

"I shall only add, that M. Daguerre has entered into a contract with Giroux, the celebrated toyman, for the practical application of his discovery, and that it is said he has already, *in petto*, some new results of importance, which he will submit to the *Academie* at an early opportunity."

Our subscribers will notice many points of interest in the foregoing communication. It gives a very correct idea of the discovery at the time the art was first announced.

STEAM VERSUS STAME.

MR. JAMES FROST, of Brooklyn, about a year since, published a pamphlet, in which he stated that steam, heated out of contact with water, was expanded to twice its volume by four degrees increase of temperature, to three times by sixteen degrees, and to ten times by about four hundred and forty degrees increase.

Professor HORSFORD, as Chairman of the Rumford Committee of Harvard University, made a report upon this pamphlet, stating, that instead of the great expansion found by Mr. Frost, of two volumes for sixteen degrees, its increase amounts to a thirtieth of its volume less than a ninetieth of what Mr. Frost represents it.

Recently, Mr. Frost has published a supplement to his pamphlet, containing a report by a Committee of the American Institute, signed by Professor Renwick, Mr. Meigs, and Mr. Dunham the engineer, in which they state that his experiments are performed with an apparatus, and upon principles, which admit of no doubt as to the accuracy of the results; and they endorse the statement that an increase of temperature from 212° to 650° , in steam heated out of contact with water, increases its value nearly ten-fold. And Mr. T. H. Secor, Mr. Stevens, principal of the New York University, Captain Leich, of the Steamer America, and several others, who are practically conversant with steam-engines, certify that they witnessed two experiments with an engine, in one of which

common steam was used, and in the other super-heated steam, the results of which showed that more than six times the work was done, by the same quantity of fuel when used in the latter way.

It has hitherto been believed by philosophers and practical engineers, that steam expands 1-480 for every increase of 1 degree of Fahrenheit, very nearly as Professor Horsford reports. There must, then, be some strange delusion, either in the scientific world, or in the minds of the gentlemen who endorse the views of Mr. Frost. We hope that such a difference, among men so eminent, will induce some careful experimentalist to examine closely into these matters, and find where the error lies. It is of great importance; for, if the new experiments are not fallacious, more than eight times the power now got from a given quantity of fuel can be obtained.

The quantity of fuel necessary to superheat steam from 212° to 650° , Mr. Frost states to be less than a fifth of what is required to produce the steam from boiling water. If this be exact, there would be some advantage in superheating steam, though the law of Guy Lussac should be found true. Engineers generally, we believe, have been careful not to superheat steam, unless they could do it by the heat from the smoke, which would otherwise be wasted, because they believe that a given quantity of fuel, applied to the production of saturated steam, would be productive of more power than when used in superheating.

We shall be glad to hear from any of our friends, who may make careful experiments upon the subject.

GETTING A LIKENESS.

MR. SMITH tells an amusing incident that occurred while he was taking Daguerreotypes in western New York. An elderly gentleman called at his room; said, "I would like to get my Daguerreotype taken, and while I go down street to