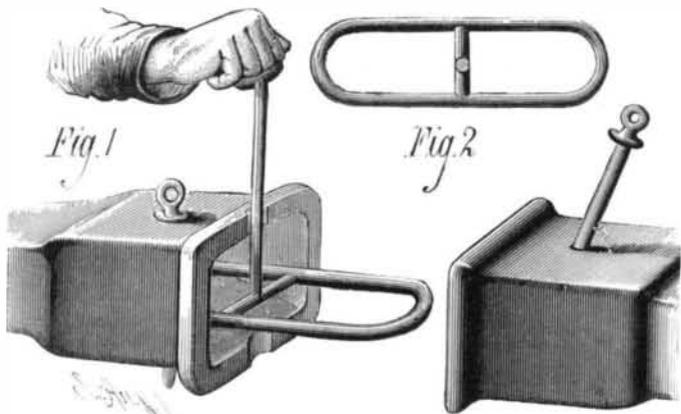


**NEW SAFETY CAR COUPLING.**

The engraving shows an improved car coupler in which a light handle, attached to the link, reaches up far enough to permit of holding it up by the hand with perfect safety while coupling. A narrow shallow groove is formed in the face of the drawheads, in which the handle sets when the drawheads bump together; this prevents injury to the handle. To couple the cars the free end of the link is held up by the handle and guided into the mouth of the drawhead, the pin is then dropped as usual. There is no danger, as the hand does not go between any colliding parts. When more convenient to couple from below, the handle may be turned downward, and the link held up by one hand below the drawheads, while the pin is dropped by the other hand above. It is not necessary to go between the cars, as a short rod may be passed through the ring on the handle to hold the link up.



**FRITTS' SAFETY CAR COUPLING.**

The ordinary form of link is used, with a bar across the middle and a handle welded to the bar. The handle may be made of a small iron rod one-quarter by one-half inch. The groove in the drawbar face is about one-quarter inch deep and one inch broad. This groove can be formed when making the drawbar, or ground in the face of one already made, by means of an emery wheel. It is not absolutely necessary to take the drawbar off the car to alter it, as a portable emery wheel can be employed for the work.

An ordinary coupling changed to this form is in no respect unfitted for coupling with cars fitted with other couplings, as it will couple into any other form or device that it could couple with before being altered over. If the handle gets worn or accidentally broken off, the coupling is still as good as the ordinary link.

This coupling, when put into use, will undoubtedly prevent a very large proportion of accidents in coupling.

Further information may be obtained by addressing Mr. Charles E. Fritts, at 42 Nassau street, New York city.

**IMPROVED NUT LOCK.**

The engraving shows an improved nut lock consisting of a plate of iron of the desired length, breadth, and thickness, having recesses formed in its face capable of receiving the nuts of the bolts in connection with which the plate is to be used. At the bottom of these recesses there are slots through the plates, which allow the bolts to pass through. These slots extend beyond the open ends of the recesses far enough to permit of readily turning the nut. The end of the plate has a head to admit of driving it one way and the other. These recessed plates, when used as fish plates, are placed on one side of the abutting rails, and a plate having square bolt holes is placed on the opposite side. The bolts have square shanks, and pass through both plates and the rails.

After the nuts are screwed up the recessed plate is driven along lengthwise of the rail until the nuts are in the recesses. The nuts will then be locked and cannot be turned until the plate is driven back.

This style of nut lock can be applied with great advantage to cars, wagons, machinery, iron buildings, and, in fact, in many places where bolts are employed, but it finds its principal application to railroad rails.

Further information may be obtained by addressing Mr. W. D. Simpson, Anderson, S. C.

**RECENT INVENTIONS.**

A novel clothes drier has been patented by Mr. John R. Buckwaite, of Buyerstown, Pa. The object of this invention is to provide a cheap and simple drier, especially adapted for application to ordinary stove-pipes, for drying articles of clothing. It consists of two semicircular bands having arms and at right angles thereto, supported by flanges having sockets for receiving the arms.

Messrs. James Casey, Sheldon Juniper, and John H. Mitchell, of Savannah, Choctaw Nation, Indian Territory, have patented a dumping car provided with an end gate carried by a bail pivoted to the sides of the car, the end gate being provided with a recess in its upper end for receiving a hook suspended from a frame above a tilting platform, upon which the car is run, so that when the car is tilted this hook

will hold and raise the gate, permitting the contents of the car to slide down the inclined floor.

