

**NEW BELT CLASP.**

The simple and ingenious device herewith illustrated seems to exactly meet a great want among users of small machinery for a perfect coupling for round leather belts.

The fastenings now in use are the hook and the screws neither of which is satisfactory, since under a variety of conditions they both give out and have other objections which are too well known to need mention. The manner of applying the Whiting belt clasp is clearly shown in the engravings.

Fig. 1 shows the appliances necessary for coupling round belts; they consist of a quantity of thin brass ferrules and a steel pincer, (Fig. 2) of peculiar form for preparing the belt for the clasp, and afterward compressing it upon the belt.

In Fig. 5 the left hand view shows the belt compressed with a crease formed around it by the cavities in the ends of the pincer jaws (Fig. 3). The central view (Fig. 5) shows the ends of the belting inserted in the ferrule, and the right hand figure shows the ferrule after it has been creased by the transverse semicircular cavity in the pincer jaw. The ferrule, as will be noticed, is flanged on opposite ends to form a guide in applying the pincers.

When the metal of the ferrule is creased so that it sets down well into the crease in the leather of the belt it forms a fastening which is not only very secure, but it is perfectly smooth and does not wear the pulleys, and when belts are crossed they are not worn by the clasp. The joining is so perfect that pieces of belting of two inches in length may be used for a whole belt, and yet run as perfect as if there were but one joint. When the belt is broken or cracked the clasp can be applied without shortening the belt. When the belt is adjusted to proper length, and the clasp applied, no further attention is required, as it will last until the belt is worn out.

We are informed that the belt is now in use in hundreds of manufactories, giving the best of satisfaction.

Manufactured and for sale by the Whiting Stronghold Belt Clasp Company, 111 Liberty street, New York city.

**THE NEW NAVAL OBSERVATORY.**—A tract of seventy-one acres of land on the outskirts of Georgetown, D. C., has lately been purchased for the site of the new Naval Observatory. It remains for Congress to pass the necessary appropriations for buildings and equipments.

**TELEGRAPH HAND CAR.**

In the SCIENTIFIC AMERICAN of April 16 we gave an illustration of a single velocipede hand car; we now give an engraving of a velocipede hand car adapted to two persons and provided with a receptacle for wire, tools, etc. It is very little heavier than the single machine, but with the power of two men applied the propulsion becomes easier for each man than it would be if their power were applied to two single machines. The speed may be greater than that of the single machines, and the carrying capacity is also increased. This machine is provided with two seats for the operators, who face each other and both work the same lever. The strength of this machine is adequate to the power applied and to the usage it is likely to receive, while at the same time it is so light as to be easily lifted from the track when occasion requires. And although it is made to accommodate two men, it may be easily operated by one person, or it can be readily run by two men, who may carry the third man in place of the tools, and if necessary a fourth man on the rear seat.

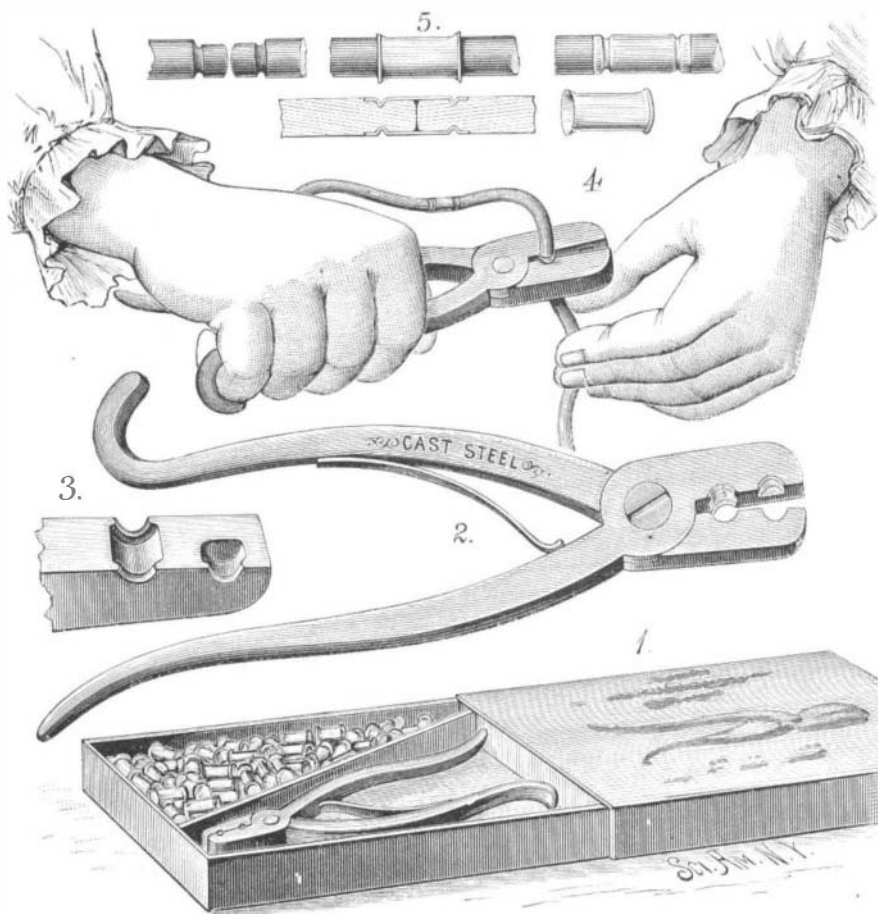
The value of this invention will be appreciated by those whose duty requires them to pass frequently over railway tracks, and who have heretofore used only the cumbersome and power-wasting hand car. It is invaluable to telegraph-line men, track repairers, bridge builders, and inspectors, and, in fact, to any class of men having to do with railways and telegraph lines. It is also well adapted to light section work, and has been adopted by several roads for this purpose, and so far with excellent success.

