50 minutes, excelling by three hours the best previous Atlantic passage. After the year 1888 the company ceased to build single-screw steamers, all later vessels having been constructed on the twin- screw system, of which the superiority had been clearly demon­strated. About this time also the owners of the line became responsible for an important advance in steamship construction which was afterwards imitated by merchant ships of all the great maritime powers. The "Teutonic ” and "Majestic,” introduced in 1889 and 1890, were the first merchant ships constructed with a view to their use as possible auxiliaries to the Royal Navy. The former was present, armed with eight quick-firing guns, at the naval in­spection by the German emperor in 1889. With the launch of the second “ Oceanic ” in January 1899 the company’s record was still further enhanced. the White Star Line was from 1877 regularly employed under contract with the British government to carry the American mails from Liverpool and Queenstown to New York. Besides this weekly mail and passenger service, a fleet of twin- screw cargo vessels maintained a subsidiary service between Liver­pool and New York. These vessels were especially designed for the conveyance of cattle and horses. After 1883 several steamships of the line were employed in the Shaw, Savill & Albion service between London and New Zealand. Three of the company’s ships ran in the line of the Occidental & Oriental Company between San Francisco and Yokohama and Hong-Kong. The company inaugurated a service to Australia from Liverpool in 1899. Five ships ran in it (calling at Cape Town) to Albany, Adelaide, Melbourne and Sydney. The ports visited by their vessels in New Zealand will be found detailed under Shaw, Savill & Albion Company. In 1902 the absorption of the White Star fleet and management in the Morgan shipping combine was arranged. Since that time several alterations have taken place. The mail steamers of the line left Liverpool for Southampton in June 1907 and now call at Cherbourg on their way *to* and from New York. Two services are still maintained between Liverpool and New York— one the old cargo service, and the other a weekly despatch of large passenger and cargo vessels. In addition to these there are two other Atlantic services from Liverpool—one to Boston and the other maintained in conjunction with the Dominion Line to Canadian ports. There is also a line of White Star, steamers between New York and the Mediterranean. Several important vessels from other limbs of the combine have been brought under the White Star flag, whilst the company has also practically absorbed the old Aberdeen Line.

*Wilson Line.—*Thomas Wilson, Sons & Co. is at the present time the largest private ship-owning company in the world. This line traces its origin as far back as 1835. It was founded by Mr Thomas Wilson in conjunction with Messrs Hudson and Becking­ton, and on the retirement of the two last-named gentlemen it acquired its present title. Early in the ’forties the firm was running three steamships to Gothenburg, and was engaged largely in the iron trade, importing large quantities of Swedish and Russian iron, and running a regular line of sailing boats to Swedish ports. It also despatched a regular service to Dunkirk. Steamships gradually superseded the sailing vessels, and new steamers year by year were placed on the Scandinavian service. About this time the firm secured the mail contract between England and Sweden, which it still holds. After the Crimean War it started the St Petersburg, Stettin and Riga trade. During the Franco- German War the trade to Stettin had to be suspended; and as a set-off the service to Trieste was inaugurated, which has developed into an independent Adriatic and Sicilian service. The Norwegian trade was then improved by the despatch of steamships to Bergen, Stavanger and Trondhjem, and subsequently a service of large steamers began running to Constantinople and the Black Sea. After the opening of the Suez Canal the trade to India, which has since assumed such considerable proportions, was inaugurated. In 1875 the firm launched out into a more hardy enterprise, by commencing to run steamers to America. Its vessels in 1902 ran to New York regularly from Hull and the Tyne ports. The original Calcutta trade was discontinued when the New York line was started, but in 1883 a service was established between Hull and Bombay. In 1891 the firm became a private limited company and in 1894 took over the coasting trade between Hull and New­castle. The company employs a number of. large and swift ships in the Norwegian passenger traffic, which in the summer season now reaches very considerable proportions. It has frequent ser­vices of passenger and cargo vessels to the ports of northern Europe, carrying passengers in the season as far north as the North Cape. Of course the winter season necessitates considerable variation of summer services to Baltic ports. In 1903 the fleet of the old- established Hull firm of Messrs Bailey & Leetham was absorbed, and in 1908 that of the North-Eastern Railway Company. There are also steamers leaving Grimsby, Manchester and Liverpool regularly for Scandinavian and Baltic ports; weekly services to Ghent, Liverpool and Newcastle; and services to Mediterranean and Black Sea ports. Besides the New York line there are ocean services to Boston, to New Orleans and the river Plate. . There is also a weekly service to and from London and Boston in con­junction with the Furness-Leyland Line.

