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## Rail-Road News.

### Our Lines of Railroads.

In about two years from the present date, it may be predicted with certainty that we will be able to step on board of a railroad car at the corner of Hudson and Chambers street, this city, and proceed on our way, by uninterrupted railroad, to the Mississippi River in Illinois. From New York to Galena, on the Mississippi River, Illinois, the distance is 1200 miles, and railroads are now in the course of construction, which, along with those in operation, will complete the whole chain in about the time we have specified. The New York and Erie road will be opened to Dunkirk, on Lake Erie, next year, and a road will soon be constructed from that to Toledo, and then the road from Toledo to Chicago, at the head of Lake Michigan, through part of Indiana, will be completed 250 miles by the time mentioned, which will carry the line entire to Chicago, from which the Galena road, 40 miles of which are constructed, will then be finished, forming the longest and most splendid internal railroad communication in the world, excepting it may be the great Russian line. In the course of ten years from the present moment, it is not too much to expect an interior line of railroad communication from New York to San Francisco.

### True Heroism.

On the occasion of the late breaking down of the tressel-work over the Wateree river on the line of the Camden Railway, a conductor, fearing that a passenger train that was approaching would run into a chasm, wounded as he was, crawled along the broken timbers a considerable distance, and succeeded in making signals, which prevented any subsequent disaster. This is a real act of heroism, exhibited under circumstances of a peculiarly trying nature, yet nobody thinks it worth while to learn the name of the actor. It is vaguely given, with a "we believe his name is Spell." Had he been a military hero, who had destroyed a thousand lives, his name and his fame would have been blazoned abroad, and inscribed upon the pages of history.

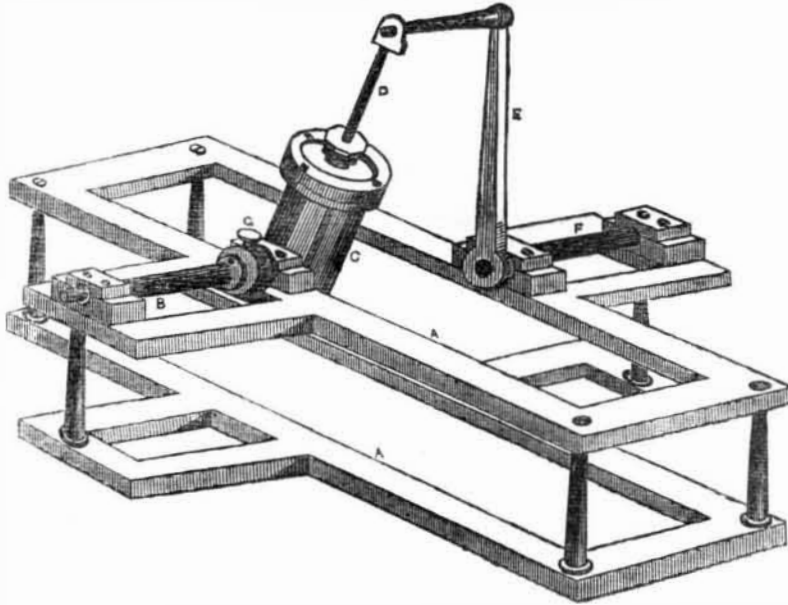
### Ogdensburg Railroad.

A bill has been reported to the Vermont Legislature, to allow the Ogdensburg Railroad Co. to construct a bridge across Lake Champlain at Rouse's Point, and also with provisions that the Rutland and Burlington Co. may extend their road from Burlington northward, and connect with the Vermont and Canada in Swanton, and thence run their engines and cars over the latter road across the bridge; that a double track shall be laid from this point of connection westward; and that other roads that may be chartered to connect with the Vermont and Canada shall have similar and equal rights and privileges.

### Bronze Mordant.

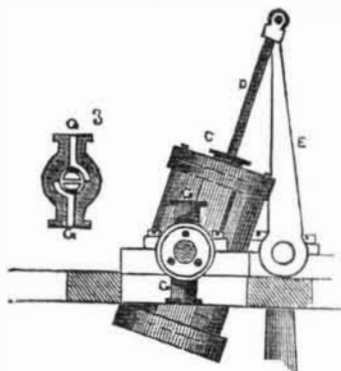
Water, 10 parts; nitric acid, 5 parts; muriatic acid, 1 part. Mix.

## WILDER'S REVOLVING CYLINDER ENGINE.—Figure 1.



This Engine is the invention of Mr. A. A. Wilder, of Detroit, Michigan, the inventor of the Lee Way Indicator, and the Hand Copying Press, which have been illustrated and described in our last two numbers. Notices of this invention have spread far and wide, but we suppose that not one has derived anything like a correct idea of its action. We have seen rotary disc engines, steam wheels and oscillating cylinder engines, but we never saw a rotary cylinder steam engine, before this one of Mr. Wilder—it is a novelty to us in engineering.

Figure 1 is a perspective view; figure 2 is a side elevation, and figure 3 is a vertical section of the steam box. The same letters refer to like parts, on all the figures. A A represents a frame; B is an axle, or shaft of the cylinder, C, on one side, and F is a shaft on the other side, but not opposite to B. The shaft, F, is attached to long crank, E, which is connected by a crank-pin to the top of the



piston rod, D. It will be observed, by figure 2 that the axle, B, is not in the same line with the axle, F. The two are at such a distance apart as describes the leverage, or what would be the length of the crank in common

### To Fatten Fowls.

The best food for fattening fowls is potatoes mixed with meal. Boil the potatoes and mash them fine while they are hot, and mix the meal with them just before it is to be presented. They fatten on this diet in less than half the time ordinarily required to bring them to the same condition of excellence on corn, or even meal itself.

