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## Rail-Road News.

### Another Splendid Locomotive.

The Baltimore and Susquehanna Railroad, says the Baltimore Sun, have, within the last few days, turned out another splendid locomotive, from their shop at Bolton Depot, under the superintendence of Mr. G. Denmead, master of machinery. This engine is called the "York," and is finished in all particulars in first rate style. It has four drivers, five feet in diameter, driven by cylinders fourteen inches in diameter, and eighteen inches stroke. The principal feature in the construction of this engine consists in an improved valve gear, designed by George W. Fulton, of our city. By this contrivance, the whole control of the engine, viz.: stopping, starting, backing, as well as regulating the speed in either direction, is concentrated in one handle. This arrangement requires the eccentric to be set "without lead," the valve is so arranged that a portion of the exhaust steam is received into the opposite end of the cylinder, and immediately cut off there, fulfilling all the purposes of "the lead," and further saving that portion of steam usually lost in the side pipe and clearance of the cylinder. Another advantage consists in the saving of the wear of the valve in running down grade, as it can instantly be made motionless, without throwing out of gear, as is usually the case. In reversing the engine this gear acts without a jar or concussion of any kind, as by merely moving the bar from one extreme to the other, the steam is gradually shut off, and as gradually let on to the opposite side of the piston. The "York" is undoubtedly an A, No. 1 engine, highly creditable to the company and all concerned in its construction.

### Baird's Spark Arrester.

A friend writes us that an application is now pending for a renewal of French & Baird's patent on a "Spark Arrester;" he thinks it should not be renewed, because they have made over 600 pipes and realized about $50 on each. He also states that the unexpired term of the patent has been sold for $15,000, which is a fair remuneration for the invention—making in all about $45,000.

### Sale of the Franklin Railroad.

We learn that the Franklin Railroad—a line extending from the town of Chambersburg in Pennsylvania, to the Maryland line, and thence to the flourishing town of Hagerstown—a distance of about fifteen miles,—together with all its chartered privileges, is to be sold. This road passes through a very rich country.

### Central Railroad.

By an advertisment in the Pittsburg Gazette all the sections remaining unlet on the line of the Pennsylvania Railroad, between Pittsburg and Johnstown, are to be given to contractors on the 10th of October next. The whole line will be then under contract except a part of the mountain section, for which the Portage Railroad can be substituted until it is finished.

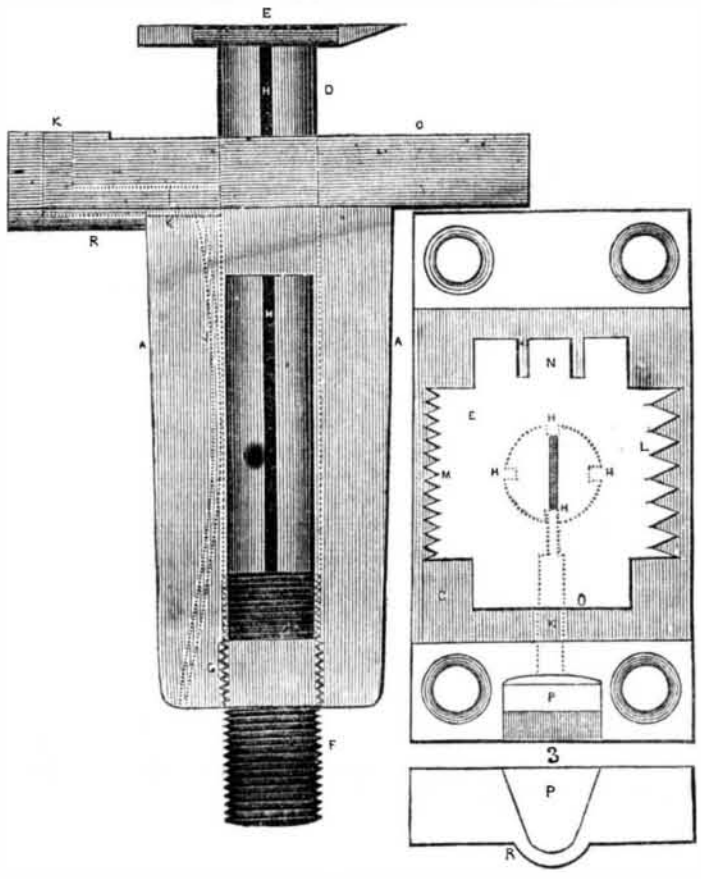
### The First Railroad in Wisconsin

The Milwaukie and Mississippi road had the first rails laid on the 12th inst.

Two locomotive engines for passenger trains on the Central Railroad, arrived at Savannah on the 17th inst.

## CARPENTERS' IMPROVED BENCH HOOK.

Figure 1. Figure 2.