Further information may be obtained by addressing Messrs. George S. Sheffield & Co., Three Rivers, Mich.

The dome of the cathedral at Rome is illuminated inside and out by the Siemens electric light, and the effect is described as brilliant and charming.

**Physiological Action of Salts of Gold and Other Metals.**

A very remarkable series of observations has been made by Dr. James Blake, concerning the physiological action resulting from solutions of different salts when introduced into the blood of living animals. He finds that salts of the same isomorphous group produce an intensity of physiological action in proportion to their atomic weights. The salts



**NOVEL BELT CLASP.**

of thorium, palladium, platinum, osmium, and gold showed great similarity in their physiological action, all of them having a decided and characteristic effect upon the heart. The action of gold compounds was surprising; in minute doses of 0.008 gramme per kilo, it kept up the action of the heart for several hours after death, though the temperature of the body had fallen 13° below the normal heat.

**Tattoo Marks Made Useful.**

"Why is it," asks Dr. Le Comte, who is physician to a regiment of dragoons, "Why is it that such quantities of

**RECENT INVENTIONS.**  
An improvement in the manufacture of staples has been patented by Mr. Charles W. Dean, of South Wareham, Mass. This invention applies more especially to the manufacture of small staples or double-pointed tacks for fastening carpets, or for other purposes, but may be also applied to staples of any of the usual sizes for common uses. The staples are formed from bars of metal in lieu of wire. The staples being cut successively from bars of metal in a form approximating to their finished shape, with their legs diverging, and then bending these legs parallel, or nearly so, to complete the staple.

Mr. Archibald W. Reid, of Schenectady, N. Y., has patented an improved machine for fleshing and removing the hair from hides, in which machines the hides are placed upon a suitable support and the hair removed by tools carried by a revolving drum or wheels.

Mr. John Harger, of Toronto, Ontario, Canada, has patented a mode of preserving butter by incorporating with the milk or cream before churning, and with the butter after churning, boracic acid dissolved in hot glycerine, and sulphate of potassium dissolved in boiling water.

Mr. Gustav Rein, of Cincinnati, Ohio, has patented an improved annunciator for telegraph lines, which provides for raising the drop automatically by the devices used for connecting or breaking the lines, thus avoiding necessity of handling the drop and insuring its return to place. The further object is to prevent mistakes in connecting the lines.

An improved washing machine, patented by Mr. George Jackson, of Boscobel, Wis., consists of a semi-cylindrical tub having a semi-cylindrical cover and disks mounted upon gudgeons provided with inwardly projecting stops connected by rods and carrying oscillating paddles.

An improved trace clip and hook has been patented by Messrs. Joseph T. Haines and Horatio M. Stratton, of Swedesborough, N. J. This invention relates to that class of harness in which half chains are used for the

traces, the object being the production of a cheap and durable loop or clip and hook which can be easily fastened without the employment of a spring or similar device, the loop or clip serving at the same time as a ring by which the trace is held up by the hip strap of the harness.

Anu E. Isham, of West Troy, N. Y., has patented an improved candy package which consists of a cone provided with an aperture in its bottom closed by a swinging or sliding gate, and with an opening in front having flaps and closed by gauze or netting, the whole designed to represent an army tent with flying colors.

