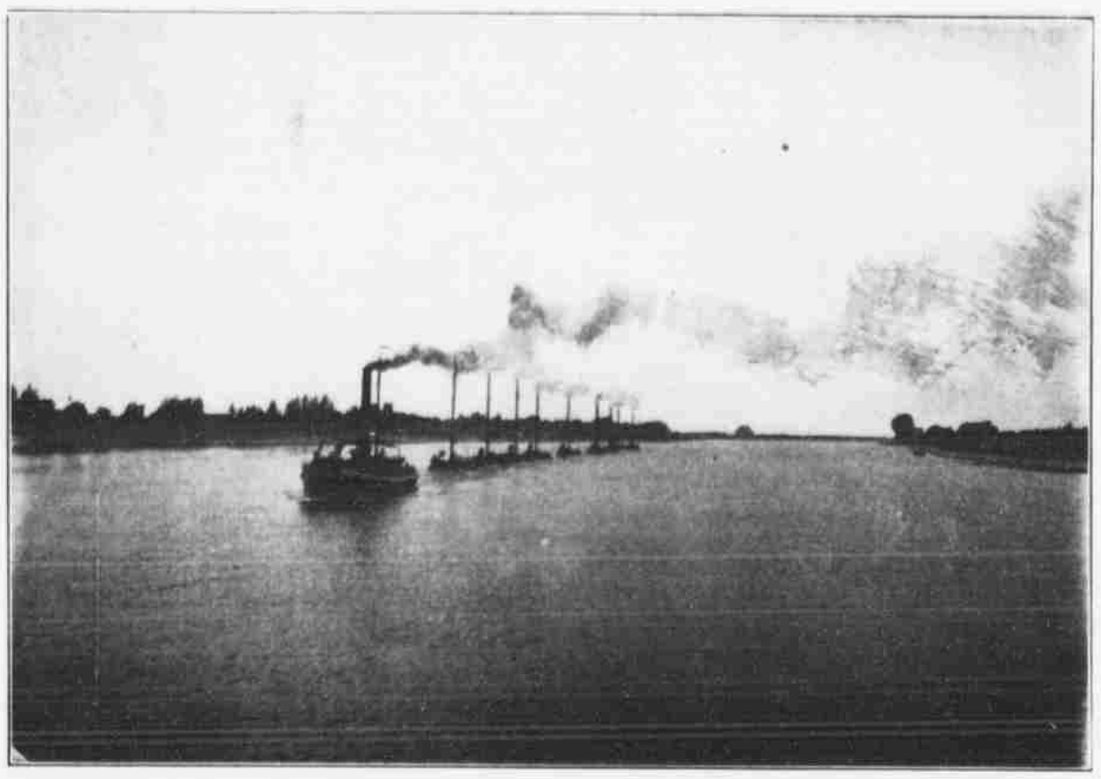
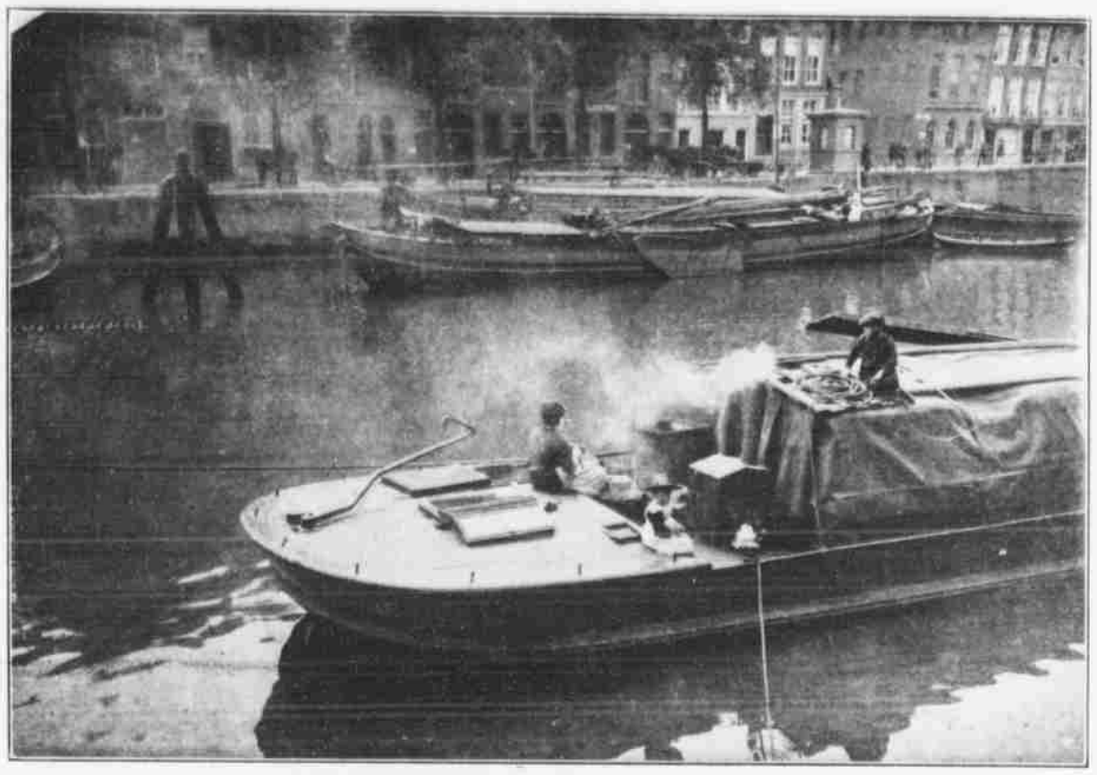
Canal Service and Administration in Europe



