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## RAIL-ROAD NEWS.

### Fatal Railroad Accident.

Le Roy Barney, a respectable citizen of Buffalo, was killed on the 1st inst. at the Falls. The evening train had started for Buffalo, and he endeavored to catch it by running; he reached the front of the last car and attempted to catch hold of the rails on each side of the steps, but caught only that nearest the carriage with his right hand, when he was swung violently round, and the next second was hurled under the wheels, which passed over his head, crushing out his brains in the most frightful manner.

### Railroad Disaster.

An accident occurred on the Springfield Railroad, last week, by which three passengers were killed and several severely injured. The calamity was caused by the train running off the track at a place called Windsor Locks, between Hartford and Springfield, when two of the cars became detached, and one of them was precipitated into the adjoining lock of the canal. No blame can be attached to the engineer, as the accident arose from no negligence on his part, but it is supposed from a defective rail, which threw the train off the track.

### Northern Railroad.

The work on the section of the road near Albany is expected to be completed by the 1st of next month. The buildings on the line of this road within the bounds of the city are being torn down, and the ground prepared for the rails. It is confidently expected that the rails will be laid to Cohoes, and the road ready for use by the 1st of December next.

### A Long Tunnel.

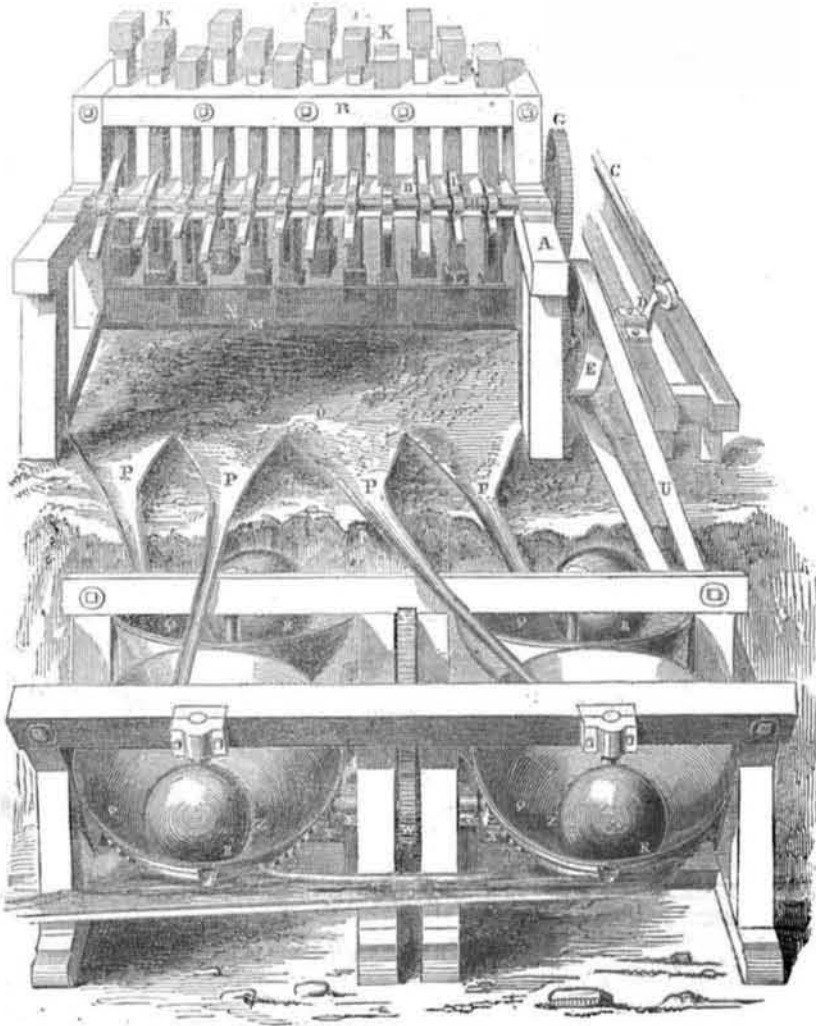
One of the longest tunnels in the world is now approaching completion. It is situated in Hungary and leads from the shore of the river Gran, not far from Zarnowitz to the mines in the Schemnitzer Hill. It is about ten English miles long, and it is intended to answer the double purpose of a channel to drain off the water accumulating in the works, and of a railway to transport the ore from the mines to the river.

### Air Line Railroad.

The air-line project between New York and Boston is again agitated. It is now proposed to make use of the newly constructed Charles River Railroad, which will be met at a point called Scott's Hill, in the town of Bellingham, by a direct line of road passing through Woonsocket, R. I., thence across the State of Rhode Island, and thence through Middletown and the State of Connecticut to New York City.

The Pittsburgh and Steubenville Railroad is rapidly advancing to completion. This is the great connecting link between the Pennsylvania Central Railroad, and St. Louis road. The completion of these railroads opens a direct communication to the entire west. It is expected that the whole road from Philadelphia to St. Louis, will be in successful operation by January 1851.

## GOLD QUARTZ PULVERIZER AND AMALGAMATOR.



The above is a perspective view of H. Berdan's machinery for grinding and reducing gold quartz to an impalpable powder, and amalgamating the said ground quartz with quicksilver. The same letters refer to like parts. The machinery here represented exhibits a set of stampers placed on an elevation above the pulverizing and amalgamating basins. The stampers are of the usual form, and are operated in the common manner as here exhibited. A strong frame is erected.

