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IMPROVED METHOD OF TRANSPORTING BRICKS DURING MANUFACTURE.

In the accompanying engraving, we illustrate a new method of transporting bricks about the yard, from the machine in which they are manufactured to the points at which the filled hacks are piled for drying and storage. The general design is to enable the work to be done more readily and rapidly, and with probably a less number of hands than is usually required. Before proceeding to describe the plan in detail, we desire to direct the reader's attention to the apparatus for manufacturing the bricks depicted in the foreground of the engraving. This machine has already been illustrated in these columns, but is here presented in a horizontal instead of an upright position. The clay is transported directly from the bed and at once dumped into the hopper, whence it passes to a pug mill, within which it becomes thoroughly ground, tempered, and reduced to a homogeneous mass of about the consistence of thick putty. Hence it passes to the molds which are formed in a mold wheel which revolves in face of the pug mill. A follower beside the wheel, traveling along an incline, forces each brick from its matrix with all the angles and faces smooth, sharp, and perfect, so that the brick as it emerges is deposited upon the endless belt, A. The various devices for conveying the bricks from this belt to their storage places will be found represented in the engraving and described in the following lines:

As the bricks are carried from the machine by the belt, they are removed from the latter by boys, who pile them six high upon the hack planks, B. The hack planks are board platforms constructed of three longitudinal boards, with suitable cross pieces and supports below, and resting on a series of fixed rollers which are inserted in socket rails, C, in the ground. After a hack plank is filled, it is easily slid over the rollers out of the way, and an empty one brought up in its place.

At right angles to the line of rollers over which the hacks are transported, and crossing said line, is an excavation which extends entirely across the yard. Running upon rails, laid in the bottom of this ditch, is a switch car, D, the platform of which is flush with the level of the ground, so that the filled hack planks are easily slid from the rollers directly upon said car. The latter is then pushed along until opposite the point where it is desired to stow the hacks. Tracks are laid from such points in sets of three, and terminate at the edge of the excavation, and upon them are trucks, E, which consist of frames wider and higher than the hacks, and provided with a hand windlass, chains, and grappling hooks. As soon as the switch car is in place, a truck is run directly upon it and over the hack, the hooks are caused to catch beneath the latter, and then, by turning the windlass, the hack is raised from the ground. The truck is readily pushed by one man along the track to the point at which the hack is to be deposited, when the latter is let down by the windlass and detached from the truck, which returns for a new load. The truck runs on either pair of the three tracks so that the latter allow of the storing between them of two rows of brick.

The saddles, as represented at F, are stowed between the sets of track during the drying of the bricks. This completed, they are placed, as shown, in the distant heaps upon the tops of the piles.

In manufacturing brick on a large scale, the matter of removing them from the press and stacking them in a convenient place, without unnecessary handling, is a very important feature; and the arrangement, patented by E. R. Gard and shown in our illustration, seems to accomplish this object admirably.

