stones, which lay upon the table for inspection, as evidences of the capacity of the machine.

The paper in question will be found published in the *Journal* of the Institute for October, 1873.

Under the head of deferred business, the President announced the consideration of a resolution, presented by Mr. S. Lloyd Wiegand, at the last meeting of the Institute, as follows:

"Resolved. That a special committee of five members be appointed by the Chair, and announced at the next meeting of the Institute, to inquire into the expediency of introducing a system of uniform standard screw-threads, for tubing, and if, in their judgment, it appears expedient, to report such a system to be recommended by the Institute to manufacturers, for general adoption."

Mr. Wiegand moved to refer the subject of his resolution to the Committee on Sciences and the Arts. Carried.

Under the head of new business the President stated the business of the meeting to be the consideration of the motion of Mr. Robert Briggs, of which notice was given by Mr. Briggs at the last meeting, namely, to abolish Section 2d of Article xi of the By-Laws, referring to the Committee on Science and the Arts.

Mr. Briggs, in defence of his motion to abolish, made an address to the Institute, the tenor of which was to show that the period of usefulness of a committee, so constituted as the one under consideration, had passed.

Mr. John C. Cresson, in reply, gave a review of the past history of the Committee, and its opportunities for usefulness at present.

Mr. Orr followed with similar tenor, and in conclusion moved to indefinitely postpone the motion to abolish.

Mr. Cresson requested a withdrawal of the motion to postpone, in order that a square action might be had upon the motion to abolish. By consent, Mr. Orr withdrew his motion, whereupon a vote was taken upon the original motion of Mr. Briggs, which was lost.

Upon motion the meeting adjourned.

WILLIAM H. WAHL, *Secretary.*

Proceedings of the Stated Meeting, June 18, 1873.

The meeting was called to order at the usual hour. In the absence of the President, Mr. Chas. J. Close was called to the chair.

The minutes of the last meeting were read and approved.

The Actuary submitted the minute of the Board of Managers,

and reported that at the stated meeting held June 11th, 1873, the following donations to the Library had been received:

Geological Survey of Ohio and Maps. From the State Geologist.

Proceedings of the Scientific Meetings of the Geological Society of London for 1872, with Index 1861—1870. From the Society.

Monthly Reports of the Manchester Steam Users' Association for January, February, March and April, 1873. Annual Report of the same for 1872. From the Society.

Proceedings of the Royal Geographical Society of London, England, for May, 1873. From the Society.

Proceedings of the Literary and Philosophical Society of Liverpool, England, for 1871, 1872. From the Society.

Journal of the Society of Arts of London, England, for April, 1873. From the Society.

Journal of the Statistical Society of London, England, for March, 1873. From the Society.

A Compendium of the Ninth Census of the United States, June, 1870. From F. A. Walker, Superintendent of Census.

Smithsonian Contributions to Knowledge for 1873. From the Smithsonian Institution.

Annales des Ponts et Chaussées for February, 1873. From the Editor.

The Actuary likewise reported the minutes of the several standing committees.

The special committees on the Horse-Power of Steam Boilers, and on Conflagrations, reported progress and were continued.

The President then announced a paper on Some Improvements in Weaving Machinery, by John Shinn. The paper gave a detailed description of a loom for weaving pile fabrics on stationary wires—the invention of the speaker,—an abstract of which will appear in the "Journal."

This paper was followed by one upon the American District Telegraph System. The subject was introduced and fully described by the Hon. Daniel M. Fox, after which a practical demonstration of its usefulness was made. The subject and remarks of the speaker are published in full in the "Journal" of September, 1873.

The Secretary next read his monthly report upon Novelties in Science and the Mechanic Arts.

Under the head of new business, the Secretary announced the

resignation of John H. Cooper as a member of the Board of Managers, and called attention to the clause in the by-laws of the Institute requiring such a vacancy to be filled. An election was thereupon ordered for a member of the Board, to fill the unexpired term of the gentleman resigned. The election resulted in the choice of John W. Nystrom.

After which the meeting adjourned.

WILLIAM H. WAHL, *Secretary.*

Fire-proof Construction.—At a recent meeting of the Franklin Institute, an improvement in the mode of constructing fire-proof floors and ceilings, combined with a system of ventilation, the invention of Mr. James Bounds, was exhibited. The invention consists of a truncated tile with the floor and ceiling surfaces in parallel planes, and overlapping the iron beams. The perforated sides of the tile, when in position, form a flue extending from wall to wall, connecting with flues in the latter—forming thus a series of ventilating flues, in which punctured register openings in centre of ceilings assist; and, in the event of fire, the system described is designed to afford an outlet for smoke and flame without injury to rooms above and below. The iron girders are isolated from the action of fire. The inventor claims that, from the simplicity of his construction, many expensive details in building may be dispensed with. It is further maintained that the tile by modification is capable of forming a level floor and ceiling arch without impairing either the fire-proof or ventilating properties of the construction, and that floors, roofs and partitions of any size, may be constructed upon the above plan.

The Suez Canal.—The returns of the Suez Canal Company for the month of August, according to the *Engineer*, make a very satisfactory show. It appears that 83 vessels passed through the canal during the 31 days of August, making an average of more than 2½ per diem, and yielding the company the sum of 1,660,000 francs transit receipts. The average cost per ship, it will be seen, by dividing the total receipts by 83, was just £800. It appears that the tonnage of the 25 vessels which passed through the canal during the third portion of the month made up an aggregate of 49,500 tons; if the other 58 vessels were of equal tonnage, the traffic must have been about 164,000 tons. The tonnage of the 25 vessels already referred to, gives an average of 1980 tons per ship, which shows that many of the vessels must have been of large size.