optically inactive. These long-known facts led Pasteur to the discovery of the true relations of the two acids. If the double racemate, (C4H4O6)Na(NH4), is allowed to crystallize slowly, two kinds of crystals are produced, both bearing hemiedric faces, but differing from each other in the situation of these, exactly as the right hand differs from the left. Pasteur separated the two kinds of crystals, and found that one kind is identical with the ordinary (dextro-) tartrate of soda and ammonia, while the other contains a new kind of tartaric acid, which he called lævo-tartaric acid because it turns the plane of polarization to the left. Equal weights of the two acids, when dissolved separately in water and mixed, unite, with perceptible evolution of heat, into optically neutral racemic acid. Racemic acid, then, is lævo- and dextro-tartaric united (loosely) into one molecule. There are a number of optically inactive tartaric acids, not susceptible of decomposition in the sense in which racemic acid is. (W. D.)

TARTARS (more correctly Tatars, but Tartars is the form generally current), a name given to nearly three million inhabitants of the Russian empire, chiefly Moslem and of Turkish origin. The majority—in European Russia—are remnants of the Mongol invasion of the 13th century (see Mongols), while those who inhabit Siberia are survivals of the once much more numerous Turkish population of the Ural-Altaic region, mixed to some extent with Finnish and Samoyedic stems, as also with Mongols. The name is derived from that of the Ta-ta Mongols, who in the 5th century inhabited the north­eastern Gobi, and, after subjugation in the 9th century by the Tungus Kidañs, migrated southward, there founding the Mongolian empire under Jenghiz Khan (*q.v.*)*.* Under the leadership of his grandson (Batu) they moved west­wards, driving with them many stems of the Turkish Ural- Altaians towards the plains of Russia. The ethnographical features of the present Tartar inhabitants of European Russia, as well as their language, show that they contain no admixture (or very little) of Mongolian blood, but belong to the Turkish branch of the Ural-Altaic stock, necessitating the conclusion that only Batu, his warriors, and a limited number of his followers were Mongolians, while the great bulk of the 13th-century invaders were Turks. On the Volga they mingled with remnants of the old Bulgarian Turkish empire, and elsewhere with Finnish stems, as well as with remnants of the ancient Italian and Greek colonies in Crimea and Caucasians in Caucasus. The name of Tatars, or Tartars, given to the invaders, was afterwards extended so as to include different stems of the same Turkish branch in Siberia, and even the bulk of the then little known inhabitants of the high plateau of Asia and its north-western slopes, which was described under the general name of Tartary. This last name has almost disappeared from geographical literature, but the name Tartars, in the above limited sense, remains in full use.

The present Tartar inhabitants of the Russian empire form three large groups,—those of European Russia and Poland, those of Caucasus, and those of Siberia. The discrimination of the separate stems included under the name is still far from completion. The following subdivisions, however, may be regarded as established. (1) The Kazan Tartars, descendants of the Kiptchaks settled on the Volga in the 13th century, where they mingled with survivors of the Bulgar Turks and partly with Finnish stems. They number about half a million in the government of Kazan, about 100,000 in each of the governments of Ufa, Samara, and Simbirsk, and about 300,000 in Vyatka, Saratoff, Tamboff, Penza, Nijni-Novgorod, Perm, and Orenburg ; some 15,000 belonging to the same stem have migrated to Ryazan, or have been settled as prisoners in the 16th and 17th centuries in Lithuania (Vilna, Grodno, and Podolia); and there are some 2000 in St Petersburg. In Poland they constitute 1 per cent. of the population of the district of Plock. The Kazan Tartars speak a pure Turkish dialect ; they are middle-sized, broad- shouldered, and strong, and mostly have black eyes, a straight nose, and salient cheek bones. They are Mohammedans ; polygamy is practised only by the wealthier classes and is a waning institution. Excellent agriculturists and gardeners, very laborious, aud having a good reputation for honesty, they live on the best terms with their Russian peasant neighbours. It may be added that, according to Μ. Yuféroff (*Étude éthn. sur les Bachkirs,* 1881), those Bashkirs who live between the Kama, Ural, and Volga are not of Finnish origin, but in virtue of their history, language, anthropological features, and customs must be regarded as Tartars. (2) The Astrakhan Tartars (about 10,000) are, with the Mongol Kalmucks, all that now re­mains of the once so powerful Astrakhan empire. They also are agriculturists and gardeners ; while some 12,000 Kundrovsk Tartars still continue the nomadic life of their ancestors. (3) The Crimean Tartars, who occupied the Crimea in the 13th century, have pre­served the name of their leader, Nogai. During the 15th, 16th, and 17th centuries they constituted a rich empire, which prospered until it fell under Turkish rule, when it had to suffer much from the wars fought between Turkey and Russia for the possession of the peninsula. The war of 1853 and the laws of 1860-63 and 1874 caused an exodus of the Crimean Tartars ; they abandoned their admirably irrigated fields and gardens and moved to Turkey, so that now their number falls below 100,000. Those of the south coast, mixed with Greeks and Italians, are well known for their skill in gardening, their honesty, and their laborious habits, as well as for their fine features, presenting the Tartar type at its best. The mountain Tartars closely resemble those of Caucasus, while those of the steppes—the Nogais—are decidedly of a mixed origin from Turks and Mongolians.

