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## Rail-Road News.

### Tunnel at Buffalo.

The Buffalo Courier gives the following description of a gigantic undertaking near that city:—

About the greatest object of interest in the vicinity of our city just now, is the Tunnel of the Water Works Company in the rock under the Erie Canal and the Black Rock harbor to the Niagara river, about half a mile beyond the city line.

The perpendicular shaft or well is about eight feet in diameter and thirty feet deep, nearly the whole being through rock. From the bottom of the well starts the Tunnel, which is nearly circular, and about six and a half feet in diameter, running nearly horizontally towards the bed of the river, which is distant about three hundred and sixty feet. A slight slope upward, as the Tunnel advances, allows the water which pours into it from springs or crevices in the rock, to run back into the well out of the way of the workmen who are engaged incessantly, day and night, in blasting the rock. They have now proceeded about two hundred and eighty feet from the well, progressing at about two feet per day. Only four of the miners employed are able to work at once, changing three times during the twenty four hours. The work is all done by lamp light.

The rock is soft and easily drilled and as yet no crevices have been found of sufficient magnitude to offer very considerable impediments to the work. The blasts are discharged about once in three hours, four charges being let off at once. When the holes are drilled to a sufficient depth and charged, all hands leave the hole to avoid the deafening roar of the explosions, and as a matter of safety in case they should open any watercourse connecting with the river, in which event the Tunnel would be likely to fill with water uncomfortably fast to people so far away from the external world.

At the mouth of the well the noise of the blasts is like the discharge of heavy artillery, and the earth and buildings are considerably shaken by the shock. The water which accumulates in the well is removed by two large pumps driven by a steam engine which is also used to lift the broken stone from the pit.

### Railroad Completed.

The Montgomery and West Point Railroad, in Alabama, having an extent of ninety miles, is finally finished. It is the first work of the kind ever completed in that State. It has already, it is said, poured into Mobile the grocery and cotton trade of a large number of counties in Georgia and Alabama, and has done, remarks the Montgomery (Ala.) Journal, more for Mobile than all other causes put together.

A walk before breakfast on these heavenly spring mornings, is conducive to health, and costs nothing but a little energy.

## WHIPPLE'S PATENT MACHINE FOR BRICK MANUFACTURING.

Figure 1.

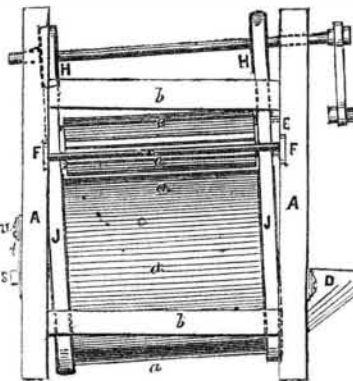
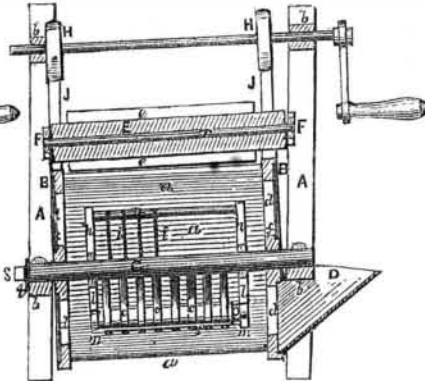


Figure 2.



The accompanying engravings represent an improvement in machinery for preparing clay for making brick, which is the invention of Mr. Heman Whipple, of Port Richmond, Staten Island, N. Y., and for which a patent was granted on the 6th day of last March.

Fig. 1 is a side elevation of the machine; fig. 2 is a longitudinal section; fig. 3 is a front end elevation; fig. 4 is a transverse section; fig. 5 is a diagram illustrating the crushing or pulverizing action. The same letters of reference indicate like parts.

The nature of this invention consists in the use of a revolving screen working on a stationary axis set at a straight inclination and hav-

ing attached to, or suspended from it, lugs or crushers which pulverize the clay, which is fed in at one end of the screen and is carried along by the rotary motion under the crushers and completely pulverized, whence it falls down through the apertures of the screen; the waste matters, such as had lumps, and which had been mixed up previously with the stock clay, are expelled at the back or lower end of the screen.

A A are uprights with cross ties, b b, forming the framing, a a a are metal bars forming the screen; these bars may be placed at any required distance apart. They are bound in a cylindrical form by the hoops, B B, which

Figure 3.

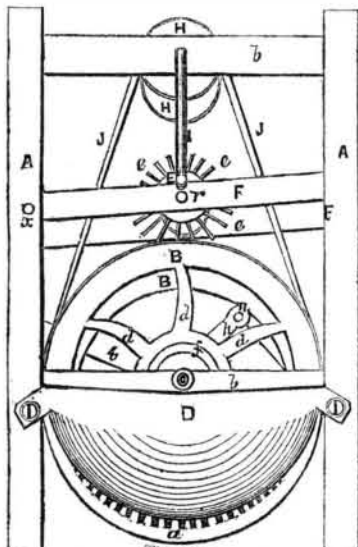
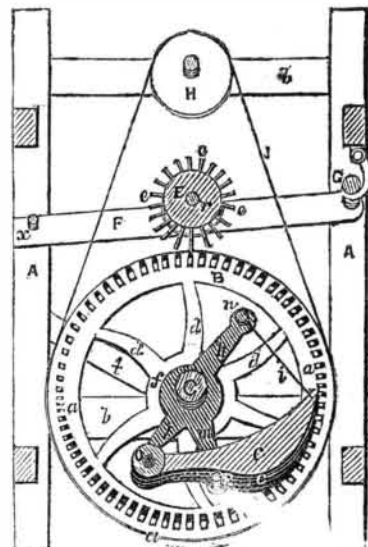
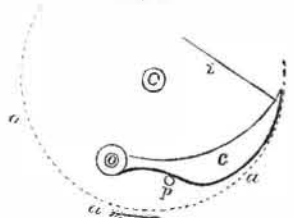


