

**NOVEL WORK TABLE IMPLEMENT.**

In the novel combination shown in the accompanying engraving the body of the implement, which represents a walking turtle, forms a paper weight. It is hollow and contains a spring acted drum upon which is wound a tape measure of three or more feet in length. The end of the measure extends through the mouth of the turtle, and is provided with the usual ring. Upon the back of the turtle there is a pin cushion, and just above the base of the tail there is a very hard beveled piece of steel, against which knives and scissors may be drawn to sharpen them. In the end of the tail there is a hardened steel wheel that is used as a glass cutter.

This combination of devices was recently patented in the United States and Canada by Mr. E. S. Heath, of Clintonville, Pa. It is one of those little articles that will be found useful in every household.

A good idea of the form of the knives and the arrangement of the rubber strips may be formed from the engravings, Fig. 1 being a perspective view and Fig. 2 a transverse section through the cutter heads.

Further information may be obtained by addressing

An improved tire setter and fastener has been patented by Mr. David Fairbanks, of Rockingham, Vt. It is well known that a majority of blacksmiths cannot measure and weld a tire without making mistakes in its length of from one eighth to one fourth of an inch, and commonly they have to make several trials before succeeding in making a proper fit. The object of this invention is to insure perfect accuracy, to fit and tighten the tire at little expense, and in a manner which shall preclude all possibility of a mistake or misfit.

Mr. Frank A. Bowen, of Putnam, Conn., has invented an improved stripper spring for carding engines, which consists in combining a socket, base, sleeve, and rubber spring for receiving the impact of the flat. In carding machines at present the flat, when it is raised, bears against two steel springs attached to the crossbar; but these springs frequently break, causing loss of time, and sometimes tear the clothing of the cards. This invention is intended to remedy these defects, and to furnish a steadier and better spring for the purpose.

Mr. George William Schaefer, of St. Louis, Mo., has invented an improved machine for paring horses' hoofs, by which the hoofs may be pared with safety and with greater ease to the operator than when the paring is done in the usual way. It leaves the hoof level, so that no burning will be required to get a firm seat for the shoe.

An improvement in running gears for wagons has been patented by Mr. Joseph C. Fowler, of Arcola, Texas, in which the inventor makes use of a ball-and-socket coupling device applied back of the front axle, so that the forward axle is not weakened by boring to insert a king bolt, and the vehicle may be turned shorter and with less strain than when the joint is in line with the axle.

An improvement in looms has been patented by Mr. Paul W. Green, of Philadelphia, Pa. It consists of a box adapted to fit over the rods on which the picker moves, and to receive the elliptical rubber springs or cushions having at one end a solid bottom and at the opposite end, adjacent to the heads in which the rods are held, a movable bottom adapted to slide within it, and a spindle supporting bracket of a construction to permit the necessary movement of the bottom. The springs are held between the two bottoms, and the box slips over the movable bottom when struck by the picker.

Mr. Benjamin N. Shelley, of Anderson, Ind., has patented an improved carriage axle and axle box, which consists, mainly, in combining a shaft having one or more grooves around it with a packing and two clamping nuts or washers arranged upon opposite sides of said packing, so that when said washers or nuts are drawn together they force the packing down into the groove in the shaft and form a flange or collar fitting in the groove, that both prevents the escape of oil and serves to hold the shaft and bearing against longitudinal movement.

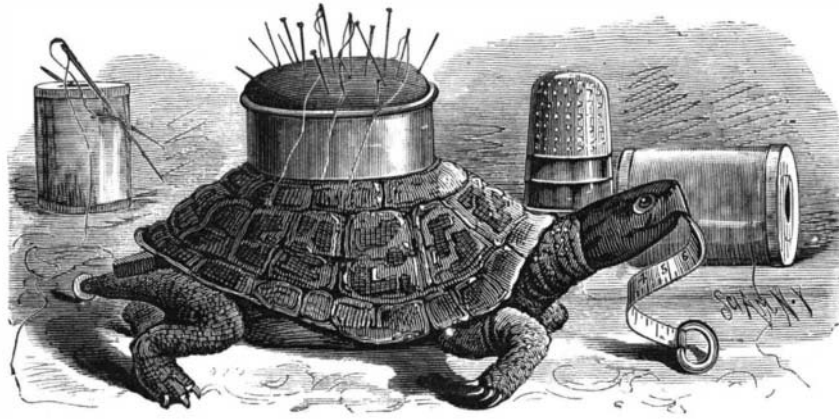
An improved machine for making paper boxes from pulp has been patented by Mr. Peter Cook, of Mattapan, Mass. It is so constructed that the formers may be cleaned immediately after being used and without stopping the machine.

