

**RECENT INVENTIONS.**

**Improved Bag Holder.**

We give an engraving of a new device for holding a bag raised and open while it is being filled. The bag holder is formed of two curved arms provided with hooks, the arms being attached to toothed disks resting against another toothed disk on the upper end of a rod which is supported by a forked brace, the latter being driven into the ground or into some post or wall. The several toothed disks are pressed against each other by a screw passing through them. By this means the curved arms can be adjusted to hold bags of any desired size.

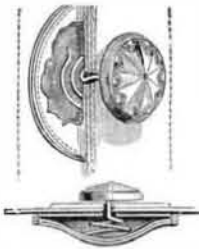
This invention has been patented by Henry W. Nelson, of Ord, Neb.



**Shield for Shirt Studs.**

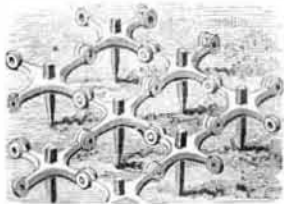
The object of this invention is to provide a device for preventing the screws or spirals of shirt studs from irritating the skin and cutting holes in the underwear. The invention consists in a shield, into which the screw or spiral of the stud can be screwed after having been passed through the aperture in the shirt bosom. This shield is preferably constructed of two disks secured to each other at the edges, one of the disks being provided with an aperture, through which the screw of the stud can be passed. This useful device is the invention of Mr.

Daniel W. Wilkins. All communications in regard to it may be addressed to Noyes Brothers, 4 Summer St., Boston, Mass.



**Improved Harrow.**

This is a novel arrangement of the harrow frame in separate sections, which are jointed together so as to enable sections to be added or detached for increasing or diminishing the size of the harrow; also for changing its form as may be desired, each section being preferably constructed for one tooth, and consisting of a center and four arms radiating from it for jointing with the other sections, the joints being interchangeable, so that any section may be added to any others. Beside enabling the harrow to be varied as to size and shape, the teeth will conform to the surface of the ground better and do better work, and by making the sections in cast iron or steel the harrow can be made very cheaply. This invention has been patented by Mr. Joel A. Thronson, of Dayton, Washington Territory.



**Improvement in Trays.**

The annexed engraving shows an improved tray on which articles can be carried without danger of their sliding off, and without requiring the use of both hands while carrying. An oval or circular tray is provided with wings, to which handles or bails are hinged, and the latter are curved in such a manner that when they are folded down they rest on the rim of the tray. The hinges of the bails or handles are provided with stops to prevent swinging them upward or outward too far beyond the vertical position. While carrying the tray, the highest points of the handles or bails are to be swung in contact, so that the tray can be carried and held by one hand, leaving



the other free to open doors, etc. The rim prevents the dishes and other articles on the tray from sliding off in case the tray is accidentally inclined. The tray can be used in dining rooms, sick rooms, etc. When the handles or bails are swung down, they cross each other. The rim of the tray is about one inch high. In place of making the tray oval, it can be made circular; but the oval shape is considered preferable. This invention has been patented by Sara L. Vreeland, of Hackensack, N. J.

**Improved Pipe Wrench.**

The annexed engraving shows a simple and very effective pipe wrench patented by Mr. C. C. Coleman, of Honolulu, Hawaii Island. In this wrench the serrated jaws are pivoted together, the larger one being pivoted to the lever handle and forming a fulcrum for it, the smaller one being connected with the short arm of the lever by a link. The mechanical arrangement is such that any increase of pressure tending to turn the pipe insures a firmer hold of the jaws on the surface of the pipe.



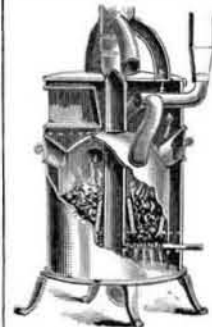
**Protector Attachment for Electrical Conductors.**

The engraving shows an improved device for preventing the stretching or breaking of electrical conductors while being introduced into or removed from their inclosing tubes, and for removing the conductors from their tubes should they become severed. The improvement consists in attaching to the conductor, by a wrapping of wire, a spirally wound wire or clips, a straight wire having a protective coating of gutta-percha or other suitable material, and of sufficient strength to be used in introducing the conductor into or removing it from its tube or casing. This device will render it a simple matter to remove and replace any conductor; it will also greatly facilitate the construction of underground lines. Further information in regard to this useful invention may be obtained by addressing the inventor, Mr. William E. Townsend, Jr., 30 So. Elliott Pl., Brooklyn, N. Y.



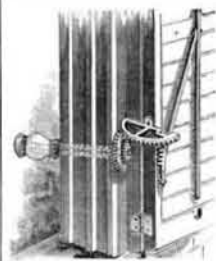
**Combined Heater and Oven.**

This device is formed of a vertical drum or cylinder made of cast or sheet iron, and provided with a central cast iron tube extending through the drum and projecting from the top and bottom, the lower end of the pipe being curved. An annular firebox made of cast iron and provided with a dome is contained in the lower part of the drum, and the pipe passes through this firebox and dome. The bottom of the firebox is a sufficient distance above the floor of the drum to form an ash-pit. The grate rests on an annular projection of a short cylinder surrounding the pipe in the ash-pit. A baking oven is arranged in the upper part of the drum, and is provided with a door. Below the oven a chamber is formed and provided with an apertured bottom; the outer end of this chamber being closed by a sliding gate. If the heater or oven becomes overheated, the sliding door or gate is opened to let the surplus heat out. The heated air in the vertical pipe can be conducted into several rooms or apartments, as may be desired, suitable registers being provided for regulation. This invention has been patented by Mr. Joseph H. Lindsay, of Freeland, Pa.



