1877 by observations of the surface of Mars, whereon he detected, among other peculiar characters, certain streaky markings or *canali,* the nature and origin of which is still controversial (see Mars). Mercury and Venus were also studied, and he concluded that these planets rotated on their axes in the same time as they revolved about the sun; but these views are questioned. He also discussed many other problems, such as stellar distribution, the extent of the um- verse, &c., whilst at Brera. On his retirement he turned to the astronomy of the Hebrews and Babylonians; his earlier results are given in his *L' Astronomia nell' antico Testamento* (1903), a work which has been translated into English and German, whilst later ones are to be found in various journals, the last being in *Scientia* (1908).

SCHIAVONE, the Italian name of the basket-hilted sword of the 17th century, resembling what is erroneously called the “ claymore ” of modern Highland regiments. The “ schiavone ” was the sword of the Slavonic guards (*Schiavoni*) of the doges of Venice, whence the name (see Sword).

SCHIÀVONETTI, LUIGI (1765-1810), Italian engraver, was born at Bassano in Venetia on the 1st of April 1765. After having studied art for several years he was employed by Testolini, an engraver of very indifferent abilities, to execute imitations of Bartolozzi’s works, which he passed off as his own. In 1790 Testolini was invited by Bartolozzi to join him in England, and, it having been discovered that Schiavonetti, who accompanied him, had executed the plates in question, he was employed by Bartolozzi and became an eminent engraver in both the line and the dot manner. Among his early works are four plates of subjects from the French Revolution, after Benazech. He also produced a “ Mater Dolorosa ” after Vandyck, and Michelangelo’s cartoon of the “ Surprise of the Soldiers on the Banks of the Arno.’’ From 1805 to 1808 he was engaged in etching Blake’s designs to Blair’s *Grave,* which, with a portrait of the artist engraved by Schiavonetti after T. Phillips, R.A., were published in 1808. The etching of Stothard’s “ Canterbury Pilgrims ” was one of his latest works, and on his death on the 7th of June 1810 the plate was taken up by his brother Niccolo, and finally completed by James Heath.

SCHICHAU, FERDINAND (1814-1896), German engineer and shipbuilder, was born at Elbing, where his father was a smith and ironworker, on the 30th of January 1814. He studied engineering at Berlin and then in England, and returning to Elbing in 1837 started works of his own, which from small beginnings eventually developed into an establishment employing some 8oo0 men. He began by making steam engines, hydraulic presses and industrial machinery, and, by concerning himself with canal work and river or coast improvement, came to the designing and construction of dredgers, in which he was the pioneer (1841), and finally to the building of ships.

His “ Borussia,” in 1855, was the first screw-vessel constructed in Germany. Schichau began to specialize in building torpedo- boats and destroyers (at first for the Russian government) at an early date. From 1873 he had the co-operation of Carl H. Ziese, who married his daughter. Ziese introduced compound engines into the first vessels built by Schichau for the German navy, the gun- boats “ Habicht ” and “ Möwe,” launched in 1879, and also designed in 1881 the first triple-expansion machinery constructed on the continent, supplying these engines to the torpedo-boats built by Schichau for the German navy in 1884, the first of some 16o that by the year 1909 were provided for Germany out of the Elbing yards. Torpedo-boats were also built for China, Austria and Italy. Meanwhile Elbing had become insufficient for the increased output demanded. In 1889 Schichau established a floating dock and repairing shops at Pillau, and soon afterwards, by arrangement with the government, started a large shipbuilding yard at Danzig, for the purpose of constructing the largest ships of war and for the mercantile marine. He died on the 23rd of January 1896; but Ziese carried on the work, and not only made the Danzig yard the chief cradle of the new German fleet, rivalling the finest English establishments, but also largely developed the equipment at Elbing. The Schichau works have made the name of their originator to rank with that of Krupp.

