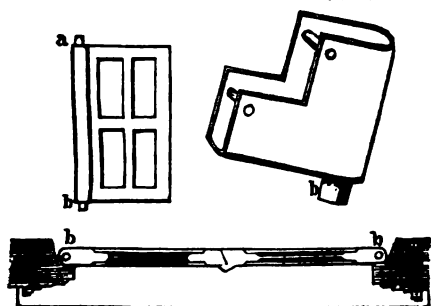


*CARD'AMUM (*καρδάμυς*), a species of plant. Schneider remarks that Sprengel holds it to be the *Lepidium sativum*, or cultivated Pepper-wort; Stackhouse, however, is for the *Sisymbrium nasturtium*, or Water-cress; while Coray thinks it is either the *Lepidium perfoliatum*, or *Orientalis*, Tournefort. "There can be little doubt," observes Adams, "that it was a sort of Cress, but the species cannot be determined with any degree of certainty."¹

CARDO (*θαῖρος, στροφεύς, στρόφιγξ, γίγγλυμος*), a hinge, a pivot.

The first figure in the annexed woodcut is designed to show the general form of a door, as we find it with a pivot at the top and bottom (*a, b*) in ancient remains of stone, marble, wood, and bronze. The second figure represents a bronze hinge in the Egyptian collection of the British Museum: its pivot (*b*) is exactly cylindrical. Under these is drawn the threshold of a temple, or other large edifice, with the plan of the folding-doors. The pivots move in holes fitted to receive them (*b, b*), each of



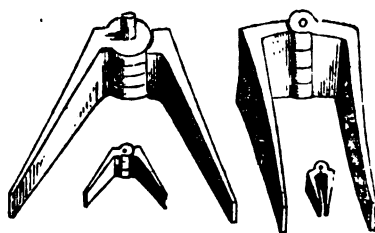
which is in an angle behind the antepagmentum (*marmoreo aratus stridens in limine cardo*²). This representation illustrates the following account of the breaking down of doors: "*Janua evulsis funditus cardinibus prosternuntur*."³ When Hector forces the gate of the Grecian camp, he does it by breaking both the hinges (*ἀμφότερους θαίρους*⁴), i. e., as explained by the scholiasts, the pivots (*στρόφιγγας*) at the top and bottom. (*Vid. CATARACTA*.)

According to the ancient lexicons, "cardo" denoted not only the pivot, but sometimes the socket (*foramen*) in which it turned. On this assumption we may vindicate the accuracy of such expressions as *Postes a cardine vellit*, and *Emoti procumbunt cardine postes*: *θαῖρὸν ἐξερύσαντες*.⁵ In these instances, "postis" appears to have meant the upright pillar (*a, b*) in the frame of the door. The whole of this "post," including the pivots, appears to be called *στροφεύς* and "cardo" by Theophrastus and Pliny, who say that it was best made of elm, because elm does not warp, and because the whole door will preserve its proper form, if this part remains unaltered.⁷

To prevent the grating or creaking noise⁸ (*stridor*, *strepitus*⁹) made by opening a door, lovers and others who had an object in silence (*cardine tacito*¹¹) poured water into the hole in which the pivot moved.¹²

The Greeks and Romans also used hinges exactly like those now in common use. Four Roman hinges of bronze, preserved in the British Museum, are shown in the following woodcut.

The proper Greek name for this kind of hinge was *γίγγλυμος*: whence Aristotle¹³ applies it to the



joint of a bivalve shell; and the anatomists call those joints of the human body *ginglymoid* which allow motion only in one plane, such as the elbow joint. Of this kind of hinge, made by inserting a pin through a series of rings locking into one another, we have examples in helmets and cuirasses.¹

The form of the door above delineated makes it manifest why the principal line laid down in surveying land was called "cardo" (*vid. AGRIMENSORES*);² and it farther explains the application of the same term to the North Pole, the supposed pivot on which the heavens revolved.³ The lower extremity of the universe was conceived to turn upon another pivot, corresponding to that at the bottom of the door;⁴ and the conception of these two principal points in geography and astronomy led to the application of the same term to the east and west also.⁵ Hence our "four points of the compass" are called by ancient writers *quatuor cardines orbis terrarum*, and the four principal winds, N., S., E., and W., are the *cardinales venti*.⁶

The fundamental idea of the pivots which served for hinges on a door may be traced in the application of the same terms to various contrivances connected with the arts of life, more especially to the use of the tenon (*cardo, στρόφιγξ*) and mortise (*foramen, βάσις*) in carpentry;⁷ *tingulum cardinatum*; *cardines securiculati*,⁸ i. e., dove-tailed tenons, called *securiculati* because they had the shape of an axe (*securicula*). We also find these terms applied to the pivot which sustained and moved the hand on the dial (*orbis*) of an anemoscope,¹⁰ to the pins at the two ends of an axle, on which it revolves;¹¹ and to cocks used for drawing fluids through pipes (*bronze cock in the Museum at Naples*¹²).

Lastly, "cardo" is used to denote an important conjuncture or turn in human affairs,¹³ and a definite age or period in the life of man (*turpes extremi cardinis annos*¹⁴).

