OIL FOR THE ROADS.

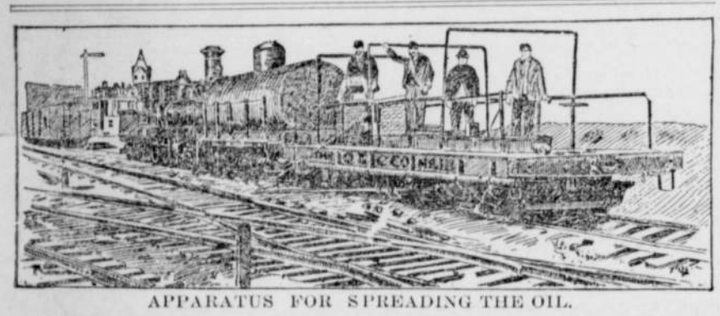
PROPOSED TO LAY DUST IN A NEW WAY.

Crude Petroleum to Be Scattered Along the Roadways from a Car—The Plan Is Not for Railroads Alone, but For Country Roads, Too.

The improvements and conveniences appertaining to railroad travel come so rapidly that nowadays they are taken quite as a matter of course. What the traveling public put up with ten years ago as necessary evils of long railway journeys, smoke and dust filling the cars and ruining traveling costumes, are little if at all experienced now and would be indignantly resented. The introduction of vestibule trains has done much to solve that problem, and the next step toward dustless railroad has been taken by many roads and will in a year or two be taken by all very probably.

The secret lies in the sprinkling of the roadbed with oil, a scheme which was greeted rather doubtfully two years ago when it was proposed, then experimented with in a half-hearted way and finally enthusiastically adopted by the road on which the experiments were made. When the news of the success of the new plan spread other roads took it up, patents on the process were issued, and now it is as much of an industry as patent car couplings, air brakes or any of the many things that go to make up railroading.

Not only did the oil, properly spread, keep down the dust, but it served to shed water readily and thus protected the ties from rotting. More than that, it kills vegetation along the roadbed, which previous to the use of oil had to be burned out by laborers as a precaution against fires when the weeds



APPARATUS FOR SPREADING THE OIL.

became dry and inflammable in the fall.

The apparatus for spreading the oil is of course very simple in arrangement. An ordinary flat car is fitted with one fixed pipe extending the length of the cross ties and two swing pipes—one on each side—which when extended will reach two or more feet up the sides of slopes in cuts. Each pipe is controlled by a gate valve worked by a lever. A supply pipe extends the length of the car and a rubber hose connects with the four-inch outlet in the ordinary tank car. A locomotive engine moves both cars and furnishes steam or compressed air to aid in ejecting the oil when thickened by cold weather. The flat car has a box for tools, extra parts, etc., and is partly covered with an awning to protect the men. The sprinkling pipes are slitted for the oil to escape. The sprinkling car is furnished with shields, which cover and protect the rails from any oil which might drop or be splashed onto them. One end of the supply pipe on the sprinkling car is fitted with a connection for three or more lengths of hose, each terminating in a valve and spreader, for use by hand in covering sides of slopes in cuts.

It was found that about 2,000 gallons per mile was necessary to properly treat the track, and in doing the work on the eastern roads tank cars containing 6,000 gallons each were sidetracked several miles apart, where the employes on the oil sprinkler could readily pick them up and attach them to the sprinkling train when necessary. A "general treatment" of a roadbed sends the oil down about four inches into the ballast and earth and will prove all sufficient for a year. After that about one-third as much oil is used annually to renew the treatment and absolutely prevent the raising of dust. The oil used is especially manufactured and is practically non-inflammable, and the odor is imperceptible after a day or two, when the oil has penetrated the earth. The oil costs from $32 to $45 per mile, depending largely upon the point of delivery and the roads which are using the system say the cost is more than offset by the saving in cost of renewal of ballast and the loss on draperies and furnishings of cars injured by dust.

For Country Roads.

