

Improved Brick Machine.

This engraving represents a new brick machine of that class where the clay is placed in the pug mill and forced down by the mixing knives to the bottom, and then into the openings, A, in the mud boxes. From the mud boxes, by means of plungers operated by a crank on the main shaft, it is forced through openings in the front of the boxes on an endless band, B, the strips of clay corresponding in size to the bricks. The thickness of the strips of clay is varied by set screws raising or depressing the hinged die plate.

The molds, C, descend as soon as the strips of clay cease to move, and cut through them on to the endless band, underneath which is placed a strong stationary table. The molds are then held firmly down on the table. In case the molds strike a stone or other hard substance, in cutting through the clay, the springs, D, are so arranged that they yield and prevent any part of the machine from being broken. While the molds are held down on the table the followers are forced down and press the bricks. The pressure on the bricks is varied by set screws, E.

The molds and bricks are then all raised together, and the bricks are forced out of the molds by the followers on to racks, F, to be removed. The molds are operated up and down by levers connected with an inclined circular track on the main shaft, so that it requires but little power to produce a great pressure on the bricks.

The machine is so constructed that while one set of molds are forming and pressing bricks, the other set are delivering the bricks on racks.

The bricks are pressed sufficiently hard to be handled without marring, so that only racks for one day's work are required.

The machine is also well adapted for making drain tile; the only changes required are to disconnect and remove the molds and place dies of any suitable size in the front of the mud boxes, then arrange a bed of rollers for conveying the tile to be cut into suitable lengths.

The machine is simple in construction, weighing about 2,500 lbs. It is worked by two horses, and will make from 20,000 to 30,000 bricks per day.

Patented July 30, 1866, by E. P. H. Capron and James F. Winchell, Springfield, Ohio. For rights or further information address Capron, Winchell & Co., Springfield, Ohio, or Baker & Short, General Agents, Columbus, Ohio.

Belladonna an Antidote for Opium.

A correspondent, a professional physician, in a letter to the *Medical and Surgical Reporter*, details the circumstances of a case where the patient had taken three ounces of opium tincture, or laudanum, which had exerted its effects three and a half hours. Fluid extract of belladonna was then administered in doses of twenty drops every ten minutes, which, in twenty minutes, arrested the progress of the opiate, and in about eight hours the patient was so far recovered as to sit up and converse. The writer says he is sure that belladonna saved this man's life.

Inflammability of Coal Gas.

Numerous accidents have occurred, especially in the destruction of vessels carrying bituminous coal, from the generation of an explosive and inflammable gas. An English exchange, in noting the fact, recommends thorough ventilation of the cargo as the proper remedy. It is a suggestion worthy of attention. A lantern taken into the hold of a vessel loaded with bituminous coal, which has been kept for days and weeks confined, not unfrequently

sets the ship on fire and causes the destruction of life. If a combustible gas, similar to the "fire-damp" of the miner, is generated by the confinement of coal in a ship's hold, the proper remedy is certainly proper ventilation, which can be easily secured by the introduction of pipes, perforated where they pass through the mass, and extending above the deck. If these vertical pipes are connected near the bottom by a horizontal tube, and the forward opening is provided with a funnel like that of a

River Falls, Wis., to whom apply for further particulars.

The Influence of Science.

The address of Gov. Andrew, before the Agricultural Society of Vermont, will well repay perusal, characterized as it is by the depth of investigation and exactness of information which we should be led to anticipate when emanating from such a source. His statements in relation to the agricultural and mechanical interests of our country are worthy the consideration of every one. The statistical information is of great value; figures are stubborn facts which no subtlety of argument can overthrow, their possession furnishes a power which no opponent is able to gainsay or resist, while the acquisition of such power cannot fail to be both pleasant and profitable when presented in the engaging manner of the address before us.

