

Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME 6.]

NEW-YORK, FEBRUARY 22, 1851.

[NUMBER 23.

THE
Scientific American,
CIRCULATION 16,000.

PUBLISHED WEEKLY

At 128 Fulton, street, N. Y., (Sun Building,) and
13 Court street, Boston, Mass.

BY MUNN & COMPANY,

The Principal Office being at New York.

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Rail-Road News.

Charleston and Memphis Railroad.

The Commissioners' Court of Lauderdale county, in Tennessee, has subscribed \$30,000 to the Charleston and Memphis Railroad, provided the road be located on the north side of the Tennessee river, in that county. Madison county has subscribed \$100,000, unconditionally, to the same enterprise, and the people of Marshall county, Mississippi, have voted, nearly unanimously, to contribute the same amount.

Utica and Susquehanna Railroad.

At a recent meeting at Utica, N. Y., of those favorable to the building of a road to run from that place and intersect the New York and Erie Railroad, a committee reported in favor of laying the route through the valley of the Unadilla and Susquehanna, cutting the New York and Erie road at Deposit, as a terminus, with a branch from a point four miles north for the purpose of receiving coal. The road will be 84 miles long, and will cost \$1,680,000. A committee was appointed to draw up articles of association.

Georgia Railroad

The Macon Messenger says that the entire length of the Georgia Railroads now in operation, viz: the Central, Georgia, Macon and Western, and Western and Atlantic Roads and Athens Branch, is 642 miles. The extent of railroads completed and in progress is 956 miles. The roads already in operation are all prosperous, and are realizing from 8 to 16 per cent. clear profits per annum. Thus is demonstrated the wisdom and importance of a proper system of improvements. Georgia after expending nearly fourteen millions of dollars is now twice as rich as when she commenced her noble enterprise.

Liabilities of Railroad Companies.

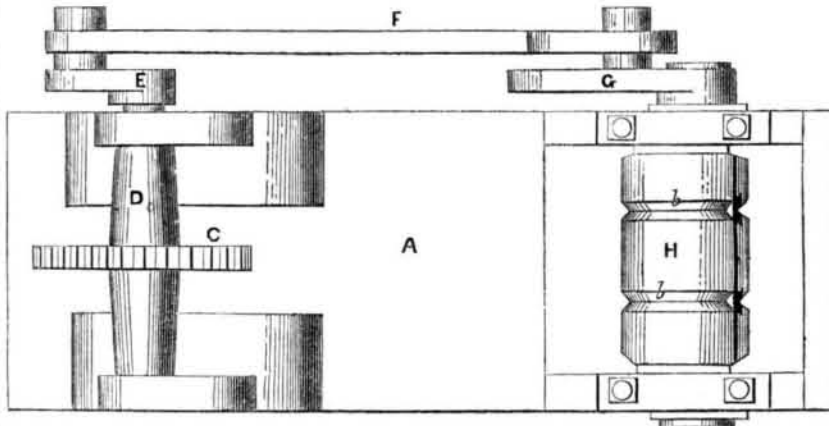
The Supreme Court of Massachusetts, by a second decision, have laid down the principle that railroad companies are not liable for a person, not a passenger, injured or killed while carelessly upon the track. Upon this question of law the case will go before the whole Court.

Artesian Well

Mr. Welton, says the Charleston Mercury of the 1st, has gone to the depth of one thousand feet and is now engaged in putting down his tubes to secure further operations. For nearly this whole depth, with the exception of a few occasional boulders, he has cut through a bed of marl. We have not seen the chemical analysis, but such is the appearance. His latest borings show a considerable increase of sand, and the rise of water above the surface is a very hopeful indication.

There are now sixty-five steamboats on the California waters. Three years ago there was not one.

SPIKE MAKING MACHINERY.—Figure 1.



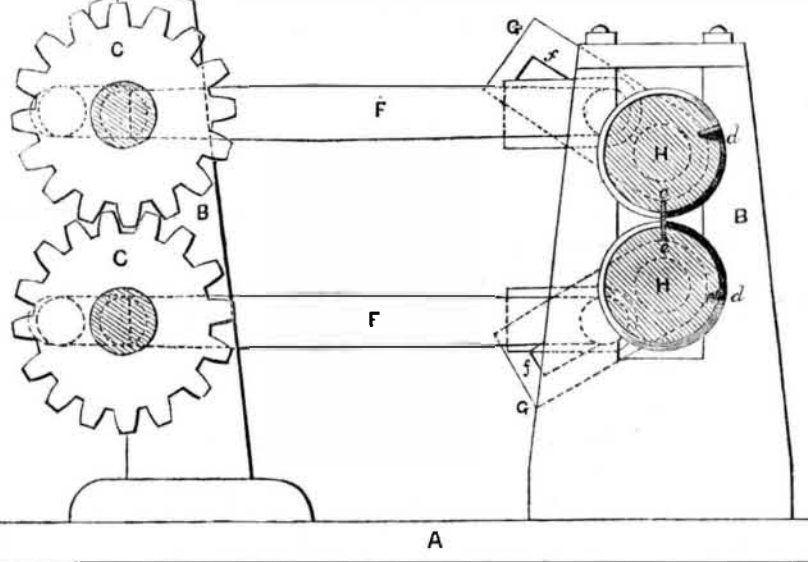
This is an improvement on Spike Making Machinery, by Mr. Thomas Rogers, of the Bergen Iron Works, New Jersey, who has taken measures to secure a patent.