But the use of oil to lay the dust is not to be confined to railroads, although it is on steam roads most progress has been made. Experiments are to be begun near Des Moines, Iowa, in the use of oil on a country highway to shed the water, lay the dust and generally improve the road as a substitute for paving. Major Montgomery Meigs, United States civil engineer, is an enthusiast on the subject, and it is under his direction the experiments are to be conducted. In preparing a country road the oil is not spread on the surface as is done on a railway roadbed, as every passing vehicle would take up the oil and carry it away. The system which has been tried in many cities, notably near Los Angeles, Cal., necessitates the use of a machine with harrow teeth six inches long. This is driven over the road and the teeth cut down into the earth, leaving long furrows similar to those made in a harrowed field. On the same machine is carried a tank of oil and small feeders or pipes allow the oil to flow directly into the furrows. Then the earth is closed over the oil and the roadway is rolled with a three-ton roller and farmers' wagons and other vehicles are kept off it for a day until the oil has time to percolate up through the earth, as the narrow tires of the wagons would cut the road to pieces before the oil had time to work.

When a roadway is treated in this manner the results are said to be eminently satisfactory, but spreading the oil on the surface would be of no avail, as it would not sink rapidly enough to escape being carried away on the wheels of wagons. The result near Des Moines will be eagerly watched. The cost of the oil and the work is estimated to be about $141 per mile. The attention of the management of various suburban trolley roads has been directed to the oil process, and it is expected that something will be done with them.

GROWTH OF THE TELEPHONE.

The United States Leads the World in Many Particulars.

The growth of the telephone, more especially in this country, has been phenomenal. Since 1879, when its practical qualities were demonstrated, 772,989 mils of telephone wire have been strung on poles, buried in the ground, stretched on buildings and laid under water within the boundaries of the United States. That is at the rate of 38,449 miles per annum, or, allowing 300 working days to every year, rather more than 128 miles a day. Of the total length of telephone wire in this country—which would reach 96½ times around the earth at the equator, by the way—369,503 miles are overhead; nearly as much, or 358,184, are under ground; 15,329 are in buildings, and 2,973 are in submarine cables. All this wire connects 465,180 telephones—more than four times as many as are in operation in England, which has only 103,084, and 11,336 more than the total of all continental Europe, which has only 453,844. Germany excels England, and leads all other European countries with 173,981; Sweden, curiously enough, comes next with 56,500; France follows with 45,000; then Austria with 33,862; little Switzerland with 32,252; Norway with 20,678, and Russia with 20,108. There are telephones in Italy, Spain, Portugal and some of the smaller European countries, of course, but they are of small consequence there, relatively, with their importance here, and this will be understood from the statement that 32,000 telephones—more than in all Norway or all Russia, and nearly as many as in Switzerland—are in regular service in the Borough of Manhattan alone.

Besides having thousands of miles of telephone line and thousands more instruments than any other country, the United States leads the world in length of line, the longest line operated in Europe being only 850 miles, while the longest line here is of 2,000 miles. Until recently the longest line extended from Boston to Omaha, 1,500 miles, but the line recently completed to Little Rock, Ark., exceeds this by 400 miles, and will, in turn, be exceeded soon by the line to New Orleans. Commercially speaking, this last line reaches the present practical limit. Scientifically speaking, it is possible to operate a telephone line around the earth, but this would require a copper wire of great weight and enormous cost. In practice it has been found that wire of 400 pounds to the mile is heavy enough to operate a line of 1,000 miles; wire weighing 800 pounds to the mile will carry nearly twice as far. It would require wire weighing 1,500 pounds to the mile to operate a telephone line from the East to San Francisco. Such a line will be built just as soon as the Pacific coast is settled sufficiently to afford profitable business for it.

Chinese Methods.

When we consider the vast strides which our cities have taken in the science of sanitation and in general public improvements, it is interesting to learn how the authorities in Chinese cities have spent the last third of a century.

