

WHAT IS A YEAR?

What is a year? 'Tis but a wave
On life's dark rolling stream,
Which is so quickly gone that we
Account it but a dream.
'Tis but a single earnest thro'p
Of Time's old iron heart,
Which, tireless, now, and strong as when,
It first with life did start.

What is a year? 'Tis but a turn
Of Time's old broken wheel;
Or but a page upon the book
Which time must shortly seal.
'Tis but a step upon the road
Which we must travel o'er;
A few more steps, and we shall walk
Life's weary road no more.

What is a year? 'Tis but a breath
From Time's old nostrils blown,
As rushing onward o'er the earth
We hear his weary moan.
'Tis like the bubble on the wave,
Or dew upon the lawn;
As transient as the mist of morn
Beneath the summer sun.

What is a year? 'Tis but a type
Of life's oft changing scene;
Youth's happy morn comes gaily on
With hills and valleys green;
Next summers prime succeeds the spring,
Then autumn with a tear,
Then comes old winter—death and all
Must find a level here.

ANCIENT AND MODERN COINAGE

(From the New York Christian Union.)

Platinum was coined in Russia from 1828 to 1845. But the metals best adapted and most generally used as coin are copper, nickel, silver and gold; the first two being now used for coins of small value, to make change, the two latter, commonly designated "the precious metals," as measures of value and legal tender. On the continent of Europe a composition of silver and copper called bullion, has long been used for small coins; which are made current at a much higher value than the metals they contain. In China Sycee, silver is the principal currency, which is merely ingot silver of a uniform fineness, paid and received by weight.

Spanish and Mexican dollars also circulate there, but only after they have been assayed and stamped as proof that they are of the standard fineness. As Asia Minor produces gold, its earliest coinage was of that metal. Italy and Sicily possessing copper, bronze was first coined there.

The Lydians had gold coin at the close of the ninth century B.C.; Greece proper only at the end of the eighth century, B.C. Servius Tullius, King of Rome, made the pound weight of copper current money.

The Romans first coined silver 281 B.C., and gold 207, B.C. Some nations, although they worked the metals with skill, seem never to have coined money, and such was the case with a large number of whom no coins are known prior to the English invasion in the twelfth century.

The amount of specie existing in Europe, A.D. 14, was equal in value to but £358.

After the Augustan era the product of the European mines failed, and the stock of coin gradually disappeared until the ninth century, each step of its fall being marked by the greater poverty and social degradation of the people, until at last such was the scarcity of coin, that human beings in Britain were made a legal tender at specified rates.

INVENTION OF BANK NOTES.

This dearth of the precious metals contributed largely towards establishing the dark ages. Out of these depths arose the great modern institutions—the mercantile theory and credit—the one a palliative and the other a cure. No increase in the stock of coin occurred until after the discovery of America, but the invention of paper credit

largely alleviated the prevailing misery. The invention is due to the Jews, who, in 1160, introduced bills of exchange, and who were the only persons, from the institution of the canon law against the taking of interest for the loan of money to the sixteenth century, who, in Western Europe, durst make a business of giving credit.

The same people established the first banks in Europe. That of Venice was established in 1157, that of Geneva in 1345, that of Barcelona in 1401, and that of Genoa in 1407. The discovery of America in 1492 produced no immediate increase in the European stock of coin. The mines of Potosi were opened in 1545, but it was not until near the seventeenth century that the stock of coin sensibly increased. The taking of interest was totally forbidden until 1571, and the device of extending credit by means of endorsement was not practiced until a century later, when it was introduced from Holland.

INCREASE OF COIN.

The stock of coin steadily increased until 1827, when it reached its highest point, and then declined until the opening of the Pacific coast mines in 1848, when it again increased, passing in 1860 its greatest previous height, and attaining in 1867 the enormous sum of two thousand six hundred million of dollars.

Copper coins, few in number, were used by the Mint of the United States as early as 1792, but these are now so rare that one of them sold at auction in Philadelphia, in January, 1860, for sixty-five dollars and fifty cents, and another for fifty dollars. The Mint did not get fairly into operation until 1793, when the first copper cent appeared.

