

**ELECTRIC LIGHT PLANT STEAMER BAY STATE.**

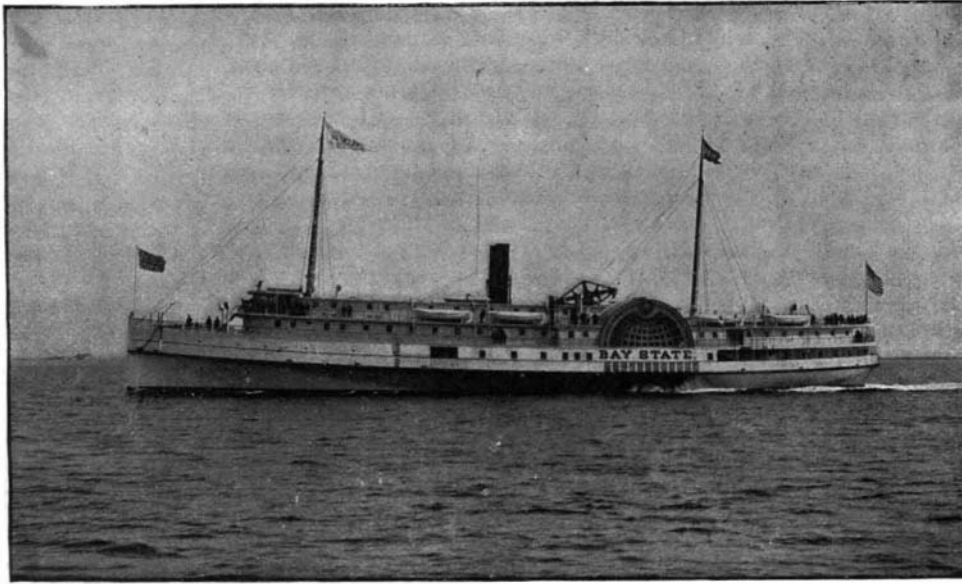
The accompanying illustration represents the electric light plant on the new steamer Bay State, of the Boston and Portland Line, recently installed by the Belknap Motor Company, of Portland, Me. The engines used are the Ideal. The dynamos are multipolar slow-speed machines of 400 lights capacity each, but either machine will carry the entire load, amounting to 540 lights, it having become a general practice to use duplicate plants for marine work, so, in case an accident should happen to either engine or dynamo, the duplicate machine can do the work. The dynamos were designed by Mr. W. H. Chapman, electrician for the company. This plant does great credit to the company, and has secured further orders for the installation of two direct-coupled machines for steamer Portland, of the same line; also, for steamship St. Croix, of the International Steamship Company, which is practically under the same board of management. The system of wiring is most excellent. There are eight main circuits controlled at the switchboard in dynamo room, which lead to sixteen different distributing boxes, containing switches located in different parts of the boat, each switch controlling six lights, turning them on or off as may be desired. These distributing boxes have glass fronts, secured with lock and key, and are under control of the steward of the boat. Then there are pilot lights on main and fore rigging, and at the bows of the boat. The fixtures are of the latest design, with opalescent globes and shades. The dining saloon is fitted with ground glass globes, which gives this part of the boat a very pleasing effect. The freight deck lights are protected with guarded fixtures.

**Cats and Cold Storage.**

A story to the effect that a new breed of cats had been produced in the cold storage warehouses of Pittsburg went the rounds of the newspapers some months ago. A letter received from the secretary of the Cold Storage Company, and published in the June number of the American Naturalist, shows that the story has but slight foundation in fact. The letter reads as follows: "While there is some foundation for the newspaper article, it has been somewhat exaggerated. Our cold storage house is separated into rooms of various sizes, varying from 10° to 40° above zero. About a year ago we discovered mice in one of the rooms of the cold storage house. We removed one of the cats from the general warehouse to the room referred to in the cold storage house. While there, she had a litter of several kittens; four of these were transferred into one of the general warehouses, leaving three in the cold storage house. After the kittens were old enough to take care of themselves, we put the old cat back into the house we had taken her from. The change of climate or temperature seemed to affect her almost immediately. She got very weak and languid. We placed her again in the cold storage room, when she immediately revived. While the feelers of the cats in the cold storage room are of the usual length, the fur is thick and the cats are larger, stronger, and healthier than the cats in any of the other warehouses."