"I visited Peking," says Lord Charles Beresford, "about thirty years ago. On my return last year I found it unchanged, except that it was thirty times dirtier, the smells thirty times more insufferable, and the roads thirty years the worse for wear. A few weeks ago a mule was drowned in a hole in the middle of the roadway, just opposite one of the foreign legations."

The reason for this condition of things is quite plain when we learn that the six oil lamps at present employed to illuminate the streets of Peking represent the expenditure of a liberal budget for street lighting, as well as a handsome salary to the mandarin who oversees the work.

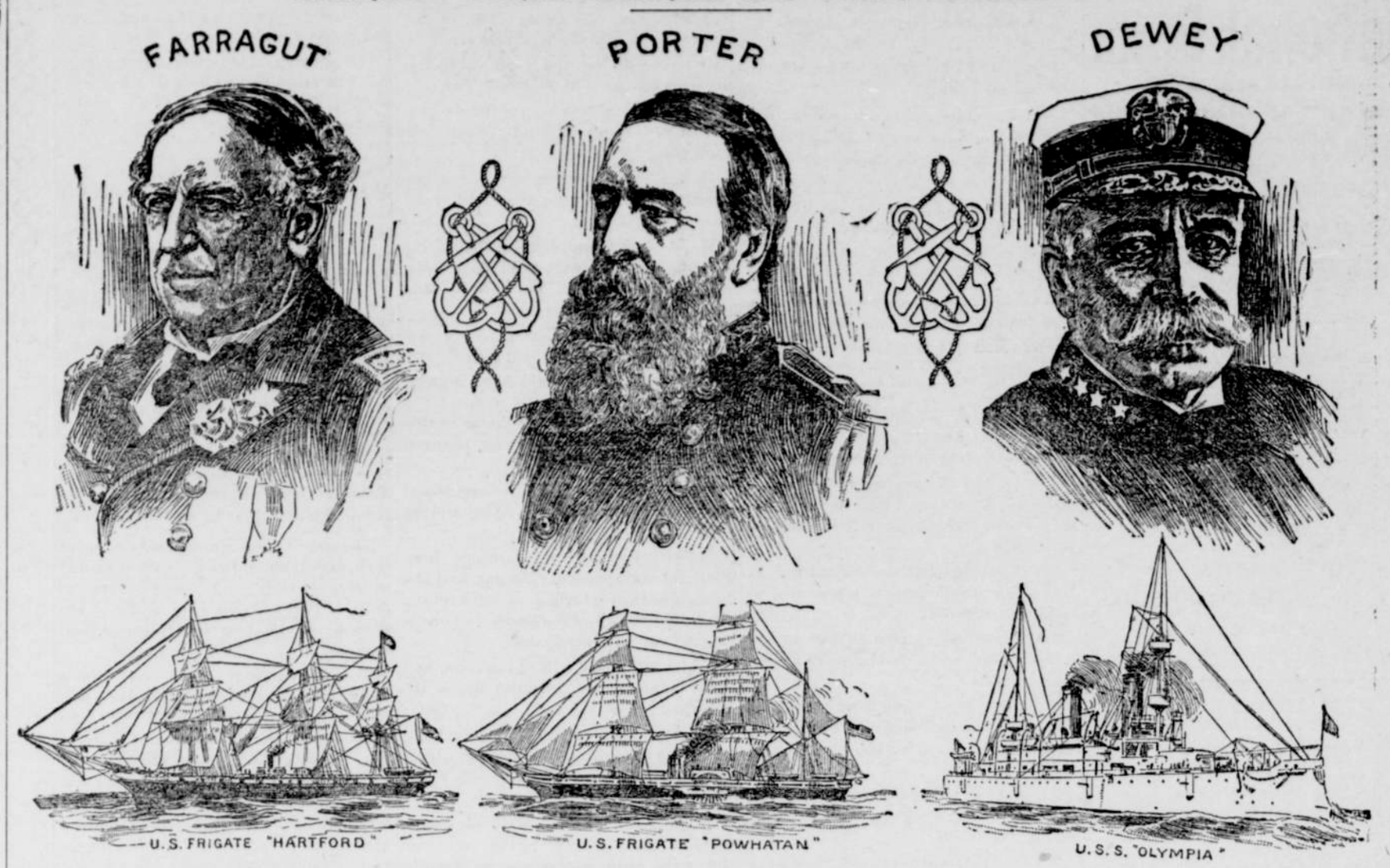
It is additionally instructive to note that upon investigation Lord Charles was unable to ascertain the locality of any one of the six lamps! The inference is that it was too "dark" to find them.