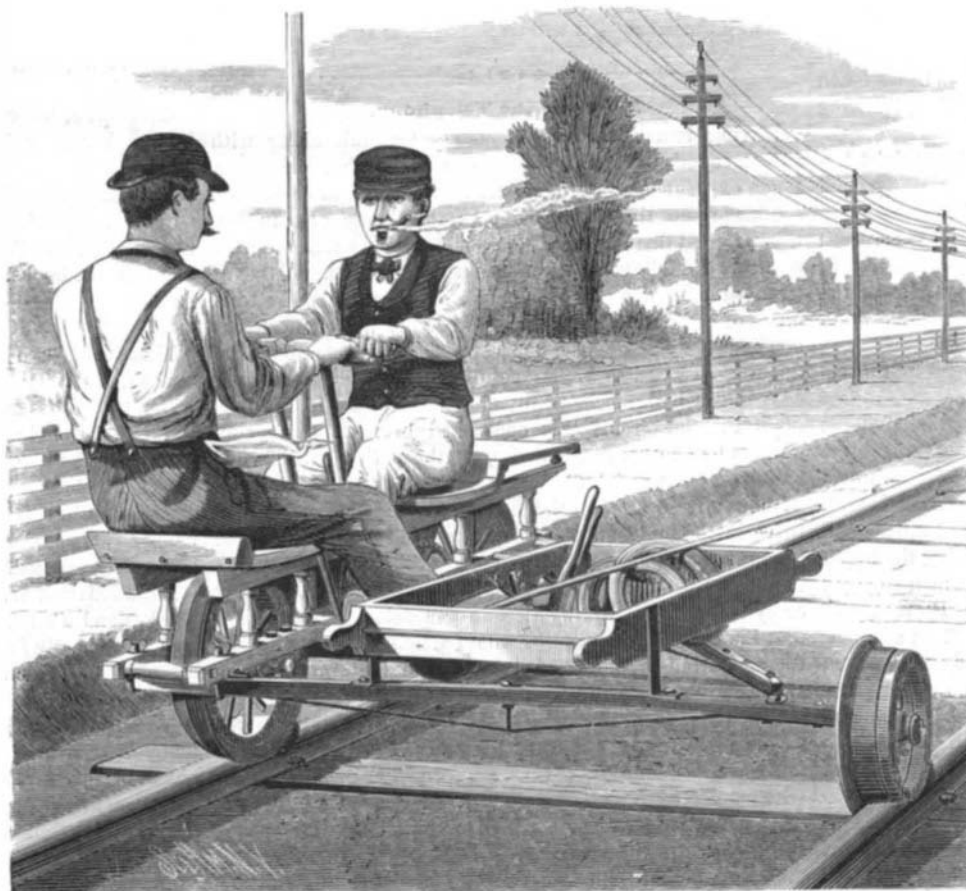
An improved trace carrier, patented by Mr. Charles H. Fox, of Winnebago City, Minn., consists of a frame and a pivoted hook arranged and operating in connection therewith, by which provision is made for the attachment of the trace and for holding it securely in place.

In telephone-exchange systems, where it is necessary to have six or eight stations connected with one line wire, it is desirable that the telephone switches be placed correctly after using for speaking purposes, for if left in a wrong position there is much trouble and delay in finding and remedying the fault. To overcome this Mr. John D. Richardson, Jr., of Newport, R. I., has invented a telephone switch signal that reminds the person using the telephone, either by visible signals or by vibrations of the call bell, to place his switch in the right position, or that his switch is wrongly placed, thus preventing the switch from being left in a wrong position, and saving time and trouble in finding and locating the misplaced switch.

An extension magazine for coal stoves has been patented by Mr. Dewitt Van Evera, of Maquoketa, Iowa. The invention consists in constructing an extension magazine of a stationary or movable upper part having exterior ribs, and a movable lower part made in two or more sections, and having

corresponding interior grooves, whereby the magazine can be lengthened and shortened.

Messrs. Peter D. Fischer and Charles Nonnenmacher, of New York city, have patented an improvement in extension folding lounges; and it consists in constructing them so that the links which connect the two parts will be inclosed with the frame out of sight when the lounge is closed; and the shell is so contrived that it is supported independently of the body when opened or extended.



**SHEFFIELD'S TELEGRAPH AND LIGHT SECTION HAND CAR.**

soldiers die upon the battlefield?" And then he replies, confidently: "Simply because of the difficulty which arises in regard to arresting hemorrhages."

The compression of an artery being the best mode of stopping profuse bleeding, Dr. Le Comte proposes to teach each soldier first where these vessels are situated, so that he may assist himself while waiting for the surgeon. Therefore, he tattoos an image of some kind upon every portion of the soldier's body where there is an artery.