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## Rail-Road News.

New York and Erie Railroad.

By the Report for 1850, of Mr. N. Marsh, the Secretary of this Company, we learn that about 405 miles of the road is now in use, and that it will all be completed to Dunkirk, on Lake Erie, about the 14th of next May. This railroad is the greatest private enterprise in our country. The whole cost of equipments, buildings, &c., will be, when the road is finished, about twenty and a half millions of dollars, and the cost about \$38,706 per mile—not counting the machinery and building. This is an enormous sum, but the expense of construction is very moderate, considering the difficulties of the work, and the manner in which it has been performed. The earnings for the year 1850 have been \$1,600,300, or \$5,000 per mile; in 1849 they were only \$3,697 per mile. This is a great increase, but nothing to what it will be when the road is finished throughout. This road runs through some of the grandest mountain scenery in our country. The bridges, cuttings, and gradings are works of great magnitude, but are all of the most substantial and enduring character. The most able engineers and architects have been and are now employed by the Company. This road is of a wider track than the common roads in our country, and to see one of the large locomotives that are used on it come rushing onward, it makes the "boldest hold his breath for a time." When completed, there will be an unbroken line of wide track 543 miles long, and at the rate of 30 miles per hour, a traveller will be able to reach Erie from New York in 18 hours.

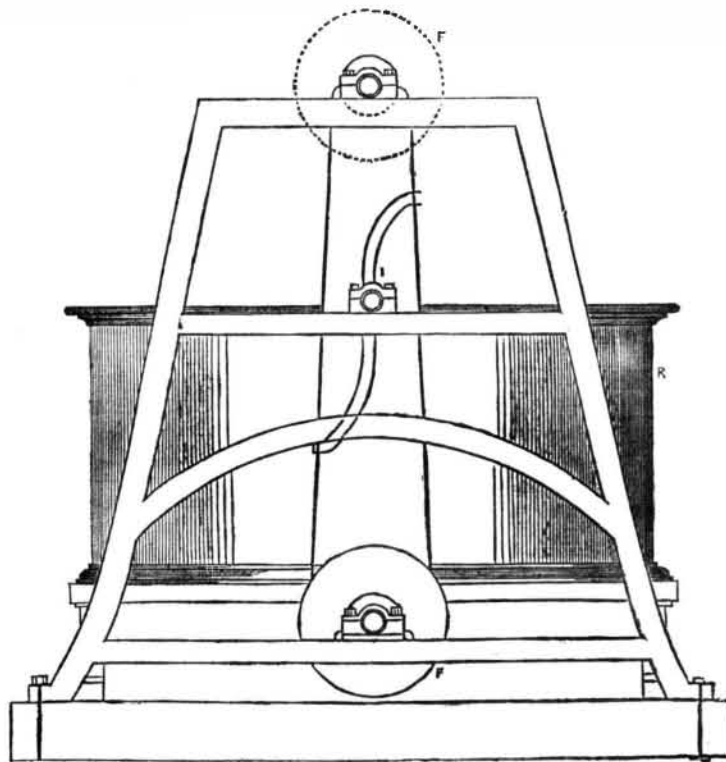
New Arrangement between the New York and Erie Railroad.

The arrangement between the Erie and Ramapo and Paterson Railroads for transporting the passengers of the former to Jersey City, instead of Piermont, as heretofore, went into operation last week. A ferryboat is to ply between Jersey City and Duane street pier, N. Y., by which passengers arrive and depart at that point. The express trains leave at 7 A. M. and 5 P. M., the former period of starting, but passengers arrive at their destinations some hours earlier than by the Piermont route. The Erie road is finished to Cuba, a distance of 45 miles from its present terminus, and will be opened sometime next week—making a continuous line of road over 380 miles, and it is thought the whole line will be finished by the 1st May next. The citizens of Rockland County, New York, have published a protest against this arrangement.

Wheeling Bridge.

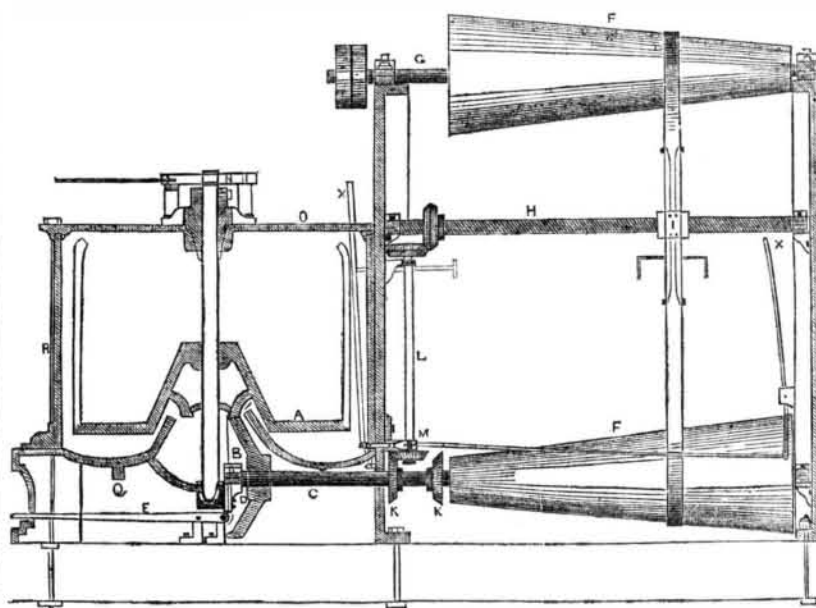
Chancellor Walworth recommends the elevation of Wheeling bridge twenty-eight feet. This is considered a final disposal of the Wheeling Bridge case, and is equivalent to its coming down.

