shoes at $80 and $100 a pair. Fifteen dollars would purchase a spool of thread or a paper of pins. Medicines and all luxuries were not in the market for that sort of paper. A silver dollar was worth at least thirty Confederate dollars. The Confederacy understood that it had to protect its currency as well as its rights, and an act was passed making it treason for moneys to be exchanged at different values.

There has never been a craze among the curiosity collectors for Confederate money. The $1,000 bill is scare, and readily finds buyers at $2 or $3 each ; the $500 bill can be bought for 20 or 30 cents, the other denominations can be had for a song. Soon after the war men and women began to know for a certainty that their money was valuable only as paper. The ingenious housewives began to use it as money never before was used. They would paper their walls with old journals and periodicals, and put on a border made of Confederate money. Screens were made of bonds with money borders—in fact, everything susceptible of ornamentation received its supply of paste and pink treasury notes.—*Cincinnati Enquirer.*

A VESSEL OF NEW DESIGN.

No event in the last 20 years has created so profound and widespread an interest among shipping merchants, steamboatmen, and yachtsmen, as the performance of the little steam yacht Stiletto in beating the fast steamer Mary Powell. The Stiletto was built by the Herreshoff Manufacturing Company, of Bristol, of which John B. Herreshoff is president, and N. G. Herreshoff superintendent and designer. She was launched in April. John B. Herreshoff says that the hull of the Stilletto is the product of a series of experiments made with models, in the same manner as was followed by Froude, the English shipbuilder, and of the improvements suggested by tests of the numerous steamers previously built by the Herreshoff company. Her length over all is 94 feet : beam, 11 feet ; depth of hold in the centre, 7¾ feet. Below the water line both ends of the craft are very nearly alike, being modelled so as to present the smallest possible surface exposed to the water with a given flotation, as in the attainment of very high speed " skin," or watar surface friction is the factor of major resistance. The lines of the bows are very nearly straight, and the bottom is made in round sections. The slight slope of the deck forward and the more pronounced slope aft from the centre, which gives the peculiar appearance so noticeable in the boat, as well as the inclination inward are given merely for the purpose of getting rid of unnecessary weight in the hull, consequent loss of deck room being a matter of no moment in a boat of this kind.

The engine is designed to produce the greatest amount of power with the least possible amount of vibration. It is an annular valve inverted compound engine. It has two cylinders, one of 12 inches and the other of 21 inches diameter, with 12 inches stroke of piston. With maximum steam pressure of 150 pounds it will make 450 revolutions per minute, and is capable of working with that hight pressure and high number of revolutions with very little wear and very liability to break down. The space required for it is very much smaller than that occupied by any other engine in use of the same power. The ordinary yacht engines are capable of making only from 175 to 225 revolutions per minute. The essential feature of the engine is in the construction of the cylinder, which consists of one cylinder within the other, with an annular space between in which the valve works. The steam ports, or openings through which the steam enters the inner cylinder, are ranged all around it at the top and bottom, so that the steam pressure is exerted on the piston head from all sides at once, and not as in the engines in use now from only one side. The Stiletto has made 25 miles an hour.

THE MANUFACTURE OF OXYGEN.

The chemical wonder of the London Inventions Exhibition, the manufacture of oxygen by the process of Brin Frères, is thus described : They have made what is really an artificial mineral lung of anhydrous oxide of barium, and with this, by an ingenious process, they simply take up the oxygen from the atmospheric air. They decompose the air, so to speak, and absolutely do what they like with it. First the air is drawn by means of a partial vacuum through a vessel of quicklime, which absorbes all the carbonic acid and moisture and reduces it to a mixture of oxygen and nitrogen. These gases are then drawn into the retorts heated at 500°, and the artificial lung absorbs the oxygen, while the nitrogen is drawn off to a gasometer for conversion into ammonia, etc. The novelty is in the manufacture of the artificial lung. The Brins for the first time have made this indestructible. The use of baryta for the purpose is not unkown, but hitherto the baryta has been perishable and has required renewal every twenty-four hours at great expense. They make it virtually indestructible and unchangeable. In this way they claim to have effected an absolute revolution in chemistry, for with a lung for the machine and the atmospheric air for the material they can make just as much oxygen as they like, and the uses of this fluid, present and prospective, are almost innumerable and incalculable.

The doctors would be very glad to have it for purposes of inhalation, only as it has been hitherto made from chlorine it contains a trace of that poison and is therefore a perilous thing to play with. We are now to have, according to the inventors, oxygen not only for the sick chamber, but for the purification of ordinary dwelling houses, and especially of theatres and public halls. It is simply to be turned on into a vitiated atmosphere like a stream of fresh air. Then the oxygen is forced into water to make a new table beverage of the most refreshing and invigorating kind, aerated without the slow poison of carbonic acid. It is to burn with gas or lamp light, and make a flame which is to rival electricity in brightness and brilliancy, and altogether surpass it in cheapness, besides being the one light in the world which shows all colors at their absolute daylight value. In metallurgy it is to produce nothing short of a revolution, as it will feed a fire up to the highest temperature known. In another of its uses, dissolved in water, it is to effect much the same revolution in the bleaching trade. The nitrogen, which was at first looked upon as a waste product incidental to the manufacture of oxygen, is now, by a process due to the ingenuity of the same inventors, to be turned into ammoniacal salts for manure. Most of the uses of these products were formerly known, but this invention, if we are to believe what is claimed for it, tends to make them universal by an almost fabulous reduction in the cost of production. The chemical text books, according to Messrs. Brin, are at fault as to the possibilities of baryta. They all teach that it is destructible ; and the Brins maintain that as they know how to treat it, it is indestructible. That is the essence of their invention, and according to them the failure to discover the secret accounts for the fact that so many men of science, beginning with Priestly and Lavoisier, have vainly tried to extract oxygen from atmospheric air. Their efforts have been persistent in proportion to the magnitude of the reward in view. Oxygen in large quantities means a revolution in half the processes of chemical industries.

BOOTS AND SHOES.

In 1836 the State of Massachusetts made, in round numbers, 16,000,000 pairs of boots and shoes ; in 1844, 20,000,000 ; in 1854, 45,000,000 ; 1864, 31,000,000 ; in 1874, 59,000,000 ; in 1880, 78,000,000, and in 1884 (estimated), over 100,000,000 ! If this is not progress it would be difficult to say in what progress consists. The value of this vast product is estimated at $120,000,000 ; and good authority even places it at the superlative amount of $150,000,000. Such is the pleasant little sum gathered in by the boot and shoe manufacturers and merchants of Massachusetts every year. In the great production Lynn ranks first, with an annual business of nearly $30,000,000. Haverhill stands second, with more than $10,000,000. Brockton occupies the third place with $7,000,000. Number four on the list is Marlboro, which does a business of $5,000,000. Worcester comes next with over $4,000,000 ; then Weymouth ; then natick, while Boston stands eighth in the matter of production. New England furnishes more than two-thirds of the total product of the country, Massachusetts the bulk of the New England product, and Essex county the lion's share of the State's business. Lynn is still king in spite of all the changes that have occurred in the trade in the last half century.—*Boston Globe.*

CUT glass is said to have been invented about the year 1609 by Casper Lehman, an iron and steel cutter of Austria. But it was at Nuremberg, near the beginning of the eighteenth century, that glass cutting began to show really fair claims to be reckoned as an art.