distance from each other that only hand and fore-arm can be reached with the last few inches of the sword nearest the point, both edges being supposed to be sharp. No thrusts are allowed, and both feet must remain stationary where they are planted when the bout begins. Narrow parries are necessary, though many cuts are avoided by withdrawing the hand. Manchette- fencing is not considered good practice for the light sabre and is therefore losing ground.

The German Basket-Sabre (*Krummer Säbel,* or *Krummsäbcl*) is a descendant of the heavy cavalry sabre once in use in some branches of the German horse. It is now used almost exclusively by students. It has a strongly curved blade about 32 in. long and 1 in. broad, tapering slightly towards the end, which is truncated, no thrusts being allowed. The hand is protected by a large guard of heavy steel basket-work, and the handle is shaped to fit the hand, the forefinger being run through a leathern loop. On account of the great weight of the weapon (about 2⅛ lb, more than half of which is in the guard) blows delivered with a full swing are impracticable, and all cuts are made from the elbow and wrist, the hand being generally kept as high as possible. The *Mensur* is the distance at which the combatants stand from one another. There are three recognized distances, that in general use being the middle, from which two sabres can be crossed at about 15 in. from the points. Neither combatant may move his left foot (the right in the case of a left-handed fencer) from the position in which it is placed at the beginning of the bout, all advances and retreats being made by the movements of the right foot and the body. The position of the engagement is in high tierce, the arm being held straight out towards the adversary. The feet are planted about 24 in. apart, the right in advance. The right shoulder is bent forward and the stomach drawn back, imparting a slight stoop to the fencer. There are eight cuts and as many parries. The basket-sabre is used in the more serious students’ duels; the neck, wrist, armpits and body below the nipples being heavily bandaged.

Rapier-fencing among the students of the German universities and technical high-schools of Germany, Austria, Switzerland and Russia may be considered under the sabre, as the rapier, although originally used for thrusting as well as cutting, is now employed by students only to cut. According to the association of German fencing-masters the modern weapon when blunt and used only for practice is called *Rapier* or *Haurapier,* but when sharpened for duelling, *Schläger* (striker). It is derived from the long straight sword of the German *Reiters,* or light cavalry, who were famous in the 16th century and later. Its use, however, was only occasional before the middle of the 19th century, when it gradually took the place of the dangerous *Pariser,* or long French small-sword, for the semi-serious duels *{Mensuren) of* the students. There are two varieties of rapier, each having a thin flat blade about 33⅛ in. long and 7/16 in. wide and truncated at the point, but distinguished by the shape of the handle. The bell-rapier *{Glockenrapier),* used only at the north German universities of Leipzig, Berlin, Halle, Breslau, Königs­berg and Greifswald, is furnished with a guard consisting of a cup or bell of iron about 41/4 in. in diameter and 2 in. deep, joined to the pummel by a steel shaft protecting the hand. Its total weight is about 13/4 lb. The basket-rapier *{Korbrapier),* used at all universities except those named above, has a handle protected by a sort of basket of heavy steel wire. Its total weight is 2 lb. The balance is just below the guard. The blade of the rapier is divided conventionally into the *forte,* the half next the hilt, and the *foible.* These are again divided into full and half forte and full and half foible, the half foible being the weakest quarter of the bIade, nearest the point. Every bout, whether with sharp or blunt weapons, is preceded by the command *Auf die Mensur!* (on the mark, literally distance). The two fencers take position with feet apart and the right slightly in advance just far enough from one another to allow their heads to be reached by the sword without moving the feet, which remain firm during the entire bout. During the first half of the 19th century the objective points of the rapier included the upper arm and breast; but later the head, including the face, became

the sole target. In practice a heavy mask of wire with felt top, a glove with padded arm-piece (*Stulp)* and a padded apron to protect body and legs are worn. There is one defensive position, which is with the arm stretched upward bringing the hand and hilt about 6 in. in front of and above the forehead, and the point of the rapier directed diagonally downward across the body and to the outside of the adversary’s knees. The fencers having at the command *Bindet die Klingen!* (Join blades!) placed their hilts together with the points of the rapiers directed upwards, attack simultaneously at the com­mand *Los!* (Go!). All blows are delivered from the wrist, slightly helped by the forearm, the hand never being dropped below the level of the eyes. No movement of the head or body is allowed except such as is unavoidably connected with that of the sword-arm.

