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## THOMAS SILVER.

Thomas Silver, civil engineer and inventor, died in New York, April 12, of Bright's disease. He was born June 17, 1813, in Cumberland County, New Jersey, of American parents, belonging to the "Society of Friends." When a boy, he developed mechanical ingenuity, and at the age of nine years his little boat, with hidden propeller wheel and other devices, was the wonder of the country village. Models of his many subsequent inventions are at the Patent Office, Washington, Kensington Museum, London, and the Conservatoire des Arts, Paris. The loss of the San Francisco in 1854, bound to California, with troops, caused by the engines becoming disabled in a severe storm, led to the invention of Silver's marine governor. In 1855, it was placed on the engines of the steamer Atlantic, of the old Collins line, also on engines at the United States Mint, Philadelphia Arsenal, and on the printing presses of the *Public Ledger*, of Philadelphia, and *Tribune* and *Herald*, of New York, which reported it as "operating more quickly and correctly, even for stationary engines, than the old two-ball governor, which depended upon gravity." Mr. Silver's greatest success with it was in Europe. Admiral Pairs introduced the governor in the French navy in 1855, maintaining "it was just what always had been needed." Vessels on the Continent soon adopted it. John Hamilton, and, later, Osborne & Co., engineers on the Clyde, became the manufacturers, realizing large fortunes, though opposition was continual, one house in Glasgow confessing candidly as a reason for not using it that they realized \$25,000 yearly by repairing engines on which it was not used.

At the Royal Institute, of London, it was resolved that "Mr. Silver had done as much as any man living to facilitate steam navigation, enabling steam vessels to weather all gales, without danger of broken shafts, wrecking, and consequent loss of life." Prince Albert said: "Mr. Silver, it is too common sense a thing, engineers must use it." The British Admiralty ordered it into general use in 1864, and so did all the naval authorities of the world, excepting that of his own country, the United States. Mr. Silver was a member of the Franklin Institute, of Philadelphia, and of different societies in Europe, and awarded several medals. His latest inventions were a mechanical lamp, and a lamp burner made to dispense with glass chimneys, which is a great economical success.

Mr. Silver married the daughter of the late James M. Bird, of Philadelphia, who survives him, and leaves one daughter, the wife of Thomas Chalmers, of New York.

## POSITION OF THE PLANETS FOR MAY.

### JUPITER

is morning star till the 21st, and then evening star. The most important epoch in his course occurs on the 21st, at midnight, for he is then in opposition with the sun. Jupiter in opposition, rising at sunset, looking down from the meridian at midnight, and enthroned among the bright stars of Scorpio, makes the most charming celestial picture that will glow on the planetary annals of May. Observers should follow his course as rising low in the southeast earlier every evening he leads the starry hosts as they move over the heavenly road. He is very near to Beta Scorpii on the 20th, at 10 o'clock in the evening, passing only 2' south of the star, scarcely a line of sky intervening between them. An opera-glass will bring star and planet into the same field at the time of conjunction. Jupiter rises on the 1st at 8 h. 38 m. P. M. On the 31st he sets at 3 h. 57 m. A. M. His diameter on the 1st is 42".4, and he is in the constellation Scorpio.

### MARS

is evening star. He is on the meridian soon after 10 o'clock on 1st, and is still a conspicuous object in the sky, the distance increasing between him and Spica. On the 5th, at 1 h. P. M., he is in conjunction with Uranus, being 35' north. Mars sets on the 1st at 3 h. 54 m. A. M. On the 31st he sets at 1 h. 45 m. A. M. His diameter on the 1st is 16".2, and he is in the constellation Virgo.

### URANUS

is evening star. The chief interest attached to his course during May is his near neighborhood to Mars, the larger planet serving as a guide to point out the position of the smaller. Uranus sets on the 1st at 3 h. 49 m. A. M. On the 31st he sets at 1 h. 50 m. A. M. The diameter of Uranus on the 1st is 3".8, and he is in the constellation Virgo.

### SATURN

is evening star. He is moving eastward and approaching the cluster Praesepe, in Cancer. He is on the meridian, or point overhead, on the 1st, at 5 h. 31 m. P. M. Saturn sets on the 1st at 12 h. 45 m. A. M. On the 31st he sets at 10 h. 54 m. P. M. His diameter on the 1st is 17", and he is in the constellation Cancer.