An improved chimney cap and ventilator has been patented by Mr. William D. Bartlett, of Amesbury, Mass. This invention is an improvement on the chimney cap shown in letters patent granted to the same inventor September 21, 1880, No. 232,434. The invention consists in wing strips combined with a suspended hood for the purpose of diverting or breaking up the gusts of wind and preventing back eddies.

A dumping car of simplified construction, and one which can be operated with greater ease than those in common use, has been patented by Mr. Aaron Park, of Ottumwa, Iowa. This invention consists in providing the frame of the car truck with a longitudinal central shaft, and also at or near its ends with vertical plates, the upper edges of which are made heart-shaped to form tracks upon which the car box moves when dumping the load in either direction, the car box being connected with the frame of the truck by a rod passing through curved slots in the vertical plates and operated by levers.

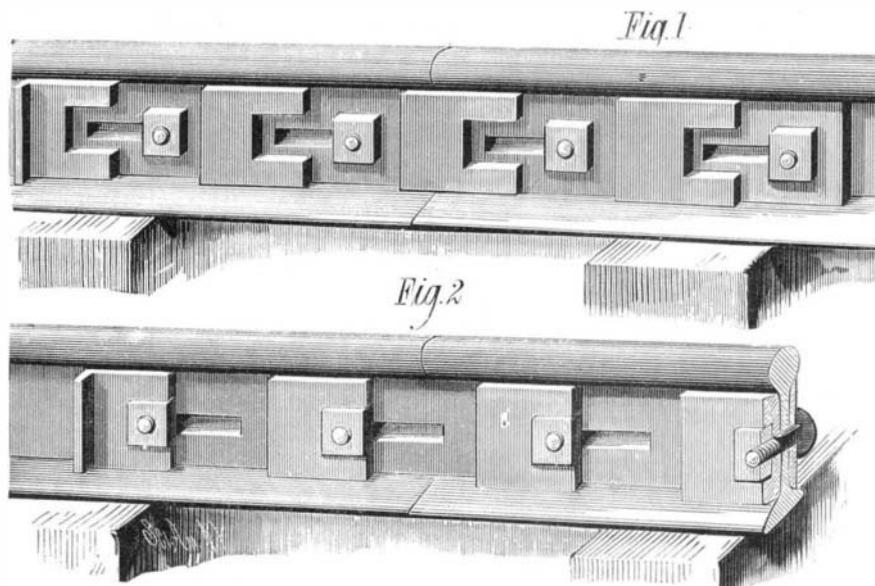
A novel cattle tongs for catching and holding wild cattle in slaughter-houses and other places has been patented by Mr. Christopher Brühl, of Greenpoint, N. Y. The invention consists in cattle tongs having its jaws hinged to the handles. The handles have a hinged serrated locking arm and a locking pin for holding the jaws closed.

A refrigerator that will secure as much as possible the direct effect of the ice and prevent the currents of warm and cold air coming in contact and mingling with each other, and one which will be perfectly ventilated, has been patented by Mr. John Alexander, of Toronto, Ontario, Canada. This invention consists of an open ice rack at the top of the refrigerator, separated from the provision chamber by a water-shed and trough, which permit the free downward passage of cold air into the provision chamber, and at the same time catch and conduct off all drip from the ice, the sides of the ice box being slotted adjacent to vertical partitions in such manner as to form side passages for the downward currents of cold air, the lower edges of the boards being provided with deflectors for turning the downward currents toward the center of the provision chamber, and for guiding the upward currents to passages or flues formed by the partitions and the walls of the refrigerator, from whence the air returns to the ice rack or box, to be again cooled and to descend again to the provision chamber.

An improvement in the manufacture of key-board coverings for musical instruments has been patented by Mr. George B. French, of Ivoryton, Conn. The invention consists in so punching or cutting the spaces for the short keys in a sheet of covering material—as, for instance, celluloid—before the same is glued to its baseboard that the punched or cut-out pieces may be utilized by being glued to the narrow portions of the long keys of a second base.

A novel barrel cleaner has been patented by Mr. Charles Vonderlinden, of Rhinebeck, N. Y. The invention consists in a series of metallic balls or blocks provided with projecting brushes, the balls being connected by pieces of chain, so that they can be passed into a barrel through the bung-hole, and can be moved about in the barrel to scour it, water having been previously poured into the barrel.

