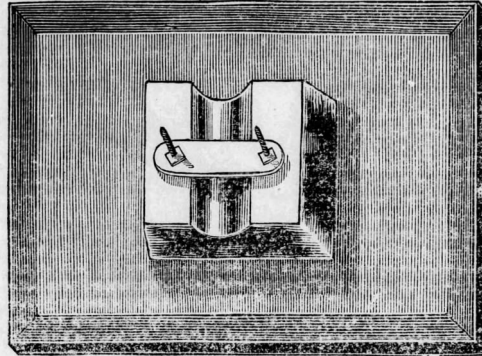


1826.]

NEW ENGLAND FARMER.

FOR THE NEW ENGLAND-FARMER.

VALUABLE IMPROVEMENT IN PREVENTING THE EFFECTS OF LIGHTNING.



The above Drawing will give the reader a correct idea of a method of fitting Lightning Rods to buildings, [patently invented by Messrs. J. Brown and G. W. Robinson, of Providence, it. I.] which is at once perfectly safe, cheap, and may be rendered highly ornamental.

This method consists simply in placing blocks of glass firmly between the conducting rods and the roof and sides of buildings. Two metallic staples, with bolt heads, are inserted about half way into the glass, while in a state of fusion, so that when the glass cools, the bolt heads of the staples are held fast and solid, leaving a thickness of two or three inches of solid glass between the building and rods. Small metallic bars are placed over the rods, and secured by matts, which hold them fast in grooves, made in the middle of the glass blocks. This block of glass is cast of a wedge shape, and fitted closely into a piece of plank, which is nailed or secured to the sides and roof of buildings, the heads of these nails or screws sink into the wood, and are covered with putty, or for buildings of brick or stone, the glass blocks are made of suitable length and shape to be fitted in at the time of building, or may be fitted to buildings now erected, by taking out a brick, without the use of the plank.

The importance and utility of this improvement can only be calculated by informing ourselves of the surprising number of unforeseen losses of human life, and of the amount of property, which is every year destroyed by Lightning, even in Buildings which had Conducting Rods fitted to them upon the old but unsafe and imperfect plan of having the Rods fastened to Buildings by staples of the same Conducting Materials with the Rods themselves.

So great is the destructive power of this swift and fearful element, and so little provision is there made against it in this country, that almost every paper in our Union, in the course of one year, records the death of an Human Being even within the circle of its Subscribers; besides the loss of Animals and the inextinguishable conflagration of Houses, Barns and Factories of every description, and Ships and their

Cargoes, upon the Ocean. But we are certain, beyond a doubt, that if this late improvement is generally adopted in the United States, no instance will ever occur of Lightning striking a Building at the parts where the Rods are fastened.— And those are very well ascertained to be the places where the fluid strikes in those cases where Rods are erected and fastened with Iron Staples.

The above Article in the different forms, completely finished, may be had of J. R. NEWELL, No. 108, State-street, Boston, who will furnish any quantity at short notice for this vicinity, or for other States.

MOTION OF WATER-WHEELS.

There is a notion prevalent among practical operators, that water wheels move faster by night than by day, and various theories have been suggested to account for the fact. The following letter from Professor CLEVELAND, published in the last number of Silliman's Journal, proves that the fact does not exist.

MY DEAR SIR.—In a former letter, I mentioned the opinion existing in this part of the country, that saw-mills move faster during the night than the day. The explanation usually given by the workmen is, that the air becomes heavier after sunset.

I selected a fine day in August, and requested that all the mill-gates might remain stationary for 12 hours. At 2 o'clock P. M. I suspended a barometer in the mill; the pressure of the atmosphere was equal to 30.16 inches; the temperature of the water just before it passed the mill-gate was 72° Fahrenheit. The log was then detached from the saw, and the number of revolutions of the wheel, being repeatedly counted by different persons, was 66 in a minute.— At midnight, I again visited the same mill.— The barometer stood at 30.36 inches; the pressure of the atmosphere having increased seven hundredths of an inch. The temperature of the water was 72°, the same as the preceding observation, although it had been a little higher during the afternoon. The log being detached, as before, the wheel was found to revolve precisely