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Railway Economy in Construction and Repair.

One of the great mistakes of railway construction has been in consequence of the inordinate desire to open the works at the very earliest day. To such an extent has this hurry been carried, that many of our companies have laid down their iron without proper ballasting, and with the road-bed in such a condition that it could not resist the action of severe rains or frosts of the climate. Then, again, the iron has been taken from the importer without survey or examination, and experience has shown that in many cases much of the iron has had to be taken up and replaced in three or four years, when, in fact, had it been of proper quality, it would have lasted twenty years. Then, again, the sleepers have been laid down without kyanizing or other chemical preparation, to preserve them, and they have to be renewed in from three to five years; when, had they been properly prepared, they would have lasted from fifteen to twenty-five years; and almost every other department of construction has been carried on with like wastefulness and indiscretion. Let our readers examine the annual reports of the different companies they are interested in, or familiar with, particularly with regard to the percentage of annual repairs, and see if our remarks are not well grounded. Owing to this kind of management, many of our railroads are now passing their dividends.—[American Railway Times (Boston).

Beans for Soup.

The use of beans as an article of food, is not so considerable as it should be. Beans are the most nutritious of all kinds of food used by man. Chemical analysis, and the experience of those who make extensive use of them, demonstrate this. To make good bean soup, take one quart of white beans and a shank beef bone and boil all together for two hours, then add salt and pepper for seasoning. The use of bones is not so much esteemed as they should be in food. By boiling them in soup some of the phosphate of lime, which goes to form our bones, is taken up and we thus get a supply of a necessary element for our bodies which cannot be obtained so fully from roasted or fried meat.

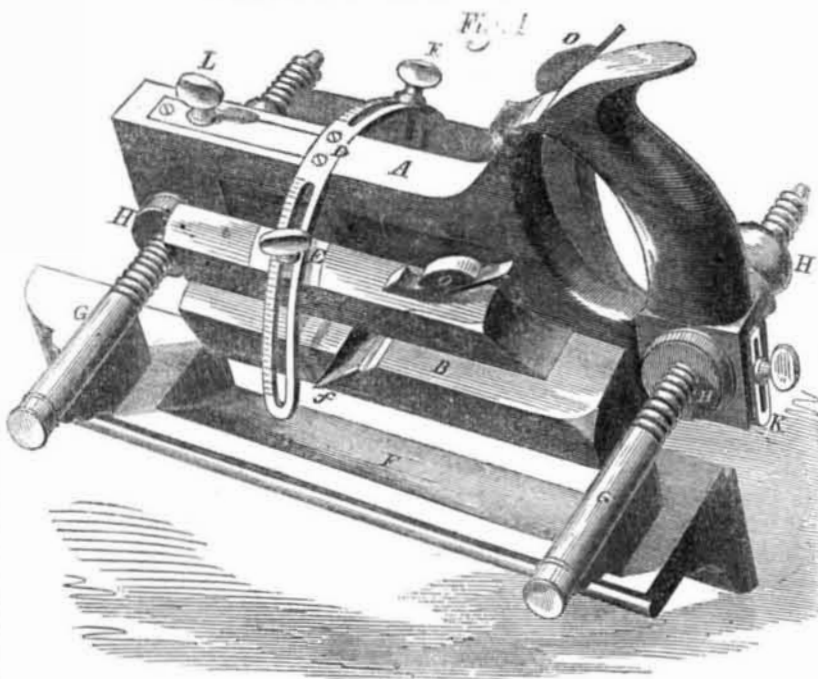
Gold near Reading, Pa.

Dr. C. M. Wetherill has confirmed his former announcement of the discovery of gold near Reading. The gold was discovered by Mr. Philipps, a mining geologist, searching for iron ore, a few miles westward from Reading, and on the farm of Mr. Entlich, also on the western slope of Penn's Mount. It was obtained in washing specimens of ferruginous quartz.

Liberal Employers.

On February 8th, the Directors of the Bank of England notified their employees that they would receive a bonus of ten per cent. on their salaries, in consequence of the present high price of provisions.

IMPROVED BEVEL PLANES.

