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High Temperature Procured from Carbon.

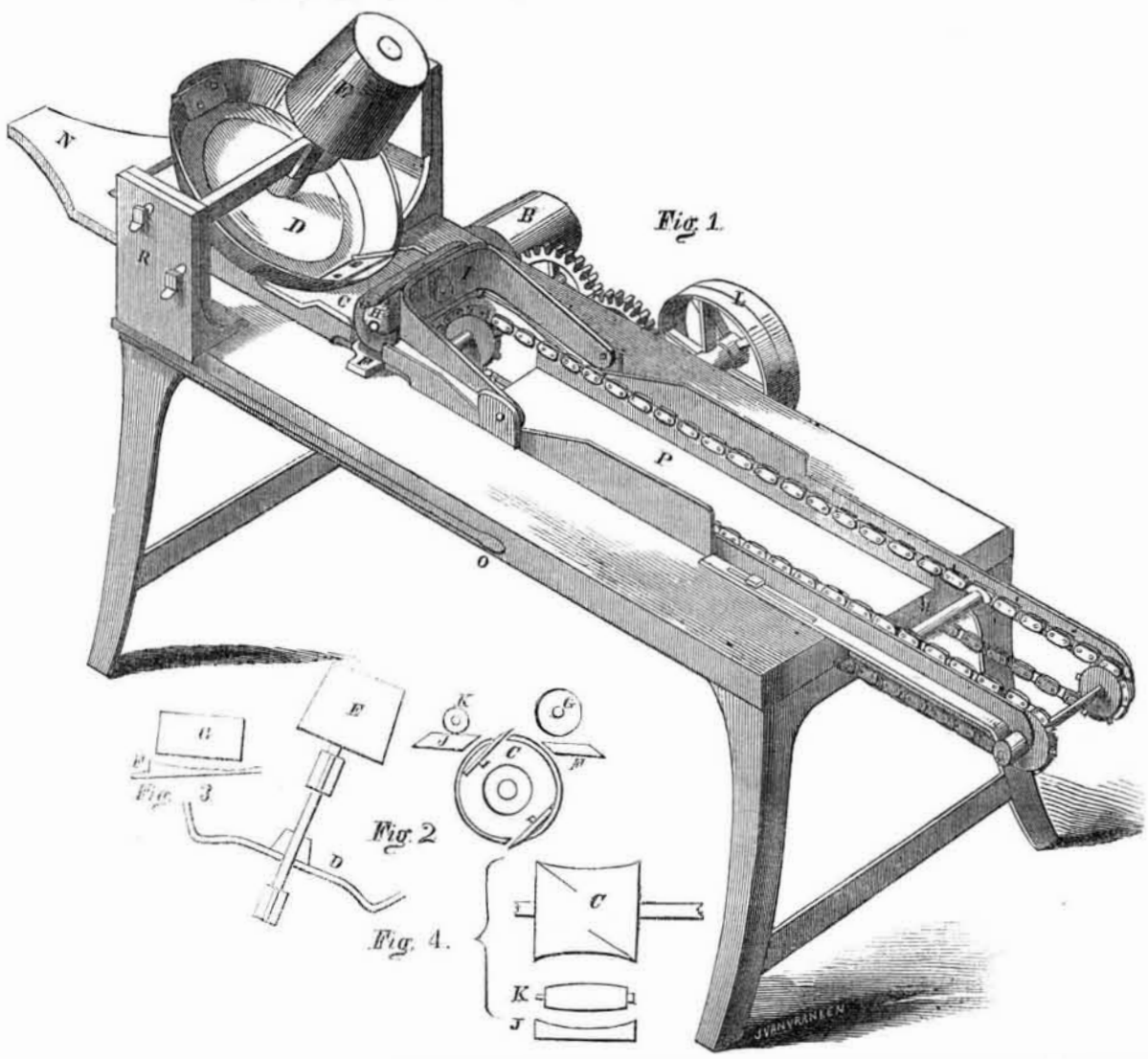
The following communication has been made to the French Academy by M. Deville. "It is well known that near the tuyeres of blast furnaces, a very elevated temperature is developed, which M. Eblemen considers to be equal to the melting point of platinum. Some experiments made in the course of an investigation, although different, have led me to believe that the heat developed during the combustion of carbon, is capable of producing effects much more energetic and comparable with those obtained by means of a mixture of hydrogen and oxygen. Thus, by a suitable arrangement of the furnace, and with the proper kind of carbon, it is possible to melt and even to volatalize platinum and to melt pure silica. These results, and the simplicity of the means by which they may be obtained, have convinced me that they will become useful to the chemist and manufacturer. I have therefore decided upon submitting to the Academy the details of the operation, which, I trust, will not be found unworthy of attention. The apparatus which I employ is a simple furnace, 30 centimetres high, and 18 centrimetres diamet r, supported on a plate of cast iron pierced with holes, arranged in a circle 5 centimetres from the centre. This is placed in connection with the bellows of a portable forge. The best kind of crucibles melt down at the temperature in question, to a perfectly liquid glass, and for a substitute I was obliged to have recourse to pieces of well burnt lime, which may easily be brought into the shape of thick crucibles. Their covers are likewise made of lime. M. Berthier observed that hydraulic limes were readily fused at a high temperature, and I have found they very frequently agglutinated. It is, therefore, indispensable to employ a somewhat porous lime.—With regard to the combustible, it must be very porous and in a state of very fine division; and I should add, that I succeeded only when I made use of the residue of the imperfect combustion of coal, the clinkers mixed with cinders which fall from the grate of the heating apparatus and still at the Ecole Normale, passed through a wire sieve. With coal of the best quality, in very small particles, the effects are much more feeble, and do not differ from those which have already been obtained."—[Comptes Rendus.

