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RAIL-ROAD NEWS.

Hudson River Railroad.

This road is now completed, and its history forms both an interesting and instructive chapter. Its total cost and equipment, up to this date, is \$6,666,681, or over six and a half millions of dollars. The company was organized March 1st, 1847, and to the 31st December, 1848, the amount of capital stock subscribed was \$3,110,500; of this amount \$2,384,200 was paid in. The expenditures for this period were \$481,386 12 for land; \$1,426 83 for buildings; \$1,581,366 34 for construction, and \$108,533 18 for salaries. No part of the road was in operation on the 1st January, 1849, during the summer and autumn of that year the track was laid to Poughkeepsie, and on the 30th of September the road was open for travel to Peekskill, and on December 31st to Poughkeepsie. During these years the capital stock was increased to \$3,281,500: of this amount \$3,157,175 was actually paid in. The whole cost of the road to December, 1849, was \$5,003,675 39. During the year 1849 about forty miles of a double track was laid, extending from New York to Peekskill, and a large amount of work was done to secure the structures, increase the conveniences and promote the safety of the road. That portion of the road between Poughkeepsie and Albany was put under contract in July, 1850. On the 16th June the road was opened to Hudson; July 7th, to Oak Hill; August 3d to Tivoli; and October 1st, to New York.

Public opinion pronounced this road would prove a poor speculation. It runs along side of the Hudson River, and had to be cut through mountains in some parts, and had to span valleys in others, and at the same time it was to compete with the finest steamboats in the world, some of which ran at the rate of twenty miles per hour. It was said "it never would pay," but since it has been opened to Poughkeepsie it has paid, and paid well, and we suppose it is the cheapest road to travel on in the United States. It deserves to be supported with a general good will.

This road was opened with a grand celebration on Wednesday, last week. The locomotive took the train from Albany to New York in about three hours and a half. There were two engines in requisition, both of which made the fastest time ever made in our country;—they were built from plans of Mr. Walter McQueen, the master machinist, and one of the ablest in the world.

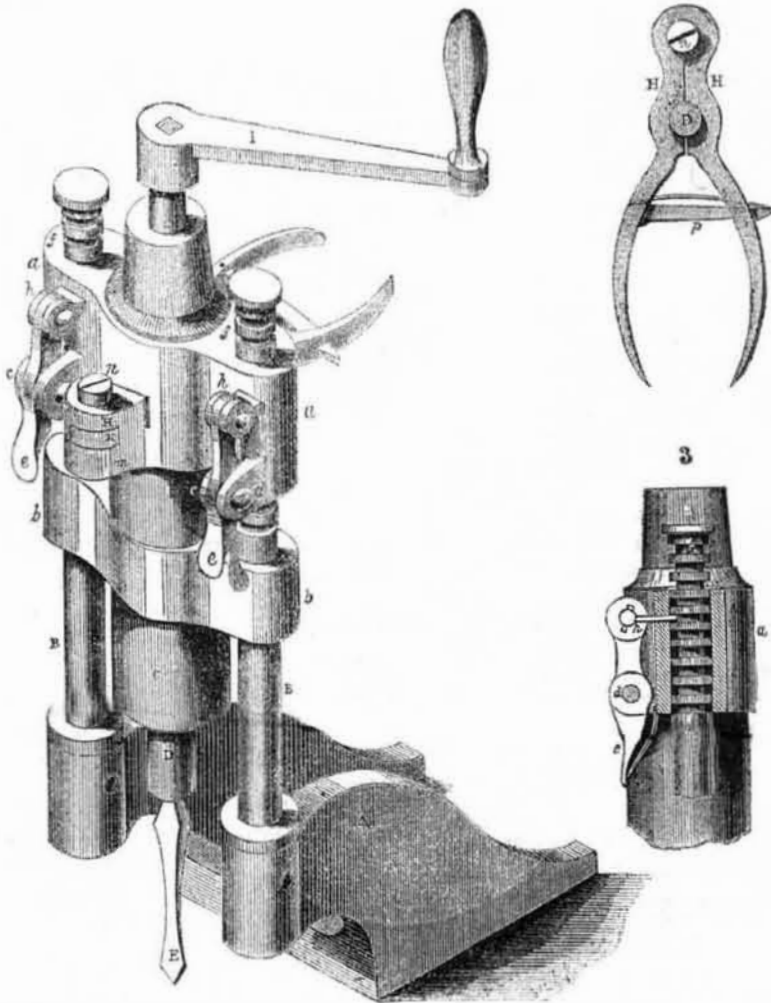
The East Tennessee and Georgia Railroad.

