Some Facts about Alaska.

Commander Henry Glass, U. S. Navy, who was for some time stationed at Sitka, Alaska, with the United States ship Jamestown, and afterward visited every part of the coast in command of the Wachusett, was in San Francisco recently, where he was interviewed with regard to the productions and possibilities of our great northern territory.

The fisheries of Alaska he thought very valuable, and destined to play an important part in the commerce and industries of the Pacific coast. Salmon of fine quality are found in the greatest abundance in every creek and river of the territory. It is probable that several canneries will be in operation this year (1883). The waters in places are teeming with halibut of the finest quality, and already the herring fishery has become of great value, works having been established during the past year for the manufacture of herring oil. Great numbers of whales frequent the inner channels and bays, and arrangements are now being made to prosecute whaling extensively. This can easily be done, and at much less expense than in the open seas, as small and inexpensive vessels can be used on the calm bays and channels of southeastern Alaska. To the northward and westward of Sitka are banks of considerable extent, where very fine codfish are found in great abundance.

The vast timber products of Alaska promise to be of great value in the near future.

On all the islands and the mainland of Southern Alaska are heavy forests of fir, spruce, alder, and cedar. Up to the present time very little timber has been cut in Alaska—only that needed for consumption in the Territory. But, with the inroads now being made on the timber of California, Oregon, and Washington Territory, Alaska must soon become a source of supply, and from the accessibility of the timber along the extensive shore line it can be exported very cheaply. On many of the islands are found large quantities of a hard yellow cedar, superior to any found elsewhere on this coast. This wood is quite hard, is easily worked, takes a high polish, is quite aromatic, and is said to possess the power of resisting the attacks of the teredo, which, if true, would make it very valuable in ship building. Commander Glass was told when in command in Alaska that the timbers of a Russian vessel constructed of this wood, after being some forty years under water, were found perfectly sound, and that they had not been touched by the teredo.

Of the mining prospects of Alaska, Commander Glass was quite hopeful. The placer mines of the Harris district are already valuable. During 1882 over $200,000 in gold dust were sent away, only the crudest machinery being used by the miners.

Quartz mining is equally promising in the same district, several extensive ledges having been discovered and traced one or two miles, and although only surface work has been done in prospecting, a great deal of fine quartz has been shown. The want of laws and courts to adjudicate disputed claims has prevented any extensive work being done up to the present time. With the organization of the Territory, capital would be attracted there and mines of value be developed.

Coal has been reported in several portions of the Territory, but as yet nothing of value has been discovered. Copper is reported in considerable quantities about the Copper River, to the westward of Mount St. Elias. This, however, Commander Glass had no opportunity to investigate.

At present nothing of importance is done in agriculture, only a few small gardens being planted about the principal settlements to supply vegetables. The summer is too short for any of our cereal crops, but potatoes of very fine quality could be grown in Alaska, and in all the valleys fine grasses grow luxuriantly, and portions of Alaska will hereafter be valuable for grazing purposes.

Southeast Alaska produces furs of value, and quite a large trade is carried on. Land and sea otter, lynx, several varieties of the fox—the most valuable being the silver gray fox—bear, and deer skins are exported, in considerable quantities.

Contrary to popular opinion, Commander Glass regards southern Alaska as an exceedingly healthy country, with a climate not at all severe. The lowest temperature that he saw recorded in Alaska during the two winters he was there was four degrees below zero (Fahrenheit); this was only on one day of January, of 1882, in latitude 59 degrees north. The highest temperature recorded on board ship during the summer was 80 degrees; this was at Sitka, about the middle of August. The mean temperature for December, January, and February, as found by hourly observations taken on board the Jamestown, was about 32 degrees (Fahrenheit). A great deal of rain and snow fall in southeastern Alaska, and there are few perfectly clear days during the year in what is known as southeast Alaska, say from Mount St. Elias to the southern boundary at Portland Canal. The climate of western and northern Alaska differs very greatly, and a very low mean temperature is experienced in that portion of the territory. This difference is largely due to the influence of the Japanese current, or Kuro Siwo, a portion of which is deflected by the Aleutian Islands, and impinges on the coast in about the latitude of Sitka.