Painter's Colors.

At the last meeting of the Society of Encouragement of National Industry, in Paris, President Dumas proposed that the section on fine arts should undertake to ascertain the colors which are used by the most distinguished painters. He is of the opinion that the colors employed in painting have a great influence on the value of pictures, especially as to their preservation of the flesh tints and local colors. A member of the society, a painter, has already shown that Rubens never used more than nine kinds, and in some instances only seven, with which he composed all the other colors.

Inunction, or anointing, is said to be a successful mode of treating scarlatina, relaxing, as it does the skin, adminishing the heat, and in some cases causing perspiration.

ELLIOT'S RIVED STAVE DRESSING MACHINE.



The annexed figures illustrate a machine for dressing rived staves, invented by J. D. Elliot, of Leicester, Mass.

Figure 1 is a perspective view; fig. 2 is a sectional view, showing the relative positions of the principal cutting parts, and feed rolls. Fig. 3 is a sectional view of the inclined bed with catch teeth on the face, and with the swiveled roller, G. Fig. 4 is an end section view of the concave bed, J, and the roller, K, over it. The same letters refer to similar parts.

A is the table; B is a pulley, to drive the lower concave cutter head, C. D is the top or diagonal cutter head. E is the pulley which drives it. F is an inclined bed. G is an adjustable roller, resting upon the bed, F, and hung in a swiveled frame, H and I, and is held down by springs or weights. L are pulleys on a shaft for driving the endless feed chain. M is one of the bars connecting the feed chains; N is a plate for the stave to run out upon. O is a lever to guide staves that have a short crook near the end. The transverse position of the knives is shown in fig. 2, C being a side view of the concave cylinder. The roller, K, rests upon the concave bed, and is held down by springs or by weights.

Operation—When the machine is in motion, place an undressed stave between the chains and upon the post of the table, marked P, and place the end of the stave against the bar, M, which will pass the stave along endwise over the inclined bed, F, and under the swiveled roller, G, as shown in figs. 1 and 2. The knives in the concave cutter head, C, will round the lower side of the stave, and the knives in the diagonal cutter head, D, will hollow the top side of the stave, and pass it over the concave bed, J, and under the roll, K. Another undressed stave is then placed upon the bed, P, and the succeeding bar, M, will carry it along. The feed chain carries the first bar, M, down in front of the bed, F, and the ends of the staves coming together, the second will shove the first one through the machine. If the stave is crooked, take hold of the end of the stave and bar with one hand and lift it up, so that the other end of the stave will lie flat on the top of the bed, F; when the stave has passed under the roll, K, fig. 2, it is let go; the bar, M, will not then slip off, and the adjustable rolls, G and K, will keep the stave in its place, whether crooked or winding, and keep the position of the stave between the beds, F and J, in a straight line, so that it is dressed by the cutters, C and D, with the grain of the wood. If the stave is thick it is placed on the further side of the bed, P, which will pass it over the lower side of the inclined bed, F, fig. 3. The knives in the cutter head, C, fig. 2, will take off a portion of the extra wood; or if one edge of the stave is thin, the thin edge of the stave is passed over the high side of the bed, F, which is on a line with the cutting edge of the knives in C, and the edge of the bed, J, consequently the thin edge of the stave will pass along without being reduced by the knives of C or D. If the stave is of medium thickness pass it over the middle of the bed, F, and the knives in C will take off enough to smooth its outside; the remaining extra thickness will be removed by the knives in D; or if the stave is thick at one end and thin at the other, run it in askew, passing the thin end over the high side of the bed, E, and the thick end over the lower side of the bed, the swiveled roller, G, always adapting itself to the staves.

The cutting edge of the knives are straight in the cylinder, C, fig. 4, but are placed in transversely, so that they will dress a stave as rounding as the cylinder is concavo and perfectly smooth. The knives are adjustable in cylinder C, to the diameter of half barrels, barrels, and hogsheads; the diagonal cutter, D, is made adjustable to any diameter by the slots in the stand, R, which allow the placing of the shaft more or less toward the perpendicular.

Some of the advantages of this machine over all others, are its being adjustable to all sized casks, and thicknesses of staves, without adding to or taking from it a single piece, except the bed, J, which must be as hollowing as the stave is rounding. The knives in the cutter head, C, are adjustable.

The combination of the concave cutter head, C, with straight-edged knives, and the diagonal cutter head, D, will allow the beds, F and J, and the self-adjustable rollers, G and K, to come so near each other that a crooked or winding stave will be parallel with the beds at the cut of the knives, dressing both sides of the stave at the same time, and with the grain of the wood. The combination of the inclined bed, F, and swiveled roller, G. Fig. 3 enables the machine to save all the thin edges, by running them through, more or less, up the inclined bed, and all the thin ends by running them askew over the bed, F, and will dress a crooked and winding or thin-hearted stave as economically and as smooth as it can be dressed by hand. This dresser is simple, compact, and entirely made of iron.

The inventor represents the machine to be capable of dressing 300 to 400 staves per hour with the labor of one man. For further information apply to J. D. Elliot, Leicester, Mass.