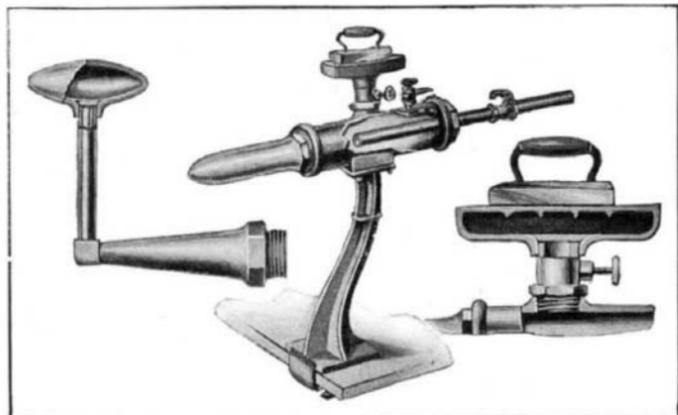




**IRONING APPARATUS.**

An apparatus has been invented by Mr. Robert Rutherford, of 101 Wabash Avenue, Montavilla, Ore., which is especially designed for ironing velvets, ribbons, ruffles, etc. The apparatus is very simple, and is arranged to be heated either by gas, steam, or electricity. In our illustration we show a form adapted for the use of gas,

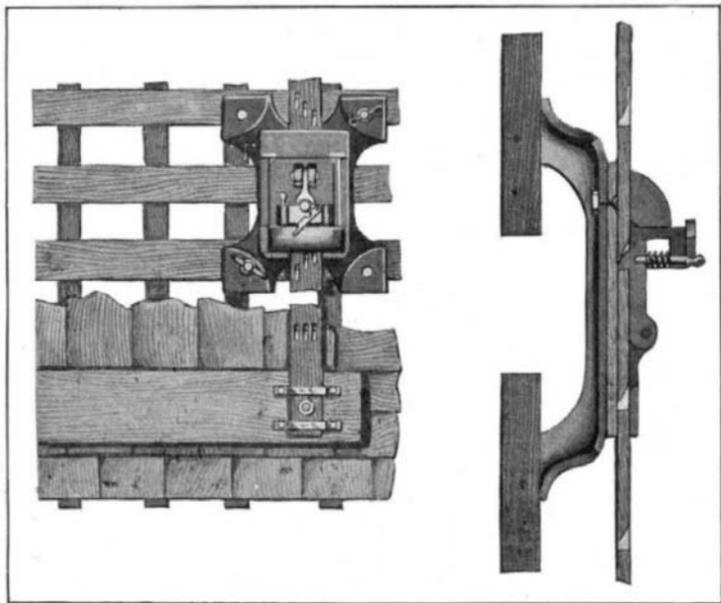


**IMPROVED IRONING APPARATUS.**

and also the steam attachment. The device comprises a stand which may be secured to the table by means of clamping screws. At the top of this stand is secured a tubular heating chamber, in the front end of which is screwed a tubular sad iron closed at its outer end, as shown. This sad iron may be of any desired form to suit different requirements. One special form is shown at the left of the main figure in our illustration. At the top of the heating chamber is a hollow stand on which a sad iron of the ordinary form may be heated. This stand and its connections are shown more clearly in the view at the right of the main figure. A valve controls the admission of heated air from the main chamber to this hollow stand. The heating chamber is heated by means of a Bunsen burner therein, the flame being supplied with fresh air through openings in each side of the chamber. When steam is used for heating the sad iron, it is admitted through a valve shown at the top of the chamber near the rear. If electricity is to be used, a coil of fine heating wire may be placed in the heating chamber and connected with wires extending through a plug threaded into the rear of the chamber. The apparatus is used in the ordinary way, the sad iron remaining stationary, of course, and the goods to be ironed being drawn over it.

