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TIME.

LAND AND WATER CLOCKS.

Time was Formerly Measured

The Invention of Clocks
And Watches,
The greatest interest will be found in the history of the origin and development of clocks and watches. The first gnomen or sun-dial of which we have any historical notice is that of King Ahaz, about 740 years before the Christian era. It is mentioned in 2 Kings 20:11: "And Isaiah the prophet cried unto the Lord; and he brought the shadow ten degrees backward, by which it had gone down in the dial of Ahaz." The ancients used hemispherical dial plates, with the radius which throws the shadow running north and south; those now in use are flat, with the edge of the shadow radius forming an angle with the horizon equal to the latitude in which they are situated or parallel to the earth's axis. though it was possible to tell the time by a mathematically adjusted in-dial to within a few minutes, they were in a great measure super-seded at a very early date by clepsy-dre and sand-glass. The most usual form of clepsytræ, or water clocks, seems to have been a graduated ressel containing a float, into which water dropped from another vessel, the float as it rose, indicating the time of day. The sand clocks, or glasses, seem to have been very similar to an ordinary hour-glass of the present day. These are supposed to have been of early origin. Candle

clocks were a later method of mark-

ing time. It is rather remarkable

the first invention of wheel clocks,

no two writers seemingly agreeing as to the exact period of their introduc-

tion. Although some historians as-

sign it to such an early date as even

the sixth century, it is not very prob-

able that they are correct, the words horologium, horologe, etc., having been applied indiscriminately

weights, and striking automatically, existed in the eleventh century.

was paid for out of a fine imposed by Edward I., in the year 1288, upon Sir

by at least two years. From these

dates the manufacture of clocks would appear to have become a set-

tled industry in England, although

the first authentic description we have of the interior of any wheel clock is that of one made by Henry de Wyck, a German, for Charles V.

of France, in 1379, which has been

not inaptly styled the "parent of modern time-keepers," since, except that it had no pendulum and only an hour hand, it was very like in principle the clocks of the present day. It consisted of a train of wheels driven by a weight and had a vert

driven by a weight, and had a verti-cal or verge escapement with a vi-brating balance, but no spring; the balance, instead of being shaped like

a fly wheel, was in the form of a T,

upon the two thin projecting arms of which concentric notches were cut.

Two small regulating weights were

suspended from the arms, and it was by shifting these from notch to notch,

or from the center, that the clock

was made to go faster or slower as required. The discovery of the isochronism, or equality of time, of the pendulum is attributed to Galileo.

who observed that a chandelier

swinging in a church at Florence, Italy, performed the vibrations of the long and short arcs in the same time. It was he who first conceived

Hele, a clockmaker of that town. They were furnished with the verge escapement, similar to the one in De Wyck's clock, the want of control

But it was not until the invention

But it was not until the invention of the balance spring, about the year 1660, that any rapid progress was made in the direction of good time-keeping. The invention of the balance spring is assigned both to Huygens and to Dr. Robert Hooke, an Englishman, and it is claimed that it must rest with the latter, whose enunciation of the theory of its iso-chronism in the words, "Ut tensis

Purely Vegetable Compound, that acts directly upon the Diver; curing the many diseases incident to that many diseases incident to that many portant organ, and preventing the numerous ailments that arise from its deranged or torpic action, such as Dyspepsia daundice, Biliousness, Costweness, Malaria, Sick-headache, Rheumattum etc. It is therefore a state of the invention of wheel clocks, planetariums, or orreries were well known. The first modern planetarium in England was one made for Lord Orrery, whose name has been since generally given to these machines, and that our forefathers looked upon the planetary motions as the true measure of time may be proved by the fact that the first clocks constructed nearly always showed various astronomical phenomena, in addition to showing or its name implies; & that, long before the invention of Rheumathan etc. It is therefore s ruismathat "To have Good Health little is known, it would seem, about the Liver must be kept in order." DR. SANFORD'S LIVER INVIGORATOR-Invigorates the Liver, Regulates the Bowals, Strengthens the System, Purifics the

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De Wyck's clock, the want of control over which, no doubt, suggested the idea of the fusee adjustment, which was invented about the year 1520. Charles V. of Germany is said to have taken great interest in the performance of these early specimens of horological art, and to have kept several of them going together. They appear to have been in common use in England in the reign of Queen Elizabeth, and are mentioned by Shakespeare in "Twelfth Night." But it was not until the invention