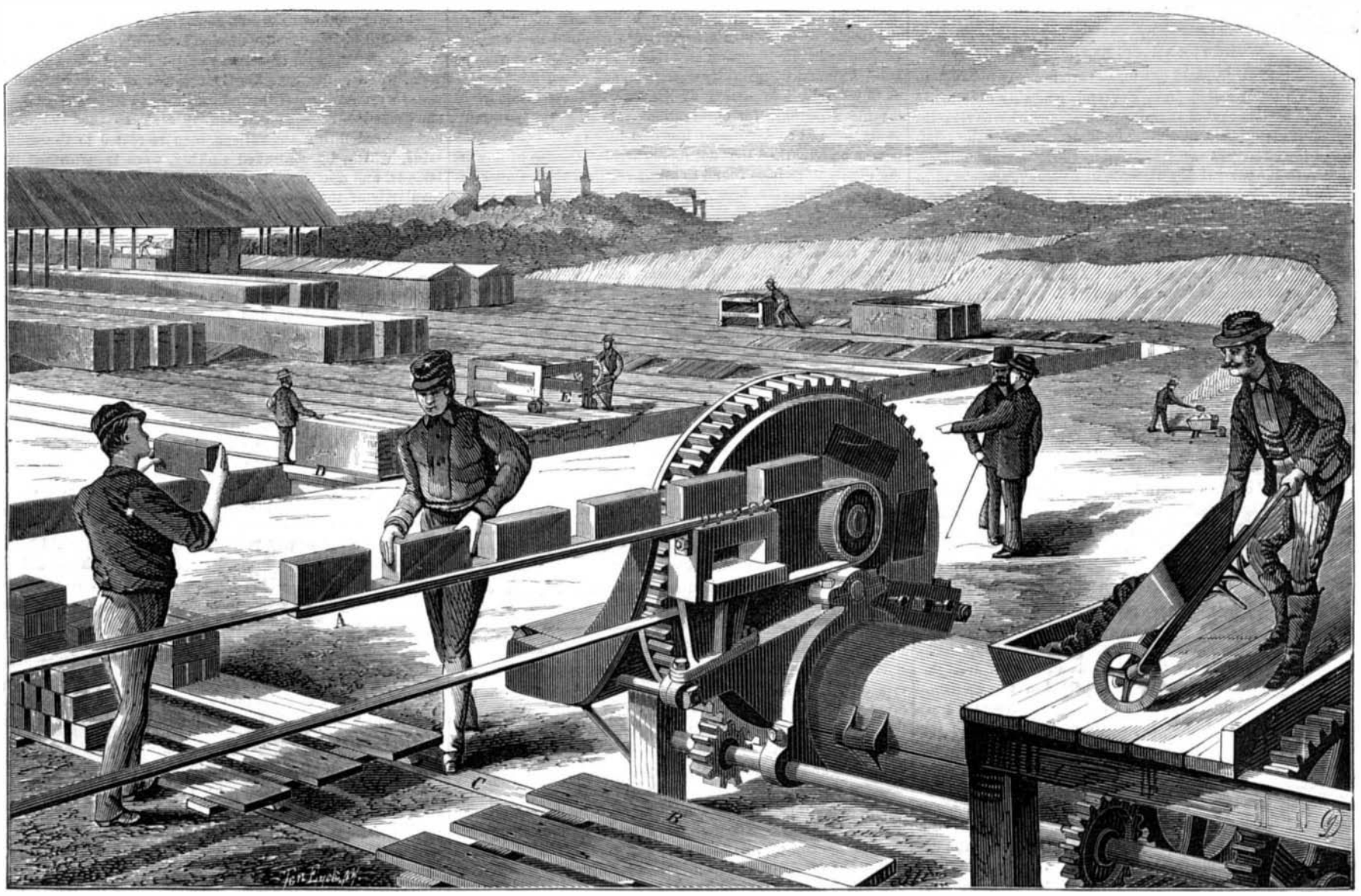
Further particulars may be obtained by addressing the Great American Brick Company, 260 Eleventh avenue, corner West 27th street, New York city.

The North Polar Region.

In an article upon the occasion of the sailing of the new British discovery expedition to the north pole, the London *Times* says:

"So what we really begin this 29th day of May, 1875, is in all probability a progressive series of operations for the discovery of this planet's most intractable and inaccessible quarter. At present there lies within a few weeks of us, and right between us and inhabited continents, a circle, 1,400 miles across, of which we know not even whether it be land or water, or in what respect it is affected by some conditions wholly different from our own. Is it anything more than a great refrigerator for the production of cold—that is, for the absorption of heat? If water preponderate there, then the cold need not be so extreme as we imagine; and just as the equator is not everywhere hotter than the tropics, just as the eastern hemisphere is warmer by 10° in north latitude than the western, and the northern hemisphere very much warmer than the southern, so even the arctic circle may have the benefit of some genial influences. It has at least half a year of continuous day. What if it be found sufficiently habitable for the establishment of stations in which the production and economy of heat will be the only serious difficulty? Science is sanguine, but it confesses itself to be hoping against hope as to the matter of its expectations. An animal or two, seeds that can stand any cold, some of the lowest forms of vegetable life, and perhaps organisms in the sea, the possible revelations of an atmosphere completely clear of aqueous disturbance, figure prominently in the catalogue of hope. If, as is suspected, there be ingredients in the earth's atmosphere too subtle for chemical analysis, the spectroscope may detect them in a region where humidity no longer embarrasses the question. Then what is the aurora? Is it of earth, or of heaven? Is it meteoric? Is it cosmic? Does it reveal a universal medium? Is it a magnetic phenomenon? At about the 70th degree of latitude the expedition will reach the other side of the magnetic pole, and will have to steer by rules the contrary of our own, and becoming more and more complex till the needle points finally to the center of the earth. At the pole not only the compass, but even the sun, moon, and stars will cease to be available for the usual purposes of observation; that is, if anything should happen to the chronometers, for all will then depend on the preservation of Greenwich time. The forlorn hope told off for the pole will have to mark its track very carefully if it would be sure of retracing its course back again. The geologists, ethnologists, and palæologists fret at their exclusion, but they must admit their chances would be small indeed. They can wait, at all events. Perhaps the one hope widest felt and deepest is that of something unknown and unconjectured. Who would have guessed a few years ago that the interior of Africa was populous and delightful, that the ocean was full of life and undergoing change, or that the elements and fabric of the sun would yield to analysis? The expedition is a lottery, in which we know too well there are blanks, but in which there are sure to be some prizes, perhaps one or two great ones."

FERMENTATION of food should be guarded against as the warm weather approaches. This action is always liable to cooked vegetables when set aside. Instead of warming up cold messes, it is better to scald them.



GARD'S BRICK MACHINE AND TRANSPORTING APPARATUS