The Tartars of Caucasus, who inhabit the upper Kuban, the steppes of the lower Kuma and the Kura, and the Araxes, number about 1,350,000. Of these (4) the Nogais on the Kuma show traces of an intimate mixture with Kalmucks. They are nomads, supporting themselves by cattle-breeding and fishing ; few are agriculturists. (5) The Karatchais (18,500) in the upper valleys about Elburz live by agriculture. (6) The mountain Tartars (about 850,000), divided into many tribes and of an origin still undetermined, are scattered throughout the provinces of Baku, Erivan, Tiflis, Kutais, Dagh­estan, and partly also of Batum. They are certainly of a mixed origin, aud present a variety of ethnological types, all the more so as all who are neither Armenians nor Russians, nor belong to any distinct Caucasian tribe, are often called Tartars. As a rule they are well built and little behind their Caucasian brethren. They are celebrated for their excellence as gardeners, agriculturists, cattle­tenders, and artisans. Although most fervent Shi'ites, they are on very good terms both with their Sunnite and with their Russian neighbours. Polygamy is rare with them, and their women go to work unveiled.

The Siberian Tartars, mostly mixed with Finnish stems, are the most difficult to classify. They occupy three distinct regions,—a strip running west to east from Tobolsk to Tomsk, the Altai and its spurs, and South Yeniseisk. They originated in the agglo­merations of Turkish stems which in the region north of the Altai succeeded the Ugro-Samoyedic civilization (see Siberia), and reached a relatively high degree of culture between the 4th and the 8th centuries, but were subdued and enslaved by the Mongols. In the meantime the following subdivisions of the Siberian Tartars may be accepted. (7) The Baraba Tartars, who take their name from one of their stems (Barama), number about 50,000 in the government of Tobolsk and about 5000 in Tomsk. After a strenuous resistance to Russian conquest, and much suffering at a later period from Kirghiz and Kalmuck raids, they now live by agri­culture, either in separate villages or along with Russians. (8) The Tcholym or Tchulym Tartars on the Tcholym and both the rivers Yus speak a Turkish language with many Mongolian and Yakut words, and are more like Mongols than Turks. In last century they paid a tribute for 2550 arbaletes, but they now are rapidly becoming fused with Russians. (9) The Abakan or Minu­sinsk Tartars occupied the steppes on the Abakan and Yus in the 17th century, after the withdrawal of the Kirghizes, and represent a mixture with Koibals (whom Castrén considers as partly of Ostiak and partly Samoyedic origin) and Beltirs—also of Finnish origin. Their language is also mixed. They are known under the name of Sagais, who numbered 11,720 in 1864, and are the purer Turkish stem of the Minusinsk Tartars, Koibals, and Kyzyl or Red Tartars. Formerly Shamanists, they now are, nominally at least, adherents of the Greek Orthodox Church, and support themselves mostly by cattle-breeding. Agriculture is spreading but slowly among them ; they still prefer to plunder the stores of bulbs of *Lilium Martagon, Pæonia,* and *Erythronium Dens canis* laid up by the steppe mouse (*Mus socialis*)*.* The Soyotes, or Soyons, of the Sayan Mountains, who are Finns mixed w’ith Turks, the Uryankhes of north-west Mongolia, who are of Turkish origin but follow Buddhism, and the Karagasses, also of Turkish origin but much like the Kirghizes, and reduced now to a few hundreds, are akin to the above. (10) The Tartars of the northern slopes of the Altai (nearly 20,000 in number) are of Finnish origin. They comprise some hundreds of Kumandintses, the Lebed Tartars, the Tchernevyie or Black- Forest Tartars, and the Shors (11,000), descendants of the Kuznetsk or Iron-Smith Tartars. They are chiefly hunters, passionately lov­ing their *taiga,* or wild forests, and have maintained their Shaman religion and tribal organization into *suoks.* They live partly also on cedar-nuts and honey collected in the forests. Their dress is that of their former rulers, the Kalmucks, and their language con­tains many Mongolian words. (11) The Altai Tartars, or “Altaians,” comprise—(*a*) the Mountain Kalmucks (12,000), to whom this name