**SHINGLE GAGE.**

A patent has recently been granted to Mr. James Dinwiddie, of Fayetteville, Ark., for an improved shingle gage which is pictured in the accompanying illustration. The device is simple and inexpensive, and by its use the several courses of shingles will have



**SHINGLE GAGE.**

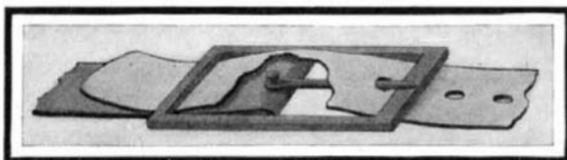
their butt ends in perfectly straight lines and parallel throughout the extent of the roof. The device is so constructed that it may be quickly adjusted for progressing courses and for different lengths to be exposed to the weather. Two or more fastening devices, such as the one we illustrate, are fastened to the sheathing of the roof. Each holding device comprises

a baseplate secured at the corners by thumb screws. Mounted on the base-plate is a guide-plate which has pivotal connection with the base-plate, and has a limited lateral movement thereon. Mounted to slide transversely on the guide-plate is a second plate which carries a dog adapted to engage one of a set of slots or notches formed in a bar which passes between this plate and the guide-plate. This bar carries at its lower end the gage-bar. A spring-pressed pin bears against the end of the dog and holds it firmly in engagement with its slot. These slots in the bar are ranged in sets of three, each one of a set being differently placed, and by sliding the plate laterally, the dog may be brought into engagement with different slots of a set as desired. Means are provided for locking the plate in position after it has been laterally adjusted.

The operation of the device is obvious. The shingles are nailed in place against the gage-bar and then the gage is moved up for the next course. The end walls of the slots in the bars which pass through the holders are inclined so as to raise the dog when they are moved upward for the different courses. When it is desired to raise the dog to bring it into engagement with a different slot, the spring-pressed pin is first raised and held in its position by means of a latch which fits under the head of the pin. It is obvious that with an apparatus of this character shingles may be very rapidly laid, as the shingler is not required to mark off chalk lines for the butts of the shingles, or to use gage boards as is sometimes done, the boards being nailed to the shingles. This, it may be stated, is objectionable, because the nails may leave holes which would cause leaks.

**IMPROVED BUCKLE.**

The common type of buckle now in use is so designed that the finger or pin has a tendency to stick into the strap and impede the removal of the strap from the buckle. In order to overcome this difficulty, Mr. Edward A. Mainguet, of Evangeline Post Office, near Jennings, La., has invented a buckle so constructed that its finger can be swung to one side



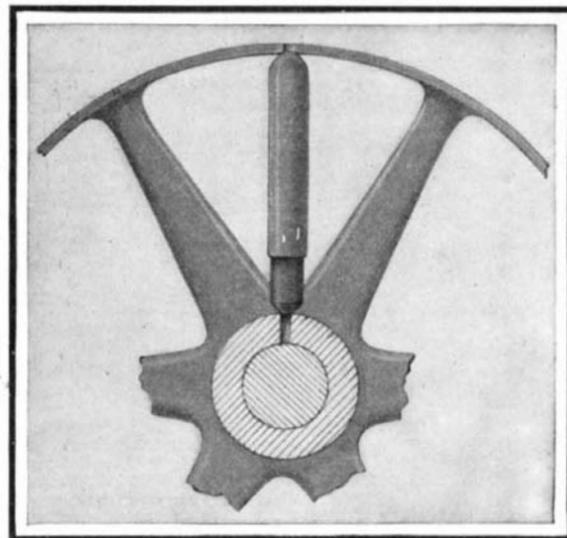
**IMPROVED BUCKLE.**

out of the way of the strap, permitting free and unimpeded removal of the strap. As shown in the accompanying illustration, the buckle comprises a frame of the ordinary form, with the usual cross piece. At the center of this cross piece is a curved stud so shaped as to permit the finger to swing freely in a plane parallel with that of the frame and also to have limited movement in a plane perpendicular thereto. When it is desired to remove the strap, the pin is disengaged therefrom, and swung laterally to a right angle with the direction of the strap; thereupon the strap can be freely drawn through the buckle. It will be evident that this type of finger fastening may be used in any of the ordinary forms of buckles now in use, and that in place of a curved stud a ring may be used to equal or even better advantage, permitting the same lateral movement of the finger, and a greater movement in the vertical plane.