SCHIEDAM, a town and river port of Hofland, in the province of South Hofland, on the Schie, near its confluence with the Maas, and a junction station 3 m. by rail and steam tramway W. of Rotterdam. Pop. (1905) 29,227. The public buildings of interest are the Groote or Janskerk, the old Roman Catholic church, the synagogue, the town-hall, the exchange, the concert- hall and a ruined castle. Schiedam is famous as the seat of a

great gin manufacture, which, carried on in more than three hundred distilleries, gives employment besides to malt-factories, cooperages and cork-cutting establishments, and supplies grain refuse enough to feed about 30,000 pigs, as well as sufficient yeast to form an important article of export. Other industries include shipbuilding, glass-blowing and the manufacture of stearine candles.

SCHIEFNER, FRANZ ANTON (1817-1879), Russian linguist, was born at Reval, in Russia, on the 18th of July 1817. His father was a merchant who had emigrated from Bohemia. He was educated first at the Reval grammar school, matriculated at St Petersburg as a law student in 1836, and subsequently devoted himself at Berlin, from 1840 to 1842, exclusively to Eastern languages. On his return to St Petersburg in 1843 he was employed in teaching the classics in the First Grammar School, and soon afterwards received a post in the Imperial Academy, where in 1852 the cultivation of the Tibetan language and literature was assigned to him as his special function. Simultaneously he held from i860 to 1873 the professorship of classical languages in the Roman Catholic theological seminary. From 1854 till his death he was an extraordinary member of the Imperial Academy. He visited England three times for purposes of research—in 1863, 1867 and 1878. He died on the 16th of November 1879.

Schiefner made his mark in literary research in three directions. First, he contributed to the *Memoirs* and *Bulletin* of the St Petersburg Academy, and brought out independently a number of valuable articles and larger publications on the language and literature of Tibet. He possessed also a remarkable acquaintance with Mongolian, and when death overtook him had just finished a revision of the New Testament in that language with which the British and Foreign Bible Society had entrusted him. Further, he was one of the greatest authorities on the philology and ethnology of the Finnic tribes. He edited and translated the great Finnic epic *Kalevala;* he arranged, completed and brought out in twelve volumes the literary remains of Alexander Castrén, bearing on the languages of the Samoyedic tribes, the Koibal, Karagass, Tungusian, Buryat, Ostiak and Kottic tongues, and prepared several valuable papers on Finnic mythology for the Imperial Academy. In the third place, he made himself the exponent of investigations into the languages of the Caucasus, which his lucid analyses placed within reach of European philologists. Thus he gave a full analysis of the Tush language, and in quick succession, from Baron **P.** Uslar's investigations, comprehensive papers on the Awar, Ude, Abkhasian, Tchetchenz, Kasi-Kumük, Hürkanian and Kürinian languages. He had also mastered Ossetic, and brought out a number of translations from that language, several of them accompanied by the original text.

SCHILL, FERDINAND BAPTISTA VON (1776-1809), Prussian soldier, was bom in Saxony. Entering the Prussian cavalry at the age of twelve, he was still a subaltern of dragoons when he was wounded at the battle of Auerstädt. From that field he escaped to Kolberg, where he played a very prominent part in the celebrated siege of 1807, as the commander of a volunteer force of all arms. After the peace of Tilsit he was promoted major and given the command of a hussar regiment formed from his Kolberg men. In 1809 the political situation in Europe appeared to Schill to favour an attempt to liberate his country from the French domination. Leading out his regiment from Berlin under pretext of manœuvres, he raised the. standard of revolt, and, joined by many officers and a company of light infantry, marched for the Elbe. At the village of Dodendorf (5th of May 1809) he had a brush with the Magdeburg garrison, but was soon driven northwards, where he hoped to find British support. The king of Prussia’s proclamations prevented the patriots from receiving any appreciable assistance, and with little more than his original force Schill was surrounded by 5000 Danish and Dutch troops in the neighbourhood of Wismar. He escaped by hard fighting (action of Damgarten, 24th of May) to Stralsund, and attempted to put the crumbling fortifications in order. The Danes and Dutch soon hemmed him in, and by sheer numbers overwhelmed the defenders (May 31). Schill himself was killed. Some parties escaped to Prussia, where the officers were tried by court-martial, cashiered and imprisoned. A few escaped to Swinemünde, but the rest were either killed or taken. Handed over to the French, the soldiers were sent to the galleys, and the eleven officers shot at Wesel on the 16th