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sic vis" (as the tension so is the force), showed that he was well acquainted with its properties, although this axiom, which is called "Hooke's law," is true only of certain lengths WYATT & THOMPSON of spring fixed at the ends at certain positions. Repeating work was invented in the year 1676 by an English clergyman named Barrow, who was, however, opposed by one Dan-iel Quare, a watchmaker, in his application for a patent for his invention, and in favor of whom the King (James II.), on appeal, rendered

From the latter part of the seventeenth century the science of horology steadily improved in England. Facio introduced jeweling from Geneva in 1700; and George Graham, a watchmaker's apprentice, invented the year. This escapement, although found to be a great advance on the verge, was soon almost discarded, owing to the rapidity with which the brass escape wheel cut in the cylinder, which was of steel. This, indeed, caused the introduction of ruby cylinders, but the difficulty and expense of making rendered them unsuitable for ordinary watches. The Swiss, however, took the idea up, and the horizontal escapement, with a small steel wheel, was, until very recently, almost the only one applied to their watches. It is indeed generally made now, but the superior qualities of the lever are slowly asserting themselves in that country, and are gradually driving it out of the market.—[N. Y. Sun.

Why the Editor Is Bald and Tooth-

"You may never have remarked that literary men are apt to be-come toothless sooner than other people," said a dentist to me yester-day. "The phosphates which hand on to report the hair and day. "The phosphates which should go to renew the hair and teeth, are consumed by the brain with such rapidity that the dentist with such rapidity that the dentist and barber have to be called into requisition by brainworkers more frequently than by any other class. If, in addition to hard brainwork, unvaried by frequent periods of recreation and repose, the subject is a beavy smoker or dripler the decay heavy smoker or drinker, the decay is so much the more pronounced."-[Interview in N. Y. Star.

ubstitute for Calemelan | Quivi Simmons Liver Regulator, purely veg etable, is equal in power to blue mass or calomet, but without any of their in

or calonist, but without any of their in-jurious properties.

"I find Simmons Liver Regulator a most excellent medicine, aeding like a charm on the liver. It is the best sub-stitute for caloniel. Have tried it in several cases of bilions disorders, chills and fever, and it effected a care in a most satisfactory manner.—Dr. J. H. Bowen, Clinton, Ga." in old writings to any machine for measuring time. It is pretty certain, however, that clocks driven by The oldest clocks in England were that of St. Paul's Cathedral, Landon, and one at Westminster, which latter

species of snake has been discovered in Missouri. This looks as if a stronger brand of whisky had also been found in that State.—[Norris-town Herald.

The Detroit Free Press says a new

The Grand Alms of Life Are pullithes to the chronic toyalid. What to him are the rewards of ambition, the accu tie happiness? The zeal of life is gone, it aims are dead. Well for him if all this is not irretrievable-if his malady is a 4 of the deep seated organic sort which forbld's hope sure. For many of the ills to which flesh i heir, formerly supposed to be incurable, tios heir, formerly supposed to be incurable, ties-tetter's Stomach Bitters is a sovereign rem-edy. Among them are dyspensia, chrowic constipation, rheumatism, debility, and nervousness. These are remediable with the grand resionative, which does the wor-thoroughly, striking at the root of the evils to the removal of which it is adapted. By insuring activity and purity of the circula-tion, inducing a healthy flow of the bite, and promoting a regular habit of body, it forti-les the system against mularia. It is neeful as a dilurette.

The inhabitants of Burmah worship idols of brass. Book agents would probably meet with a very different reception in Burmah from what they do here .- Burlington Free Press.

What is the matter with that man, mother? He has a bad cold, my child Then be should buy a bottle of Red Star Cough Cure, mother. You know a few teaspoonsful of it made me better, and it has no opiates.

time. It was he who first conceived the idea of applying the pendulum to a clock; but Huygens, the Dutch philosopher, was the first to investigate thoroughly the mathematical theory of the pendulum. The first watches were made at Nuremberg, Germany, about the year 1500, where the mainspring is said to have been invented by Peter Hele, a clockmaker of that town.

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