It will make the boxes rapidly and of uniform thickness, and will allow any kind of stock and chemicals to be used.

Mr. R. S. Munger, of Mexia, Texas, has patented an improved cotton gin saw cleaner, having a series of slotted knives or scrapers of peculiar shape, adjustably attached to a movable revolving support, and adapted to be thrust against the saws when cleaning is to be done.

An improved machine for printing paper hangings has been patented by Mr. Jacob J. Janeway, of New Brunswick, N. J. It is so constructed that the ground color and the other colors may be applied to the paper while passing once through the machine. It is simple and effective.

Mr. C. G. Damaschky, of Brooklyn, N. Y., has invented an improved station indicator, consisting in a revolving wheel fitted with radial indicating cards that are capable of radial movement, combined with a supporting frame that retains the cards inward, and is slotted for permitting the under card to drop by gravity to a position where it may be seen; also in sliding tongues and pawls for raising the cards and turning the wheel for bringing any one into position.

**HEATH'S WORK TABLE IMPLEMENT.****IMPROVED PORTABLE RAILROAD LOCK.**

The portable railroad shown in the accompanying engraving is made in sections ten feet long; the two rails being firmly connected together by tie iron which is riveted to the rails. The sections thus formed are very light and yet strong and durable and capable of adapting itself to any surface. It may be used in hilly countries as well as upon flat lands.

The principal feature in this railroad is the locking device which secures the ends of the rails. As will be observed by reference to the engraving, it consists of a pointed piece of iron attached to one end of the rail and projecting a short distance beyond the rail end, so that it may be received by a mortise formed between a piece of iron attached to the end of the adjacent rail and offset, as shown in the engraving.

This lock holds the ends of the rails firmly, and at the same time admits of easily breaking the connections to insert a curve or a switch at any point without disturbing the whole road. For sugar plantations, mines, and quarries a road of this kind is invaluable; it is fast superseding cattle and carts, being much more economical.

Further information may be obtained from the patentee, Mr. John Turl, Turl's Iron Works, foot of West 28th street, New York.

**The Coal Crop.**

In 1877 the anthracite regions of Pennsylvania yielded 21,000,000 tons, and although in 1878 the demand was curtailed to 17,000,000 tons, it is expected that close upon 30,000,000 tons will be required this year. Up to date 12,750,000 tons have been mined, against 7,300,000 tons for the corresponding period last year. The full average production is estimated at 500,000 tons a week, and it has reached on one occasion 655,000 tons. For the week ending July 12 the production was 531,613 tons, against 239,613 tons for the corresponding week of last year.

**IMPROVED STRAW CUTTER.**

We give herewith an engraving of a straw cutter invented by Mr. Charles G. Biedinger, of San Francisco, Cal., which possesses considerable novelty.

The cylinders carrying the cutters are geared together so that they revolve in opposite directions; each cylinder carries two knives, B, of peculiar form, arranged longitudinally and parallel with the shaft. The knives are concaved in the direction of their length, and the faces of the upper knives, which are straight, meet at every revolution the faces of the lower knives—which are rounded off toward the edge—so that the upper and lower knives may be said to roll together like the teeth of a gear wheel. As they come together the sliding of one over the other makes a shear that cuts whatever comes between easily and cleanly. These knives also draw forward the feed a certain distance at each revolution. When a longer feed is required than can be obtained by the knives alone, the rubber strips, A, are placed between the knives, and opposite each other, so that as the machine revolves a greater length of hay or straw will be drawn through. The knives being concaved lengthwise, the shearing cut will be from the ends of the cutters toward the center of the machine, conforming to the natural arrangement of the straw as it passes through the machine, the straw being thickest in the middle.