Rain.

Rain falls more frequently between 3 o'clock and 8 o'clock in the morning than at any other time during the day.

It is never possible to please half your audience.

AMERICA'S THREE ADMIRALS AND THEIR FLAGSHIPS.



ALASKA IS FERTILE.

GROWING THINGS THRIVE IN OUR ARCTIC DOMAIN.

Gratifying Information from the Government's Experimental Agricultural Stations—Early Vegetables Excel in Flavor Those of the States.

The Federal Department of Agriculture has shown that fruits, vegetables and grain are being grown with profit in Alaska, and that our great Arctic domain offers enormous possibilities, hitherto unsuspected, for agriculture on a large scale.

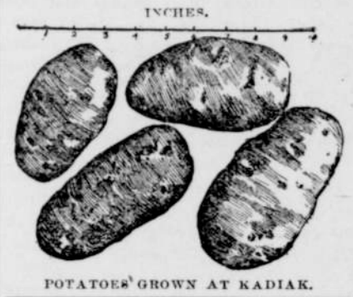
Along the Alaskan coast the soil is capable of producing grain, vegetables, small fruits and forage plants of as good quality and in as great abundance as many of our Northern States, and of supporting countless herds of cattle. In southeastern Alaska is a region as large as all New York, New Jersey and Pennsylvania combined, that is adapted in all respects to cattle raising.

The Government is establishing three agricultural experiment stations at different points in the Territory, to test thoroughly and scientifically the capacity of its soil for producing a food supply for its present and future population, and enable the Territory ultimately to become self-supporting with respect to the food it may need.

The stations are at Sitka, on the southeastern coast; at Kadiak, on Kadiak island, off the southern coast; and at Kenai, on the Kenai peninsula, beside Cook inlet, about 110 miles to the north and east. The conditions at Sitka represent all the heavily timbered region of southeastern Alaska, with its deep moss and peaty soil. At Kadiak the climate is somewhat cooler, and the soil less peaty, while in the Kenai peninsula there is a large area of agricultural land inside the coast range, which presents favorable conditions for farming, although it lies north of the sixtieth parallel of north latitude.

Last year the Department sent to Alaska a special agent, Prof. C. C. Georgeson, a native of Denmark. He made his headquarters at Sitka and Skaguay, and experimented with seeds of over 100 varieties of grain, vegetables, grasses and forage plants. He also distributed seeds to individuals in other localities in Alaska and made arrangements for co-operative experiments and reports as to the results obtained. All of the seeds were planted between May 18 and May 25. The season was backward, and it was impracticable to plant them earlier.

Of vegetable seeds planted there were asparagus, wax beans, beets, cress, kale, lettuce, mustard, onions, parsley, parsnips, peas, radishes, rutabagas, rhubarb, salsify, spinach, sage, thyme, turnips and Windsor beans. All these, including in some cases several varieties of each, except the wax beans and spinach, made excellent growth and produced vegetables and plants that compared favorably with the products of gardens almost anywhere in southern latitudes. The peas were especially prolific, and the turnips, radishes, parsnips, parsley and salsify produced roots as good as can be found anywhere. Some of the turnips weighed five pounds each, and some even ten pounds, and were of excellent flavor. Potatoes also were a decided success. Many of them weighed each a pound or more.



POTATOES GROWN AT KADIAK.