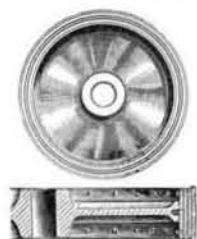
**Combined Shutter Worker and Blind Slat Operator.**

This is a combined shutter worker and blind slat operator which is capable of manipulation from the interior of a window. It consists in a pair of concentrically arranged sliding shafts with knobs and clutches for controlling them, and wheels on the outer ends of the shafts. There is a toothed sector on the shutter for connecting it with the toothed wheel on one of the shafts, and sliding toothed rack connected with the bar that controls the slats and engaged by the toothed wheel on the other shaft, so that according as one or the other of the knobs is pushed in or out and turned, the shutter or the slats will be closed or opened and locked in any desired position. This useful invention has been patented by Mr. David Beal, of Doylestown, O.



**New Emery Wheel.**

This emery wheel has a cast iron wheel with wrought iron tire shrunk upon it. To the wrought iron tire is secured by rivets a leather band to form a seat for the leather cover that carries the emery compound. The hub of the wheel is cast with a circular web. The rim is thickened to form a substantial seat for the tire. The tire in addition to being shrunk on is further secured in place upon the wheel by screws passing through the tire and into the rim. To the tire is secured by copper rivets or otherwise a leather band, to which is cemented a second leather band; to this the emery compound is applied in the ordinary manner. With this construction the wheel has no projecting parts to catch the air, and it will run smoothly, and at the same time the wrought iron tire binds the wheel firmly together, so that it will not be liable to burst. This invention has been patented by Mr. John McLaughlin, 453 Water Street, New York city.



**Reflector for Lamps.**

The engraving shows a novel and simple reflector for application to lamps of all sizes and forms. To the upper edge of the reflector are secured wire hooks bent downward to provide for hooking over the top edge of the chimney. Wire

stays or braces are attached to the lower edge of the reflector, and diverging with their front ends rounded to cause them to receive partly within them the lower portion of the chimney, and to keep the reflector set out its proper distance at its bottom from the chimney. By slightly straightening out the hooks and bending the stays further apart the reflector will be made to occupy a lower position relatively to the flame, and it will then be converted into a simple shield for use in a sick room or elsewhere, or by straightening the stays the reflector may be adjusted into a position which will adapt it to act as an ordinary lamp shade. In both of these positions it will cast no shadow or have any darkening effect on the portion of the room designed to receive the light. This invention has been patented by Mr. Henry F. W. Seele, of Rolla, Mo.



**Calf Weaner.**

This invention relates to the class of calf weaners adapted to be attached to the central cartilage of the calf's nose, like a bull ring, the parts of the weaner being provided with sharp points that come against the cow's bag when the calf attempts to suck. The parts or sections of the device are attached together by a pivot forming a part of one of the points. They are held closed by means of a small screw. This device is very effective, simple, and cheap. Mr. William F. Geissler, of Comfort, Texas, is the patentee of this invention.



**Hints on Sleep.**

The question of chief importance to most people in these overwrought, wakeful days and nights is how to get good sleep enough. Dr. Corning drops a few simple hints which may be of value. In the first place, people should have a regular time for going to sleep, and it should be as soon as can well be after sunset. People who sleep at any time, according to convenience, get less benefit from their sleep than others; getting sleep becomes more difficult; there is a tendency to nervous excitability and derangement; the repair of the system does not equal the waste. The more finely organized people are, the greater the difficulty and the danger from this cause. The first thing in order to sleep well is to go to bed at a regular hour, and make it as early as possible. The next thing is to exclude all worry and exciting subjects of thought from the mind some time before retiring. The body and mind must be let down from the high-pressure strain before going to bed, so that nature can assert her rightful supremacy afterward. Another point is, never to thwart the drowsy impulse when it comes at the regular time by special efforts to keep awake, for this drowsiness is the advance guard of healthy, restorative sleep. Sleep is a boon which must not be tampered with and put off, for if compelled to wait, it is never so perfect and restful as if taken in its own natural time and way. The right side is the best to sleep on, except in special cases of disease, and the position should be nearly horizontal. Finally, the evening meal should be composed of food most easily digested and assimilated, so that the stomach will have little hard work to do. A heavy, rich dinner taken in the evening is one of the things that murder sleep. Late suppers with exciting foods and stimulating drinks make really restorative sleep next to impossible. Narcotics are to be avoided, save as used in cases of disease by competent physicians. The proper time, according to Dr. Corning, to treat sleeplessness is in the day-time, and it must be treated by a wise and temperate method of living rather than by medicines. This is good common sense, says the *New York Star*, from which paper we copy, and doubtless a vast deal of the debility, nervous derangement, and the insanity of our time would be prevented by more good, restful natural sleep.

**Iron and Steel Magnetized by Breaking.**

At a recent meeting of the Society of Physical and Natural Sciences, Karlsruhe, M. Bissinger made a communication on the magnetization of bars of steel and iron when broken on the machine serving to test them. The phenomenon is not due to elongation of the bar, but to the actual breakage; and both parts are converted into two magnets of sensibly equal power. The shock and trembling of the metal on breaking is probably the cause of magnetization. According to Professor Hughes' recent experiments, in the testing machine the bars are placed vertically, and the south pole is formed at their upper part. The different iron objects near the machine at the moment of rupture and vibration are also magnetized, but to a less degree.

MR. W. H. VANDERBILT recently received a letter from an inventor, asking him for a gift of \$500,000, to enable him to perfect a perpetual motion machine. As incredible as it may appear, the request was not complied with. We fear Mr. Vanderbilt has very little sympathy with struggling genius; and if the inventor becomes discouraged and commits suicide, he will be another victim of monopoly.