Figure 4.



have notches to receive the ends of the said bars. To the hoops, B B, there are attached arms, d d d d, connected with naves, f f, which form the bearings of the screen. The bars, a a, should be of such a shape in their cross section, and so arranged that any particles once entering the spaces from within between them, will readily pass off,—they are broader on their interior than their exterior

FIG. 5.



edges, thus making the outside width of their spaces greater than the inside; for this purpose bars of a triangular half round or any other appropriate shape may be used, with their narrowest face outside. The screen may also be made of a cylinder having slots corresponding to the spaces formed by the bars, a a. C is the stationary axis on which the

naves, f f, rotate; it rests on the lower cross-piece, b b, and is prevented from turning by its back end, S, being made square, and having an arm, t, fastened to the upright, A, by a screw, as fig. 1. The axis, C, is slightly inclined, thus giving the screw a slight dip towards its back end. On the axis there are secured arms, h h, l l, m m, (figs. 2 and 4), a is a cross bar connecting the arms, h h. H is a bar connecting the arms, l l, and p is a rod connecting the arms, m m; c c c c are crushers working on what is termed a hinged joint on the rod, O, at one end, while at the other extremity they are attached by cords or chains, i i i i to the bar, n, at their lower side by the rod, p. Either arrangement of the suspension chain, i, or the supporting rod, p, may be used so as to prevent the crushers, C, from rubbing on the screw; or both arrangements as represented may be used. D is a stationary hopper to feed in the clay. e e e e are pickers arranged radially round a small drum, E, which is keyed to the axis, r, working in either end in side levers, F F. The pickers are of nearly the same length as the bars of the screen and they drop into the spaces between

the said bars. The side levers, F F, are hung on a rod forming a joint on which to work; their other ends are connected by a bar, G, which is held by a hook, g, (fig. 4); H; H are pulleys driven by a lever handle, I, and they are secured on a shaft. These pulleys drive the screen by belts, J J, which pass around the hoops, B B, of the screen.

The stock clay is fed into the hopper, D, and is carried forward by the rotary motion of the screen (shown by the arrow) under the pulverizers, c c c c. These crushers are of such a weight that they squeeze the clay and pulverize it, yet owing to the way they are hung and supported, they yield or rise when stones are passing under them, so that no damage is done to the machinery, while there is sufficient crushing pressure to pulverize the proper clay and push it through the spaces of the screen. The several crushers are made of different sizes, shape or weight. Those at the mouth of the screen may be made so as merely to slightly crush the material, and the after ones made to pulverize it very fine—thus distributing the work gradually among them. The pickers, e e, may be thrown in or out of gear with the bars by lowering or raising the side levers, F F, working as a hinge joint on the rod, y. By unfastening the hook, g, (fig. 4,) the pickers enter the spaces between the bars, and as the screw rotates the picker roller rotates also, and thus they clear the screen of any soft clay that might otherwise adhere to it and choke up the spaces between the bars.

We have thus described this invention in such a way, we believe, that all who read carefully will understand. Its practical qualities are of a very superior order. More information about the sale of rights &c., may be obtained by letter addressed to Mr. Whipple, directed as above.

### Gas from Wood.

The Tribune of last Monday notices an invention, of Austrian origin, it seems, whereby it is stated that an eminent chemist in Vienna is said to have obtained gas from wood, and that the Railroad Depot at Munich had been lighted up with it. The invention is spoken of very favorably and at some length, and gas made from fir wood (pine) is made out to be much cheaper than coal gas. This is neither a new invention nor one that will be of any benefit to us. Every chemist knows that good gas can be made from wood, and we made experiments with hard maple, hickory, and Blosburg coal, in 1840, to test their different gas producing qualities, but the coal came paid for the trouble.

prim wood makes good gas, but then the quantity depends upon the rosin in the wood. The woody fibres which are mostly composed of nitrogen, give out no illuminating gas. It is much better to use rosin at once, at least for cheapness of material, as it saves freight, &c. It is stated that "when the discoverer announced his project every engineer and chemist declared it impossible." This, poetically speaking, shows how dark the minds of such men must have been.

### Stopping of Flour Mills.

The Missouri Republican of the 23d ult., states that in consequence of the prevailing high prices for wheat, and low rates for flour in that and the Eastern and Southern markets, some ten or twelve of the principal millers have resolved to stop their mills for the present.

Smoothing irons seem to be rather a late invention. About the time of Elizabeth and James the I., large stones inscribed with texts of Scripture, were used for the purpose of ironing.