



## LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending May 29, 1849.

To Daniel Dunham, of Pawtucket, R. I. for improvement in Cooking Stoves. Patented May 29, 1849.

To Horace Halbert, of Oneida, N. Y. for improvement in Cooking Stoves. Patented May 29, 1849.

To Charles Perley, of New York City, for Direct and Counter-motion Winch. Patented May 29, 1849.

To Charles Rogers, of Bridgewater, Mass., for improvement in machinery for cutting Welts for Shoes. Patented May 29, 1849.

To D. N. Ropes, of New Haven, Conn. for improved method of attaching the tang to the handle of Table Cutlery. Patented May 29, 1849.

To Devolt Stetlemeyer, of Hancock, Md., for improvement in Bedstead fastenings. Patented May 29, 1849.

To Wm. H. Willcox, of Tarrytown, N. J. for improvement in Boring machines. Patented May 29, 1849.

To L. Augur & J. L. Lord, of Chester, Conn. for improvement in stops for Carpenters Benches. Patented May 29, 1849.

To G. W. Fulton, of Baltimore, Md. for improvement in Pumps. Patented May 29, 1849.

To John Wilson, of Gentsville, S. C. for improvement in Looms. Patented May 29, 1849.

To Lorenzo Smith, of Easton, Mass. for improvement in Gates. Patented May 29, 1849.

## Precious Metals.

From Comstock's "History of Gold and Silver," we take the following "estimated amount of the consumption and use of the Precious Metals in the United States for other purposes than coin :

Silver tea spoons, :	:	\$36,000,000
Silver table spoons, :	:	27,000,000
Silver table forks, :	:	4,500,000
Plate dining service, :	:	5,500,000
Gold watches at \$16, :	:	16,000,000
Gold watches at \$8, :	:	8,000,000
Silver watches at \$2, :	:	4,000,000
Communion silver, :	:	1,229,416
Gold pencils, :	:	2,000,000
Silver pencils, :	:	1,200,000
Silver spectacles, :	:	150,000
Silver thimbles, :	:	450,000
Gold spectacles, :	:	2,000,000
Gold watch keys and seals, :	:	150,000
Silver pitchers and tea pots, :	:	2,000,000
Silversugar bowls and tumblers, :	:	1,000,000
Waiters' coffee pots, :	:	1,000,000
Gold finger rings, :	:	16,750,000
Gold bosom pins, :	:	14,000,000
Gold chains, :	:	12,000,000
Gold beads, :	:	4,000,000
Gold thimbles, :	:	1,250,000
Gold bracelets, :	:	3,000,000
Gold lockets, :	:	1,000,000
Gold pens, :	:	250,000
Gold leaf, :	:	404,000
Gold foil, :	:	180,000
Total, :	:	\$165,013,416

## New Inventions.

Who can count 'em? Who can number the hours of labor saved by them? Who can measure the stretch they have made in articles of comfort, of necessity, and luxury.

Without the least surprise we hear of worlds which have never been seen or never can be, and we presume to affirm their exact position. We talk with our friends, while thousands of miles intervene, and query when the telegraph to Europe will be contrived. We never think of being astonished at seeing a man's shadow caught and fastened to a metal plate, so as to be visible a whole life-time.

Who would have dreamed of this twenty years ago:

## The "Ten Hour System."

Messrs. MUNN, & Co.

As the tone of your paper for the past year evinces, you must be included amongst the advocates of the ten hour system. You at one time recommended a convention of manufacturers to meet and unite upon a plan for adopting this system throughout the country; and it would have been well had your suggestion met with a prompt response.

The utter folly of Legislation on this subject, without the decision of such a convention as the basis of action must be apparent to any one who has reflected at all upon this question. Whenever a law becomes coercive in its provisions, to the prejudice of parties most largely interested in its operations; it fails of every beneficial effect.

A law should regulate, not control public sentiment. And how can the sentiments of the laboring classes, regarding the ten hour system be properly known and expressed? Certainly not from brawling demagogues, who wish to make political capital out of their pretended sympathy for the working man, neither can they be gathered from the acts, or expressions of the ringleaders of a "turnout" for these are generally British operatives, who have brought to this country all the venom which a long system of oppression and mismanagement have engendered in the bosom of the employed against the employer, and which is constantly belched forth until every mind in contact with them becomes poisoned with their false sentiments.

