

## IMPROVED HAND PRESS.

The engraving shows a domestic hand press for fruit, cracklings, hominy, and other articles which require separation from the liquid which they may contain. The invention consists of a perforated bowl or receptacle having a rigid handle extending at right angles to the plane of the bowl, and a perforated presser head conforming to the bowl and connected by a slide with the handle of the bowl. The sliding presser head is connected by a link with a lever handle pivoted to the main handle. By bringing the presser head down on the material contained in the bowl by means of the lever, the liquid is expelled through the perforations. This invention was lately patented by Mr. J. T. Haile, of Whitesborough, Texas.



HAILE'S HAND PRESS.

**GOLD IN NEW YORK STATE.**—Two hundred and eighty-three notices of discovery of gold and silver were officially entered at Albany, last year. The alleged deposits are chiefly in Hamilton County. The law prescribes that mines of gold or silver found in New York shall be property of the State, but gives to the discoverers or their assigns the right to work them for twenty-one years free of any royalty on condition that they file with the Secretary of State notices describing their discoveries. After the twenty-one years the Legislature may dispose of the mines at its discretion; but the discoverers or their representatives shall be preferred in contracts for working them.

## IMPROVED OIL-STOVE WICK TRIMMER.

In ordinary oil-burning stoves it is necessary to remove the top of the stove, and any utensils which may be in use in order to trim off the crust which forms on the wicks and prevents the free operation of the stove. It is necessary to put out the fire before the wick can be trimmed. Beside the great inconvenience and delay in trimming the wick with shears in the common way, the wicks are wasted, and with the sharpest shears they will be poorly trimmed on account of their great width, and an uneven burning surface will be left which causes the stove to smoke and throw off a bad odor. Kerosene stoves are often condemned for this reason alone.

By means of the simple invention shown in the engraving these inconveniences are avoided, and the wick is quickly and evenly trimmed. This device is in every way superior to the old method.

A wick should never be cut; it is only necessary to remove the crust, and the stove or lamp burns freely with a flame of the proper form.

This invention is simple in its application and is thoroughly practicable. It consists of a wire rod carrying one or more lateral arms extending over the wick tubes. This wire passes through the front of the stove, and is provided with a ring or handle by which it may be grasped and moved back and forth over the ends of the wicks while they are turned down. By this means the crust is removed and a clean and free burning wick is left, without extinguishing the flame or removing any part of the stove or furniture.

Each wick tube is provided with a guide which is bent up at the ends forming a stop for the trimming attachment. Oil stove manufacturers may, with advantage, adopt this simple but useful and effective invention.

This invention has been patented by Messrs. Walker and Williams, and is owned by Walker, Williams & Co., Sing Sing, N. Y.

## A Use for Cotton Seed Hulls.

The Chicago *Railway Review* reports that the use of cotton seed hulls as a substitute for cotton waste in packing the journal boxes of cars and locomotives has been adopted on several roads, and others are preparing to adopt it. It is claimed that the hulls are actually superior to ordinary cotton waste for packing, and would be preferable at the same cost. But the cheapest cotton waste is worth 7½ cents a pound, and the superior grades range as high as 14 cents. Cotton seed hulls can be delivered in any part of the United States at one cent a pound.

## Cements for the Shop.

**Iron Cement for Closing the Joints of Iron Pipes.**—Take of coarsely powdered iron borings, 5 pounds; powdered sal-ammoniac, 2 ounces; sulphur, 1 ounce; and water sufficient to moisten it. This composition hardens rapidly; but if time can be allowed, it sets more firmly without the sulphur. It must be used as soon as mixed, and rammed tightly into the joint.

2. Take sal-ammoniac, 2 ounces; sublimed sulphur, 1 ounce; cast iron filings or turnings, 1 pound; mix in a mortar and keep the powder dry. When it is to be used, mix it with 20 times its weight of clean iron turnings or filings, and grind the whole in a mortar; then wet it with water until it becomes of convenient consistency, when it is to be applied to the joint. After a time it becomes as hard and strong as any part of the metal.

**Cement for Uniting Leather and Metal.**—Wash the metal with hot gelatine; steep the leather in an infusion of nut-galls (hot) and bring the two together.