ON THE ZUID BEVELAND CANAL.



EVERY BARGE HAS ITS FAMILY.

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ROTTERDAM, Jan. 27.—(Special Correspondence of The Bee.)—This is the age of railroads. It promises also to be the age of canals. Water transportation is still cheaper than any other, and the European nations are deepening their rivers and constructing canals to join their waterways. It is only a question of time when the United States will do the same, and when we shall have ship canals joining some of the principal parts of our country.

I came from Antwerp to Rotterdam by boat to learn something about the canals of the Dutch, and since then I have visited their waterways in the north. Holland is the canal land of the world. It has more interior waterways than any region except the Yangtse Kiang valley about Shanghai, Hangchow and Soochow. It is, all told, only about as big as Massachusetts, but if you could stretch its navigable waterways out in one straight line they would carry you from New York to San Francisco and almost back to Chicago before you got to the end of them. There are in all about two thousand miles of canals—enough to reach from New York to Denver—and also three thousand miles of other waterways, including little rivers and the mouths of the Scheldt and Rhine, and also the Zuyder Zee and other places where the northern ocean runs into the land.

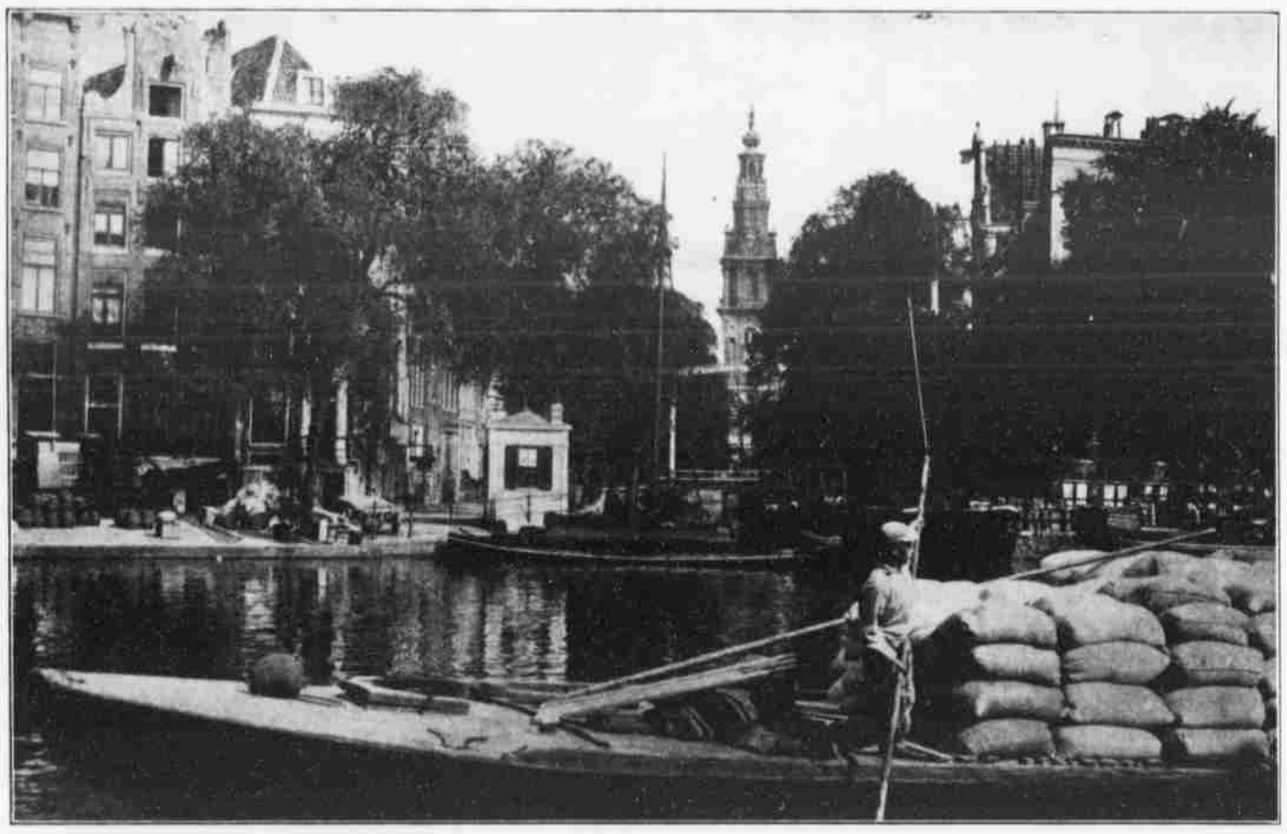
Indeed, there is so much water here that one of the most important duties of the government is the taking care of it. The government has a department known as The Waterstaat, and the queen has in her cabinet a minister of waterways. This department has some of the best of civil engineers. It has men who devote themselves to studying how to keep the North sea from rushing in and drowning out the country, for almost one-half of Holland is below the ocean, so that in some places the fishes outside swim high above the level