A convention of manufacturing Agents and Superintendents could alone fix upon the proper plan to give universal satisfaction, and which could be generally carried out. What a sublime spectacle such a convention would present! When we see the employers meeting to discuss measures for securing the comfort and well-being of the employed, in connection with the profitable management of their business, we may expect to find much of the unnatural jealousy existing between the two classes done away with.

The high wages hitherto paid to operatives in this country have kept us comparatively free from such collisions between them and the owners of mills as have taken place at different times in the manufacturing districts of Britain.

But we cannot blink the fact, that there has been a tendency towards the same unhappy state of things in our own manufacturing towns and villages.

This, as already intimated, may be partly owing to the influence of British operatives scattered amongst our manufacturing population, but principally we conceive to the real evils of the British manufacturing system, insinuating themselves constantly, but by gradual and imperceptible degrees into all our establishments.

The worst feature of the British manufacturing system is the entire dependence of the operatives upon their wages in the mills for subsistence, and the consequent necessity of their compliance with all the arbitrary regulations of the owners, especially in regard to the number of working hours. But the law of the land steps in and protects the operatives in this particular. The hours of labor in all manufactories have long been limited by act of parliament to 69 per week. And recently the ten hour system has been adopted with entire success as far as we have been able to learn. The hours of labor in the Eastern States of this country are 73½ per week, and in the Southern and Middle States many of the mills work 82½ hours per week. Yet in the face of these facts our operatives have always compared to advantage with those of Britain. An explanation of this apparent contradiction is to be found in the fact that our mills have hitherto been principally operated by farmers' sons and daughters who have always had good homes to which they could go in case of any dislike to the factories, or at which they could spend a few weeks or months in each year recruiting impaired health, without expense. I am confident that the girls in our Eastern mills have never averaged 10 hours per day through the year. The demand for factory help having always been greater than the supply, all who felt inclined to give up their places in the mills, have been sure of

finding employment whenever they might choose to return.

Such a system would be more desirable than a ten hour system, but the dependency of our operatives upon manufactories for the means of subsistence is constantly increasing; immigration as well as natural tendency of things contributes to the separation of the manufacturing and agricultural population. And the more complete this separation becomes, the more is the former dependent upon employment in our manufactories. Had the laws of Britain not interposed for the benefit of her manufacturing population they would have had to endure suffering with which those now experienced are not worthy to be compared.

Yet the very same evils, to avert which the laws of Britain in regard to the hours of labor were enacted, are staring us in the face, and the question with every candid person interested, is not whether our hours of labor shall be limited to ten per day—but how shall this be effected without demanding an unreasonable sacrifice of the capital embarked in manufactories. It were mere presumption for any one person to answer this question with confidence. It needs the united wisdom of our best men from all the States of our Union assembled in convention, to determine this question. What has been effected through the acts of parliament for the British operative, cannot be done under our peculiar government where every State is independent of another in the operation of local laws. And the manufacturers of one State running their mills 10 hours per day, can never compete with those in a neighboring State running 12 hours per day. It would not be expedient to introduce the 10 hour system suddenly into our manufacturing establishments. It ought to be brought on gradually during a period of at least four years, diminishing the hours where 12 is the usual number one half hour each year. Even this plan would be unwise in the present depressed state of manufacturing business. It could only be introduced in the event of adequate protection under a wisely framed tariff law. W. M.

## The Use of Lime in Building.

The following is an extract from the address of P. A. Browne, Esq. before the Society for the Development of the Mineral Resources of the United States in Philadelphia, and published in the Ledger of the 1st. inst.

1st. From the time that the lime is drawn from the kiln until it is slacked, it should be kept in a dry and tolerable close place. The reason is this, the burnt lime being anhydrous has a constant tendency to abstract moisture and perhaps carbonic acid gas, from the atmosphere, and by so doing, to undergo a premature chemical change.

2d. A practice has been introduced into this city and elsewhere, particularly when about to make plaster, of suddenly drowning the lime in an excess of water, instead of gradually supplying that liquid as the operations of slacking slowly goes on, and of limiting the quantity of water to that which is sufficient to form a paste of consistency of clay prepared for the potter's wheel.

