The following is a list of his contributions to the JOURNAL OF THE FRANKLIN INSTITUTE, viz :

Birkinbine, H. P. M., and Trotter.—“West Philadelphia Water Works Stand-Pipe,” lix, 210.

Birkinbine, H. P. M., “Economy of Using Steam Expansively,” lxxiii, 34.

“Pumping Engines,” lxxxvii, 323 ; lxxxviii, 109.

“Stand-Pipe for Bloomington, Ill.,” c, 234.

“Rainfall in the Schuylkill River Basin,” ci, 185.

“The Schuylkill River,” ci, 321.

“Relative Cost of Steam and Water-Power,” cv, 47.

“The Future Water Supply of Philadelphia,” cv, 305 ; cvi, 38 ; cviii, 297.

Personally, Mr. Birkinbine was a man of positive convictions, thoroughly in earnest in everything he advocated and undertook. He leaves behind him the record of a busy, an active and useful life. At the time of his death, which occurred on the twenty-first of April, 1886, he had almost completed his sixty-seventh year.

W. BARNET LE VAN, *Chm.*

WASHINGTON JONES,

JOHN H. COOPER,

C. CHABOT.

EMILE FRANÇOIS LOISEAU.

Our late fellow-member, Emile François Loiseau, died at Brussels, on the thirtieth day of April, 1886, in the fifty-fifth year of his age. He was a native of Belgium, in which country he received an education to prepare him for one of the learned professions; but, becoming dissatisfied with the sedentary pursuit selected for him, he withdrew from college and commenced a business life of congenial and active character. He served for eight years in the French army, participating in the Crimean campaign. He was then upon the editorial staff of a Parisian journal, and subsequently became superintendent of an industrial works in Belgium. Whilst in that position his liking for mechanical pursuits so developed, as to determine his future life-work. It was during this period that his attention was drawn towards the immense deposits of coal waste at the Belgium mines, which were constantly increasing, as

the processes then in vogue were imperfect and unequal to the requirements. To the problem of utilizing this waste material, Mr. Loiseau devoted his earnest and intelligent efforts, and devised a process, with the necessary machines, which would more rapidly put it into convenient sized lumps for domestic or steam users' consumption. As the European field was partially occupied, he concluded to introduce his method into the United States, and began operations near Nashville, Tenn., but soon removed thence to Pennsylvania, which promised a wider field and better market, and for the reason that his plans had won the favorable regard of several extensive coal operators in the anthracite region. At Mauch Chunk, the first experimental machinery was built, and gave such satisfactory results, that a company was formed for the purpose of utilizing the great mounds of coal waste to be found in Pennsylvania. About this time (see this JOURNAL, January, 1874,) Mr. Loiseau read before the FRANKLIN INSTITUTE a highly interesting paper upon the manufacture of "Artificial Fuel," in which he described the processes and machines in use up to that date. In furtherance of the intentions of his company, Mr. Loiseau designed, and had built at Mauch Chunk, a machine capable of making 100 tons of compressed fuel per day in lumps of the shape and size of hen's eggs. In this machine he embodied what he considered to be good in existing machines, and supplemented it with some important details of his own devising. When completed, it was erected at Port Richmond, near the coal wharves of the Reading Railroad Company, at which point it was expected coal dust could be had in quantities. After the delays and mishaps inseparable from new enterprises, and which were borne by Mr. Loiseau with indomitable courage, the apparatus, with such modifications as later experiences had taught, was got into such excellent working condition as to yield about eighty tons per day of ten hours of agglomerated anthracite dust of dense, non-friable and weather-proof qualities, which met with a ready sale at a price but little below that of natural lump coal. Unfortunately at this juncture, the buildings took fire and were totally consumed. Previous to this disaster, when the success of his methods had been assured and patented in the European countries, Mr. Loiseau had entertained proposals made to him, by some important coal companies in France and Belgium, to erect his machines at their mines, and

as the destruction of the works at Port Richmond, and the inability to procure coal dust at that locality in quantities and at desirable prices, influenced his company against rebuilding, Mr. Loiseau then determined to accept a proposition made to him by a Belgian coal mining company at Ham-sur-Sambre, and had built in Philadelphia and shipped to Belgium, the patented parts of a machine capable of compressing twenty tons of dust, accompanying them to superintend their erection and operation, and to demonstrate the practicability of his process. It reached the mines, but, unfortunately, was not put up, as the strike of the Belgium miners soon after took place; hastened, perhaps, by the anticipated loss of employment from the use of such a labor-saving machine. The more valuable parts taken from the United States were hidden under coal dust to preserve them from the fury of the mobs. This derangement of his plans, with threats of violence directed against his person, added to general ill health, brought upon him an acute attack of sickness, which terminated his life at the time when his many years of persevering efforts seemed on the verge of securing for him the substantial reward they merited.

WASHINGTON JONES, *Chm.*,
C. M. CRESSON, M. D.,

W. BARNET LE VAN,
WM. H. WAHL.

JOAQUIM BISHOP.

JOAQUIM BISHOP died on the 8th of August, 1886, in the eighty-third year of his age.

Mr. Bishop was a pioneer in the manufacture of platinum in the United States. Born of English parents, in Portugal, in 1804, he came with them to Baltimore in 1810, leaving Portugal, where his father was engaged as Director of a department of Government work, on account of the invasion of the peninsula by the armies of Napoleon.

After a residence of one year in Baltimore, the family removed to Philadelphia.

At the age of twenty-two, Mr. Bishop entered as an apprentice to the jewelry business, but soon after changed his vocation to that of a finisher in a brass foundry.

In 1832, he engaged with Prof. Robert Hare, as an assistant, at the University of Pennsylvania. While in this position, his attention was attracted by the experiments of Prof. Hare with th