## BIRKETT'S IMPROVEMENT IN SUGAR REFINING MACHINERY.---Figure 1.



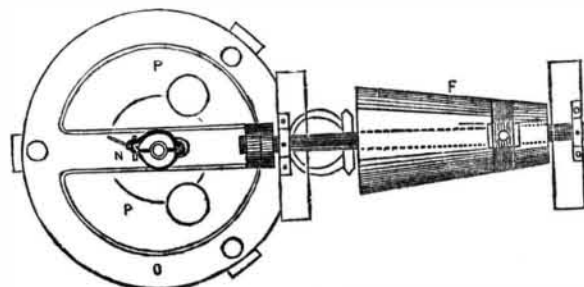
The improvements embraced in this invention have been made by Mr. J. Birkett, of 180 Essex street, this city. Figure 1 is an end view; figure 2 is a vertical section, showing the inside of the revolving sugar case. Figure 3 is a plan view. The same letters refer to like parts. Mr. Birkett claims it as a valuable improvement on the English Liquid Extractor, requiring no more than one-fourth of the power to drive it that is required by other machines which have been used for the same purpose, and it can be applied to the dry-

Figure 2.



ing of wet goods, either silk, cotton, or woolen. The machine is a centrifugal one; in other words, the matter from which the mois-

Figure 3.



ture is extracted receives a rapid rotary motion, which throws the moist particles off by centrifugal force, from the more thick and

inner end of the line shaft, C. D is a sliding pedestal, which can be raised or lowered by the lever, E. When raised this brings it to bear on the bottom of the cylinder, A, thus answering the same purpose as a pulley. When the line shaft, C, is put in motion, it turns the inner cylinder round in its top and bottom bearings, and it can be driven at the rate of from two to three thousand revolutions per minute. Any substance, such as moist brown sugar mixed with molasses, placed in the inside cylinder, by its rapidity causes the moisture to pass through the wire gauze, and the sugar is retained inside, white and dry. The sugar is thrown against the gauze, and the moisture gets through it to the outside, where it is carried away by a spout. G is the driving shaft, with a fast pulley on the end of it; F F are cone pulleys, the one placed on the line shaft, C, and the other on the driving shaft, G. I is a belt guide, and H is a screw for driving it backwards and forwards; K K are a pair of small friction pulleys placed on the line shaft, C, and L is a small upright with a bevel gearing at the top, and a friction pulley at the bottom; M is a small sliding pedestal, which moves the upright shaft backwards and forwards against either the one or the other friction pulleys, K K; this gives the right and left hand motion to the screw for moving the belt on the cone pulleys. When the belt is straight it commences running from the small end of the top cone, and is fed forwards by the screw increasing in speed, until it attains to the small end of the lower cone, where it attains the maximum of velocity, and then the bar on the belt shifter strikes the projecting arm, of the lever, X, which shifts the friction pulley on the bottom of shaft L, making it come in contact with the opposite bevel, K, which reverses the motion of the screw, H, and slides along the belt on the cones. By this method of gearing the speed is got up gradually and let down in the same way—the only sure method of working. N is a friction clamp with hard wood steps, which, when pressed together by its lever, acts upon the wood steps or bearings of the cylinder shaft, thereby retarding, graduating, and arresting its velocity by friction. This oftentimes will save a great deal of time. O is an iron flange with a brace across the middle to support the pedestal, which is fastened on the top of the outside cylinder, R, by three bolts; this allows the inner cylinder to be taken out at any moment for cleaning or otherwise. P, fig. 3, is a pair of loose covers which fit on the top of the flange, O; the small holes are for the purpose of having small covers on them, or they can be used for pipes to admit hot atmospheric air into the inner cylinder, it being drawn in by the vacuum formed at the centre of the cylinder by the centrifugal motion of the cylinder. The hot air assists in the extraction of the moisture and greatly facilitates the operation in respect to the saving of time. Q is a pipe in the centre cylinder, R, to carry off the liquid extracted from the sugar. One of these machines may be connected at each end of the line shaft. This machine is well adapted for our southern planters. It can be worked easily by horse-power, as well as by steam and water power.

More information may be obtained by letter addressed to Mr. Birkett.

A work has appeared by Mr. Getty, on a discovery made during the last century, of a number of Chinese seals which were found in Ireland. They have been found in various parts of the island, are made of porcelain, and represent a monkey sitting on a cube. Very ancient Chinese characters are engraved upon them. They have long puzzled the learned men of the world.