**Cement for Leather Belting.**—One who has tried everything, says that after an experience of fifteen years he has found nothing to equal the following: Common glue and isinglass, equal parts, soaked for ten hours in just enough water to cover them. Bring gradually to a boiling heat, and add pure tannin until the whole becomes ropy, or appears like the white of an egg. Buff off the surfaces to be jointed, apply this cement warm, and clamp firmly.

**Steam Boiler Cement.**—Mix two parts of finely powdered litharge with one part of very fine sand, and one part of quicklime which has been allowed to slake spontaneously by exposure to the air. This mixture may be kept for any length of time without injuring. In using it, a portion is mixed into paste with linseed oil; or, still better, in boiled linseed oil. In this state it must be quickly applied, as it soon becomes hard.

**Turner Cement.**—Melt one pound of rosin in a pan over the fire, and when melted, add one-quarter of a pound of pitch. While these are boiling, add brickdust until by dropping a little on a cold stone, you think it hard enough. In winter it may be necessary to add a little tallow. By means of this cement a piece of wood may be fastened to the chuck, which will hold when cool; and when the work is finished, it may be removed by a smart stroke with the tool. Any traces of the cement may be removed from the work by means of benzine.

**Wollaston's White Cement for Large Objects.**—Beeswax, 1 ounce; rosin, 4 ounces; powdered plaster of Paris, 5 ounces. Melt together. To use, warm the edges of the specimen, and apply the cement warm.

**Gutta Percha Cement.**—This highly recommended cement is made by melting together, in an iron pan, two parts of common pitch and one of gutta-percha, stirring them well together until thoroughly incorporated, and then pouring the liquid into cold water. When cold it is black, solid, and elastic; but it softens with heat, and at 100° Fab. is a thin fluid. It may be used as a soft paste, or in a liquid

Fig. 1.

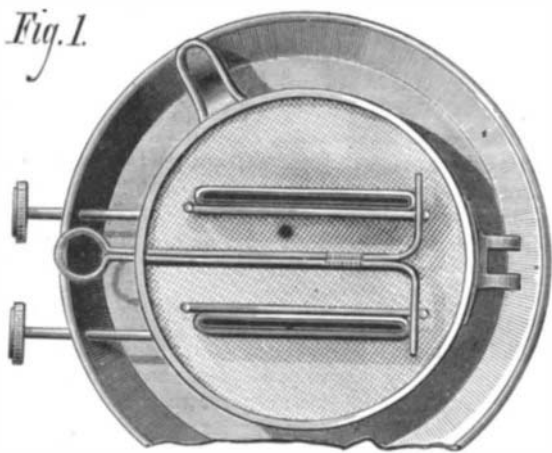
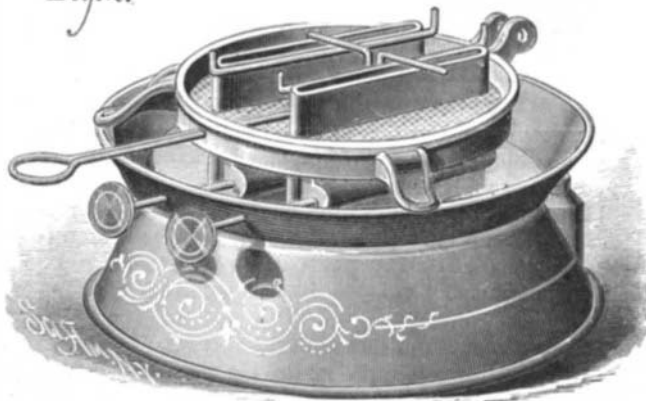


Fig. 2.



## IMPROVED OIL-STOVE WICK TRIMMER.

state, and answers an excellent purpose in cementing metal, glass, porcelain, ivory, etc. It may be used instead of putty in glazing windows.

