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Rail-Road News.

State Line Railroad.

The stock holders and others interested in the different lines of railway from Albany to Buffalo, have held a meeting recently at Syracuse, at which the subscription to the stock of the State line road from Buffalo to Erie was all taken, and the books closed. There was a spirited competition for the stock, and immediately after the books closed, it appreciated five per cent. The completion of the road is now secured. Its length will be sixty-seven miles, and it is to be finished by the first day of September next. One citizen of Buffalo took stock to the value of $50,000.

Vermont Railroads.

The Passumpsic Railroad, 61 miles in length, has been extended to St Johnsburg. The entire cost of construction and equipment is $1,650,000, making a little more than $27,000 per mile. The Vermont and Canada Railroad will, it is said, be completed to Rouse's Point in a few days. The cars now run to Missisquoi Bay bridge, which is only seven miles from Rouse's Point, and the iron is already laid over more than half this distance.

Albany and Buffalo Railroads.

The several railroad companies between Albany and Buffalo intend to run three daily passenger trains on their roads during this winter, and the fare is to be reduced on the route to $9,50—which is a discount of half a cent per mile on the present rates. The arrangement is to take effect on the 15th inst.

Tennessee and Georgia Railroads.

The ship India, from Pill, England, which reached Savannah, Georgia, a few days since, brought 3,208 bars of iron for the above named road.

Electro Magnetic Locomotive.

The Report of the Secretary of the Navy states that the experiments of Professor Page, in testing the application of electro-magnetism as a motive power, in mechanics, have been continued since his report, made in compliance with a resolution of the Senate in September last, by the virtue of the approbation of March 3, 1849, and he is now engaged in preparation for a trial trip of a locomotive on a railroad propelled by this power.

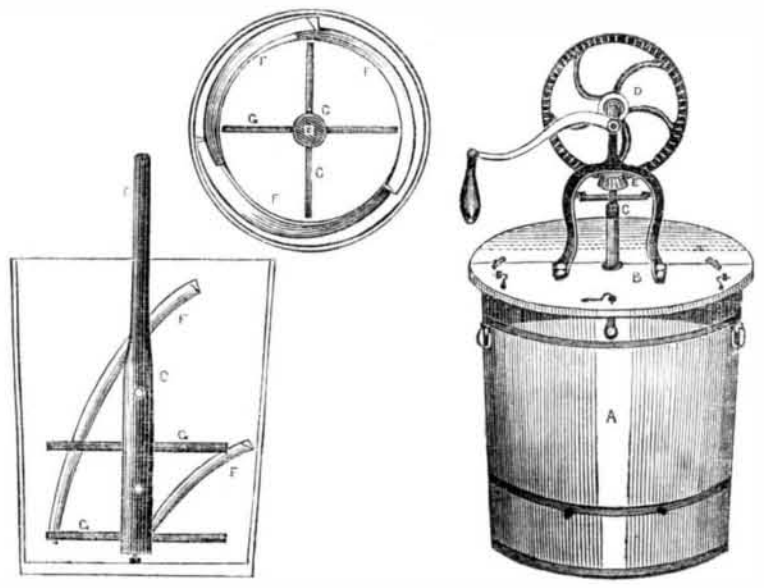
Round Wood Box Machines.

Mr. George W. Carleton, of Brunswick, Maine, informs us that Mr. Asa Fessenden, of Baldwinville, Mass., is the inventor of a "Round Wood Box Machine," one of which is running at Brunswick, by E. Byam & Co. He says, "it is a beautiful thing, and a credit to the ingenious inventor. It receives a wood bolt at each of the four corners, and cuts covers and boxes at the same time, and will cut six gross in one hour.

A Subscriber should read our articles in Vol. 5, on the sinking of lead in water. It will sink to the bottom.

NEW PATENT CHURN.

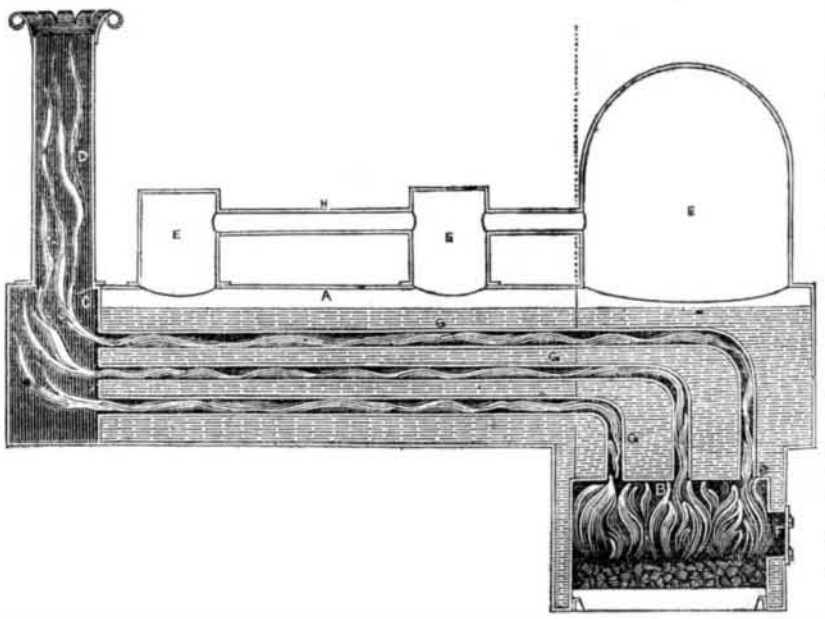
Figure 3. Figure 2. Figure 1.



