

## HENRY MORTON STANLEY.

August Peterman speaks of Stanley as the Bismarck of African explorers. It is a fact that the results achieved by this American in Africa surpass all the scientific discoveries made during the last thirty years, all travels of Europeans during the last eighty years, and the travels of the Arabians during the last thousand years. Stanley has acquired more knowledge of Africa than millions of the inhabitants possess of their own country. History knows of no other discoverer who has been as successful as Stanley.

Stanley's first trip to Africa, and the finding of Livingston, created a great sensation throughout the civilized world. He had no special object in view during his second journey, and at the time that he embarked on a small boat on the African stream Lualaba, and drifted toward the north. Shortly before leaving Njangwe, on October 30, 1875, he wrote as follows:

"The entire equatorial Africa is an unknown country, from which not even the slightest information has passed to the outer world. Even here in Njangwe no one knows anything of the same. It is wrapped in mysterious darkness, and the great superstition of the inhabitants has surrounded it with horrible imaginations. They are of the opinion that it is inhabited by vicious dwarfs striped like the zebras, living on elephants, and using poisoned arrows. An immense forest extends toward the north, no one knows how far, as no one has seen its end. Day after day, and week after week, the traveler passes through the forest of equatorial Africa without ever seeing the sun. The great Lualaba River flows to the north, and it is supposed that it extends to the Mediterranean Sea; at least, so the Arabs and their slaves say."

From the above it is evident that much courage was required to undertake the hazardous trip to this unknown country, but Stanley succeeded after overcoming enormous difficulties, dangers, and hardships. He has proved that the Lualaba and the Congo are identical, and has thus solved the last problem of the two main rivers of Africa, the Nile and the Congo.

Stanley achieved much because he did not travel as a scientist collecting notes, or as a great discoverer, but as a general and conqueror. He negotiated where he could accomplish the desired result thereby, but otherwise made use of his weapons. Cortez and Pizarro received much assistance, in the countries they conquered, from those who were suppressed and ill treated, or dissatisfied with the rulers, but Stanley received no assistance whatever, and it was all he could do to prevent being attacked. Stanley not only achieved scientific results, but also discovered a beautiful river and country for mercantile transactions. Enormous woods of oil palms, cotton plants, rubber trees, etc., cover this country. Elephants seem to be in abundance, for Stanley says that he not only saw temples and buildings made of ivory, but even the most common implements, which are not usually made of such costly material. Some of the inhabitants are cannibals, but some tribes are partially civilized and have some culture. Stanley found very large cities and some vessels of perfect construction. The Congo countries are very fruitful, and the climate is favorable to vegetation, although the coast climate is not very favorable for Europeans. The country is specially well adapted for raising tropical fruits, and most of the West Indian plants can be raised here, such as cotton, sugar, indigo, tobacco, cocoa, ginger, and many others. The quantity and number of drug plants of this country are enormous.

The annexed portrait of Henry Morton Stanley was taken from the *Illustrirte Zeitung*.

## The Box Psylla Found in the United States.

While making some observations for the Bureau, Mr. A. Koebele found toward the end of May, in the garden of Mr. Angus, New York city, large numbers of a flea-louse infesting box (*Buxus sempervirens*). The insect—at this time mostly larvæ and pupæ and a few imago—thickly crowded the young growth of the plants, and the whole hedge showed at the first glance a sickly appearance, the tender shoots being more or less yellowish in color and evidently dying. In our breeding cages the imago continued to develop throughout the month of June, but outdoors no further observation on the life history of the insect could be made. The species proved to be identical with the European box psylla (*Psylla buxi* Linn.), a species hitherto not known to occur in America. It is of a pale green color with hyaline wings, the anterior and middle portions of the thorax (pronotum and dorsulum) having brownish longitudinal markings, the larva and

pupa being of still paler, uniform greenish color, and not deviating in form from the larvæ of other species of the same genus. The winged insect bears a deceptive resemblance to our native hornbeam psylla (*Psylla Corpini* Pitch), and can only be distinguished from this upon close examination, the most obvious difference being the absence of a distinct pterostigma in the box psylla.

Mr. Angus attempted to crush the psyllas off with a stiff broom, but this is a remedy of very questionable value, and a much simpler and doubtless more effective way of getting rid of this pest would be the application of diluted kerosene emulsion in a very fine spray.

There is no danger that this newly imported psylla will infest any other plant besides the box, but, if not kept in check, it is liable to spread and to do serious damage to the plant in all those sections of the country where it is grown and esteemed as an evergreen ornament.—Prof. C. V. Riley, in *Ann. Rep. Dep. Agr.* 1884.