**Poultry Cars.**

The Live Poultry Transportation Company, which has offices in the Rookery Building, Chicago, has recently let a contract to the Ohio Falls Car Company for 38 cars. These cars will have a capacity of 16,000 pounds each, that is, from 4,000 to 5,000 head of poultry. The cars are 34 feet 10 inches long inside. This company has 150 of these poultry cars in service. They are without air brakes or vertical plane couplers, and

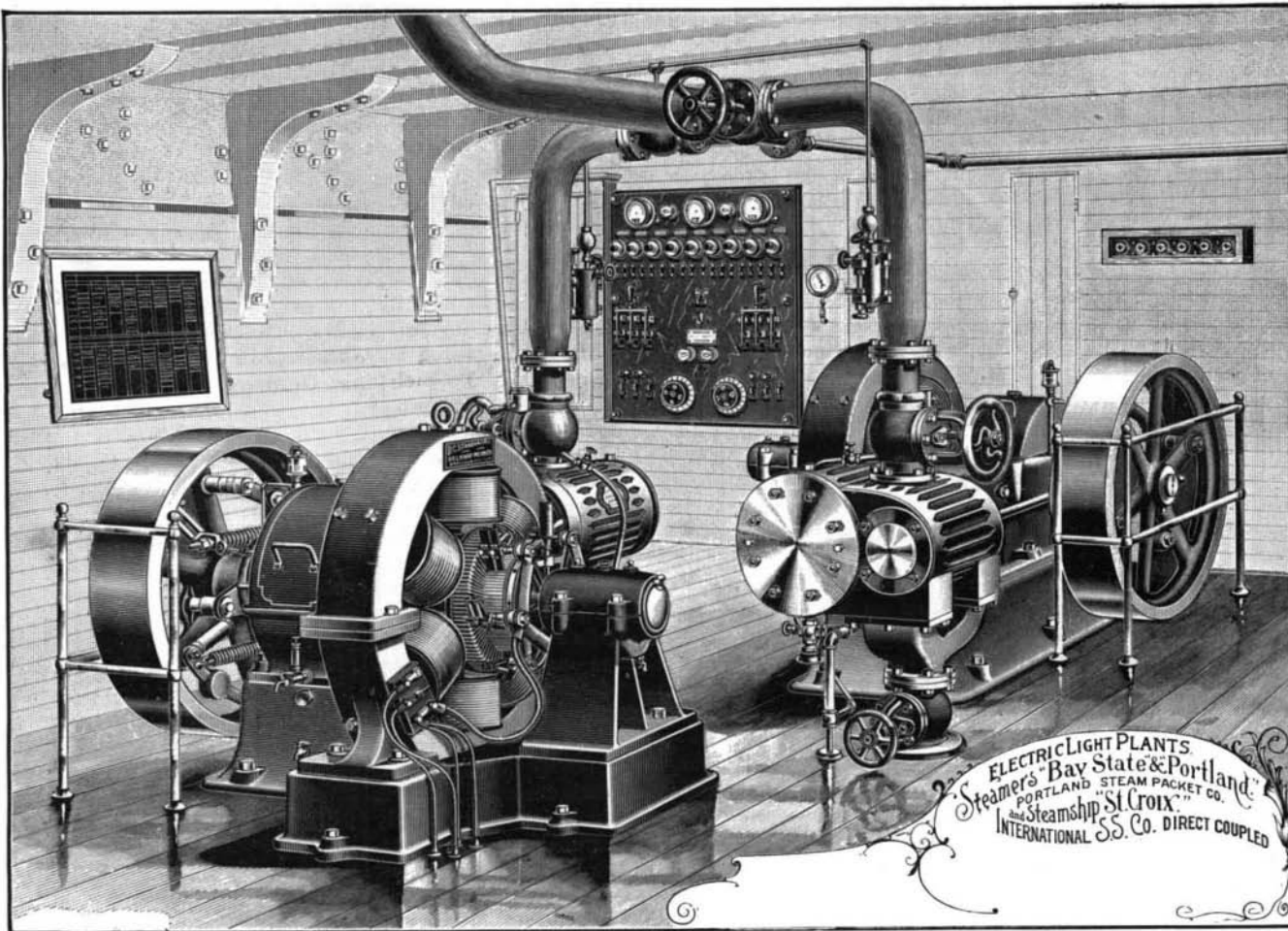


**BOSTON AND PORTLAND STEAMER BAY STATE.**

it is said that the new cars are to be minus these improvements. Evidently the company is in the business for what it is worth. The National Car Builder says: "Some society for the prevention of cruelty ought to take it in hand. It would probably order a few more cars then, as penning several thousand chickens or other fowls in one car is as cruel as anything can well be, and probably quite as bad for the public health as any other kind of indiscretion practiced by greedy shippers."

**Electric Fans Cause a Fire.**

A fire started in the steamship Massachusetts at the foot of West Twenty-ninth Street, New York City, June 19. The outbreak was in the meat storage room in the rear hold, and was caused by the friction of two



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large electric fans which are used to keep the meat cool. The fireboat Zophar Mills, which was soon on the spot, poured lots of water into the hold, soon extinguishing the flames. About \$750 damage was caused. Several firemen were partly overcome by the fumes of ammonia, which is used in the refrigerating apparatus in preserving the meat.

**Iron.**

In the alcoholic extract of orris root the inventor has discovered a new substance, which is the aromatic principle of the root, which he gives the name "irone." It is a ketone, having the formula C<sub>13</sub>H<sub>20</sub>O. This body has the characteristic odor and flavor of the orris root, and may be preferentially employed in perfumery, etc. Its preparation is carried out thus: The alcoholic or ethereal extract of the root is distilled in a current of steam. Organic acids, ethers, alcohols and irone pass over into the distillate, which is then treated with ether and the ethereal solution agitated with a dilute alkali solution in order to separate the free acids. The mixture is evaporated down and the residue