### MERCURY

is morning star till the 10th, and then evening star. He reaches superior conjunction with the sun on the 10th, at 7 h. P. M., passing beyond the sun and reappearing on his eastern side as evening star. Mercury rises on the 1st at 4 h. 35 m. A. M. On the 31st he sets at 9 h.

4 m. P. M. His diameter on the 1st is 5".2, and he is in the constellation Aries.

### NEPTUNE

is evening star until the 20th, and then morning star. He is in conjunction with the sun on the 20th, at 8 h. A. M., changing his position to the sun's western side and becoming morning star. He is in conjunction with Mercury on the 15th, both planets being very near the sun. Neptune sets on the 1st at 8 h. 15 m. P. M. On the 31st he rises at 3 h. 58 m. A. M. His diameter on the 1st is 2".4, and he is in the constellation Taurus.

### VENUS

is morning star, rising on the 1st about half an hour before the sun. Her diameter is decreasing, and her distance from the earth is rapidly increasing. Venus rises on the 1st at 4 h. 13 m. A. M. On the 31st she rises at 3 h. 54 m. A. M. Her diameter on the 1st is 10".6, and she is in the constellation Pisces.

Mercury, Saturn, Mars, Uranus, and Jupiter are evening stars at the close of the month. Venus and Neptune are morning stars.

## The Sharing of Profits with Employees.

This is a subject which is receiving considerable attention, and one on which there seems to be a diversity of opinion. A Springfield (O.) manufacturer says in the *Age of Steel*: "I am almost persuaded that the best way to secure the undivided interest of an employe is to share with him the profits of the concern. You thus make him your partner; he is elevated in his own estimation and in reality; he feels a certain pride in the work turned out, not only of his department, but of the entire factory; he has aroused in him a feeling that he is in a certain sense responsible for anything that may go wrong about the establishment, and he will use his best mental and physical endeavors to do the particular piece of work he is doing as well as it can possibly be done. I believe, also, that the system of profit sharing is a solution of the labor question. The system brings employer and employe together. They are friends, collaborators, in a common cause. What is for the best interest of the one is for the best interest of the other, and should any difference arise between them they will not go into a corner and sulk and nurse their grievances until a molehill becomes a mountain, but will come together like partners, as they are, and will adjust their differences without trouble. I am not saying that either employers or employes in this country are yet ready for this new order of things. But they will grow into it, for I believe that the time will come when the system will be very generally adopted in this country."

## An Unpolishable Diamond.

A remarkable diamond was exhibited at a recent meeting of the New York Academy of Sciences by Mr. George F. Kuntz. It was a compound or multiple crystal, containing a large number of twinnings. It is of the class termed "extreme durate" by the French. It had been cut into the general shape of a brilliant, and its main face or table was then placed on the polishing wheel. It was kept there for 100 days, the wheel revolving at the rate of 2,800 revolutions per minute. The diamond was held upon the rotating surface at a distance of about 15 inches from the center. Based on these figures, a calculation showed that the surface passed over by the diamond amounted to 75,000 miles, or nearly three times the circumference of the earth. Yet it was all futile, as the stone would not acquire a polish. The ordinary weight placed on a diamond, while on the wheel, is from 2¼ to 2½ pounds. This was increased by 4 and 8 pounds without effect, and finally 40 pounds were used. The wheel was badly damaged, the diamond plowing into it and throwing scintillations in all directions. The diamond, even under these conditions, could not be given a commercial polish. The wheel had to be replaced. The work was done in the establishment of Tiffany & Co., of this city.

## Exploration of Greenland.

A correspondent in Norway sends us the following interesting information:

The conservator of the museum at Bergen, Mr. Frithjof Nansen, intends very soon to investigate the interior of Greenland.

One of our sealers is to take him to the eastern shore, where he is to land at, or near, Scoresby Sound.

Taking the place as a starting point, he intends to cross the continent to some place near Disco Island, on the western shore. For making the journey over the ice or snow he means wholly to rely on the use of the Norwegian snow shoes, long narrow strips of wood (ash as a rule), on which great distances can be traversed in an incredibly short space of time.

Mr. Nansen is a man of learning, of an energetic turn of mind, and is bent upon seeing his plan accomplished in this manner. He is an expert on snow shoes, and is to be accompanied by only three or four other persons accustomed to the hardships of mountain traveling in a Norwegian winter, as is also Mr. Nansen himself.