Bibliography.—For the light sabre see *La Scherma italiana di spada e di sciabola,* by Ferdinando Masiello (Florence, 1887); *Infantry Sword Exercise* (British War Office, London, 1896), prac­tically the system of Masiello; *Istruzione per la scherma,* &c., by S. de Frate (Milan, 1885); *La Scherma per la sciabola,* by L. Barbasetti (Vienna, 1898) ; a German translation of the foregoing *Das Säbel­fechten* (Vienna, 1899); *Die Fechtkunst,* by Gustav Hergsell (Vienna, 1892). For the old-style sabre see *Cold Steel,* by Alfred Hutton (London, 1889); *Broadsword and Singlestick,* by R. G. Allanson Winn and C. Phillips Wolley, “All England ” series (London, 1898); *Foil and Sabre,* by L. Rondelle (Boston, 1892), an exposition of the French military system. For sabre-fencing for cavalry see *The Cavalry Swordsman,* by Alfred Hutton (London. 1867) ; L'E*scrime du sabre à cheval,* by A. Álessandrî and Émile André (Paris, 1895). For German basket-sabre and schläger, *Die deutsche Hiebfechtschule für Korb- und Glockenrapier* (Leipzig, 1887), published by the association of German academie fencing-masters; *L'Escrime dans les universités allemandes, &c.,* by L. C. Roux (Paris, 1885), a French exposition of the German student fencing. (E. B.)

SABZAWAR, a town of Afghanistan, situated at an elevation of 3550 ft. on the left bank of the river Harud, 93 m. S. of Herat. Sabzawar was once a city of considerable size, and still possesses a fortress with sides of about 2∞ or 250 yds. This fortress has been abandoned, and the town, which is the centre of a group of villages, is now fairly prosperous, with a bazaar of about 800 shops and a busy traffic with Seistan. The plains about Sabzawar are highly cultivated by the Nurzai Duranis, and each village boasts its own little mud fort.

SABZEVAR, a district of the province of Khorasan in Persia, formerly called Baihak. It is situated between Nishapur on the east and Shahrud-Bostam on the west, and has a length of about 80 m. and a breadth of 50; its population is about 60,000, and it pays to the government a yearly revenue of £8000. The district has many flourishing villages and much cultivation; it produces much wool, excellent cotton, some silk, partly exported to Russia, partly manufactured into various stuffs in the district, and fruits, exported dried in large quantities. The export trade is chiefly done by a few Russian Armenians who reside in Sabzevar town.

Sabzevar, the capital of the district, is situated 150 m. E. of Shahrud and 65 m. W. of Nishapur, in 36° 12' N., 57° 39' E., at an elevation of 3100 ft. The population, which was 30,000 before the famine in 1871, is now about 15,000. There are some good caravanserais, a well-supplied bazaar, three colleges, two large and thirty small mosques, and post and telegraph offices.

SACCHARIC ACID, C6H10O8 or HO2C[CH∙OH]4CO2H, in chemistry, a tetraoxydicarboxylic acid which exists in three stereoisomeric forms. The ordinary or dextro (*d)*-saccharic acid is formed in the oxidation of cane sugar, grape sugar, *d*-gluconic acid and many other carbohydrates with nitric acid. It forms a deliquescent mass. On standing, the syrupy acid gives the crystalline lactonic acid, C6H8O7. Sodium amalgam reduces it to glucuronic acid, C6H10O7 or OHC[CH·OH]4CO2H, whilst hydriodic acid reduces it to adipic acid, HO2C[CH2]4CO2H. Nitric acid oxidizes it to dextro-tartaric acid and oxalic acid. Laevo (*l*)- saccharic acid is formed by oxidizing /-gluconic acid with nitric acid, whilst the inactive (d+∕)-acid is obtained similarly from inactive gluconic acid. These acids closely resemble the *d* acid except in their action on polarized light. For their relations