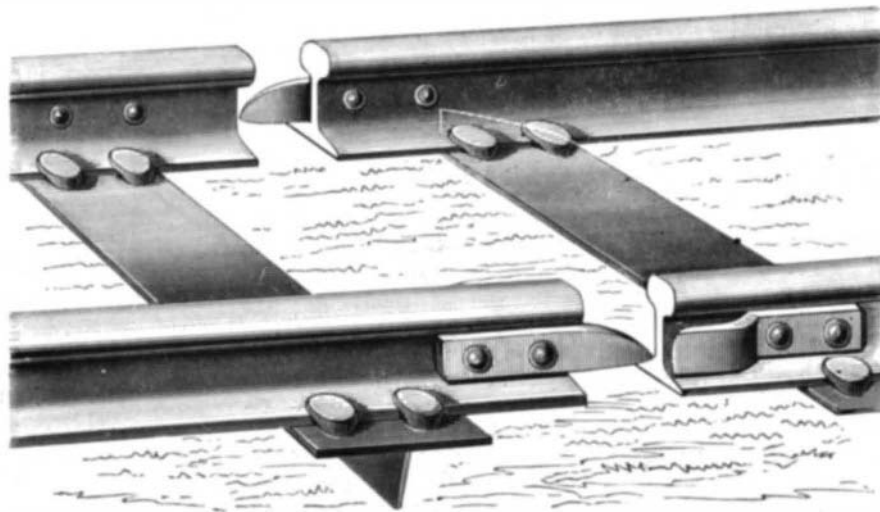
the inventor, at 28 Sansome street, San Francisco, California.

**RECENT MECHANICAL INVENTIONS.**

An improved horseshoe machine has been patented by Mr. David H. Hatlee, of Clifton Park, N. Y. In letters patent granted to the same inventor, August 6, 1878, No. 206,726, a

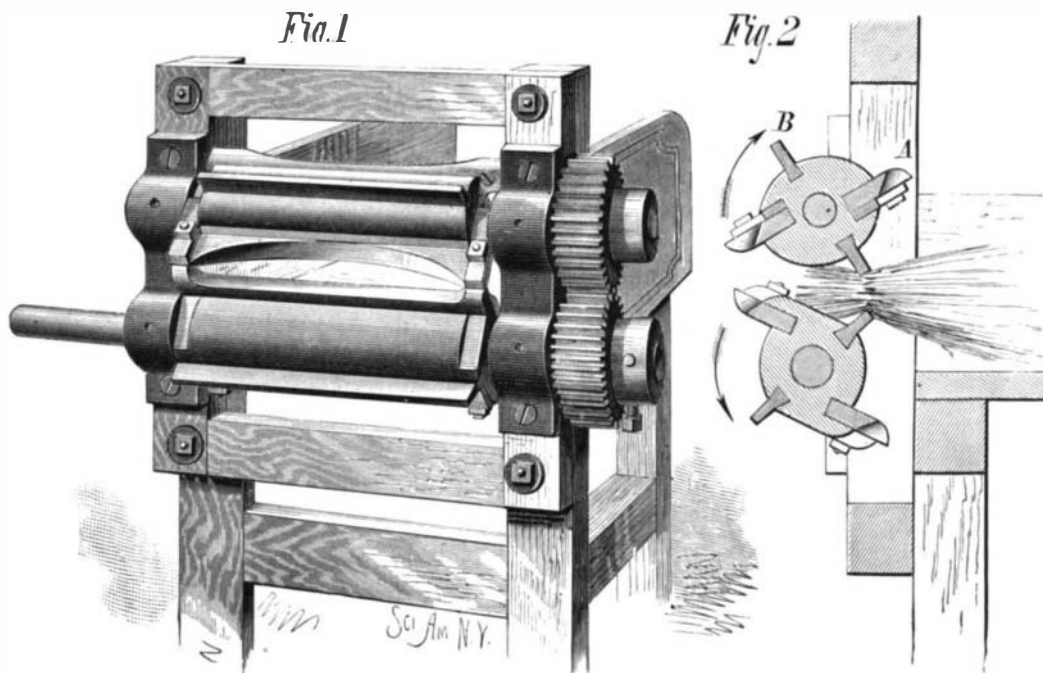
machine for making horseshoes is described. It has a horizontal bed that has a movable portion, and carries dies around which the shoe is formed. The present invention is an improvement on the former patent.

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**TURL'S LOCK FOR PORTABLE RAILROADS.**

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**BIEDINGER'S STRAW CUTTER.**

for this purpose. It consists in a combination tool formed of the handles pivoted to each other, and having a tack puller and a screwdriver formed upon their ends, the curved jaws having half round notches formed in their edges, and the blades or cutters attached to their sides.