The accompany engravings represent an improved churn, the invention of Messrs. George E. Gill & Joseph B. Tillinghast, of Chillicothe, Ohio, which was secured to them by patent on the 14th of last June.

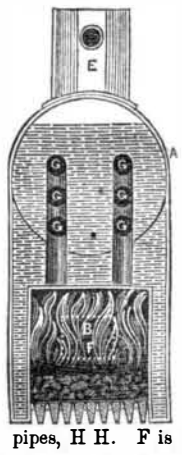
Figure 1 is a perspective view; figure 2 is plan view, and figure 3 is a vertical section, showing the interior. The same letters refer to like parts. A is the outside of the churn, which is made like a tube; B is the lid, it is made of two halves, which are secured together by hooks, to be easily taken apart. The lid sets snug on projecting pins in the upper edge or rim of the tube. It is required that the lid be solid and snug. A standard bearing is screwed to one half of the lid, to support a shaft with a bevel wheel, D, on it;—this bevel meshes into a bevel pinion, E, which is secured on the top of the dasher shaft, C. This dasher shaft has pins or arms, G G, secured on it; these are the agitators. This shaft has a journal at the foot, running in a metal step in the churn bottom. When the crank is turned, the large bevel wheel gives a great velocity to the pinion, consequently to the dasher. To the inside of the churn, there are secured projections or ribs, F F, these form the peculiar feature of the churn, and give a counter direction to the cream, when it is acted on by the revolving dashers, G G. Mr. Tillinghast, one of the inventors and proprietors, is now in this city, at Dunlap's Hotel, Fulton street, exhibiting the churn. On last Friday afternoon an experiment was made with it at our office, in the presence of quite a number of gentlemen; Mr. Tillinghast was the operator, and the experiment was conducted with good humor, and ended to the satisfaction of all present. Butter was produced in a little over ten minutes; and from the nature of New York cream, although we are opposed to betting, we undertook to wager a quarter of a peck of potatoes, that he would bring forth chalk instead of butter, but we were happily disappointed; a good lot of as beautiful butter as we ever saw, was produced in the time mentioned. This is a capital churn; it is simple (not an atmospheric one), and is easily operated. We cannot but recommend it as being simple, useful and durable.

IMPROVED LOCOMOTIVE BOILER.---Fig. 1.



This improvement on Boilers, is the invention of Mr. Samuel Bradly, Mauch Chunk, Pa., who has taken measures to secure a patent for the same. Figure 1 is a vertical longitudinal section, showing the interior; figure 2 is a transverse section. The same letters refer to like parts. The nature of the invention is the providing of tubes within the boiler, which form fire flues leading from the fire-box, curving upwards, but rising vertically for some distance above the crown plate. The main part of the tubes passes through the waist of the boiler, in a horizontal direction, and by the first part of the tubes being vertical, and then running through the boiler horizontally, a great length of tubular heating surface is obtained. A is the shell of the boiler; B is the fire-box, it is surrounded by water spaces which communicate with the body of the boiler; C is the smoke-box; D is the chimney or smoke-pipe; E E E are steam chambers on the top of the boiler, and are

FIG. 2.



united by the pipes, H H. F is the furnace door; G G G are the heating tubes—any number may be employed; they communicate with the fire and smoke-box, passing through the crown plate in front, and the inner rear plate behind. These tubes are curved at some distance above the crown plate, and then run horizontally to the smoke-box, as represented in fig. 1. The inventor proposes to employ about 75 tubes, of 2½ inches diameter, in a large locomotive. No further description of this boiler is required. The accompanying engravings convey a correct idea, at a glance, of it nature and construction.

More information may be obtained by letter addressed to the inventor.

Mosaic Gold.

Mosaic Gold, or Aurum Mosaicum, is used for inferior articles. It is prepared in the following manner: A pound of tin is melted in a crucible, and half a pound of purified quicksilver added to it; when this mixture is cold, it is reduced to powder, and ground with half a pound of sal ammoniac and seven ounces of flour of sulphur, till the whole is thoroughly mixed. They are then calcined in a matrass; and the sublimation of the other ingredients leaves the tin converted into the Aurum Mosaicum, which is found at the bottom of the glass, like a mass of bright flaky gold powder. Should any black or discolored particles appear, they must be removed. The sal ammoniac used here must be very white and clear, and the mercury quite pure and unadulterated. When a shade of deeper red is required, it can easily be obtained by grinding a small quantity of red lead along with the above materials.

Gold Powder.

Put some gold leaf, with a little honey or thick gum water, into an earthen morter, and pound the mixture till the gold is reduced to very small particles. Then wash out the honey or gum repeatedly with warm water, and the gold will be left behind in the state of powder; which, when dried, is fit for use.

Another, and perhaps better method of preparing gold powder is to heat a prepared amalgam of gold in a clean open crucible, containing a very strong heat, till all the mercury has evaporated, stirring the amalgam all the while with a glass rod. When the mercury has entirely left the gold, grind the remainder in a Wedgwood's mortar with a little water; and when dried it will be fit for use. The subliming the mercury is, however, a process injurious to the health.