cost of power employed at the stations, they have not regarded it as incumbent on them to enter into any investigation of the comparative merits of condensed air as a lifter, operating by virtue of its buoyant force, and of the immediate application of the power used for the condensation of the air, to the same purpose. This and other subordinate questions are superseded by those radical and essential features of the system, to which they have already adverted. But while they do not regard the plan as suitable for the great purposes subserved by the railroad system, they cannot but commend the mechanical ingenuity displayed in the model exhibited by the inventor.

By order of the Committee,

WILLIAM HAMILTON, Actuary.

Philadelphia, May 11th, 1841.

Report on Mr. John Wier's Window Blind.

The Committee on Science and the Arts constituted by the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, to whom was referred for examination a Window Blind constructed by Mr. John Wier, of the city of New York, Report:

That the window blind submitted to their examination differs from the common blind chiefly in the mode of suspension, which (instead of using pulleys inserted in a mortise, or cut, in the head board) is effected by means of a horizontal roller, as long as the width of the blind, passing across beneath the head board, around which are wound the cords passing through each of the blinds. On one end of this roller is a ratchet wheel with a click, or catch,—so that the blind can be raised to the desired height, and there remains fixed without the trouble of winding the cord around pins in the window frame. If it is desired to lower the blind, a check string attached to the catch is pulled, and the roller, with a reverse motion, allows the blind to descend. By this arrangement several defects and inconveniences in the common blind are entirely removed. The blinds always preserve their proper level, or horizontal position, in being raised or lowered, which is frequently not the case when acted upon in the common mode of suspension by two cords passing over pulleys.

The wearing and chafing of the cords consequent upon friction is also avoided, and the disagreeable creaking noise made in raising and lowering the common blind is not heard in this. The mode of changing the position, or inclination, of the blinds, so as to admit or exclude the light, appears also to be an improvement upon the common method.

In conclusion, the Committee would remark generally that they view Mr. Wier's window blind as a decided improvement upon that

useful and almost indispensable article of household furniture, and they understand that it can be afforded at about the same price as the common blind. Having thus the double advantage of utility and economy, they consider it worthy the attention of upholsterers and housekeepers in general.

By order of the Committee,

WILLIAM HAMILTON, Actuary.

Philadelphia, October 14, 1841.

Report on John L. Clarke's Brake for Railroad Cars.

The Committee on Science and the Arts constituted by the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, to whom was referred for examination the plan for a Brake for Railroad Cars constructed by John L. Clarke, Esq., of Nashua, New Hampshire, Report:

That they have examined the very neat model of the invention of Mr. Clarke, the peculiarities of which are accurately set forth in his description of its purpose and arrangement—viz: “a simple piece of machinery, the object of which is to apply the momentum of the train at the pleasure of the engine man, to the friction brakes, and thereby arrest the progress of the cars. To effect this, under each car, and in the centre, there is a strong rod, of even length with the buffing beams, and so adjusted in bearings as to move freely a given distance, either way, lengthways of the car. Upon this rod are collars and a double set of progressive levers, or toggles, so arranged that when the rod is moved either way the collars will act upon one of the toggles, and this toggle acting upon another lever the brakes are applied to the wheels. There being a continuous line of rods through the whole train, and the rods being the same length with the buffing beams, it is evident that when the rods are at rest the buffers of the cars will come in contact, and the brakes will not be applied. But the rod under the tender is so adjusted that the engine man, by a lever, can at pleasure throw it back, and thus apply the brakes to the tender. The rear end of the tender rod, of course, throws back the rod on the car behind and applies the brakes on that car, and so on through the train.

This arrangement will, of course, dispense with several brakemen, and in any sudden emergency enables the engine man to stop the whole train, in the shortest possible time by simply moving a lever; for the rod under the tender being first thrown back, and its brakes applied, the cars behind, as they successively come up, apply their own brakes by their own momentum till the whole train is at rest.”

It may be added to this description that the rod which operates on