sure. The whole pile is thus completely dried in 6 or 8 days, and requires no other attention than to renew the coal in the grate three times in twenty-four hours. The Lehigh coal will be found a very convenient article applied in this way in all the processes where drying is requisite, and particularly in kiln-drying corn. By removing the grates from the building while the ashes are shaken out and the grate replenished with coal, no inconvenience will be experienced from dust.

As persons who are not accustomed to the use of Lehigh coal, may wish to try this plan, it may be well to state the mode of kindling the fire. Cover the grate with a *thin stratum* of Lehigh coal, then add a quarter of a peck of charcoal—apply your fire, fill up the grate with Lehigh coal, and then *let it alone*. To renew the fire—with a crooked poker clear out the ashes from the bottom of the grate and fill up with fresh coal. The bars of the grate should be an inch and a quarter apart.*

FRANKLIN INSTITUTE.

Monthly Meeting.

The stated monthly meeting of the Institute was held at their Hall on Thursday evening, May 26, 1831.

Professor ALEXANDER D. BACHE was appointed chairman, *P. T.* The minutes of the last meeting were read and approved.

The following donations were presented to the Institute, viz.

By Matthew Carey, Esq.

Marriott's Dictionary, 2 vols. quarto.

Cobbett's Weekly Register, 1 vol.

By Reuben S. Gilbert.

The Laws of the Province of Pennsylvania, collected in one volume by order of the Governor and Assembly of the said Province, 1714.

The Cabinet of Natural History and American Rural Sports, first 5 numbers.

By James Rowland, Jr.

Elements of Chemistry, by M. J. A. Chaptal.

Physical and Chemical Essays, translated from the Original Latin of Sir Torben Bergman, by Edmund Cullen, M. D.

A System of Practical surveying.

By James Mease, M. D.

Archives of Useful Knowledge, 3 vols.

The corresponding secretary laid on the table the following works, received in exchange for the Journal of the Institute.

Recueil Industriel, for November and December, 1830.

Bibliothèque Physico-economique, for January and February, 1831.

Annales de Chimie et de Physique, for October and November, 1830.

* The difficulty upon this subject is to bring the coal and the tobacco together; they are the products of different regions, and where tobacco grows wood is plentiful and will be used.—EDITOR.

Bulletin de la Société d'Encouragement pour l'Industrie Nationale, for October and November.

Programmes des Prix proposés by la Société d'Encouragement pour l'Industrie Nationale, pour être Décernés, en 1831, 1832, 1833, et 1835.

Annales des Mines, No. 3, Vol. 7.

American Annals of Education and Instruction, for May.

Magazine of Useful and Entertaining Knowledge, for April.

Ladies' Book, for May.

Casket, for May.

The Southern Review, for May.

Southern Agriculturist, for January, February, March, April and May.

Museum of Foreign Literature, Science, and Arts, Vols. 14, 15, 16, 17, and Nos. 1, 2, 3, 4, 5, of vol. 18.

The chairman of the Committee on Inventions stated, that the committee had been engaged during the past month in examining several inventions submitted to them, and reports on some of them would be prepared to be submitted to the Institute at their next meeting.

Professor Johnson made some remarks on the subject proposed for discussion this evening, viz. on the best mode of securing the boilers, cylinders, and all other parts of steam engines against loss of heat by radiation and conduction, when it was on motion continued as the subject for the next meeting.

Dr. Hays rose, and after some prefatory remarks, stated in substance as follows. That an attack upon the scientific reputation of Dr. Godman, late Professor of Natural History in the Institute, having been made very recently by a lecturer on Geology, in a public lecture delivered in the hall of the Institute, at which many members of the Society were present; and that a thorough investigation of the subject having resulted in a complete refutation of the attack, he thought it would be interesting to the members of the Institute to be put in possession of the facts upon which the vindication of their late Professor rested.

The lecturer before alluded to, had stated to his class that the animal described by Dr. Godman as new, under the name of *Tetra-caulodon Mastodontoides*, was nothing more than the young of the common mastodon. In support of this, the lecturer had exhibited two lower jaw bones from the collection of the American Philosophical Society, one of which he stated to be that of a young animal, and showed the socket which had once contained the tooth characteristic of the animal described by Dr. Godman, while the other, which he said was that of an adult, was asserted by him to have contained no such socket. The lecturer had also exhibited a tusk which he said was the milk tusk of the young of the gigantic mastodon.

Doctor Hays proceeded to say, that the jaw exhibited by the lecturer as that of a young animal, had proved, on examination, to be that of an adult, as the dentition clearly showed, while in that admitted by the lecturer to be the jaw of an old animal, the remains of the socket

which had once contained a tusk was clearly to be seen. And further that the tusk exhibited by the lecturer as a milk tusk, was evidently that of an old animal.

Dr. H. stated that he had communicated to the American Philosophical Society, the proofs of the accuracy of the preceding statement.

A. D. BACHE, *Chairman.*

J. HENRY BULKLEY, *Rec. Sec.*

AMERICAN PATENTS.

LIST OF AMERICAN PATENTS WHICH ISSUED IN MARCH, 1831.

With Remarks and Exemplifications, by the Editor.

1. For making *Rifles for the sharpening of edge tools*; and a composition for polishing of all kinds of metals; Peleg Barlow, Armenia, Dutchess county, New York, March 1.

A machine is to be used for putting the composition which is employed, upon wooden strips, called rifles; there is to be one composition for grinding, and another for polishing. The machine to be used is particularly explained and distinctly claimed, but there is no drawing of it. The rifles are as follows:—

“For grinding. *Two* parts of white lead, ground in linseed oil, and *three* parts emery. Linseed oil to be added to the mixture in sufficient quantity to make a paste of suitable consistence. Before the paste is spread upon the rifle, a composition of white or red lead and linseed oil, to be applied to the rifle, and dried, before the paste, or cement is spread upon it.”

“For polishing. *Two* parts of white lead ground in oil, and *three* parts of red oxide of iron.—To the mixture for polishing, oil in like manner to be added, until the composition becomes of a suitable consistence.”

On turning to Vol. 4, p. 175, it will be seen that a patent was obtained by Beriah Swift, living in the same county with Mr. Barlow, for a *rifle for sharpening scythes and other edge tools*; dated June 11th, 1829, which we have thus described.

“Emery, of suitable size, is to be fixed upon properly shaped strips of wood, by means of a mixture of oil, paint, and varnish, which, when dry, forms the substitute for the stones usually employed.”

The validity of either claim may admit of some doubt, and it certainly would have puzzled the last patentee, to have distinguished his invention “from all other things before known.”

2. For making *Axes by Machinery*; being an improvement upon the apparatus called the “oval axe machine;” Stephen Hyde, Williamsburgh, Hampshire county, Massachusetts, March 2.

The original machine was patented on the 29th of January, 1830,