THE engineer constructing the Washington monument reports that it reaches a height of 340 feet.

FLEXIBLE SELF-GAUGING FAUCET.

The engraving shows, in two views, an improved self-gauging faucet recently patented by Mr. William T. Robertson, of Montgomery, Ala. This device answers all the purposes of an ordinary faucet without being liable to the objections of wear and leakage, and at the same time it serves to indicate at any time the level of the liquid in the barrel.

A tap or tubular plug is screwed into the barrel or other vessel near the bottom, and on the outer end thereof is secured a flexible tube, which is about equal in length to the depth of the barrel. On the free end of the flexible tube there is a metal valve seat, to which is fitted a ball valve and a cage to retain the valve. The valve is so adapted to its seat that when the tube is vertical the valve is seated,

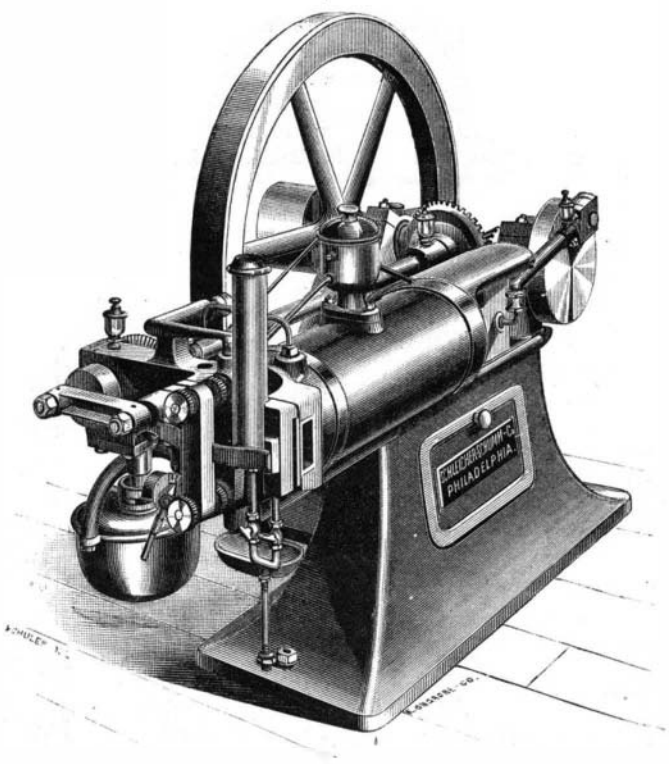
FLEXIBLE SELF-GAUGING FAUCET.

and when the tube is let down to draw liquid from the barrel, or to ascertain the level of the liquid in the barrel, the valve unseats itself and allows the liquid to escape, while the valve is retained by the cage in position to reseat itself when the tube is again put in a vertical position.

Near the upper end of the barrel spring clips are applied in position to secure the tube when in its vertical position. These clips are apertured transversely to secure a padlock to prevent theft. It will be noticed that this device is free from parts liable to derangement, and will at any time gauge the depth of the liquid in the barrel.

THE NEW OTTO ONE-HORSE POWER SILENT GAS ENGINE.

Since the "Otto" gas engine was invented, and its practicability fully demonstrated, large numbers of them have been put into use in our cities where other engines could not be operated to any degree of advantage. The sizes



THE NEW OTTO ONE-HORSE POWER SILENT GAS ENGINE.

made, however, were not below two-horse power, and the demand for smaller amounts of power could not be satisfied, on account of difficulty in making a smaller machine, at a cost proportionately reduced.

Messrs. Schleicher, Schumm & Co., Philadelphia, the well known builders of the "Otto" engine in this country, have now constructed a one-horse engine, which is offered at a proportionately reduced price, the special construction of the engine permitting a reduction in the cost of manufacture without sacrificing quality.

Our illustration shows the engine from a point that makes all its main parts visible, the governor being particularly apparent. This latter will regulate the speed of engine, and, at the same time, the consumption of gas, which varies in an automatic manner, in proportion to work done, from two to five cents per hour.

The engine has already found its way extensively into the workshops of jewelers, printers, and amateurs, and is seen giving attraction to the show windows of tea and grocery stores. For similar work the new size engine was purposely constructed, and the demand found for it is such that the makers cannot always fill it promptly.