of the thatched house roofs. It has men who are engaged in planning and building ship canals, such as the mighty waterways which connect Amsterdam with the ocean, and it has others who are scheming how to build a great dyke across the Zuyder Zee to redeem as much land as a good-sized Texas county, which, when redeemed, will be worth hundreds of dollars an acre.

This undertaking is for a time in abeyance, but there is no doubt that it will eventually be carried out. The Dutch have done much of such reclamation in the past. About fifty years ago they lifted 1,000,000,000 tons of water out of the region near Haarlem, and made seventy square miles of good farming land. It cost them more than $1,500,000, but the land was worth it. In another place they have redeemed 41,000 acres at a cost of about $4,000,000, and as soon as the work was done a foreign syndicate offered them $2,000,000 for the property as a whole. The government refused this offer, and eventually got several hundred thousand dollars more than it cost it to make the improvement.

As to the Zuyder Zee scheme, this is a bigger one than any that has yet been undertaken. It is estimated that it will cost over $75,000,000, but it will result in the reclamation of a vast tract of land. The work will take thirty-three years, and the taxes on the land recovered will then bring in $4,000,000 a year to the government, making the matter a good long-time investment. At present the government is afraid of it, and although all the plans have been completed no work has been actually done.

Have you ever heard of Zeeland? It is the southeastern province of Holland, consisting of nine islands lying in the mouths of the Scheldt and the Maas, formed by the silt brought down by these rivers. The most of the province is below sea level, being protected against the ocean by mighty dykes. It was through this province that I came from Antwerp to Rotterdam on the little steamboat Telegraf III.

