

paper alone, and in fact are paid in nothing else. There is no possible reason for them to hoard gold except that they expect a premium upon it or that they wish to force the government to borrow money which it does not need. Their talk about country banks occasionally demanding gold remittances is folderol. They can go to the sub-treasury upon every such occasion and exchange greenbacks for gold in any quantity they please. The banks still owe to the public an answer to the *World's* questions.

And the banks still refuse to give to the public the answer which they owe, meanwhile forcing the government into the needless borrowing referred to, and all the time enhancing the value of, if not indeed putting a premium upon the one metal. The public sees the dilemma plainly enough, and cannot be much longer restrained from enforcing its legal remedy.

POPULATION OF THE WORLD.

Some interesting figures concerning the entire population of the world are given in an article recently published by the *Denver Republican*. The subject is, naturally, exceedingly difficult, because in regard to many countries the statistician is placed very much in the position of the curious guesser of the number of seeds in a watermelon. Yet the figures given are accepted as sufficiently accurate to give an approximately fair idea of the present size of the human family.

According to Wagner and Supan, the German savants, our globe is inhabited by 1,480,000,000 of human beings. They are distributed as follows:

Asia	823,954,000
Europe	357,379,000
Africa	163,953,000
America	121,713,000
Oceanic islands and Polar regions	7,500,400
Australia	3,230,000

The fact is conveyed in another form in order to make it more clear. If the entire population of the world were 1,000, the distribution in the various geographical divisions would be this:

Asia	553
Europe	242
Africa	111
America	82
Oceanic islands and Polar regions	5
Australia	2

That is, more than one-half of the human family dwell in Asia and nearly one-quarter in Europe; about one-ninth inhabit Africa, while only one-twelfth have found their way to the American continents.

The total land area of the globe is calculated to be 52,315,000 square miles, distributed thus:

Asia	17,044,000
America	14,801,000
Africa	11,277,000
Europe	3,757,000
Australia	2,972,000
Oceanic islands and Polar regions	2,461,000

A glance at these figures reveals the surprising fact that while America is nearly four times the size of Europe this latter continent supports more than double the population of North, Central and South America combined.

Vast as the population of the world

is, it is really insignificant when subjected to mathematical fancy work. For instance, every man, woman and child, we are told, might be fenced in on a square, twenty-two miles each way, and then have the comfortable standing room of a square yard each. An expert on the bicycle would be able to make the tour round the whole assembly in about three hours and a half. A box 1,140 yards each way would hold every inhabitant of the world, and yet some people have been led to imagine that the globe is overpopulated, and that it is necessary for the support of the race that a few millions be killed off occasionally to give more room to the survivors. Before the figures of expert statisticians such theories are evidently unable to stand.

SHOWS PROGRESS.

There are none who will deny that scientific men have exhibited marked progress in their manipulations of electricity, both in the field of dynamical and illuminants, as well as in medical appliances; but the recent process of lighting up the interior of the human stomach with an incandescent lamp suggests a new plan of operation for the doctors. The idea worked out through the practice of laundering the stomach which has come into vogue recently, and in many instances has been attended with wonderful success.

When it became generally known that a half-inch tube could be injected into the stomach through the esophagus without serious inconvenience, those interested in therapeutics conceived the notion that this means of communication with the interior man could be utilized in more ways than one, so they set their wits to work. The electrical current can be transmitted by a flexible conductor, and therefore the task in this line was comparatively easy. It is stated that the results have proved very satisfactory in several instances. One interesting experiment by D. A. Abrams, professor of pathology in the Cooper medical college at San Francisco, merely for the information of students, was made on Saturday night. The professor put a covered telephone wire down the subject's throat, and the throbbing of the heart could be listened to by telephone. Then followed the insertion of a flexible tube containing a wire arranged for the production of an electric light at the end. The stomach was then distended with water, and a current of electricity applied from a storage battery. The result was that in the darkened room the abdominal section of the subject looked like a pinkish colored globe with a lighted candle inside.

The claim is that by this means the presence of cancers and tumors on the anterior walls of the stomach can be easily detected, and the true nature of any ulceration be determined; also that the presence and kind of many injurious substances can be ascertained, so as to be dealt with knowingly, while at present the concealment by the stomach leads to much medical experimentation before the real trouble is discovered. No doubt if this application can be made of practical use, it will be a source of satisfac-

tion to doctors to know that they can examine an ulcer in the stomach with as much care as they can investigate a boil on the back of the neck, or will be a means of comfort to those afflicted with stomachic diseases to realize that the seat of trouble can be made as visible to the eye as a corn on the great toe; yet there are some patients whose squeamishness will be aroused at the prospect of having a lamp shoved down their throats to see what ails them. Just the same, there is steady advance in the adaptations of the electric current, and mingled with many useless fads and notions will be found some practical hints of great value to mankind.

IT PAYS TACOMA.

In the present situation of the city, any facts and figures bearing upon the cost of lighting are of interest to the public generally and should be of special value to the municipal solons, in determining whether or not they are proceeding upon a wrong basis in the proposed method of dealing with the electric light problem. An illustration of some importance can be found in the recent experience of Tacoma, Washington. For years Tacoma was supplied with water and light by private companies, and the people were not satisfied. It was urged that the city should have its own water and light plants; and in support of this idea, Salt Lake City was cited as a commendable example in owning and controlling its own waterworks. The result of the agitation was that Tacoma placed a water and light plant under the control of its board of public works.

A detailed report of the workings of the new system has been published in the *Tacoma Ledger*, from the change up to the close of 1891, covering a period of eighteen months. The cost of the plant required the issuance of bonds, \$1,750,000, bearing interest to the amount of \$131,250. The city furnished water as Salt Lake does, and electric lights were provided for commercial as well as public purposes. The first step of the board of public works was to reduce light and water rates to consumers 20 and 25 per cent. Under this management the operation of the water division cost \$49,993.05; the electric light department \$99,754.11. Other expenses swelled the total outlay, including interest on the bonds, up to \$285,165.68. The total receipts for the period named were \$328,169.15; leaving to the city a net profit on its light and water plant of \$43,003.47. In the cost of operation are included extensions in the water and light system to the value of \$42,342.19.

The report thus made contains a charge against the city for its light and water, at the 20 and 25 per cent reduction from the old rates; these old rates were \$4 for each water hydrant and \$12 for each arc light for the streets. Bringing the matter down to the actual figures of December last, the Tacoma board furnishes the following statement:

December, 1891—	
Water receipts from commercial sources	\$3,084 31
Cost of operation	2,060 54
Net receipts	\$6,023 77