A more important test, however, was made with grains and foliage plants. Oats and barley were grown at Sitka and Skaguay with gratifying results. Several varieties of Norwegian and Russian barley were grown with the same excellent result as with the oats. Of forage plants there were seeded several varieties of Norwegian clover, timothy, hairy vetch and Riga flax, and all were successful, the clover being especially vigorous, measuring over two feet high.

Alaska is pre-eminently a land of small fruits and berries. The flavor of most of the native berries is pronounced to be so excellent that it is said they are worthy of introduction into the States.

Cattle were introduced in Alaska long ago by the Russians in their various settlements, and, according to reports, they always did well. Professor Georgeson reports that the cattle now found at the little towns along the coast thrive and appear to have become well adapted to the climate. This excellent condition, Prof. Georgeson says, is evidence of the nutritious qualities of the indigenous grasses.

The soils of Alaska are largely of vegetable origin, and to a great degree resemble the black earth of rice lands or peat formations. In the southeastern portion of Alaska there are deep deposits of this rich soil overlying slate or conglomerate bedrock. The organic content of many of these soils is very much higher than in any of the agricultural lands of the States. If these soils are so situated as to be well drained they should be capable of producing enormous crops, and, with an abundant and well-distributed rainfall, they would be adapted to almost any kind of crop suited to the general climatic conditions of that portion of the country.

ALASKAN REDTOPS.

GROWN AT SITKA.
Oats, Barley, Flax, Potatoes and Clover.

HOTEL SERVANTS ARE HONEST.

They Are Often Accused of Stealing, but Are Rarely Guilty.

"A curious thing happened here today," said the head clerk at one of the leading hotels in New Orleans to a Times-Democrat man. "About a month ago a gentleman and his wife, from Milwaukee, spent a couple of days in the house, and on leaving the lady missed a valuable ring. She was positive she left it on the dresser and equally positive it had been stolen by one of the servants. We set an investigation on foot and promised to forward the ring if found. A little later the husband wrote to inquire whether the search had been successful, and when we replied in the negative he notified us that he proposed to sue the hotel. He claimed we had shown great negligence in not arresting a suspected employe, and his comments were bitter in the extreme. That was two weeks ago.

"Now here is the sequel in the shape of a third letter that arrived this morning. He says that he and his wife reached home a few days ago and in unpacking the luggage found the ring in one of the trunks, and he is manly enough to add a very handsome apology for his hasty conclusions. Strange to say, that is the first time in the history of the house that any guest has frankly admitted such a blunder after taking his departure, and blunders of that kind are of almost weekly occurrence.

"It is the commonest thing in the world at all hotels for persons to go away declaring that they have been robbed by the help. We know the missing article subsequently turned up, because the subject is never referred to during later visits, but in the meanwhile a score or so of humble, but honest and hard-working people, have been placed under a suspicion that is wholly unwarranted and unjust. That is a point the average traveler doesn't seem to consider. Hotel chambermaids are continually returning valuables which they find in rooms. Dishonesty among them is so rare as to be almost unknown."

Lost Child of the Miamis.

In 1770, when a mere child, Frances Slocum was stolen from her parents by a roving Indian band at Wilkesbarre, Pa. She moved West with the ebbing tide of Indians and was finally adopted by a chief of the Miamis. Her parents searched far and near for their missing child, but were unable to locate her until she had been adopted by the Miami tribe, and when overtures were made for her return she declared that the life in the Indian camp had such a fascination for her that she had no desire to return to civilization. She was extremely popular among the members of the tribe, and the village southwest of Wabash, Ind., where she made her home was known as the "white woman's" village. As she grew to womanhood, adopting the savage customs, attire and language, she married She-pan-can-nah, meaning the Deaf Man, the chief of the Osage village, and by him had four children, two sons and two daughters. She accompanied her husband to the Osage village and afterward to the Deaf Man's village, and lived there long after the white man had invaded the wilderness and begun to clear up the dense forests.