As I rode down the Scheldt I passed the Kroonland of our own American line moving up with a cargo from New York for Antwerp, and a little later on came in sight of the dykes. Near the Dutch boundary the river is walled with stone held between piles. We rode high above the rest of the country, and could see the roofs of the barns and houses even with the top of the dykes. On the opposite side the trees showed out like bushes over the wall which extended on and on up the river as far as our eyes could reach. We passed the great forts that guard this entrance to Europe, and went on through a flat country on the edge of the sea. At times we could see the fields beyond the walls with the cattle feeding upon them. Long lines of trees marked out the road, which seemed to be marching over the landscape, making me think of Macbeth's woods coming to Dunsinane.



CANAL IN AMSTERDAM, WITH LOAD OF AMERICAN FLOUR.

We soon left the Scheldt and passing through the locks came into the canal of South Beveland. This is one of the largest canals of southern Holland. It is wide and high banked, and so straight that the tugs and barges which fill it grow smaller and smaller and finally block the canal in the distance.

The locks are old fashioned. They are moved by hand by quaint old Dutchmen in caps, roundabouts and fat pantaloons. At every lock Dutch girls brought out fruit and knicknacks to sell to the passengers. They were pretty girls and I liked their quaint costumes. They wore short skirts, white clogs and black stockings. Several had on bright vests and two had horns of gold over each of their eyes, the horns twisted around in the shape of a miniature old-fashioned bed spring. Three others had gold or silver helmets fitted tight to their heads, showing out through their lace caps. They laughed as we dealt with them, but invariably got the best of the bargain.

Most of the craft of this canal is carried along by tugs, although some barges are pulled by men and women and others by horses. So far but little electricity has been applied to these canals, although this matter is seriously considered by the Dutch. At every few steps along the way are posts for tying the boats, and we now and then passed boats at anchor.

Leaving the South Beveland canal, we entered the Ooster Scheldt, a sort of branch of the sea, and then went on between the islands of Duiveland and Tholen into the Maas canal. The waters of the Ooster Scheldt are wide and spotted with islands. We passed many sailing craft and now and then went by a tug towing great barges With the glass we could see schools of black seals on the sand flats, and farther back hundreds of Holstein cattle lying out in the sun.

We entered the Hollandische Diep and then the canals and mouths of the Maas, now going by villages on the banks, and now seeing the second stories of other village houses which were apparently looking over the dykes and watching us go by.

The Dutch canals are almost as thickly populated as the waterways of China. Every barge we passed had its family upon it, an evidence of the thousands of Dutch families which live and die upon boats. Babies are born upon them, and many have no other homes. We frequently saw children trotting up and down the roofs of the barges within six inches of drowning, and now and then a little one tied with a rope to the mast. On many of the boats the women were cooking; on some they were hanging out the washing, and on one a little Dutch girl held up her doll baby and laughed as we went by.

Every village along the canal had its own boats tied to the banks, and the larger towns were cut up by canals so that boats from the main canals could be taken into them by means of locks.

We stopped for a time at Dordrecht, which in the middle ages was one of the richest of all the Dutch cities. It had palaces at that time, and its buildings now are medieval and quaint to an extreme. Just below the city there is a lumber yard at which barges of American lumber were unloading. I noted the name of the firm. It was Dubbledam, an evidence that the lumber men of Holland can compete in profanity with our men at home.

In many places along these canals there were dredges at work, and here and there we saw the officers of the Waterstaat superintending the building of new embankments. The canals are almost everywhere walled with stones the size of your two fists and as I looked at them the enormous work that it must have taken to make 2,000 miles of such canals came to me. There are no stones in Holland. Every pebble has to be brought in from other countries, and every one of those stones was laid by hand. Each one took a part of a man's life to put it in its place, so that in reality the lives of generations have been swallowed up by these canal banks.

You have all heard of the windmills of Holland? They are to be seen everywhere. Along some of the canals there are hundreds of them. They spot the farms, and you see them on the edge of the towns, where they grind flour, saw lumber and do all sorts of things. They give a great charm to the landscape. They look so alive that I don't wonder that Don Quixote took one for a giant and wanted to fight him. These mills are all old, and it must have cost many millions of dollars to build them. Their day, however, is past, and but few new ones are building. The gas engine and the steam engine have taken their places, and we may yet have a Holland without windmills.