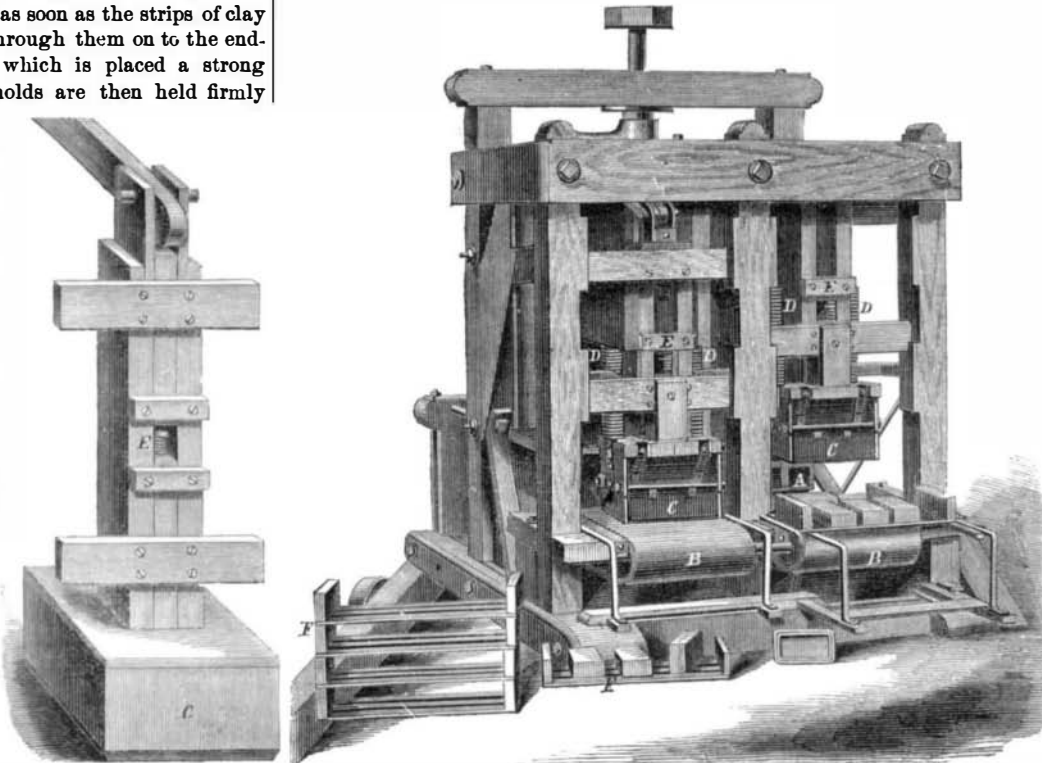
Among the important points brought forward, the following remarks on the value of improvements in machinery seem eminently just: "The activity, the ingenious cunning and the aspiring enterprise of American mechanical inventiveness—have made mankind its debtors, increasing supply, cheapening cost, relieving the hardships of labor, and doing its part toward the amelioration

of man's estate. Our own manufacturers introduced the production of heavy cotton fabrics, by the application of the least amount of labor to the greatest quantity of raw material, producing a description of goods cheaper to the consumer than any before existing. They were followed in this, not led, by the manufacturers of England, by whom even the characteristic name of the American article was adopted for their own imitations spun from the cheaper cotton of India. They have assisted in the reduction of the cost of fabrics to the consumer, so that cottons, selling in 1816 for 30 cents the yard, cost but eleven cents in 1846, since which, until the rebellion, they have vibrated with the price of cotton, between seven cents and nine cents the yard.

"One single cause, namely, the application of science to the arts, is seen in the development of manufactures by the highest mechanical agencies. It has brought together the remotest parts of the land; it has restored waste land and bogs, by drainage, by agricultural machinery, and the intelligent adaptation of crops and fertilizers. It is seen in manufacturing and agricultural machinery, in civil engineering, in the construction of bridges, locomotives, cars, steamers, and railways, in the treatment of soils, the management of breeding, the rotation of crops, and the composition of fertilizing materials, and in all the thousand manipulations of practical husbandry.

"I deem it not too much to affirm that the national existence is due this day to our agricultural and mechanical strength as developed by the science of modern times. At any previous stage of the world, I see not why an enterprising and obstinate foe, operating on interior lines, and within a territory so vast and so defensible, might not have maintained himself with ultimate success against an invading army three times as numerous as his own. Bringing to our aid the appliances and enginery of modern science and art, these conquered, by overcoming the obstacles of space and time."

At the late Nottingham meeting, the British savans gravely listened to the reading of a paper by a certain Lord, on the raising of weights by the swelling of soaked peas.



CAPRON AND WINCHELL'S BRICK MACHINE.

wind-sail, the mouth opening forward in the direction of the vessel's course, and the other pipe having an opening astern, a current would be generated which might safely convey the deleterious gases to the external atmosphere. The subject is worthy more attention than has heretofore been bestowed upon it.

NEWBURY'S SHOE CLEANER.

Every person has experienced the inconvenience of not being able to remove, by the usual means, the dirt and mud adhering in the crevices between



the upper and sole of a boot or shoe. The simple apparatus shown in the engravings is designed to obviate this trouble. It is a clamp of cast iron, A, the two jaws hinged, and the whole secured to the door step or the floor of the entry by screws. A brush or broom of semicircular form is placed between the jaws and secured by the thumb nut and bolt, B. When worn, the brush can be easily replaced by another. No further explanation is necessary, as the contrivance will commend itself to the approval of every housekeeper.



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