*CARDUE' LIS, a small bird, feeding among thistles, whence its Latin name, from *carduus*, "a thistle." It appears to be the same with the *Acanthis* of Aristotle.¹⁵ (*Vid. ACANTHIS*.)

*CARD'UUS, the Thistle, of which several kinds were known to the ancients. The *λευκάκανθος* of Theophrastus¹⁶ (*ἀκανθα λευκή* of Dioscorides¹⁷) is the *Carduus leucographus* of modern botanists: the *ἀκανθα χαλκία* is the *Carduus cyanoides*, L. The *κρίσιον* of Dioscorides, so called because reputed to heal in varicose complaints (*κρίσις, varix*), is the *C. Marianus*, or St. Mary's Thistle. The modern Greek name is *κονόγυκαθο*. Sibthorp found it in the Peloponnesus, in Cyprus, and around Constantinople. It grows wild, according to Billerbeck, throughout Europe.¹⁸ The *σκόλυμος* is a species of

1. (Adams, Append., s. v.)—2. (Ciris, 292.—Eurip., Phœn., 114—116.—Schol. ad loc.)—3. (Apuleius, Met., i.)—4. (U., xii., 429.)—5. (Virg., Æn., ii., 490, 493.)—6. (Quint., Smyrn., x., 363.)—7. (Theophrast., H. P., v., 3, 5.—Plin., H. N., xvi., 77.)—8. (Virg., Æn., i., 449.)—9. (Ovid, Met., xi., 608.)—10. (Id. ib., xiv., 728.)—11. (Tibull., i., vi., 30.—Propert., i., xvi., 26.)—12. (Plaut., Curoal., i., iii., 1—4.)—13. (H. A., iv., 4.)

1. (Bronzes of Siris in Brit. Museum.—Xen., De Re Equestr., xii., 6.)—2. (Festus, s. v. Decumanus.—Id., Orig., xv., 14.)—3. (Varro, De Re Rust., i., 2.—Ovid, Ep. Ex Pont., ii., 10, 45.)—4. (Cic., De Nat. Deor., ii., 41.—Vitruv., vi., 1; ix., 1.)—5. (Lucan., v., 71.)—6. (Servius, ad Æn., i., 85.)—7. (Josephus, Ant. Jud., iii., vi., 8.)—8. (Vitruv., x., 15.)—9. (x., 10.)—10. (Varro, De Re Rust., iii., 5.)—11. (Vitruv., x., 32.)—12. (Schol. ad Aristoph., Av., 450.)—13. (Virg., Æn., i., 622.)—14. (Lamæan, vii., 381.)—15. (H. A., ix., 1.)—16. (H. P., vi., 4.)—17. (Id., ix., 14.)—18. (Sprengel, R. H. H., vol. i., p. 183.)—19. (Flora Classica, p. 308.)

cardinal The Latin noun *cardo* (and its stem *cardin-*) was originally used for 'a pivot or axis on which something turns; a hinge'. In extended uses, *cardo* acquired the senses of 'either of the pivots or poles on which the universe was supposed to rotate about the earth', 'any of the four points of the horizon' (north, south, east, west), and 'any of the four turning points of the year', that is, the solstices and equinoxes. The derived adjective *cardinalis* was used to mean 'serving as a pivot or hinge'.

In Medieval Latin *cardinalis* took on the sense of 'chief, principal'. The Church used it in this sense as a title given to prominent priests (*presbyteri cardinales*) and deacons (*diaconi cardinales*) of important churches. The pope also conferred the title on seven bishops (*episcopi cardinales*) of dioceses near Rome, who served as counselors in synodal meetings. The cardinal bishops, priests, and deacons in time formed an association or *collegium* called the Sacred College of Cardinals and in 1179 were given the exclusive right to elect popes.

The adjective *cardinalis* was also used to describe the four principal virtues (*virtutes cardinales*) on which the rest of the moral virtues 'turn' or are hinged, those being temperance, prudence, justice, and fortitude. Their designation as 'cardinal' can be traced to St. Ambrose in the fourth century. At the end of the fourth century we find occurrences of the term *cardinales venti* 'cardinal winds', and in the sixth century, *cardinales numeri* 'cardinal numbers'.

From early in the twelfth century the word *cardinalis* was often used as a noun for 'a cardinal bishop, priest, or deacon'. When taken into French, *cardinalis* became *cardinal*, which was borrowed into English, appearing in this ecclesiastical sense in the *Old English Chronicle* for the year 1125. The earliest appearance of the adjective in English was around 1300, when it was used in the term *cardinal virtues*.

The ecclesiastical robes of a cardinal have traditionally been of the color scarlet. In fact, this color is often referred to as *cardinal red*. An American songbird of this color has, since about the middle of the eighteenth century, been called a *cardinal*.

A major function of the Sacred College of Cardinals is the election of a new pope. The word *pope* derives from the Late Latin *papa*, which is a form of the Greek word *pappas*. This Greek word originated as baby-talk for 'father'. From the beginning, the Church in the East used *pappas* as an affectionate title for all its priests. When the title spread to the West in the third century as the Latin *papa*, it was usually reserved for bishops. It was apparently in the fourth century that it began to become a distinctive title of the Roman Pontiff. And the term *pontiff* itself derives from the Latin *pontifex*, which literally means 'bridgemaker', being made up of