dissolved in alcohol, which solution is mixed at the ordinary temperature with a weak solution of an alkaline hydrate in order to saponify the ethers of the organic acids. After some minutes it is poured into water, the neutral oils are dissolved in ether, the ether is evaporated and the residue distilled in a current of steam. Irone is one of the bodies distilling over first, and by repeating this operation several times it may be obtained fairly pure, but still containing small quantities of aldehydes, which are eliminated by treatment with weak oxidizing agents. The irone is then converted into its phenylhydrazone or condensed with

another substituted ammonia to a ketone, from which bodies it is obtained by decomposing with dilute acids and distilling.

**Cavalry Telephone.**

An interesting experiment of installing a telephone by trotting cavalry was recently successfully undertaken by some Prussian Uhlans between Berlin and Potsdam. Two sets of one officer and two non-commissioned officers proceeded in the early morning respectively from Berlin and Potsdam. Each set was equipped with a complete telephone apparatus which one of the men carried in a leather case on his chest, besides the requisite quantity of thin wire. The end of the wire was connected with the respective towns' telephone station, and the wire was, by means of a fork fixed at the end of the lance, thrown over the tops of the trees along the road. As each kilometer of wire was thus suspended a halt was made, and it was ascertained whether there was connection with the station. A new kilometer of wire was then connected with the former, and on went the men. The two sets met at Teltow. The wires, having been respectively tested with their respective stations, were connected, and telephonic connection between Berlin and Potsdam was established. The distance is about twenty miles, and the whole thing was done in about four hours.

**Musky Trout.**

In the vicinity of Geneva there is a manufactory of musk by means of chemistry, which stands on the banks of the Rhone and the waste products are discharged into the river. As a consequence it is found that trout and other fish in the neighborhood have a musky savor, but whether, like some other fishes, they are attracted by the scent of the musk and eat the waste products or simply become impregnated with the perfume has not yet been ascertained.