increasing demand for improved means of conveyance.

A few particulars about the construction of these carts will be given here, not on account of their intrinsic importance, but rather to show the existence, among the natives of India, of a spirit of invention and enterprise which requires only favourable opportunities to develop itself.

The Panwell Bundree and Poona Dumney carts were invented and brought into use by a Brahmin, who opened manufactories at Panwell and Poona, from which towns these carts take their names. The following is an outline of their more important features:—The wheels, usually from $3\frac{1}{2}$ to $4\frac{1}{4}$ feet in diameter, are spoked, and surrounded by an iron tire, additional support being given to the nave by iron ferrules, &c. Babool, teak, or other wood of good quality is used in the construction.

The axle is of iron and is connected with an axle tree and axle beam of ordinary jungle-wood, by means of iron straps and spikes. The poles and the framework or body of the cart are also made of jungle-wood. The former pass through the axle beam and unite in the centre of the yoke. The framework is supported partly by the poles and partly by the axle beam. The poles, axle beam, and frame are frequently made with the assistance of the village carpenter at the cost of about 10*s*., by the owners themselves from timber previously procured from the jungle. These carts are available for the conveyance of either agricultural produce or passengers; when used for the latter purpose the body of the cart is strewn with grass or straw; when loaded with cotton or hay the substance is piled up to a height of about four feet, and secured with ropes tied to the framework; when grain is about to be carried the cart is lined with split bamboo, covered, if necessary, with coarse cloth. During the hot or rainy season an awning composed of matting stretched over a bamboo framework is erected over the body of the cart. Under the poles, and behind the wheels, hang pieces of wood called "Dhecknies," used as breaks.

In the general principles of construction the Madras Bundey and the Jooneer Satta carts (Nos. 6 and 8) agree with the above description, with the exception that in the Madras Bundey cart, No. 6, the wheels are from $4\frac{1}{4}$ to 5 feet in diameter, and there is but one pole running the whole length of the cart. The carts shown in Drawings 3, 4, and 9 are used for the conveyance of agricultural produce. The Poonah Bangree cart, No. 5, is used exclusively for the conveyance of building materials. The cost of the greater number of the carts shown in the series varies from 3*l*. to 4*l*. 10*s*. (Rs. 30 to 45), and if kept repaired at an annual expenditure of from 4*s*. to 10*s*. they will last for about 12 years. The Poonah Satta cart, No. 3, from the good quality of the wood and workmanship employed in its construction, costs from 6*l*. to 7*l*. (Rs. 60 to 70), and, if repaired, lasts for about 20 years.

The oil used for lubricating the axles is kept in a hollow joint of bamboo, and costs about 10*s*. per annum.

The weight carried necessarily depends much on the character of the road to be travelled; but on ordinary Deccan roads and with two bullocks the load does not generally exceed 11 cwt; with four bullocks the weight may be nearly doubled.

The distance travelled per diem averages about 18 miles (8 koss).

Drawings Nos. 14 and 15 represent native carts used for the conveyance of passengers only. They are usually mounted upon springs and travel at the average rate of three miles an hour. Cost, from 4*l*. to 8*l*. (40 to 80 rupees).

All the carts mentioned in the above short abstract are more or less of native design and workmanship. In addition to these, there will be found in the series, drawings of conveyances and appliances, such as commissariat carts, water carts, wheel-barrows, &c., introduced into India by Europeans.

Madras Committee.

Silk looms (2). Tanjore.
Silk carpet loom. Tanjore.

Bengal Committee.

Models of native silk-reeling machine (2). Bogra.

GROUP XIIIA.—AGRICULTURAL MACHINERY.

Madras Committee.

Model of a "Peccotta" for drawing water from a well. From Madras.
Model of Coorg "cart without wheels." From Mercara. Instrument used for weeding. From Salem.
Various publications referring to forest and agricultural produce, namely:—
"Reports of the juries on the classes of the Madras Exhibition of Raw Products, Arts," &c. in 1857. Beddome's "Flora Sylvatica," parts 1 26 to (3 vols). "Reports of Collectors of the Madras Presidency on the Rotation of Crops," &c. &c. "Annual Report of Madras Forest Department, 1871."

J. H. Masters, Collector of Bellary.

Models (9) of various agricultural implements from Bellary, namely:—
Seed-drill (Gorru), plough (Madaka), hoes (Guntaka, Metla Guntaka, and Junta Guntaka), hatchet, sickle (Kodavali), small sickle (Kurchiga) and cart (Chevalu Bandy).

Madras School of Arts.

Models (12) of various agricultural and other implements, such as ploughs, harrows, drills for sowing, grass-rake, bill-hook, "Mamoty," linseed-oil-mill, and shepherd's crook.