hunting-field and the double cow-horn was still retained; as its usefulness became apparent the second pommel practically disap­peared.

Space forbids the discussion of the varieties of harness for the pair- horse carriage, the four-horse coach, the farm wagon, &c., or the different kinds of ornamentation that are or have been lavished upon it. The leather collar, heavily padded, passes over the head and

rests firmly on the shoulders; the hames, linked pieces of metal, fit tightly round it and are fastened at the top by the hame-strap ; they bear the traces, or straps which pass along the horse’s sides and the shafts and are attached by loops slipped over hooks in the body of the carriage. Where the collar is dispensed with, the traces are attached to a breast-strap against which the horse works. This breast harness is much used for the lightly harnessed American trot­ting horses, and for military draught horses. The saddle pad is a narrow leather cushion girthed under the belly and held in position by the crupper-dock and the crupper, a loop strap passing under the tail. The saddle supports the shafts by the back-band and its tugs and by the belly-band. The reins pasá from the bit through “ terrets ” or rings on the hames and pad. The harness on the horse’s hind­quarters consists of the breeching, passing round behind the horse and helping in backing and stopping the vehicle, the hip-strap fastened to the breeching and passing over the hind-quarters, and the kicking- strap falling across the loins and fastened to the shafts. The bearing rein, when used merely as a support to the head, or as an aid to the improvement of the paces, consists of a separate bridoon-bit with the reins passing through rings on the throat-band and thence slipped over a hook on the pad. The severer form, which brings the rein over the head-stall, keeps the horse’s head up. in a cramped attitude and the mouth continually working on the bit. A recent modifica- tion of the severer form is not attached to the bit. \_

*Historical Sketch.*—Questions as to the epoch in the history of mankind when the horse was first trained for draught and riding are for archaeologists and anthropologists to discuss (see **Horse,** *§ History).* With the domestication of the horse came the develop­ment of the bit; first a halter of hide bound the muzzle, then a thong slipped into the mouth, finally replaced by wood or bone. Stone age objects have been found in lake-dwellings, such as that at Robenhausen, near Zürich which may have been bits; one is slightly curved, with two knobs grooved at either end for the reins. Bits from the bronze age and the iron age can be seen in most museums showing that the forms have changed little. The Scandinavian museums are particularly rich in early remains of harness and horse-trappings. An early bronze age bit of bone with horn cheek-pieces and with holes on the upper ends for the head- stall, and on the lower ends for the reins, was found at the Corcelletes lake dwelling, and a twisted bronze bit jointed by interlocking rings with straight cheek-pieces and rings and loops for headstall and reins is in the National Museum at Zürich. In the late iron age burial of a Gaulish chief with his chariot at Somme-Bionne were found two horse’s bits of the ordinary jointed snaffle type (see **Archaeology,** plate VI). A heavy snaffle unjointed bit with red and blue enamel ornamentation is illustrated in the British Museum *Guide to the Late Iron Age.* Assyrian and Babylonian monuments show the harness of the chariot horses and the bridling of the riding horse, cf. **Babylonia and Assyria,** Plate 11, fig. 2.

ln ancient Greece and Rome the bit and bridle were used during historic times, and allusions to riding without them refer to cxhibi- tions of horsemanship. On Trajan’s column the Numidians ride without bridles or bits, and various North African tribes trained their horses to obey their voice alone (cf. Claudian, *Epig.* i. 10, of the Gaulish *essedarii,* driving without bridle and reins). The *locus clαssicus* for the bridling and saddling of the Greek horse is Xenophon, II*ϵpί ίππίkἡs.* The Greek name for the bridle bit and reins collectively is *χa■■vόs (Lαt. frenum),* the bit proper is *ατόμων;* in Lat. *frenum* is also used of the bit itself. The headstall (κορυφαία) and cheek-straps *(πaρἡia)* were richly decorated. In Homer *(Il.* iv. 142) the latter arc ornamented with ivory plates stained with purple, and such have been found on the site of Troy (Schliemann, *Ilios,* 476, 631). The head-band also bore a crest *(λοφόs, crista),* and in front the ■*μτryξ (frontale)* might be extended down the face to serve as a defence, as in the medieval *chaufrein.* This frontal was a special subject of decoration. Of the two principal types of ancient bits, the un­

