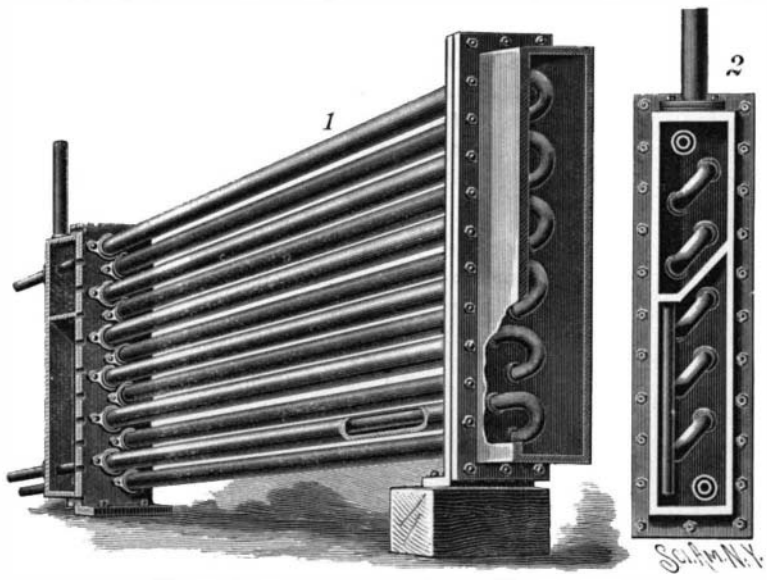
THE CONDENSATION OF AMMONIA GAS.

The illustration represents a condenser of simple and inexpensive construction in which the operation of condensing ammonia gas may be more rapidly carried on than has been generally practicable heretofore, the condenser being also adapted for use as a brine cooler. The improvement has been patented by John D. Smith, of No. 633 Amsterdam Avenue, New York City. Fig. 1 shows the condenser in perspective, with portions broken out, and Fig. 2 is an inside view of the front header. The headers are connected by staggered condensing pipes, all inclined downward from the rear to the front header, and leading through the lower portion of the front header is a water pipe which extends back and forth through the whole series of condensing pipes, and has an outlet at the upper end of the front header, the water pipe being of considerably less diameter than the condensing pipes. The front header, as shown in Fig. 2, has a transverse inclined partition, from which a pipe leads downward, designed to carry the condensation which takes place above the partition to a point of discharge into a suitable receptacle near the lower end of the front header, the partition preventing the passage of gas to the lower portion of the header.



SMITH'S AMMONIA GAS CONDENSER.

The gas entering by the vertical pipe at the top of the front header circulates or passes into the condensing pipes above the partition, while the flow of water through the water circulating pipe very rapidly condenses the gas under a very low pressure. A large portion of the gas is condensed in the pipes above the partition, and the ready outflow of the condensation prevents the clogging of the pipes that so frequently happens in other forms of condensers. For the comparatively small amount of gas passing to the lower pipes, the condensation is carried to a bottom outlet of the front header. In using the device as a brine cooler this outlet is dispensed with, and the apparatus is placed in a tank of brine suitable for storage supply, the ammonia being expanded in the bottom of the front header. The evaporation of the ammonia in the outer pipes, which are in communication with the brine in the tank, is rapid, and the evaporation acts directly on the surface of the inner pipes, through which the brine is passing, the capacity of the gas for the absorption of latent heat being thus completely utilized.

THE AUTOMATIC LUNCH COUNTER.

One of the most elaborate applications of the "nickel-in-the-slot machine" is that which forms the subject of the accompanying illustration, which shows the interior of a café in the Potsdamerstrasse, Berlin, equipped with automatic lunch counters. There are several establishments of the same kind in this and other German cities which are controlled by what is known as the Quisisana Company. It will be seen from the illustration that in place of the ordinary counter served by waiters there is a set of ornamental cabinets ranged along one side of the room which have a shelf projecting at a convenient height, upon which are placed the necessary glasses or cups. Above the drinking vessels are the faucets and a slot to receive the coin. The customer places a glass or cup beneath the faucet bearing the label of the drink which he desires and the money is inserted in the slot. The apparatus will then automatically, without further action of the buyer, deliver the liquid. The establishment in question offers a customer the choice of a large variety of drinks, the various liquors being obtainable at all seasons of the year, and the iced drinks of summer being replaced by a variety of hot drinks in the winter.

The liquors, etc., are kept in glass vessels and the hot drinks in nickel tanks surrounded by a hot water bath which is heated by gas. In order to insure perfect cleanliness, no rubber is used, the liquids being conducted to the faucets through silver tubing. The measuring out of the drinks is controlled by clockwork located within the casing of the stands. Each stand is provided with an automatic spraying nozzle for cleaning the cups and glasses. It is located in the center of a disk which is provided with a groove to receive the rim of the inverted glass. Upon pressing down, a spray of water rinses out the vessel.

The eatables, such as sandwiches, cakes, etc., are contained beneath a large bell glass, as shown in the third stand from the right. The glass contains about one dozen sandwiches, each of which is placed in a paper dish. They are arranged in a circle upon a revolving tray, and whenever the purchase coin is put in the slot the tray revolves far enough to bring a sandwich opposite an opening through which it is automatically presented to the purchaser. Other stands provide hot chicken, beef or other meats, and, indeed, the Quisisana café has a bill of fare which would compare favorably in point of variety with a first-class restaurant of the common type.

AUTOMATIC LUNCH COUNTER, WITHOUT WAITERS.

Production of Amber.

The working of amber in Prussia is a monopoly in the hands of a firm who own the two best mines, Palmnicken and Kraxtepelle. For the concession they have, according to Consul Hunt, of Dantzig, to pay to the German government a royalty of 650,000 marks (about $162,000) a year. It is reckoned that this firm has up to now paid no less a sum than $5,000,000 in royalties to the German government. In addition to the output from the mines in 1895, a good deal of amber was picked up on the beach at Pillau, in the province of East Prussia, being washed up with the seaweed during the prevalence of northwesterly gales. The shore at Pillau after a storm is sometimes covered with a layer of seaweed three feet thick, among which the amber is found entangled. Men, women and children find easy and lucrative employment in searching for the amber along this part of the amber coast. The people engaged in this precarious work often earn thirty shillings a day and more. In 1895 about 100 tons of raw amber came to Dantzig to be worked up, as compared with 140 tons in 1894. It was nearly all melted to make lac and varnish. The larger pieces are made into beads, which are sent all over the world. The beads known to the trade as Leghorn corals were in strong demand.

Street Cleaning in Berlin.

The street cleaning department of Berlin, Germany, is managed by a committee consisting of four city councilors and eight aldermen. The commissioner or "director" receives a salary of a little over $2,000. The next employé is called the inspector and receives 3,000 marks (about $750). Then there are six overseers and an administrator, with salaries from 2,160 to 2,850 marks, and twenty-four chiefs, with 1,500 to 2,000 marks a year. Eight hundred and ninety-seven workmen are regularly employed. Of these, ninety-six are foremen receiving 3·75 marks (not quite a dollar) a day; five hundred and fifty-one workmen of the first class, with 3·25 marks a day; seventy second class workmen, with 2·75 marks a day, and one hundred and eighty boys at 1·60 marks a day. They are, however, paid for Sundays and holidays, also during sickness, and receive a pension in old age.—Oesterreichische Monatsschrift für den öffentlichen Baudienst.