**LOOSE PULLEY OILER.**

It is rather a difficult matter to keep a loose pulley properly lubricated with the usual type of oiler without wasting a great deal of oil, owing to the fact that when the pulley rotates, it is apt to throw the oil out by centrifugal action and when it comes to a standstill it is liable to stop with the oil cup on the lower side of the hub, permitting the oil to flow out. As a remedy for these conditions, Mr. William D. Graves, of Browns Valley, Minn., has invented a very simple wheel oiler which we illustrate herewith. The oiler comprises two telescoping members, each of which has its free end somewhat tapered. The inner member is provided with a central bore which affords a passageway leading into the chamber formed by the hollow outer member. This chamber forms a reservoir for the oil, and to prevent leakage of the oil between the sliding members, a packing ring is seated in an annular groove at the upper end of the lower member. The oiler is placed in operative position with the lower tapered

end engaging the oil-hole formed in the hub of the wheel and the upper tapered end engaging a hole in the rim of the pulley. The latter hole is customarily formed in pulleys, but if not present can be readily drilled therein. A spiral spring in the oil reservoir presses the members apart and causes the tapered points to be snugly seated in these sockets. The oil in the reservoir is fed to the bearing surface of the pulley through the bore of the lower telescoping member. The reservoir has a capacity for holding a large

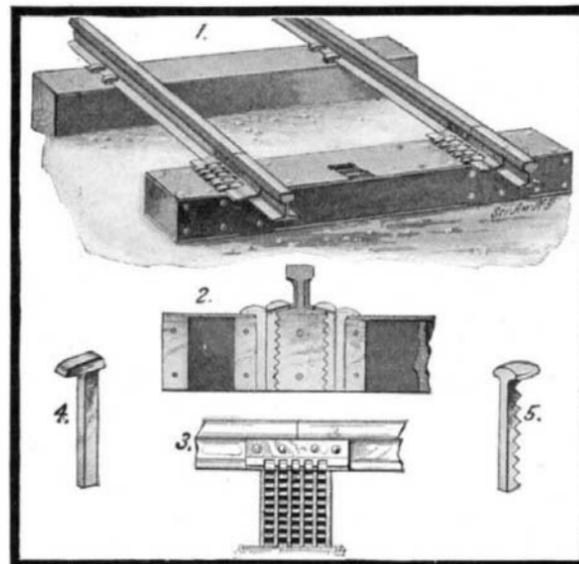


**LOOSE PULLEY OILER.**

supply of oil, and owing to the fact that the oil is entirely inclosed and can not be wasted, the pulley will be kept properly oiled for weeks without requiring any attention. A most important feature of the device is that it can be applied to the pulley without the use of any tools.

**RAILWAY TIE AND FASTENING.**

A strong yet comparatively light metal tie, and a novel form of spike for securing the rails to this tie, form the subject matter of a patent recently granted to Mr. William Bryson, a resident of Fifield, Wis. The construction of this tie is fully illustrated herewith. The tie comprises a number of longitudinally-disposed metal plates, placed on edge and spaced apart, as clearly shown in the cross-section, Fig. 3. These plates are all bolted together at the ends, and are inclosed by end and top plates. Arranged between the longitudinally-disposed plates underneath the rails are locking-plates, which are serrated or notched at their opposite edges, as shown in Fig. 2. At each side of the locking-plates, and spaced a short distance therefrom, are abutment plates or blocks. The space between the abutment blocks and the locking-plates is sufficient to permit the insertion of the locking-spikes and the key spikes. One of the locking-spikes is shown in Fig. 5, and it will be observed that it is provided along its inner side with teeth adapted to engage the notches of the locking-plates. After a locking-spike is placed in position with its head engaging the bottom flange of the fish-plate, it is driven firmly into engagement with these notches by means of the key-spike shown in Fig. 4. This tie is designed particularly for use at the joints of the railway track, to insure a perfectly firm and reliable hold on the rails at these



**METAL TIE AND NOVEL RAIL-FASTENING.**

points. At other points wooden ties of ordinary type may be safely used. Owing to the pounding which occurs at the joints of a track, the ordinary wooden ties at these points quickly wear out. With the joints supported by a substantial metal tie, such as the one illustrated, the frequency and cost of repairs would be greatly diminished.