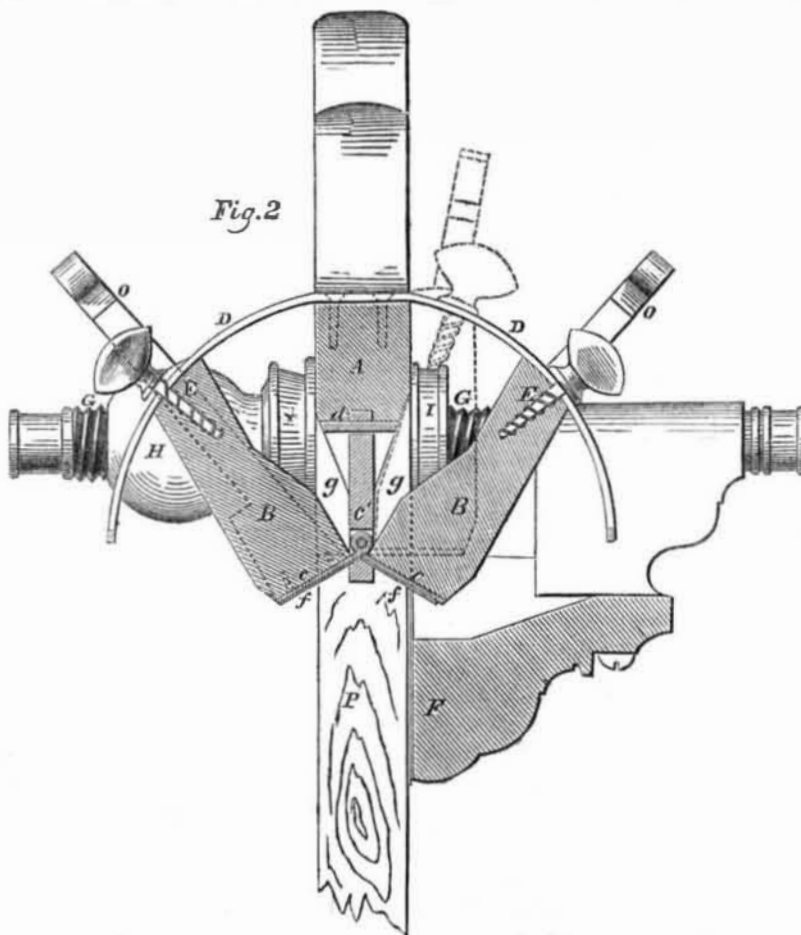


The annexed engravings are a perspective view, figure 1, and a transverse section, figure 2, of an improvement in beveling planes, for which a patent was granted to M. J. Wheeler, G. W. Rogers, H. W. Pierce, and M. B. Tidey, of Dundee, N. Y., on the 4th of July last.

The object of this invention is to plane a double bevel, or in other words, to plane two faces at any desired angle to each other, and to a third face. The invention consists in attaching the two cutters, which are to plane the two faces, to two wings which are both hinged or otherwise attached to the body of the plane, so as to swing round a

common axis, and each of which is adjustable and capable of being secured in any position independently of the other, so as to bring and set the faces of the cutters at any angle to each other, or to the fence which is employed to guide the plane.

A is the body of the plane; B B are the wings which contain the cutters, *f f*, and are connected to the underside of the body, A, by a three-flanged hinge, *c c c'*, figure 2. One flange, *c'*, of this hinge, is inserted in the body, A, and secured by screws, *d d*. The screws are secured one to each of the faces of the wings, B B, and all are united



by a pin running the whole length of the wings. The wings are shorter than the body, A, and a recess equal in length to the wings, is cut in each side of the latter, to allow them to lay up close to the sides of it, and bring their faces and the edges of their cutters as nearly as is desirable in the same

screwing into their backs. The upper surface of the bar, D, is graduated in degrees, commencing in both directions from the sides of the body, A, in order to enable the faces of the wings to be set at any desired angle; F is the fence having the screws, G G, firmly attached to it, perpendicularly to its face; said screws pass through holes in the body, and being furnished on one side thereof with a nut, H, and on the other side with a follower, I, to adjust the fence to the body and wings, for the purpose of planing stuff of various widths; K is the depth gauge which is adjusted by means of the screws, L M, for the purpose of enabling the tool to cut to the required depth to perfect the bevel, and no further.

The operation of the plane can be best explained by illustrating the beveling of a door stile on opposite sides of the channel which receives the panel. The stile, P, is represented in figure 2. The fence, F, is adjusted by the screws, G G, to bring the depth of gauge to the proper distance from the side of the stile. The wings are adjusted to set the edges of the cutters at the proper angle to each other and to the face of the stile, and the depth gauge is set to the proper depth. The edge of the stile is then planed down till the depth gauge comes in contact with the bottom of the groove. If it be desired the two sides of the channel may have different bevels, as each wing with its cutter is adjustable independently of the other. By making the edge of the cutters of this plane of proper form, coves, ovolos, ogees, or moldings of any other form may be produced on the edges of the stuff.

More information may be obtained by letter addressed to M. B. Tidey & Co., Dundee, N. Y. The planes are manufactured by this company.

Sugar Manufacture of France.

France is the largest producer of beet sugar in the world. A favorable soil and climate, and a rural and industrious population, contribute to the successful prosecution of the beet sugar manufacture. This manufacture originated during the reign of Napoleon Bonaparte. His continental system raised colonial produce to an almost fabulous price. The high rate of sugars induced many to look around for the means of producing sugar at home, and an impetus was given to the search, by the offer of a magnificent premium by the emperor to the successful discoverer of a permanent home source of supply. Of all the plants tried the beet proved the most promising, but forty years elapsed before the manufacture of beet sugar was enabled to cope successfully with colonial sugars. From France the culture spread through Belgium, Germany, and far into the interior of Russia, and now there is produced of this kind of sugar on the continent of Europe three hundred and sixty millions of pounds, nearly one-half of which is manufactured in France, in three hundred and thirty-four manufactories. In the vicinity of Lille the average yield of the sugar beet is sixteen tons to the acre, and at Valenciennes nineteen tons. In some localities twenty-five tons are produced.

New Potato Digger.

The St. Paul Daily Times (Minnesota) describes a new machine for digging potatoes, invented by F. Jones, to which the attention of farmers in that region is directed. It is calculated for two horses, and will dig about five acres in a day.

A submarine iron boat has been built in this city in order to go down and secure the treasure said to have been lost with the British frigate *Hussar*, in Hurl Gate.