

are several allusions of the same kind; one, a quotation from *Antar*, recalls the *ferrum candidum* of Curtius:

“Albi (gladii) Indici meo in sanguine abluuntur.”

In the histories, even of the Mahomedan conquest of India, the Hindu infidels are sent to *Jihannam* with “the well-watered blade of the Hindi sword”; or the sword is personified as “a Hindu of good family.” Coming down to later days, Chardin says of the steel of Persia: “They combine it with Indian steel, which is more tractable . . . and is much more esteemed.” Dupré, at the beginning of this century, tells us: “I used to believe . . . that the steel for the famous Persian sabres came from certain mines in Khorasan. But according to all the information I have obtained, I can assert that no mine of steel exists in that province. What is used for these blades comes in the shape of disks from Lahore.” Pottinger names *steel* among the imports into Kermán from India. Elphinstone the Accurate, in his *Caubul*, confirms Dupré: “Indian Steel [in Afghanistan] is most prized for the material; but the best swords are made in Persia and in Syria;” and in his *History of India*, he repeats: “The steel of India was in request with the ancients; it is celebrated in the oldest Persian poem, and is still the material of the scimitars of Khorasan and Damascus.”*

Klaproth, in his *Asia Polyglotta*, gives *Andun* as the Ossetish and *Andan* as the Wotiak, for Steel. Possibly these are essentially the same with *Hundwánty* and *Alhinde*, pointing to India as the original source of supply. [In the *Sikandar Nāma, e Bará* (or “Book of Alexander the Great,” written A.D. 1200, by Abū Muhammad bin Yusuf bin Mu, Ayyid-i-Nizāmu-'d-Dīn), translated by Captain H. Wilberforce Clarke (Lond., 1881, large 8vo), steel is frequently mentioned: Canto xix. 257, p. 202; xx. 12, p. 211; xlv. 38, p. 567; lviii. 32, pp. 695, 42, pp. 697, 62, 66, pp. 699; lix. 28, p. 703.—H. C.]

Avicenna, in his fifth book *De Animā*, according to Roger Bacon, distinguishes three very different species of iron: “1st. Iron which is good for striking or bearing heavy strokes, and for being forged by hammer and fire, but not for cutting-tools. Of this hammers and anvils are made, and this is what we commonly call *Iron* simply. 2nd. That which is purer, has more heat in it, and is better adapted to take an edge and to form cutting-tools, but is not so malleable, viz. *Steel*. And the 3rd is that which is called *ANDENA*. This is less known among the Latin nations. Its special character is that like silver it is malleable and ductile under a very low degree of heat. In other properties it is intermediate between iron and steel.” (*Fr. R. Baconis Opera Inedita*, 1859, pp. 382-383.) The same passage, apparently, of Avicenna is quoted by Vincent of Beauvais, but with considerable differences. (See *Speculum Naturale*, VII. ch. lii. lx., and *Specul. Doctrinale*, XV. ch. lxiii.) The latter author writes *Alidena*, and I have not been able to refer to Avicenna, so that I am doubtful whether his *Andena* is the same term with the *Andaine* of Pauthier and our *Ondanique*.

The popular view, at least in the Middle Ages, seems to have regarded *Steel* as a distinct natural species, the product of a necessarily different *ore*, from iron; and some such view is, I suspect, still common in the East. An old Indian officer told me of the reply of a native friend to whom he had tried to explain the conversion of iron into steel—“What! You would have me believe that if I put an ass into the furnace it will come forth a horse.” And Indian Steel again seems to have been regarded as a distinct natural species from ordinary steel. It is in fact made by a peculiar but simple process, by which the iron is converted *directly* into cast-steel, without passing through any intermediate stage analogous to that of *blister-steel*. When specimens were first examined in England, chemists concluded that the steel was made direct from the *ore*. The *Ondanique* of Marco no doubt was a fine steel resembling the

* In *Richardson's Pers. Dict.*, by Johnson, we have a word *Rohan, Rohina* (and other forms). “The finest Indian steel, of which the most excellent swords are made; also the swords made of that steel.”