### Gold in Arolite.

A very curious phenomenon took place in the department of the Marne, in France. A globe of fire appeared in the sky about 9 o'clock, P. M., and rolling with terrible rapidity, fell at a short distance from a company of four agri-

engines; G is the steam-box. The top is connected with the steam boiler, and is the inlet passage, the lower part, G, is the ejection or exhaust. The inner part of the axle, B, is cast on the cylinder, and is hollow, divided by a partition in the middle, seen in fig. 3. This hollow axle has two openings indicated by the dark marks, which openings become the injection and exhaust passages alternately. This will be easily understood by referring to figure 3. The top passage, G, of the steam-box, is the inlet steam passage, and the lower passage, G, is the exhaust. Allowing the axle to revolve, it will be observed, that the two dark openings in the axle, will alternately be in communication with the inlet and exhaust passages, and thus allow the same passages alternately to receive and exhaust, at both ends of the cylinder, under and above the piston. The openings and passages to the ends of the cylinder under the piston, are the same as in ordinary cylinders: the axle, therefore, is the valves of the engine. It will be observed that the piston, although it has a stroke from end to end of the cylinder, does not travel far either way from the central axle, B, and it describes a somewhat curious figure.

Mr. Wilder has taken measures to secure a patent for his invention, and an engine of the same kind is now in operation in Detroit. We have seen a number of letters from very respectable authorities who have seen it in operation, and who speak highly of its operative qualities. We have seen a neat model of the engine, but have not had the pleasure of seeing a working engine in operation. It should be observed that the length of the long crank, E, is such as to be equal in length with the piston rod, from the centre of the piston; and the distance between the centre of the axle, B, to the centre of the axle, F, is just the half length of the stroke (or cylinder.)

culturists, who were returning to their farm. The peasants went to the spot and found there a glittering stone, which they picked up and carried home: To their great wonder and astonishment the stone was composed of a large quantity of gold; and it is said that its value amounts to 2,000 francs. This has caused an immense sensation among the corps of savants, and to us in America, it appears more strange than true.

### Keeping Pumpkins.

We have kept them to the middle of July by putting them in a dry cellar upon a scaffold where the temperature was at no time below the freezing point.

## To give Copper Goods a Coating of Bronze or of Brass.

**FOR BRONZE.**—Tin the surface of the copper by the process adopted for pins, that is, by boiling them in grain tin, in a clear solution of cream of tartar. Half an hour will usually suffice for this, if the boiling has been kept up, especially if a few drops of chloride of tin are added to the mixture. The copper having been thus tinned, well washed and cleaned, is to be moderately heated until it acquires the tint of bronze which may be desired.

**FOR BRASS.**—Instead of the mixture above mentioned, use granulated zinc, with a saturated solution of sal ammoniac, and boil in the same way. When the copper has acquired the appearance of zinc, it must be washed, cleaned, and carefully heated until it acquires the yellow color of brass. A small quantity of chloride of zinc may be added, to facilitate the zincage.

### Pentekofer's Copper Amalgam.

Copper, 30 parts; mercury 70 parts. This amalgam is much used by the Paris dentists as a succedaneum for the teeth. It may be readily made by taking finely divided copper, obtained by precipitation, from solution of sulphate of copper, by means of metallic iron, sprinkling over it nitrate of mercury, adding a small quantity of metallic mercury, and well triturating. The mass which is at first brittle, quickly softens, and assumes the degree of consistency desired the moment that it is incorporated with a suitable quantity of mercury.

### Liquid Saleratus.

Put the salts into a bottle, and add water till nearly the whole is dissolved, and cork up for use. A little experience will show you the quantity to use, and it insures a perfect and uniform distribution of the alkali in every part of the flour, and avoids those unsightly and disagreeable tasting spots in biscuits, that can hardly be avoided when used in the other state.

### Malleable Brass.

By M. Belch. Copper, 33 parts; silicium zinc, 26 parts. Melt the copper, and then add the zinc, previously purified from sulphur; stir well and run into bars, by means of sand moulds.

Fine alcohol can be manufactured from the peel of the sour orange. It has been tried successfully in Savannah, Ga. A sample is to be sent to the London fair.

### The Races of Man.

Dr. Charles Pickering, an English author of a book entitled as above, describes eleven distinct races of man, founded on what he deems essential differences. He thus enumerates them and the population of each race:

White,	350,000,000
Mongolian,	300,000,000
Malayan,	120,000,000
Telingan,	60,000,000
Negro,	35,000,000
Ethiopian,	8,000,000
Abyssinian,	3,000,000
Paupan,	3,000,000
Australian,	500,000
Hottentot,	500,000
Total,	900,000,000

Dr. Pickering argues that the human races radiated from four centres—1. From Thibet, in Asia; 2. from Abyssinia, in Africa; 3 and 4, from North and South America.

### American Apples.

In a letter in the Buffalo Commercial Advertiser, from London, the writer says he finds American apples are wanted. There have been no shipments for two years from abroad—15,000 barrels will find immediate sale, at good prices.