A is a cross sill or bearing brace, one on each side, having journal boxes for the lifter shaft, H, which receives motion from the main shaft, D, which is driven by animal, water, or steam power, giving motion to the crank through the connecting rod, C. The cog wheel, F, gears into the one, G, on shaft, H, and rotates the lifter shaft. On this shaft are a series of horns, or lifters, and by some called "wipers" I, for lifting the stampers. There are slots in the vertical shafts or arms of the stampers, the lifters take into said slots as they revolve, and lift each stamper to a height corresponding with the length of the lifter (15 inches) when it—the stamper—drops down, 45 times in a minute, on the quartz in the trough, with a blow like that of a hammer weighing 600 lbs.; M is the cast-metal bottom or the quartz trough; N is a wire screen through which the pounded quartz—reduced to about the size of small shot—passes from the stamper trough to the receptacle, O, into the several spouts, P P P P, and thence into the pulverizing and amalgamating basins. On the other side of the stampers is an inclined iron plate to guide the ore under the stampers. The upright shafts or arms of the stampers are guided through openings in the guide boards, B B, to drop perpendicularly on the quartz; L L are the hammers of the stampers; they are made of the best chilled iron, and are so formed as to do double duty

the top weights, K K, being hammers also and capable of supplying the places of L L. The pulverizing and amalgamating basins are set in an inclined position. Four of these basins, Q Q Q Q, are shown set in one frame, receiving the pounded quartz—it is pounded with a small stream of water flowing in—from the spouts, P P. Each basin is a large circular iron vessel, like a potash kettle, and set inclined at an angle of about 45°. The basins are made to revolve, and this gives each ball a rotary motion on its own axis contrary to the motion of the basin. There is one ball, R, for each basin. Each ball keeps rolling in the lower inclined part, Z, of its basin, into which the pounded quartz is gathered, and there exposed to the rolling pulverizing weight and motion of the ball, which rolls on the quartz while the basin is continually presenting a new surface, to change the position of the quartz, as it (the basin) rotates on its axis. The quicksilver is placed in the lower part of the basin, and the weight of the ball and its motion, keeps it in continual contact below the surface with the pulverized quartz. This prevents any of the oxide of iron, which may be in the quartz, from forming a coating to prevent the contact of quicksilver with the gold—the oxide is rubbed off and passes out with the surface water. It is therefore superior to a mere surface amalgamator. Each ball weighs about 3,000 lbs., it can be cast solid, or for convenience, cast hollow, and then filled with black sand at the mines. The ball motion is the best to reduce the quartz to an impalpable powder, in which state it must be for proper washing, or for amalgamation with the mercury. The lighter matters pass off at the lower lip of each inclined basin through a spout. The basins are therefore pulverizing, washing, and amalgamating machines. These basins are each made with conical funnels reaching

down to the lower bearing of each. These funnels are not shown, but it will explain their form to say, they are shaped in elevation, like the common kind, which gives them a firm bearing below, to support each basin. Said funnels are made hollow so as to admit of being made into furnaces for heating the basins to promote the quick amalgamation of the metals, which is said to be done by a certain degree of heat. Mr. Berdan also proposes to let the exhaust steam (when an engine is employed for driving), into the water of the stampers, so as to heat it also. The same water that is employed for stamping the quartz passes into the basins; this is to economize the water in places where it is scarce. The waste water and impurities pass from the basins by the conduit, T. Motion is given to the basins—they having vertical axes—by having cog teeth, Y Y, cast on the outside at the bottom of each. A cog pinion, X X, on a cross shaft, takes into the teeth on its basin, and gives it a rotating motion on its axis. The shaft of these pinions, X, has a central pinion, W, that receives motion from the large middle wheel, V, on a central shaft, and which thus moves all the basins. Any number of basins may thus be set in rows, and thus moved by a band, U, from the pulley, E, of the main shaft, D, driving a pulley on the central shaft of the large cog wheel, V. The arrangement, motions, and operations of the several parts are now explained.

So far as has been experimented with, it takes about one horse-power to work one ton of ore in twelve hours. It takes about twenty horse-power to work twelve stampers and four of these large basins. The price, all complete, is \$200 per horse-power; one, two, three, four, or more, basins can be employed. To prevent the attendants taking out any of the amalgamated gold; the basins can be covered and locked, to be opened by the superintendent only at certain specified times. We have seen some very flattering notices of this machine, in cotemporary journals. A large machine is fitted up at the Novelty Works this city, where a number are being manufactured for California; and one for the New Jersey Zinc Co., to be employed for reducing the zinc ore.

Measures have been taken to secure patents in foreign countries for this machine. More information may be obtained by calling, or by letter addressed to Mr. Berdan, at the Astor House, New York.

### Composition for Treatment of Wool.

This is a new composition for preparing wool for manufacturing purposes, invented by Wm. S. Hubbell and Amos Barrett, of Kingsville, Ashtabula Co., Ohio, who have taken measures to secure a patent therefor. In the common way of treating wool for manufacturing purposes, it is washed before it is fit for combing, and after having dried is treated with some unctuous agent, such as oil of various sorts; to render it fit for manufacture. By this new process the previous washing is not required, as the composition itself acts upon the greasy glutinous matter in the wool, and renders it afterwards much more suitable for manufacturing purposes than wool that has been treated in the ordinary way.

### Buckle on your Preserver Right.

An inventor of a patent life preserver tested its efficacy a few days since, in the presence of a large crowd at Cincinnati. With it girdled to his body, he jumped into the Ohio, not far from Walnut street. Some of the gearing became displaced, and instead of the inventor's head remaining at the top of the water, his position was reversed—the head down and feet up. It was with difficulty the assembled crowd saved the gentleman from drowning.