*Conclusion.—*The scope of this article will not allow of any de­tailed reference to many of the important foreign lines which in a complete history should be mentioned. The Hansa Company of Bremen; the Chargeurs Réunis of Havre; the Holland-American Line, which has. of recent years added to the fleet several fine twin- screw liners, built at the Belfast yard; the Compañia Transatlantica of Barcelona, which performed so great a feat in the transport of troops from Barcelona to Cuba in the latter days of Spain’s dominion over that island; the Pacific Mail Company of the United States; and many others might be noticed. A whole article might be de­voted to the work of the lines on the North American inland waters, while there are several other English companies which might well claim attention, both from the magnitude of their operations and the extent to which they have developed types of ships suitable for the peculiarities of the trades in which their vessels are engaged. The Clan Line, for example, has largely adopted the turret-decked ship, which is the design of Messrs W. Doxford & Co. of Sunderland. This type of ship is intended to carry large cargoes on a small registered tonnage and a light draught, without paying for it by a sacrifice of weatherly qualities. The same object is aimed at by the design of the trunk steamers built by Messrs Ropner of Stockton. The Isherwood system of construction and the cantilever type of cargo steamer are other devices for attaining the same object. Then there are the tank steamers constructed for the carriage of oil in bulk. Many of these ships are adapted not only for the carriage of oil. but also for its consumption in their furnaces in place of coal. We have already referred to some of the vessels fitted with refrigerating apparatus for the carriage of dead meat, and to the cargo steamers of the Atlantic companies, which are supplied with conveniences for carrying valuable racehorses and cattle. The experience of many years has enabled the owners of some of these lines to exhibit a wonderfully low record of loss, the percentage of deaths at sea to numbers carried being small beyond the dreams of, say, the ’seventies. A tenth of 1 % over a somewhat extended period is not an unprecedented average.

The fable shows something of the recent growths of companies, and at the same time records some of the amalgamations which have been so frequent. It should be explained that the table does not pretend to be exhaustive. The fleets embraced in it are not necessarily all those whose tonnage reaches above the lower limit shown. There are now a number of lines whose total exceeds 100,000 tons which are not shown in the list. Amongst them may be cited the Hamburg-Pacific Line, the German line to Australia, the Union Company of New Zealand—which contains many small vessels, the Forende Company of Copenhagen and the Anglo-American Oil Company. The table shows how whilst the principal lines are largely increasing their fleets, one or two companies are falling back in their gross amount of tonnage. The figures, moreover, are sub­ject to certain reservations. The count was not necessarily taken by the various companies at the same period of each year. Some of the figures given may include numbers and tonnages of tugs and tenders, while others may exclude them. Again, some of the companies may have returned in their fleets the vessels which they had under construction, whilst others may not have counted them. But none of these considerations can much affect the general significance of the figures shown. The growth in the average size of individual ships is as marked as that of the aggregate tonnage of the companies.

Authorities.—The following books throw much light on the history of the leading steamship lines: *History of Merchant Shipping,* by W. S. Lindsay (London, Sampson Low & Co.) ; *La Navig. comm, au XIX. siècle* (Paris, 1901); A. J. Maginnis, *The Atlantic Ferry* (3rd ed., London, Whittaker & Co.); E. R. Jones, *The Shipping World Year-Book ; Lloyd's Register of British and Foreign Shipping* (published annually). Also see a comprehensive article on this subject in the *Quarterly Review* for January 1900. Perhaps the fullest information is, as a rule, to be obtained from the handbooks issued by the companies themselves. (B. W. G.)

STEARIC ACID, *n*-Octodecylic acid CH3(CH3)16CO2H, an organic acid found as its glyceride stearin, mixed with palmitin and olein, in most tallows (hence its name, from Gr. στέαp, tallow). The so-called “stearin” of candles is a mixture of stearic and palmitic acids (see Candle).

STEATOPYGIA (Gr. *στέαp*, fat, *πυγή* rump), an unusual accumulation of fat in and around the buttocks. The deposit of fat is not confined to the gluteal regions, but extends to the outside and front of the thighs, forming a thick layer reaching sometimes to the knee. This curious development constitutes a racial characteristic of the Bushmen *(q.v.).* It is specially a feature of the women, but it occurs in a less degree in the males. It is also common among the Hottentots, and has been noted among the pygmies of Central Africa. In women it is regarded among them as a beauty: it begins in infancy and is fully developed on the first pregnancy. It is often accompanied by