mountains: the Khabur, a little north of 37° N., navigable for rafts; the Great Zab, at 36° N., just below Nimrud, the ancient Calah; the Little Zab, about 35° 15' N.; the 'Adhcm at 34° N. and the very large and important Diyala, a little below Bagdad, at 33° 15' N.

The course of the Tigris is much shorter than that of the Euphrates, about 1150 m. as compared with 1800 m., but its volume of water is greater, at least in its lower course. At Bagdad it has an average breadth of about 200 yards and a current in flood time of about 4¼ m. per hour. It is navigable for steamers to a point a little above the mouth of the Great Zab, about 30 m. south of Mosul, at which point navigation is blocked by two ancient dams, erected, apparently, to control the river for the Assyrian city of Calah, the rums of which are called Nimrud by the natives after these dams, which they conceive to be the work of that mythical hero. Were it not for these dams steamers might reach Mosul itself, at an eleva­tion of 353 ft. above the Persian Gulf. Two lines of steamers, an English and a Turkish, furnish an inadequate service between Basra and Bagdad, but there is no steam navigation on the river above the latter city. Small sailing craft navigate upwards as far as Samārra; above this all navigation is downward, and by raft. For rafts the river is navigable from Diarbekr and is termed by the natives “ the cheap cameleer.” The rafts used are the so-called *kelleks,* of wood supported on inflated skins, which are broken up at Bagdad, the wood sold and the skins carried back by caravan.

Near the source of the Tigris, at Arghana-Ma’den, are copper mines. In the neighbourhood of Diarbekr is iron. Below Mosul, for some distance, occur sulphurous and bituminous springs. There are also in that neighbourhood famous marble quarries. This part of the river’s course, the ancient Assyria, is also a rich agri­cultural region.

From a little above the confluence of the Great Zab downward, the banks of the river are absolutely uninhabited, and the river flows through a desert until Tekrit is reached. Beginning shortly below Tekrit there are indications of considerable canalization, both for the purpose of irrigating country remote from the river, and also of shortening the course of the river for navigation. In ancient times the country on both sides of the river was well irri­gated below this point, the waters of the Tigris were under thorough control, and it and its lower tributaries, the 'Adhem and the Diyala, were made, by means of huge canals, to furnish great water-ways for the country between it and the Persian hills eastward. Of these canals the best known, and probably the greatest, was the Nahrawan, which, leaving the Tigris, on its eastern side, above Samärra, over 100 m. north of Bagdad, rejoined it below Kut-el- Amara, an equal distance to the south. None of these canals is serviceable at the present time, and few carry water in any part of their course, even in flood time.

A little south of Samärra the stony plateau of Mesopotamia ends, and the alluvial plain of Irak, ancient Babylonia, begins. Here the palm groves begin also, and from this point to a little beyond Bagdad the shores of the river are well cultivated. At the point of entering the alluvial plain the bed of the Tigris seems to be lower than that of the Euphrates, so that the canals run from the latter to the former stream. At Bagdad the Tigris and Euphrates are less than 35 m. apart, then they recede again, the Tigris bending eastward, until, below the Shatt-el-Haī, they are separated by almost 100 m. From Bagdad downward, the course of the Tigris is peculiarly serpentine and shifting. The mud brought down by it, calculated at 7150 lb an hour at Bagdad, is not deposited in marshes to form alluvium, as in the case of the Euphrates, but although in flood time the river becomes at places an inland sea, rendering navigation extremely difficult and uncertain, the bulk of the mud is deposited in banks, shoals and islands in the bed of the river, and is finally carried out into the Persian Gulf. At Kut-el-Amara, approximately half way from Bagdad to Korna, the bed of the Tigris is higher than that of the Euphrates, and accordingly from this point downward its waters flow into the Euphrates and not vice versa.

Shortly below Kut-el-Amara all traces of ancient canalization on the east side vanish, and it would appear as though much of that region, now largely under water at flood time, constituted an inland sea. On the west side, however, there are the remains of several canals or channels, some still carrying water, one of which, the Shatt- el-Haî, leaving the Tigris at Kut-el-Amara, and emptying into the Euphrates at Nasrieh, is still navigable. Indeed, in the time of the caliphate this was the channel of the Tigris, and on its banks stood the important city of Wasit. At a much more remote period also the great city of Lagash stood by or on its banks. In the time of the Sassanian kings, however, as at the present time, the Tigris occupied a more easterly course. Indeed, the lower course of the Tigris, even more than that of the Euphrates, has always been subject to change. Below the Shatt-el-Haî the country on both sides of the river is practically a swamp, except where the palm groves have formed land.

