry and lumber interest. The engines would consume 19 barrels of oil to each ton, or 58,000,000 barrels to the total possible production of the State. This would, no doubt, exhaust all the crude oil that California can produce. The use of two per cent slake lime would call for over 400,000 barrels of lime a year. The machinery needed, too, in these mills would cost \$48,000,000, and would require renewing say every fifteen years, thus creating a foundry business of over \$3,000,000 a year. An immense quantity of coal would be consumed, so that it would give support to a great mining interest. And we have not yet nigh exhausted the list of all the new industries that this great one would support. We have delineated its possibilities. It would, of course, take a long series of years to arrive at the results here presented. That it is possible under any circumstances may be known from the fact that the last sugar made cost 4 84 cents per pound, and that it is stated on good authority it can be laid down in San Francisco for 3 1/2 cents per pound, so that California can easily hold her own in beet sugar production.—*San Francisco Journal*.

PROFESSOR REVERDIN gives the following formula of an antiseptic soap that is quite soft to the hands, cleansing and disinfecting them without causing any irritation:

Sweet almond oil.....	72 parts.
Soda lye.....	24 "
Potash lye.....	12 "
Emphocarbolate of zinc.....	2 "
Essence of rose.....	9 "