## The Future of Natural Gas.

The application of this fuel at Pittsburg and vicinity is watched with an abiding interest. With gas at fifteen cents per thousand feet, it is not strange that manufacturers should be eager to avail themselves of so cheap a fuel, so cleanly in use, so readily applied and

tions, it exists in abundance in other formations where oil has not been found. The general prevalence of gas springs in the Hamilton shales of Western New York led to the sinking of many oil wells in 1866-68, which however never developed more than a plentiful supply of gas. One of these wells, in West Bloomfield, N. Y., has been a roarer for eighteen years, and we believe still roars with undiminished vigor. As these shales run through to the west on that general latitude, the gas is no doubt widely distributed outside of the oil formations. It is presumed also that other formations may prove gas-bearing.

It is this wide distribution of gas which will give it a more general industrial value. Local gas belts, when some permanency of supply is assured, will be so many mines of power, which will determine the location of manufactories as water-power has in the past. It will be gathered up into mains and forced to points more or less distant, and, if pressure be insufficient, pumps or steam jets, as in the pneumatic tubes of London, will force it to its destination. Perhaps to greater distances still, its energy may be transmitted by electric conductors.

That the supply is infinite, or incapable of exhaustion, is not to be anticipated. That it will be exhausted in the immediate future, we greatly doubt. In any event, its use should be jealously guarded, and the wasting of it looked upon as criminal, and made the

subject of legislation. No man holding a spot of land on which a well has been drilled has any more right to idly blow the gas out of a belt than he would have to cut a levee and flood thousands of acres belonging to other people, simply because he built the levee and it is on his own land. To idly burn the gas is destroying property of great value, and in which the community has an abiding interest; in fact, it is a species of arson. The obligation of the state to the future should prevent needless and heedless waste when proprietors do not find it for their self-interests, the more especially as the cost to producers would be so slight, and any sentiment which defeats such regulation is mere wantonness.

The uses to which gas may be put are practically limitless. To all metallurgical purposes, glass making, brick burning, and similar uses, it is pre-eminently adapted. For household purposes it will prove a boon, and greatly conduce to domestic felicity. If charged with oil it is equal to any illuminant, though in its natural state by no means uneconomical. If it results in making of Pittsburg a clean, smokeless city, every outside barbarian who has occasion to visit that benighted town will rejoice with great fervor. A clean, whitewashed rolling mill would be a phenomenon to delight the eye, yet we understand that such a thing already exists in Pittsburg.

Ironmasters who expect it to furnish an escape from the threatened deluge of cheap Southern iron may be disappointed, as it may prove equally prevalent in the iron regions of the South. Wherever it exists, it will certainly greatly cheapen all metallurgical and manufacturing operations, and, should it prove to be widely prevalent and reliable, the cost of production would be generally so lowered as to enable competition in the markets of the world.—*The American Engineer*.

## Idle Ship Builders in England.

The number of workmen out of employment on the banks of the Tyne, between Newcastle and Tynemouth, is estimated to be between 10,000 and 12,000. It is reckoned that the amount of money withdrawn from the local banks for the payment of wages in the several shipyards and factories on the Tyne is less by £15,000 a week than it was a year ago. In Newcastle upward of 1,600 families are regularly in the receipt of relief, involving a weekly expenditure of about £240, while in addition to this, free breakfasts and dinners are given daily to about 900 children. Immense quantities of second-hand clothing have also been distributed among the poor, and the Relief Committee are making preparations for the distribution of coals during the winter months, several local colliery owners having presented quantities of coal for disposal. At Jarrow there are 955 families receiving relief, and free dinners are given daily to nearly 1,000 children. At Wallsend the committee are relieving 171 destitute families, and are serving 280 children's dinners a day. At Walker and Hebburn a similar amount of work is being done.

An enterprising contemporary offers the following inducement for new subscribers: "We will give a Daisy Pillow Sham Holder to each subscriber, and our paper until the first of January, 1886, for one dollar."



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controlled, and, in many of its applications, furnishing a superior product. The present excitement in gas territory is not unlike the early oil days, and a general rush to utilize it seems only to be prevented by a dazed sort of conservatism which awaits further developments. Meantime, prospectors are sinking new wells, pipe line companies are organizing, and law suits have been initiated, a sure sign of serious purpose, while millions of cubic feet are daily wasted. The possibility of early exhaustion seems to be the only deterrent influence on the general alteration of plant for its use among enterprising manufacturers. The marvelous thing in it all is that this product should have been going to waste for a full generation without a systematic attempt for its utilization.

We predict for natural gas a future as great as that which grew out of the early petroleum development, and of larger and more widespread industrial value. Even were the production of gas as fickle as that of oil, the product of wells as variable and short in duration, its value would still warrant its collection by pipe lines, with the same certainty of an aggregate average yield, with due enterprise, certainly adequate for those purposes to which it is pre-eminently adapted, even though it should prove insufficient for general use. But the history of wells does not augur any such unreliability. Many have roared gas steadily for fifteen years.

Gas is also far more widely distributed than oil. While a usual accompaniment of oil bearing forma-