The Tigris begins to rise about the middle of November and is highest in May and June, and lowest in September and October, The principal towns on its banks are Diarbekr (anc. *Amida),* on the western branch; Bitlis, on the eastern branch; Mosul; Tekrit, a town dating from Persian days, said to have been founded by Shapur I. son of Ardashir I., formerly important, but now re­latively insignificant; Samärra, also called Samira, the capital of the caliphate from λ.d. 836 to 892, a place of pilgrimage of the Shia Moslems, containing magnificent tombs of two of their *Imams* the tenth and eleventh, with another much venerated shrine of the twelfth, as well as some interesting ruins; and Bag­dad. While the Tigris never played the same rôle historically as the Euphrates, numerous remains of antiquity are to be seen along its course. Cuneiform inscriptions and bas-reliefs have been found at the sources of both the western and eastern Tigris, as well as at various points on the cliffs along the upper course of both branches. Opposite Mosul are the ruins of ancient Nineveh, the last capital of Assyria, and 20 m. below that the ruins of Calah, the second capital; while 35 m. farther south, on the oppo­site bank, lies Kal’at-Shergat, the ancient Assur, the original name-place and capital of the Assyrian Empire. A little south of Samärra are found remains of the Median Wall, which stretched south-west towards the Euphrates near Sahlawych, marking the edge of the Babylonian alluvial plain. In this neighbourhood also stood the ancient Opis. At Bagdad, besides the memorials of the caliphate, may be seen a few remains of the old Babylonian city of Bagdadu, and a dozen miles southward, on the east bank of the river, stands Takhti-Khesra, the royal palace at Ctesiphon, the most conspicuous and picturesque ruin in all Babylonia, opposite which, on the other side of the river, are the low ruin mounds of ancient Seleucia.

See W. F. Ainsworth, *Researches in Assyria* (1838) ; R. F. Chesney, *Expedition to the Euphrates and Tigris* (1850); W. F. Ainsworth, *The Euphrates Expedition* (1888) ; Guy Le Strange, “ Description of Mesopotamia and Bagdad ” *(Journal of the Royal Asiatic Society,* 1895) ; E. Sachau, *Am Euphrat und Tigris* (r900. (J. P. Pe.)

**TILBURG,** a town in the province of north Brabant, Holland, and a junction station 13½ m. by rail E. by S. of Breda. A steam tramway connects it northwards with Waalwijk. Pop. (1905), 46,517. Tilburg has risen into importance since the separation of Belgium from Holland as one of the chief industrial centres of the south. It has Roman Catholic and Protestant churches, a synagogue, a cloth hall, a higher-burgher school, an art and music school, and a Roman Catholic seminary. The woollen manufacture is the chief industry, besides which there are leather, soap, oil and tobacco factories, as well as breweries, tanneries and iron foundries.

**TILBURY DOCKS,** on the north shore of the Thames, in the county of Essex, England. They lie opposite Gravesend 25 m. below London Bridge and about the same distance from the Nore, being thus within the port of London. They were constructed in 1886 by the East & West India Docks Company, and were later owned by the London & India Docks Company. The docks are four in number, having, with tidal basin and entrance locks, a total area of 74 acres. The depth of water in the tidal basin is 25 ft. at low tide and 44 ft. at high tide. The length of quayage is about 2½ m., and there is extensive warehousing as well as accommodation for passengers, as the largest passenger steamers trading with the Port of London lie here. Railway communication is provided by the London, Tilbury & Southend line, and there is direct connexion for goods traffic with all the northern lines.

**TILDEN, SAMUEL JONES** (1814-1886), American statesman, was born at New Lebanon, New York, on the 9th of February 1814. In 1834 he entered Yale University, hut soon withdrew on account of ill health, and later studied in the University of the City of New York. He was admitted to the bar in 1841, and rose rapidly to the front rank. In the financial troubles between 1850 and i860 it is said that more than half the railways north of the Ohio river and between the Hudson and the Missouri rivers were at some time his clients. In spite of his activity at the bar, Tilden maintained an interest in politics, serving in the State Assembly in 1846 and in the state constitutional conventions of 1846 and 1867. In 1848, largely on account of his personal attachment to Martin Van Buren, he participated in the revolt