Figure 1 is a plan view, and figure 2 is a side elevation, with one side of the frame removed. The same letters refer to like parts.

The two feeding rolls in this machine are also the forming and cutting rolls. They are provided with grooves running round their peripheries to form the shanks, and they have also indents to form the heads with knives to cut them off. Each roller may have any number of grooves, and these may be semi-round or consisting of the diagonal of a square, as the two in figure 1 is represented to be. Each roller has its groove made half the form, and the depth of the one in the roller above it, so that the two grooves coming together form the spike, bolt, or whatever it may be between them, by their united form and action. The two spike rolls do not revolve entirely, but have a semi-rotary motion, moving forward to form the spike and then back to receive another.

A is the bed of the machine; B B are uprights, forming the standing frame; C C are two cog wheels with shafts, D; they have their bearings in the uprights. These cog-wheels gear into one another, and may be driven by any convenient power, steam or otherwise; E E are two cranks keyed on the shafts, D, of the cog-wheels—one on each. These cranks are placed one above another, and are attached to connecting rods, F F; these connecting rods are connected to a kind of crank levers, G G, into the shoulders of which the outer ends of the spike rollers are inserted. These levers have slots, f f, in them. The cranks, E E, the connecting rods, F F, and the crank levers, G G, are of equal length and placed one above the other; it will therefore be observed that, as the cog-wheels, C C, revolve, their cranks will only give a semi-rotative motion to the rolls, H H, by the slotted crank levers, G G. The feed rolls, H H, are made with grooves, b b, running around them. These grooves receive the iron bars for the spikes. There is also an indent, d d, upon

Figure 2.



each roll; this indent is to form the head of the spike. The end of the bar, for the point, is fed in against a longitudinal ridge or division, e e, in the groove of each roller, and as it is rolled in and pressed in the grooves into the proper form, the indents, d d, meet together and press the iron into them, as into a sunk die, and the head is formed at the back of the heading die; there is a metal knife running across the groove, which cuts off the bar, and answers for a back to the header. When one spike is cut, the rollers move back and another is fed in. The slots, f f, allow the rolls to be altered so as to answer for the ma-

king long and short spikes, bolts, &c. The spikes may be pointed in any way most convenient. The connecting rods, F F, are secured to the crank levers, G G, at distances from the centre of the rolls exceeding the throw of the cranks, thereby causing the rolls, H H, to draw in between their grooves the heated rods of metal against the metal butts or ridges, e e, as shown in fig. 2. The stopping plates for heading will be observed at d d. When no heads are required for spikes, the rolls do not require to have the heading indents in them; therefore, one set of rolls may be made with grooves, to make more than one kind of spikes, and they can easily be set to work on any section of the

grooves, by altering the ends of the rolls in the openings of the slotted levers, G G.

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

To Make Good Mortar.

Sour together a quantity of lime and clean sharp sand, for two or three weeks before being used; work this well and turn it aside, and as the proportion of lime to the sand will always depend on the quality of the former, all that is necessary, is to take care (in souring), if the lime is of a rich quality, to put one-third less lime into the heap than it is intended to be built with; and if the lime is of pure quality, say only one-fourth less. It may here be observed that in general, lime of the proper quality is best for cementing building. When the lime which has been previously soured, as before directed, is to be used in the building, or otherwise, it is to be again worked carefully over, and one-fourth of quick-lime added in proportions, taking care never to have more in preparation than can be used in a short time; and this quick lime should be most completely beaten and incorporated with the soured lime, and it will be found to have effect of causing the old lime to set and bind in the most complete manner.—It will become perfectly solid without the least evaporation to occasion cracks, which can only ensue in consequence of evaporation; and this can only happen from the want of proper union between the two bodies. But by mixing and beating the quick-lime with the soured mortar, immediately before it is applied to use, the component parts are brought so near to each other, that it is impossible either crack or flaw can take place. In short, beating has the effect of closing the interstices of the sand, and a small quantity of lime paste is effectual in fitting and holding the grains together, so as to form a plastic mass, by uniting the grains of sand which otherwise would not fit each other. This system will apply to the lime mortar for all descriptions of work, whether for building, plastering in the inside or outside of houses, water cisterns, ground vaults, rough castings, &c.

Remedy for Burns.

Dr. Reese, late physician of Bellevue Hospital, New York, has been making experiments concerning the best mode of healing burns and scalds, and checking the acute suffering. He has found that flour, thrown on with a common dredging box, is one of the best and most efficient remedies yet discovered. The external air is one cause of suffering, and the flour thus applied, both heals and closes the wounds to the atmosphere. The edges of the wounds which remained open he dressed with lime and oil, applied by a feather. Dr. Reese says the above application made to wounds by fire, hot water, gunpowder, &c., has been most happy in the practice at the Hospital.

[We published the above once before in more extended form, and we do it once more, in a few words, to say that we have seen it tried with poor success.

Yankee Clock Business.

Mr. C. Jerome, of New Haven, Conn., manufactures upwards of five hundred clocks, of various patterns, every day, and the demand is equal to the supply. In the State of Connecticut, one thousand clocks are made daily. Within late years this Yankee clock business has wonderfully increased, and is very profitable. In England, Yankee clocks have superseded all others.

To Preserve Books from Insects.

Introduce into every volume some leaves of a pungent odor, such as rosemary, or submit them frequently to the vapor of oil of turpentine.