

steam at first, and as they ascend, the pressure upon the steam is gradually diminished; it, consequently, expands, and, at the surface, occupies the whole space within the buckets, to the entire exclusion of the mercury, and affording a proportionable increase of power.

STILLMAN BLAKE.

*Remarks by the Editor.*—We have, repeatedly, made known our views respecting the inefficiency of all the rotary steam engines hitherto made, and, we apprehend, that the present attempt will not cause us to relax in its favour. A vast power will be required, to force the iron buckets to wade through so dense a fluid as mercury; in doing this, we suspect more power will be lost than that from the friction of the piston, and all the other parts of the ordinary engine. Highly elastic steam must be used; for should the wheel be six feet in diameter, more than the pressure of an atmosphere will be required to cause the steam to issue from the induction pipe.

A condenser is proposed to be used: there must, of course, be an air-pump, or the condenser will not operate; as no particular plan is given, this, we suppose, is to be constructed in the ordinary way.

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*Specification of an improvement in the art of Melting and Fusing Glass, and the materials for making and forming glass. Patented by THOMAS W. DYOTT, M. D. Philadelphia, October 10, 1828.*

THE discovery and improvement consists in using the *resin of pine*, commonly called rosin, as fuel, either alone, or together with other fuel, for the melting and fusing glass, and the materials for making and forming glass.

The advantages of the improvement consists—in the economy of time, in bringing on a melt, two or three hours sooner than can be obtained with wood; in the greater certainty of the quality of the glass; the *bache*, or composing materials, being frequently subjected to a strong heat by a wood fire, yet, in consequence of the quality of the wood, not strong enough to fuse; no heat applied afterwards, will make the glass of good quality, although it may be melted, the salt and pearl ashes being decomposed before the fusing point of heat is brought on. By the use of rosin, this difficulty is obviated, the quality of the fuel being always the same, and unaffected by a damp atmosphere.—In the greater economy of the materials; the pots containing them being frequently broken, and the metal running into the furnace, mixes with the coals and ashes, and becomes black, of less strength, and fifty per centum less in value. In the use of rosin, the glass subjected to such accident, will run out nearly clear, and be as strong as at first.—In a great economy in the cost of fuel, saved principally in the difference of labour in sawing, splitting, oven drying, and preparing the wood; and in the difference of freight and hauling for the rosin; and in the greater

security of the works; the quantities of wood necessarily collected being exposed to accidents by fire, to which the rosin will not be liable.

THOMAS W. DYOTT.

*Specification of an improvement upon the ordinary Machine for Carding Wool. Patented by DON MARCUS BACON, Huntington, Pennsylvania, Oct. 10, 1828.*

My improvement upon the machine for carding wool, consists in raising the main cylinder of the carding machine, about fourteen inches above the frame, so that a larger portion of its surface may be made to act upon the small cylinders. In the ordinary machine, there are three or four workers, and two strippers: by my improvement, I usually employ seven workers, and three strippers. The seven workers are operated upon by two separate bands or cords, from the same whorl, on the doffer shaft. By this arrangement, three or four of them may, at any time, be stopped, when it is intended to run the wool twice through; or by running the whole number, the work may be completed at one operation. What I claim as my invention is the employment of the additional workers and strippers.

DON M. BACON.

*Specification of a Triangular Measure-case Ruler, for delineating garments with, or by. Patented by ALLEN WARD, Philadelphia, October 11, 1828.*

To make a triangular measure-case ruler, for delineating garments, I first procure three strips of tin or other metal plates, with which I form a triangular tube, having the edges of the metal strips turned outside, forming a trough or groove of each strip. I next proceed to solder the three troughs, or grooves, together, which, of course, forms a triangular tube, with the troughs or grooves outwards. I next prepare each side of the triangle for receiving the scales which are to be used therein, by regulating the depth of the groove or trough to the thickness of the scales, and by marking on each side of the triangular tube, some peculiar mark, such as is used in music to denote tunes, flats, sharps, &c.—any character will do to know the scales apart by. I have used a sharp to designate the scale of lengths, or heights, of each customer, and have marked the character on the side where the length scale belongs; and on the second side, I have marked the character of a *la*, or, in other words, a hollow square, which denotes the waist scale; lastly, I have marked the third side of the triangular tube with the character of a natural, which denotes the breast scale; and into these three grooves I slide each respective scale, according to the height and thickness of each customer. I also make some triangular measure-case rulers for delineating garments by, of wood, which answer the same purpose,