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,

but are not so durable. To make a wooden triangular measure-case ruler for delineating garments with, I take a piece of wood, about two feet long and two inches square, of which I form a triangular ruler; in each side of which I plough a dove-tail groove for the scales to slide in. I then put a band of wood or metal round each end, for the twofold or double purpose of holding the marks or characters of each scale, and for a supporter of a wedge with which the scales must be secured, to keep them from sliding back and forth.

ALLEN WARD.

FRANKLIN INSTITUTE.

Report to the Board of Managers on the Fifth Annual Exhibition.

To the Board of Managers of the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, the Committee on Premiums and Exhibitions beg leave respectfully to report:—

THE fifth annual exhibition of the Franklin Institute, was held in pursuance of notice, at the Masonic Hall, on the 8th, 9th, 10th, and 11th days of October, at which time the committee were much gratified to find a rich and varied collection of the products of American skill and ingenuity. The articles presented were not so numerous as at the exhibition in 1826, but displayed, generally, an improvement in style and workmanship, highly creditable to our workmen, and afforded a reasonable hope, that in a few years the advanced state of knowledge, will place the mechanical productions of America, not only beyond the competition of foreigners in our own market, but enable us to enter into a fair competition with them in other countries. Of the 45 premiums offered by the Institute, 20 were claimed by one or more competitors, of which three remain under advisement, and 9 were awarded by the committee to successful competitors. Of the remainder, several were withheld, because the condition of the proposal was not adhered to.

Premium No. 4—For the best specimen of Annealed Cast Iron, is awarded to Seth Boyden, of Newark, New Jersey, for specimen No. 163, being an assortment of buckles, bits, and other castings, remarkable for their smoothness and malleability.

This is the first attempt in this country to anneal cast iron for general purposes, that has come under the knowledge of the committee, and the success attending it, fully entitles the maker to the silver medal.

Premium No. 12—To the inventor of the best constructed Furnace and Boiler, superior to any now in use, for consuming anthracite in generating steam. This premium has been claimed, but the award is still under advisement.

Premium No. 13—To the maker of the best Fire Bricks. The