She-pah-can-nah died in 1833, and in 1847, fourteen years after, she died at the age of 80, loved and respected by whites and Indians alike. Frances Slocum's Indian name was Mah-cones-quah, or "Young Bear." Her daughter, Ke-ke-kah-kushwa, became the wife of Capt. B. Brouillette, and died on March 13, 1847, aged 47. The other daughter was O-zah-was-shing-quah, who married Tah-co-nah, and he dying she became the bride of Wah-pah-pe-tah, and several of her children by the last marriage live on the Indian land south of Wabash in abject poverty. She died in January, 1877, the last of Frances Slocum's children.

Home of the Edam Cheese.

While the Edam cheese is a familiar visitor on the table, not every one knows whence it comes nor how its cannon ball proportions and gay coloring have been achieved. The northern part of Holland is the seat of the Edam cheese industry, and the consequent cleanliness of the relish is therefore doubly assured. In making it the fresh cow's milk is carefully strained and the renet added. As soon as the milk curdles the whey is drawn off and the curd, thoroughly kneaded, is pressed into molds. This process is repeated until the whey has all been extracted and the curd is comparatively dry. It is then wrapped in a linen cloth and kept for ten or twelve days until quite solid. Then the cloth is removed and the cheese put into salt lye. Afterward a little more dry salt is sprinkled on the cheese, until the maker thinks it is salt enough to insure its keeping. It is next put into a vessel and washed with whey and scraped to remove the white crust. It is next carried into a cool room and laid on shelves, where it is frequently turned. The ripening process lasts from two to three months, the round balls growing the fine yellow or reddish color peculiar to Edam cheese. The cheeses intended to be exported to this country are rendered still more brilliant by dyeing the rind with a vegetable dye.—New York Tribune.

Queer Jap Funeral.

Lieut. Yoshibumi Fukagawa, of the I. J. N., left behind a curious request to his family a few days prior to his death, which occurred the other day in his native district of Hizen. He observed to his family that as he had never had the time to investigate religious questions deeply enough to enable him to determine which faith he should embrace, he was neither prejudiced against nor partial toward any form of religion. However, he himself was of opinion that his soul would perish with the cessation of his life, while his remains would crumble to dust. Therefore he did not wish to have any religious service performed on his behalf. The funeral, also, should be as simple as could be; and flowers and similar offerings be strictly declined. No announcement should be made of his death to friends of his until four or five days after the funeral. Two or three weeks after his death his relatives and friends should be invited to a banquet, and they should be asked to join the occasion as heartily as possible. A priest might be invited, if the presence of such a personage was deemed desirable. At the funeral, also, nobody should accompany the bier; except, if considered necessary, one or two representatives on behalf of the family and relatives might follow the remains to the grave. The tomb was to be of the simplest description, only his name being inscribed upon it. A memorial tablet was entirely tabooed.—Japan Times.

A Real Genius.

The man that sharpened shoe pegs at both ends and sold them for wheat was a genius, but he has his equal in Mexico. Some time ago one of the habitual revolutionary flare-ups was about to commence in one of the belligerent little South American Presidencies which masquerade under the title of republics. A couple of hundred men marshaled in opposition to the government, swore solemn oaths, and met nightly in an abandoned hut at the entrance to a swamp. Enthusiasm was plentiful, but arms were scarce; so a purse was made up, and three of the party set off to buy ammunition.

They went to Mexico, where a cargo of powder was delivered to them, and, after inspection, was shipped to the revolutionary headquarters. A signal gun was mounted on a hilltop, and when the day and hour arrived the field marshal of the revolutionary army touched a match to the fuse of the piece. There was no response. The marshal used all the matches in his silver matchbox, but the gun refused to fire. An investigation by the "War Office" followed, and that cargo of powder proved to be nothing but mahogany sawdust, which had been vigorously stirred up with powdered graphite to give it the proper color and appearance.

Astronomy as a science interests fewer people than gastronomy does.