

the surrounding air, the excess of the gas will rush back again. This result you see palpably and beautifully demonstrated by the rising of the crimson fluid in the tube, and its coursing around the spirals.

Now, this law of the diffusion of gases, is a vitally important one. Did they not possess this property, the different gases would envelope the earth in distinct and separate belts or layers. The poisonous carbonic acid gas being formed in a great miasm near the ground, and being fifteen times heavier than atmospheric air, would cover, primarily, the surface of the earth; then would come a layer of oxygen, next a layer of nitrogen, and so on. Nor would heating them, even supposing the heat should be applied at the bottom, be sufficient to mix them thoroughly, because each density, it would be found, would circulate nearly horizontally by itself.

Hence, it is evident that this becomes an important question with reference to the subject of ventilation; for the reason that, in a still room, although the breath may at first fall to the floor, owing to its having a hundred times as much carbonic acid as ordinary air, yet that would soon be diffused through the whole room. And yet I do not pay so much attention to this, because I think the supply of air ought to be so rapid and abundant, that the slow process of the diffusion of gas would be permitted to exercise but little practical influence.

(To be continued.)

Franklin Institute.

Proceedings of the Stated Monthly Meeting, December 16th, 1868.

THE meeting was called to order, with the Vice-President, Mr. Coleman Sellers, in the Chair.

The minutes of the last meeting were read and approved.

The Actuary submitted the minutes of the Board of Managers, and reported that at their stated meeting, held December, 9th instant, the resignations of membership in the Board by Messrs. Percival Roberts, William J. Horstmann, and Jacob G. Neafie were accepted.

Also, that donations to the Library were received from the Royal

Geographical Society, the Institute of Actuaries, the Society of Arts, and the Commissioners of Patents, London; the Smithsonian Institution, Washington, D. C.; William B. Thomas, Esq., Burlington, New Jersey, and Joel Giles, Esq., Philadelphia.

The various Standing Committees reported their minutes, and the Special Committee on a revision of the patent laws, reported progress. A paper on the Manufacture of Nitro-Glycerine, communicated by Mr. Stephen Chester, was then read by the Secretary, and the thanks of the Society presented to the author by the Vice-President for the same.

The regular report of the Resident Secretary on Novelties in Science and the Mechanic Arts, was then read, after which some interesting facts in connection with the raising of a portion of the city of Boston, and with the progress of the Suez Canal, were mentioned by Mr. Robert Briggs.

On motion, the Society then went into nomination of officers and members of the Board of Managers for the ensuing year, when the following nominations were made:

President—J. Vaughan Merrick.

Vice-President—B. H. Moore.

Treasurer—Frederick Fraley.

Secretary—Henry Morton.

Auditor—Samuel Mason.

BOARD OF MANAGERS.

John H. Towne,	Geo. P. Roberts,	H. A. Bines,
Washington Jones,	James S. Whitney,	R. H. Lang,
Pliny E. Chase,	James Dougherty,	Wm. B. Wilstack.
Chas. S. Close,	Robert C. Cornelius,	John Birkbeck,
Robert Briggs,	Caleb S. Hallowell,	Chas. Wheeler,
J. Hayes Linville,	Alexander Ervine,	Wm. Helm,
Joseph M. Wilson.		

The Chair then appointed as Judges of Election, Wm. A. Rollin, C. S. Bement, Samuel Hart, Hector Orr, M. W. Haines, Roeper Hoskins, Geo. Gardom.

Mr. Robert Briggs then offered the following resolutions:

Whereas, The rights of ownership of literary productions are based upon the same equitable considerations as those which exist in mechanics' inventions, and both classes of rights possess that individuality which should entitle the author or inventor to a means of protection from the law, well defined and of equal distinctness

to that which the law gives as security to personal property in chattels, or to property in real estate.

And whereas, The complete acknowledgment of the rights of ownership in literary productions, irrespective of nationality, is due to a sense of justice.

Therefore, resolved, That the Franklin Institute, as the representative of the interests of the scientific men, the manufacturers, inventors and mechanics of Philadelphia, expresses this opinion, that it is now desirable that such law, as will establish, define and protect the rights of authors should be enacted by our general Government.

Resolved, 2d. That negotiations and treaties should be formed to the end of obtaining for American authors the acknowledgment of such rights in foreign countries.

Resolved, 3d. That these Resolutions be transmitted to the Senators of our State in the U. S. Senate, to be laid before that body as an expression of opinion by the Institute.

That a Committee of five be appointed to solicit other literary and scientific associations to join in this memorial.

After a brief discussion, it was decided that the consideration of this subject was not within the scope of the Institute, and the motion was therefore laid on the table. The meeting was then on motion adjourned.

HENRY MORTON, *Secretary*.

Sea-Weed Charcoal.—This material, which is prepared from the fine tangle of the Hebrides, is being extensively used in England, as a substitute for animal charcoal, as a filtering medium for water, for deodorizing sewage, clearing white glass, removing acidity from and decolorizing wines and precipitating and decolorizing vegetable alkaloids.—*Chemical News*, p. 49.