CHRONOLOGY OF THE TIMEPIECE.

By timepiece we understand that instrument by the aid of which we divide the day into twenty four equal parts. As well known, the ancients already possessed such contrivances, sand or water hour glasses, and sun dials, 740 years B. C., and tradition has it that the obelisks served as gnomons for the Egyptians and Phenicians; Caliph Haroun al Rachid presented Charlemagne, in 800 A. C., with a copper clock propelled by sand. History is very vague with regard to the exact date of the discovery of clocks; it is said that the wheeled timepiece was invented in the 14th century; first by Richard Wallingford, Abbot of St. Albans, England; next by Giovanni Dondi, a doctor and astronomer at Padua, and finally, by Henry von Vick, a German clockmaker, in Paris, who, at the order of Charles V., constructed the first tower clock in Paris (the square is still called Place d'Horloge). The honor of the invention of the actual watch pertains to one Peter Hehle, of Nuremberg (the first watches were call *Nuremberg eggs*), in 1500. About the same time the second Strasbourg clock* was constructed. The subsequent improvements and inventions are due to the great number of watchmakers and men of genius, and in the following we give the names of those who made essential adaptations and inventions, and earned immortal fame.

1595. Gallileo invents the pendulum, whereby the means is offered for regulating the motion of the wheel clock; his son Vincent, however, in 1649, makes the first practical attempt to adapt it to the clock.

1656. Christian Huyghens (pronounced Hoigens), a Dutchman, finally succeeds in constructing the first pendulum clock; he later constructs several marine watches, but finally invents the balance spring, by the use alone, of which a marine timepiece becomes a possibility.

1675. Barlow and Quare, London, make the first repeating movements, first for clocks, next for watches.

1680. Clement, London, invents the anchor escapement (clock).

1695. Tampion invents the dead-beat escapement, and uses it first in a watch.

1700. Fatio, of Geneva, perforates rubies, and uses them as pivot holes.

1715. Graham, London, constructs the mercury compensated pendulum, invents the cylinder escapement, and the dead-beat escapement for astronomical clocks.

1726. John Harrison, England, constructs the gridiron compensated pendulum, and in 1761, when 67 years old, the first marine watch, receiving the prize of £10,000 therefor from Parliament. (This excellent horologist died 1776, at the age of 82 years.

1754. Caron de Beaumarchais, the son of a watchmaker, invents the pin escapement for watches; but at a later date, follows his poetical inclination, and composes the Barber of Seville, Figaro's Marriage, etc.

1755. Ferdinand Berthoud, born 1727, in Canton Neuchatel, greatly promotes the interests of horology by his writings and treatises. He also constructed several, and better watches than Harrison, and died in 1807, in California, whither he had gone, at the age of 80, to observe his last clock. Ferd. Berthoud undoubtedly was one of the greatest watchmakers that ever lived. The celebrated *Abbe* Chappe, inventor of telegraphy, was his nephew.

1765. Pierre le Roy invents the compensated balance wheel, after having constructed a marine watch, for which he obtained a prize from the Academie des Sciences.

1770. Duplex, England, invents the escapement named for him, and greatly esteemed at the present day.

1772. John Arnold, also English, makes several improvements, and afterward invents the marine chronometer with dead-beat spring escapement, and approximately correct compensated balance.

1805. Urban Jurgensen, Copenhagen, constructs the first steel cylinder scape wheel, and greatly contributes to raise the art of horology by his improvements and writings. Thus, for instance, he materially improved Arnold's dead-beat chronometer escapement.

1821. Rieussac, Paris, invents the writing clock.

1828. Perrelet constructs an astronomical clock showing the hours, minutes, seconds, even 1-10 seconds. From this time forward, Breguet, Louis Berthoud, Houriet, Wagner and Perron, by dissertations and pratical improvements, gave the incentive to bring the art of horology to a high standard, and to make it commensurate with the requirements of the present age.

It would lead too far to mention the many different inventions and improvements made in this century—the Geneva musical boxes, the orchestrions of the Black Forest, the astronomical clock of Strasbourg, etc. In the line of watches, the standing seconds, the course of the moon, perpetual almanac, etc., automatically-striking hour, ¼ and ½ hour, yea, minute repeaters; again, the remontoirs, and in latest time, the chronographs, etc. If we remember that the art of horology has labored from the year 740 B. C. to the middle of the last century, without leaving its cradle of infancy, and contemplate the grandeur of the inventions of the present time, the thinking mind will be tempted to incline his head in reverence when he hears or sees the names of Graham, Harriston, Breguet, Berthoud and others.—*Jewelers' Circular.*

*Strasbourg possessed three different clocks. The first was built in the year 1352, under John von Leichtenberg, and finished in two years; the the second one was commenced in 1547, and, on account of death and other interruptions, finished in 1574; the present third clock was built by John Baptist Schwilgue in 1838, and finished in 1842. Only a few insignificant portions of the old clock were retained.

BUSINESS CHANGES FOR JULY.

Jno. Bertram, Peterboro, hardware, has sold out to M. Miller, possession 1st July. T Crispin, Guelph, hardware & tins, removed to Woodstock; *Mitchell & Gage, Hamilton, wood*enware, &c., partnership dissolved, Thos. Mitchell continues alone; L. Atkinson, New market, jewelry stock advertised for sale by Sheriff, 8 inst. E H. Reeves, Waterford, hardware, advertises business for sale; Geo Getz, Hamilton, jeweler, dead; Ellis & Woodward, Port Rowan, hardware & tins, have dissolved, Jno. Woodward continues alone, Robb, Miller & Son, Montreal, wholesale stationery burned out; W S Anderson, Winnipeg, jeweler, given up business here; D. M. Demill, Shannonville, hardware, sold out to S. E. Mills.

BUSINESS NOTES.

In 1834 all the table cutlery used in the United States was imported from England. To-day, of an annual consumption amounting to $2,500,000 worth, not more than eight per cent. comes from England.

Messrs. C. & J. Allen, of this city, have rented half of Trout & Mitchell's drug store, in Winnipeg, and are going to open out a branch of their business there. It is to be under the personal supervison of Mr. Joseph Allen

The new Electro plated Ware Factory lately erected in this city, is now finished, and the engine and machinery are being fitted up as fast as possible. They expect to commence the