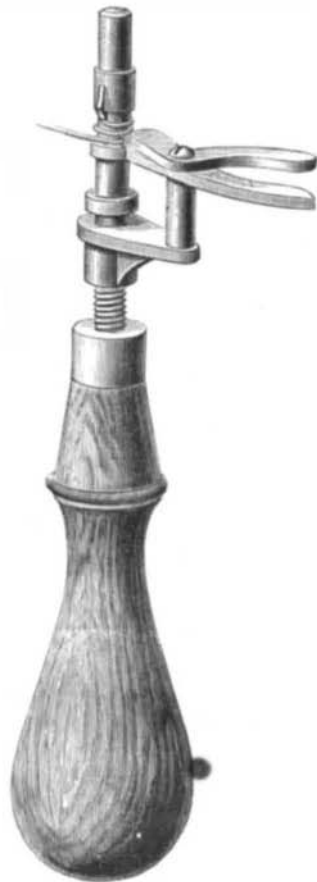
THE miner's inch is the amount of water flowing in one second from an orifice 1 inch x 1 inch, under a head of 6 inches, measured from the upper side of the orifice.

## SPRING-MAKING TOOL.

A hand tool to be used principally by jewelers for making wire spirals for shirt studs and buttons is shown in the annexed engraving. The mandrel upon which the spirals are formed is secured to an ordinary tool handle, and a carrier is fitted to the lower portion of the mandrel, which is threaded, the pitch corresponding with that of the spiral to be made. The end of the wire is placed in a slot in the end of the mandrel, and while the handle is turned with one hand, the carrier is held in the other hand, and the wire is pressed down upon the mandrel by a small lever pivoted to the carrier and grasped between the thumb and finger.

The crook at the end of the coil is formed by bending the wire back upon the end of the lever.

This invention was recently patented by Mr. A. R. Wilbur, of Baltimore, Md.



TOOL FOR MAKING SPIRAL SPRINGS.

## NEW INVENTIONS.

An improvement in that class of devices that are designed for releasing a horse instantly from the vehicle to which he may be attached, has been patented by Mr. Whiteford S. Martin, of Maybinton, S. C. An iron rod is attached to each end of the whiffletree and extends forward a short distance alongside the shafts or thills. The short leather traces are attached to the front ends of these rods by means of keys or eyebolts, which may be withdrawn—for the purpose of releasing the horse from the vehicle—by means of cords or straps that pass through a ring on the crupper or back-strap of the harness, and extend back over the dasher of the vehicle, so as to be easily accessible to the driver.

Mr. John W. Donnel, of Bedford, Iowa, has patented a self-adjusting driver for millstones, by which the stone is balanced on the top of the cock head, and thereby adjusted with a minimum of friction. The invention consists in the combination of a yoke pivoted to the upper end of a mill spindle so as to swing in a vertical plane, and four levers arranged in pairs, one pair being pivoted to each side of the yoke and suspending another yoke, which serves to make all the levers move together. The levers pivoted to the pivotal yoke extend above the point of the mill spindle and are provided with set screws, which bear against the bail at points lying in the same plane and in line with the point of the spindle.

A snow scraper, patented by Geo. F. Bond, of Troy, N. Y., is an improvement in apparatus for clearing ice fields for ice harvesting. Side boards or runners are pivoted or hinged at the front end and provided with apparatus whereby they may be made to assume the V-form, or closed into a parallel position for discharging their load at the will of the operator.

A sugar washing process and apparatus, patented by John V. V. Booraem, of Brooklyn, N. Y., acts to thoroughly wet and wash the crystals of sugar with water or sirup, and deliver the mass in a perfectly homogeneous state to the centrifugal machines. For this end a perforated pipe delivers water in a finely divided state upon the sugar just prior to the passage of the latter through crushing rollers, the pipe and rollers being arranged in relation with each other to secure the object sought. After crushing the sugar is further worked by revolving screws.

An improvement in tile and brick kilns, patented by Mr. Eber Davenport, of Waynesville, Ill., saves time, labor, and fuel. The kiln is circular, has furnaces and fire walls arranged around its peripheral wall, and a central opening in the top. The circulation of the heated air and gases is first upward near the outside wall, then downward, then upward again and out at the central opening, the deflection of the heated currents being effected by the fire walls,

crown wall, and vertical passages with bottom flues formed in laying the bricks or tiles when filling the kiln.

A patent on a folding car step, granted to Mr. Josiah W. Radbraugh, of Columbus, Ohio, covers a combination of the folding steps of a car with mechanism whereby the steps on both sides of a car may be simultaneously adjusted by a single movement of a lever.