The special features of gas engines, we suppose, are known to our readers. Above all, there are the advantages of perfect safety and cleanliness, there being no boiler, steam, coal, or ashes. A gas engine is also started at once whenever wanted, and is ready thus without preparation, and when stopped there is no continuation of expense. Engines of large size—as high as 25-horse power—are at present constructed, as well as smaller sizes, competing with steam, and surpassing it in many cases on the score of economy and absolute safety.

Illustrated catalogues, prices, and any information desired can be obtained by addressing Messrs. Schleicher, Schumm & Co., 33d and Walnut Sts., Philadelphia, Pa.

Sandakan Harbor, Borneo.

Captain Green, of the steamer Tannadice, entered the harbor of Sandakan, North Borneo, on a recent voyage from Australia to China. He gives the Australian press an interesting description of the settlement newly acquired by Great Britain there. The harbor, he says, surpasses that of Sydney, not only in extent but also in beauty of scenery. From east to west it is seventeen miles, and from north to south fourteen, and its shores are thickly covered with magnificent timber, many of the trees being 300 feet in height. No fewer than seventeen rivers flow into the harbor, two of them being navigable for twenty miles inland for vessels of a draught of twelve feet. The Kinibatangan River, a little way down the coast, is described as being navigable for 400 miles, with a draught of twenty-six feet when the bar is crossed. The town of Elopura is built on rising ground about a mile and a half inside the harbor, and already contains a population of 3,000 Chinese and natives. The climate is reported to be exceptionally cool for the tropics.

Wooden Ship Building in Maine.

In an extended review of wooden ship building in Bath, Maine, the Boston *Advertiser* shows that Bath is not only tha greatest wooden ship building place in the United States, but the greatest in the world. The value of the shipping built there within a century past is estimated to be upward of $50,000,000. The largest annual production was in 1854, when 64,327 tons were built, or 87 vessels. Of this number 59 were ships. In the ten years ending 1840 the building amounted to 69,559 tons. The next decade showed a gain of about 70 per cent, the total being 118,732 tons. Between 1850 and 1860 the product nearly trebled, and reached 324,888 tons. The war period brought the yield of the next term down to 163,539, but between 1870 and 1880 there was a gain of 37½ per cent, giving a total for that period of 225,046 tons. During the past year the tonnage of vessels launched at Bath was 39,090, with vessels of 13,520 remaining on the stocks. The cost of a completed wooden ship, or other new vessel, is reckoned at from $50 to $55 a ton.

The vessels launched last year at all the Maine ship yards gave a total tonnage of 62,567 tons, with 23,016 tons on the stocks. The official report of the wooden ship building of the whole country for the year ended June 30, 1881, places Maine at the head, with 41,374 tons. Next in rank is Michigan, with 5,852 tons. Then come Massachusetts, with 4,723 tons; Wisconsin, 3,429 tons; Pennsylvania, 3,278; and California, with 3,197 tons.

In one of the Bath ship yards is a planer, said to be the largest in the world. It is capable of working a keel piece of timber sixty-six feet long, five feet wide, and two and one-half feet deep. The keel comes out of the machine ready for laying on the blocks, and perfectly smooth and true on all sides. A beveling saw is another capacious machine, which turns out timber sawed at any desired angle from the horizontal, and by it curved timber and ship knees can be worked true to the line.

The steam engine which runs these machines runs also a bolt cutting machine which will nip off round iron of any diameter up to two inches; also a large and a small circular saw, a machine for making tree-nails, and, in the finishing shop, a band and circular saw, a planer, moulding machine, and a plug and wedge machine. The waste steam is used in bending timber. A plant for the construction of iron ships is now under way, and it is expected that the first iron vessel will be begun in May.

An Asbestos Balloon.

A fire-balloon has been made, in which the lower part is constructed of asbestos cloth, while the upper part is covered with a fire-proof solution. A spirit-lamp is used to supply the hot air for inflating it, and, being fire-proof, there is no risk as with ordinary hot-air balloons. The system is said to be specially valuable for war balloons, as a supply of spirit can be easily carried where it would be difficult to take the appliances for preparing gas.