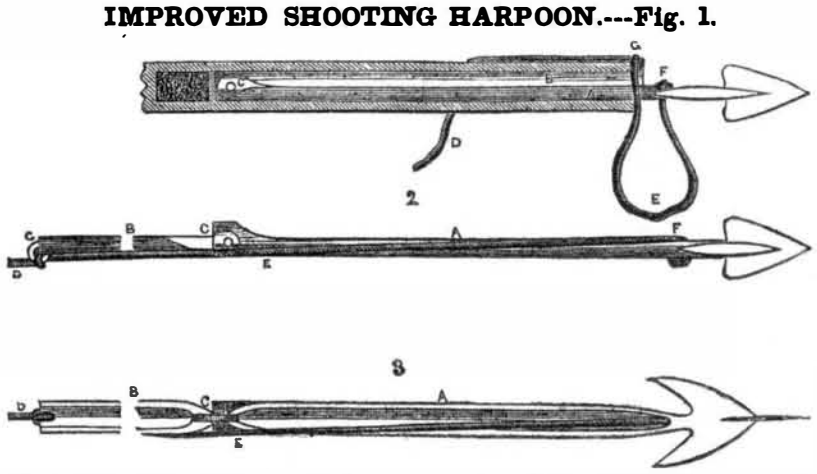



This is an improvement on the "Bench Hook" invented by Mr. W. B. Kean, of New Wercester, Mass., and secured to him by patent on the 19th of last month. The bench hook has four edges, and is capable of being turned easily in the bench, to present any one of the four edges, to hold different kinds of work—rough or smooth.

Figure 1 is a vertical elevated section, and figure 2 is a plan view (looking down on the top of the bench.) The same letters refer to like parts. A is a bolster of the work-bench; C is a plate of metal screwed down on the deck of the bench; E is the head of the bench hook, and D is its shank. Its shank is a strong screw bolt, with four slots cut in it, (one, H, being shown in fig. 1.) There is a slot for each edge of the hook, E. The screw, F, of the bench hook works into a thread, G, in the bolster of the bench, so that it can be raised to any height, for the planing of thick, or lowered for the planing of very thin pieces; O is a plane edge of the bench hook for holding smooth work, like cabinet maker's, and L M N are serated edges for holding work of different kinds, hard, &c. Figure 2 shows the three notches in the screw bolt, D, of the hook; these notches receive a spring, K, which projects into each notch for each edge, as it is turned round; J is the plate of this spring extending downwards, to give the tension of the spring a direction inwards, to catch into each notch, H, as the bolt is turned round. The bench hook cannot be moved without this spring is drawn back; this is done by pulling on the head, P, of the catch spring, K. Figure 3, below figure 2, is an end view of the plate or flange, C, and R is a little rib on the bottom of the said plate. There is a small space behind the head of the catch (P, fig. 2) which allows the spring to be drawn back, to enable any edge of the hook to be turned round.

This bench hook is a good improvement; it is useful for workers in both fine and coarse work, and will, no doubt, soon come into general use. More information may be obtained by letter, addressed to Mr. Kean.

## IMPROVED SHOOTING HARPOON.---Fig. 1.




This instrument is the invention of Mr. Wm Albertson, of New London, Conn., who has taken measures to secure it by patent.

Figure 1 is a longitudinal section, showing the harpoon in the inside of the gun-barrel; figure 2 is a side view of the harpoon, and figure 3 is a plan view of it, showing its joint. The same letters refer to like parts.

The object of this harpoon is, in forming the shank with a joint at its middle part, so that it can be folded up, and the extremity be at the mouth of the barrel—the line being there attached to it, so that the line does not enter the barrel at all. The head is double, the one set at right angles to the other, as the three engravings set forth. A is the front half of the shank and B the back half; the two halves are the same length, and figures 2 and 3 are broken at B B, to show that they are longer than represented; C is the joint—this allows B to fold over on to A, and form a round shank. Both parts of the shank are hollow for lightness, and when folded over in the gun, they form a tube; the joint is peculiarly formed, as shown by the concave part, which allows C to fold over and present a plane butt to the action of the charge; E is the line, it passes through an eye in the neck, at F, and through a ring in the extremity of the shank at G, and D is that part of it running back from the shank: it is represented as ready for firing off in fig. 1. When the harpoon is shot out of the gun, the two halves of the shank open, and the drag on the back extremity gradually straightens out, darting forward in the position represented by figures 2 and 3, to strike the monster of the deep. We had supposed that the wearing of the back half of the shank, from being folded up to its greatest length, would have changed it from the direction of its impulse, but Mr. Albertson states that it has been tried, and that it operates in whaling perfectly true and correct in every respect. Experiment is the real test of the correctness or incorrectness of the operation of any instrument, and as Mr. Albertson has given it a fair trial, the proof of its utility is not problematical, but it is actually a good improvement.

### Skill of Dentists.

Our readers may well remember the imputations which were thrown upon the testimony of Dr. Keep, of Boston, and his student, in reference to their positive identification of Dr. Parkman's teeth. The result of that lamentable affair has added no small degree of importance to the value of mechanical knowledge in a legal point of view. The testimony was the most direct of any, and so it was in another case, that of the Mannings, in England. In the latter case, the victim, O'Connor, wore a set of artificial teeth, and the dentist hearing of it, the teeth were shown to him, recognised, and applied to the working model; thus proving beyond a doubt that it was the same individual who had been murdered, viz., O'Connor—the rest of his body not being recognizable. The recognition and identification by the gentleman who had made and adapted the teeth, followed as a matter of course, and a most important link in the chain of evidence was thus obtained.

In the case of Dr. Parsman, the bones of the cranium had been calcined by throwing them into a furnace, the ashes of which were examined; and amongst them, artificial mineral teeth were found mounted upon gold, which could not be destroyed. Inquiry was made amongst the dentists, and Dr. Keep, a celebrated dentist of the place, instantly identified the work, placed them upon his working model, and at once supplied an important link of evidence, he having made the teeth a few months previously. These instances, out of many that might be cited, are interesting, as showing how important and intimate a connection there exists between a proper knowledge of the practical and mechanical department of the dental art, and its application as an auxiliary of medical jurisprudence, in which it can be rendered subservient to further the ends of justice.