Some of the best writers upon cements condemn this practice of drowning the lime and suddenly checking its temperature, in unmeasured terms; and it is confidently believed that if our architects, builders, bricklayers, and plasterers, would exercise a little of that good sense for which our operatives are so justly renowned, that it would soon be abolished.

III. Of the mixture of the slacked lime with an inert substance to form mortar.

The inert body ought not to be added to the lime until (the lime,) is entirely slacked, which may be known by it becoming cool.—So far as my observation goes, the sand or gravel are often added while the lime is yet hot.

1st. The inert body should be of a good quality.

2d. It should be supplied in a due proportion. Of the abuse of the first, we have a striking example in the use of sand from the sea shore the moisture of which holds in solution the chloride of sodium.

After the great fire in New York, it was the subject of general remark that, the bricks

of many of the walls which fell or were pulled down, were as free from mortar as the day they were drawn from the kiln; and persons of knowledge and experience attributed it to the mortar having been made with salt sand. This doubtless, was one cause, but there may have been others, viz.: that the bricks were too dry when laid, and the lime of a bad quality.

The rule laid down for the proportions of lime and the inert body, in order that the mortar may be of the best quality, appears to be a very sensible one. It is this, that so much and no more of the lime must be used as is sufficient to fill the interstices between the grains of the inert body. If too much lime is used the particles are not allowed to come into that complete contact, which, as it is believed, is best suited for their crystallization. If there is not lime enough to fill the interstices entirely, the mortar will be porous and weak. I am informed that the practice, in this vicinity, is to mix 1 1-4 bushels of lime with 1-4 of a team load of gravel, (a team load being 39 square feet) and 2 bushels of lime to a one-horse load of sand, i. e. to 21 square feet. What is the rationale of this practice? Those who follow it do not seem to be well informed; but it would be easy and exceedingly useful to experiment upon the subject. In the mean time, by filling a vessel of a given capacity with the gravel or sand about to be used, and then pouring into it, from a graduated measure, as much liquid as would exactly fill the interstices, a tolerable idea of the quantity of slacked lime that it would require, might be obtained.

[Houses should never be built in frosty weather. The best way to slack lime, is to gather it in a heap, wet it gradually with water and keep covering up the sides with sand, like a charcoal pit, and when it has received as much water as will reduce it to powder, then it should be entirely covered with the sand and left undisturbed for about 10 hours. After this it should be mixed with the sand by water as it is required to be used. This we know to be a good plan but it is seldom followed after in our city.—[Ed.]

## An Iron Stomach.

The following story purporting to be an extract from a work published some time since in London, entitled 'The principles of Medical Psychology,' is rather singular though it appears quite indigestible:

"Urban Fedad was a lunatic confined at Gratz, in Germany. One of his morbid conceptions was, that the stomach must always be strengthened with iron. He was seized with violent inflammation of the œsophagus, which nearly proved fatal. He recovered however as soon as he could speak, asserted that he had swallowed the blade of a knife, which was not credited. In November 1829, he was again taken ill, and died on the third day. On opening the body there were found 7 oxidated lath nails, each 2 1-2 inches long; 33 nails 2 inches long, some blunted by oxidation, some pointed and large, and 49 smaller nails and rivets; 3 pieces of wound up iron wire; an iron screw one inch long; half a knitting needle; two iron tobacco pipe cleaners; a brass hat buckle; part of the blade of a knife 3 inches long, which was quite blunted on the edges and at the point by oxidation; and lastly a roll of lint about the size of a hazelnut. The total number of articles amounted to 100, and weighed about twenty ounces. The stomach was very much drawn down, but not perforated. Judging from the state of oxidation, it was concluded that many of the above named contents had been retained a couple of years in the stomach, and that probably many pieces of iron had passed through this man's body."

## Pyramids of Egypt.

The pyramids of Egypt are supposed to be more ancient than 3000 years. The largest of these is 499 feet high, and has 693 feet each side, at its base, the foundation forming an area of 480,000 square feet or 11 acres of ground. The building of the pyramids is supposed to have employed upwards of 300,000 workmen for more than twenty years, and they have always been ranked among the wonders of the world.