The estimated amount of gold in existence at the commencement of the Christian era was \$427,000,000. At the discovery of America, in 1492, this amount had diminished to \$57,000,000. In 1600 the amount had risen to \$105,000,000, in 1700 to \$351,000,000, in 1800 to \$1,251,000,000. The Russian mines, extending over one-third of the surface of the globe, on parallel fifty degrees north latitude, were discovered in 1819.

In 1843 the estimated amount of gold in existence was \$2,000,000,000.

Next followed the discoveries in California, February 9th, 1848, and in Australia, February 12th, 1851, which added enormously to the gold production. In 1853 the amount in existence was computed at \$3,000,000,000, and in 1860 it was \$4,000,000,000.

From the commencement of the Christian era to the discovery of America, it was estimated that gold had been taken from the surface and mined to the amount of \$3,800,000,000. From that date to the close of 1842, \$2,800,000,000; to 1860, Russia adds \$746,000,000 and California and Australia \$2,000,000,000 more. The amount of gold at present in existence is estimated at \$5,950,000,000. The quantity of gold and silver, of all denominations, in all quarters of the globe, is set down, by the best authorities, at from three to four hundred million pounds sterling; and the quantity of plate and ornaments at about \$400,000,000.

WHAT BECOMES OF THE COIN.

In the reign of Darius gold was thirteen times more valuable, weight for weight, than silver. In the time of Plato it was twelve times as valuable. In that of Julius Caesar gold was only nine times more valuable, owing perhaps to the enormous quantities of gold seized by him in his wars. It is a natural question to ask what became of the gold and silver? A paper read before the Polytechnic Association by Dr. Stephens, recent-

ly, is calculated to meet this enquiry. He says, of our annual gold product, full fifteen per cent is melted down for manufacture; thirty-five per cent goes to Europe; twenty-five per cent to Cuba; fifteen per cent to Brazil; five per cent direct to Japan, China and the Indies; leaving but five per cent for circulation in this country. Of that which goes to Cuba, the West Indies, Brazil, full fifty per cent finds its way to Europe, where, after deducting a large percentage used in manufacturing, four-fifths of the remainder is exported to India. Here the transit of the precious metal is at end. Here the supply, however vast, is absorbed, and never returns to the civilized world.

The Orientals consume but little, while their productions have ever been in demand among the Western nations. As mere recipients, therefore, these nations have acquired the desire of accumulating and hoarding, a passion common alike to all classes among the Egyptians, Indians, Chinese, and Persians. A French economist states that in his opinion the former nation alone hide away \$20,000,000 of gold and silver annually, and the present Emperor of Morocco is reported as so addicted to this avaricious mania that he has filled seventeen large chambers with the precious metals. The same spirit is shared by their subjects, and it is in this predilection that we discover the solution of the problem as to the ultimate disposition of the precious metals. This absorption by the Eastern nations has been uninterruptedly going on since the most remote historical period. According to Pliny, as much as \$1,000,000 in gold, was, in his days, annually exported to the East. The balance of trade in favor of those nations is now given as \$80,000,000.

A system of international coinage is proposed, and a congress has recently been held in Paris, at which the several nationalities were represented, including the United States.

If our Government shall endorse the proposed system, there will be a national change in our coinage, if we shall ever return to hard money times. The proposed standard of coinage—the *franc*—is equal in value to nineteen and one-fifth cents. A five franc piece is accordingly worth four cents less than the American dollar, which is our present standard of coinage. Under proposed plan, our present half dollar would be represented by a piece worth forth-eight cents, etc.

The ancient English penny was the first silver coin struck in England. It was equal in weight to the present three penny piece

HORSE POWER IN STEAM ENGINES.

Very vague and sometimes very erroneous ideas prevail as to the meaning of the term "horse power" in reference to steam and other machinery; we will endeavour by the aid of an excellent periodical to explain the matter in as simple a form as possible.

The power of a horse has been established by a series of experiments as the amount of power which is required to raise thirty-three thousand pounds one foot in one minute; not however that a horse can pull with a force of 33,000 pounds during one minute and so raise that weight a foot high in that time. The power of a horse at different speeds is very variable; the conventional assumption is 150 pounds moved 20 miles a day at 2½ miles per hour. Thus a horse towing a canal boat and keeping a steady strain on the line of 150 pounds and a speed of 2½ miles per hour, would be doing the work which Watt experimentally decided an aver-