A method of and apparatus for disinfecting dead bodies has been patented by Mr. John D. Nietscke, of Somerset, O. This invention consists of a series of air-tight boxes or receptacles provided with tubes having cocks connected to a retort and to each other by pipes. The vapors or fumes



**SIMPSON'S IMPROVED NUT LOCK.**

are forced from one box or receptacle to another by means of a bellows, the vapor or fumes being used over and over again.

A novel curtain cornice has been patented by Mr. George Baldwin, of Buckland, Conn. This is a cornice to be applied to the top of the window frame for holding and concealing the top edge of the curtain. The center piece of the cornice is provided on its back with two bars, which extend the entire length and serve to strengthen it. One of the bars

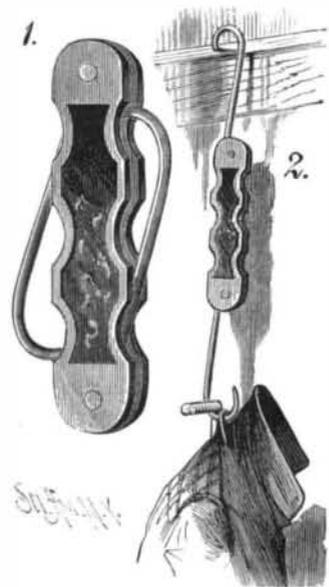
is provided with hooks for the attachment of the curtain by means of rings at its upper end.

Mr. Lewis Merrifield, of La Grange, Ind., has patented an improved cowl, consisting of a semi-cylindrical hood open at the ends and adapted to be swiveled upon the chimney or pipe, and held to the wind by means of a vane. The windward side of the hood is formed at the ends with beveled or inwardly crimped deflectors, which cause the wind, as it sweeps past the cowl, to act as an exhaust in the flue.

**POCKET HANGER FOR HATS AND GARMENTS.**

The engraving shows a very convenient and useful pocket book for hanging overcoats, hats, and other garments against the wall or on the backs of opera chairs, church pews, and for use in various other places.

The invention consists of an ornamental handle similar to the handle of a pocket knife, having pivoted in its opposite ends hooks which are capable of folding up into the handle as shown in Fig. 1. One hook is made of the best steel and tempered, and has a very sharp point which may be inserted in the wall or into any other appropriate and convenient sur-



**McDONALD'S POCKET HANGER FOR HATS AND GARMENTS.**

face. In case the hanger is intended to be used mainly upon opera chairs or church seats or in some similar way, neither of the hooks need be sharpened.

This device can be shut up into very small compass so that it may be carried in the vest pocket. It is hardly necessary to say anything in regard to the usefulness of this device, as it seems to be one of those articles that every one has use for.

The invention was lately patented by Mr. Thomas McDonald, of Austin, Texas.

**The Sense of Touch.**

Professor McKendrick, in a recent lecture before the Royal Institution, said that probably touch was the most primitive of all the senses; and then described its anatomical arrangements in man. These consist of the end bulbs of Krause, the touch corpuscles of Wagner, and the bodies first described by Vater, and usually called Pacinian, after Pacini, their closest examiner. All these minute corpuscles contain a gelatinous-like matter, in which the ends of the nerves are embedded. Tactile sensations are excited by mechanical contact, pressure, or traction. The mode of excitation varies according as the body is solid, liquid, or gaseous, and sensibility increases with the amount of pressure, till it becomes pain. Inequality of pressure is one of the conditions of tactile sensation; hence the use of papillæ to increase the points of contact, and therefore the delicacy of touch.

After illustrating this by the vibrations of tuning forks, and alluding to the sensation caused by contact with fluids and gases, the Professor suggested the probable mode of action of the terminal organs. Mere contact may give rise to sensations differing in quality; such as the touch of metal, wood, and fat. Weber's method of testing the delicacy of touch was described as observing compound tactile sensations. Tactile sensibility increases from the proximal toward the distant end of the limb—as, for example, from the shoulder to the fingers. More

than four or five points of contact cannot be observed at the same moment. It was shown by experiment that one continuous impression may be produced by about six hundred tactile impressions in a second. The sensation of touch does not correspond exactly to the duration of the excitant; and sometimes is referred to the surface of a body beyond it, as when we touch teeth. The Professor explained how there may be a tactile field corresponding to visual field.