jointed and the jointed mouthpiece, the latter is the most common form. There are also other forms of bits; those with sharp points were called *lupata.* (Virg. *Georg,* iii. 208). There is a Greek bit in the British Museum with revolving disks, a device which occurs in medieval bits, to give the horse something to keep turning in his mouth. The curb was also used: Xenophon distinguishes between the snaffle (λϵ■os χαλ■vόs) and the curb. The curb-strap or chain was termed ύτοχαλιμίδία or *■àλ■ov*, which, however, may mean a muzzle. A bronze bit found at Pompeii has a twisted and jointed metal mouthpiece and a plain curved bar acting as a curb-strap. The cheek-bars of the bit take a variety of forms: straight bars, circles with rays, square or oblong plaques, triangles and the swan- necked or S-shaped type are all found. In medieval times compli- cated and severe bits were used, and heavy bits with cruel mouth- pieccs and long elaborately curved cheek-bars are still used by Arabs and the riders of Central and South America. The bit of the armed war-horse in the middle ages was sometimes provided with very long cheek-bars covered with sharp spikes to prevent the foot-soldier catching hold of the bridle (see R. Tschille and R. Forrer, *Die Pferdetrense in ihrer Formen-Entwicklung,* 1903, for illustrations of bits from prehistoric times to the 16th century).

The saddle was not used in Egypt; the Assyrian monuments (cf. the illustration noticed above) chiefly show decorated saddle-cloths rather than any form of the saddle proper. The harness of the chariots of Egypt and Assyria arc also illustrated on the monuments (see especially Sir J. G. Wilkinson, *Manners and Customs of the Ancient Egyptians).* The ancient Greeks rode bare-backed as in the Panathenaic frieze of the Parthenon or used a saddle-cloth ***(iφlτnrιοr,*** Lat. *ephippium; sella* as applied to a saddle is quite late). Even the saddle-cloth does not appear to have been in use till the 5th century. A 6th-century vase, found at Daphnae, Lower Egypt (Flinders- Petrie and Murray, *Tanis,* 1888, ii. ρl. xxix.), shows a woman riding astride on a cloth, with fully developed headstall and powerful bit. A black-figured sarcophagus, now in the British Museum, from Clazomenae, shows a long pointed *ephippium* with a chest-strap. These indicate Asiatic influence, for Daphnae was an Ionian and Carian settlement of the 7th century B.c. In Xenophon *(l.c.)* we find that the saddle-cloth had been adopted by the Athenian cavalry, and from his advice as to the scat to be adopted pads or rolls seem to have been added. There were no stirrups (till the time of the emperor Maurice, **a.d.** 602), and the rider mounted at a vault or by blocks; mounting by the spear used as a vaulting pole was also practised as an athletic feat. On a funeral monument of the time of Nero in the museum at Mainz is the figure of a horseman on a saddle-cloth with something resembling the pommel and cantle of a saddle, but the first saddle proper is found in the so-called column of Theodosius at Constantinople (usually ascribed to the end of the 4th century A.D., though it may be more than 100 years earlier), where two figures are riding on high-peaked saddles resting on embroidered saddle-cloths. In medieval times the saddle was much like that of the Oriental saddle of to-day with high peaks before and behind. In the military saddle of the 14th and 15th century the high front parts of the saddle were armoured and extended to protect the legs of the rider. The jousting saddle (cf. the example in the Tower of London) becomes almost a box into which the rider is fixed; the high cantle fits round the rider’s loins and when charging he lifted himself into practically a standing position in the stirrups. The saddle for use on the road or hunting was much like the Arab saddle of to-day, and similar forms are in use in Europe and elsewhere where the British saddle has not been adopted. Women rode astride or on a pillion behind a male rider. The side-saddle is said to date from the end of the 12th century. For the harness of the ancient draught horse see **Chariot.**

**Bibliography.**—J. C. Ginzrot, *Wagen u. Fahrwerke* d. *Griechen u. Romer, &c.* (1817); Daremberg and Saglio's *Dict. des antiquités grecques et rom., s.υυ.* "Ephippium,” “ Frenum,” &c.; Viollet-le- Duc's *Dict. rais. du mobilier français,* and the works referred to in the text. See also **Driving, Riding** and **Horse.** (C. **We.)**

SADDLEWORTH, an urban district in the Colne Valley parliamentary division of the West Riding of Yorkshire, England, 14 m. N.E. of Manchester, on the London & North Western railway. Pop. (1901) 12,320. It lies on the western side of the elevation of Stanedge, which here forms the watershed between streams flowing westward to the Irish Sea and eastward to the North Sea. Early earthworks and tumuli are numerous in the locality. The Huddersfield canal follows the valley, and, like the railway, is carried under Stanedge by a long tunnel.

SADDUCEES, a sect or party of the Jews mentioned in the historical books of the New Testament (with the exception of the fourth Gospel), by Josephus, and in the Talmud. According to aII the authorities, the essential qualification for the title is the denial of certain beliefs which the Pharisees held to be implicitly contained in Scripture, and therefore necessarily part of Judaism as soon as they were formulated. From their own point of view they were orthodox conservatives, so far as they really cared to remain—for whatever reason—within the pale of Jewry and