Holland has made its ship canals pay well. Amsterdam has the North Sea canal, which is about fifteen miles long, running across the country from Amsterdam to the ocean. It is thirty feet deep and has two enormous locks which protect it from the North sea at high tide. I took a ride along it a week ago and inspected the breakwater at its entrance. The work is well done, but the locks do not compare with those of the Sault Ste. Marie between Lake Superior and Lake Huron. The canal cost about $16,000,000, of which one-fourth was paid by the sale of the reclaimed land, which brought an average price of almost $500 an acre.

The town of Rotterdam is a city of canals and canalized rivers. The Maas has been so dredged that it now permits the largest of ocean ships to come into Rotterdam, and the connections with the Rhine and other parts of Europe are such that this city has become one of the chief ports on the continent. It is one of our principal gateways for northern Europe, surpassing Antwerp in its importations of American products. Antwerp, as far as the figures go, has the greater tonnage, but much of its tonnage is made up of ships which merely touch there, while that of Rotterdam is composed of ships which take on and discharge cargo. Rotterdam has about half as much shipping as Hamburg and about one-third that of Liverpool or London. The shipping is steadily increasing, and it now comprises lines to all parts of the world. In 1900 there were about 600 ships from the United States. This is not one-tenth of the whole number that came here, but they carried almost one-third of the cargo of that year. The chief of these ships are those of the Holland-American line, which go from Rotterdam direct to New York, and have been doing so since 1900. These ships are first-class passenger steamers, some of them being 12,000 tons and over.

Rotterdam is our gate to the Rhine and to the enormous country tributary to it. Our goods are here transshipped into the huge barges, from 200 to 300 feet long, in which they are carried up the Rhine. The river freights are exceedingly low and the Rhine trade is enormous. About one-half of all the goods that come into Holland go through Rotterdam up the Rhine to different parts of Germany, Switzerland and France, the number of river ships and boats which carry them being something like 110,000 annually. There are canals connecting the Rhine with the Seine and the Elbe. The barges go as far north as Basel and some of them are taken up the Main to the Danube, so that Rotterdam is actually the center point of a network of waterways which embraces almost all central Europe.

The increase of the Rhine trade has given Rotterdam great prosperity. It had about 200,000 people in 1890. It now has almost 350,000 and it is growing like a green bay tree. It is steadily increasing its shipping facilities. It has built a new harbor, which is over a mile long and 1,000 feet wide, and has another harbor in course of construction which will be 2,000 feet long, 1,000 feet wide and twenty-six feet deep. When the present improvements are completed Rotterdam will have twenty-five miles of quays. It has already over twenty miles and more than thirty-two acres of sheds and warehouses for its ocean shipping. This all belongs to the municipality. The city has put up eighty steel cranes which will lift from 1,500 to 66,000 pounds each, and it has hydraulic coal lifts which will move 200 tons of coal per hour at a cost of 4 cents per ton. In every respect the shipping facilities are of the best.

I am surprised at the work the Europeans are doing in making canals. I have been pretty well over the continent within the past few years. Nearly every country is improving its waterways. Russia is planning a canal from St. Petersburg and the Baltic to the Black sea, which will be thirty feet deep and able to accommodate the largest of the ocean steamers. The canal system will probably be extended eventually to the Northern ocean, so that the whole country will be accessible by water. The chief rivers of Russia are already connected by canals, and it is possible to go from St. Petersburg to the Caspian sea by boat.

Germany has for years been spending an enormous amount on deepening its rivers and building canals, and it has one of the best canal systems of Europe. Goods can be taken from Hamburg to Berlin and almost to the sources of the Elbe by boat. There are canals connecting the Elbe and the Oder, and the canal which has been built to join the coal and iron regions about Dortmund to the North sea will eventually be extended to embrace the Rhine, the Weser and the Elbe.

The Germans want to standardize their canal system, if possible, so that barges carrying 1,000 tons can be taken to any part of the country. They use wide barges, on the principle that it is easier to make a wide canal than a deep one.

At present the canals of eastern Germany seem to be favored over those of the west, the port of Stettin complaining that the Prussian government will not give it the canal facilities which it needs to compete with Hamburg. It is much nearer and naturally more accessible to Berlin than

(Continued on Seventh Page)