We understand, says the Knoxville Register of the 18th ult., that Mr. Pritchard and his corps of engineers, are now busily engaged in re-surveying and re-locating the route for the railroad between Blair's Ferry and Knoxville. They have already permanently selected the site where the bridge will cross the Tennessee river, and we have no doubt the Company will let the bridge out by contract at the next meeting of the directors, and in all probability, a part of the road for grading. Georgia is exhibiting an energy and enterprise worthy of a great State, as she is.

BUSHNELL'S IMPROVED METAL DRILL.

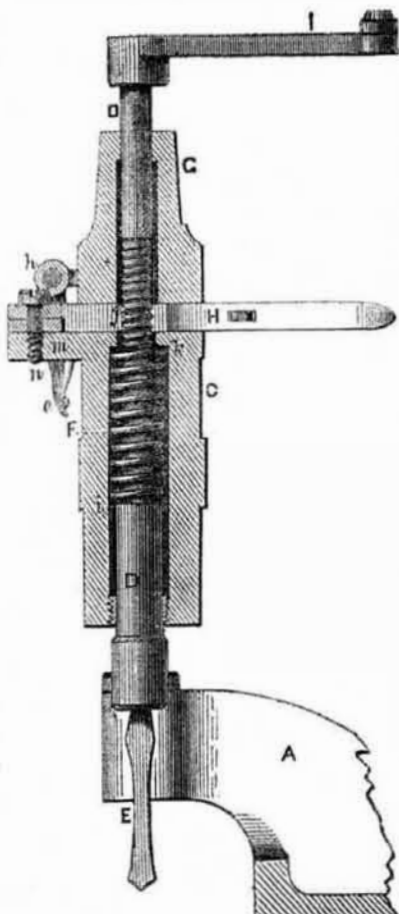
Figure 1.

Figure 2.



The accompanying engravings represent an improvement in drilling machines, invented by Mr. William Bushnell, of this city, who has taken measures so secure a patent for the

Fig. 4.



same. A neat working model of this machine is exhibited in the machine room of the Fair

for a nut in which the screw, *j*, (fig. 4) of the spindle works. *p* is a spring which catches into an opening in one of the arms, *H*, and holds the arms together when they are closed as a nut around the screw of the drill spindle. The nippers are represented as closed in fig. 2.

OPERATION.—The work being placed under the drill tool, and the machine being placed at its work, it is necessary to adjust the spring to give a suitable pressure to the drill stock; this is done by closing the nippers on the screw, *j*, until the spring, *F*, is sufficiently contracted, when the adjustable head is brought to a suitable position on the guide standards, *B B*; the nippers are then opened, and the drill spindle left free. The drill stock is then turned by the handle, *I*, and the expansion of the spring then gives the necessary pressure to the drill. When the hole is drilled to the requisite depth, the nippers are closed, and the spindle turned in the contrary direction, to raise it. The adjustable head can be set at once to bore any number of holes of the same depth, but it has to be changed for holes of varying depths.

The nature of this improvement, and its claim, consist in the combination of the helical spring, and the nippers, and the screw on the spindle, by which the pressure is controlled, and the drill stock operated in a most efficient and beautiful manner, as will readily be appreciated by any reader who pays proper attention to our description, and carefully examines the illustrative engravings.

We sincerely request those who wish such a drill as this, to examine and re-examine it. We do not wish to say it is good because it is here illustrated, but let it be inspected and judged upon its working merits. Orders will be received for it at this office. Price \$25.

Block from the old Frigate Hussar.

We have been presented by Mr. Marsh, of Morrisania, with the metal work of one of the blocks taken from the wreck of the old British frigate Hussar, which was lost during the Revolution a short distance above Hurlgate. The wood was lignumvita, but is rendered spongy and totally useless. The block appeared to have been as well made as any now used: the main spindle is a strong iron bolt, greatly oxydized, and the bearings of the small friction rollers are angular pieces of gun metal, with iron studs. There does not appear to have been any of that electric action spoken of in the case referred to by Prof. Henry, as noticed by us a few weeks ago, and we understand that some pieces of iron, unconnected with any brass, were found more decayed than the iron of the musket alluded to on that occasion. The gun metal is as good at the present moment as it was the day the frigate was lost. The copper on her bottom is stated to be better than most of the sheathing now used on our ships. The action of the salt water upon the iron gives the spindle the appearance of a twisted rope, thus showing that the iron was of the very best quality, as we judge, of Swedish manufacture.

The Good of Theories.

In the pursuit of science, theories lead to experiments and investigations, and he who investigates will scarcely ever fail of being rewarded by discoveries. It may be, indeed, the theory sought to be established is entirely unfounded in nature, but while searching, in a right spirit, for one thing, the inquirer may be rewarded by finding others far more valuable than those which he sought.

The citizens of Louisville voted a large loan for several railroads, but a few days since, and we see that Lexington has voted, by a large majority, to loan \$200,000 to the Lexington and Covington Railroad. We are glad to see Kentucky going ahead.