this country is concerned, the conclusion to which my practice in a large bottle-making district had previously inclined me—that though, as in other trades, there are men engaged in the bottle trade who undoubtedly do suffer from cataract, and who come under treatment for it, there is not sufficient evidence to show that they are liable to the affection to such an extent as has been asserted.

REFERENCES.

¹ Notably in the article in Oliver's *Dangerous Trades*, on *Eye Diseases and Eye Accidents in Relation to Industrial Occupations*, and a paper at the Bristol meeting (1894) of the British Medical Association on the Relation of Some Occupations to Eye Diseases. ² *Bottle Finishers' Cataract*, by William Robinson, M.D., M.S., F.R.C.S., *BRITISH MEDICAL JOURNAL*, January 24th, 1903. ³ Taken from the reports of the Sunderland Eye Infirmary. ⁴ Etiology of cataract: cataract in glass workers, *Klin. Monatsbl. f. Augenheilk.*, February, 1886. ⁵ *Centralbl. f. Augenheilk.*, April, 1898. ⁶ *Centralbl. f. a. Gesundheitspflege*, vol. xviii. ⁷ Abstract in *Ophthalmic Review*, 1890, p. 306.

ACHONDROPLASIA.

WITH NOTES OF CASES.

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ACHONDROPLASIA is a rare form of dwarfism which, though of ancient origin, has not been brought into prominent notice, probably because the majority of cases are either stillborn or survive birth for a very short time. Nothing is known of its etiology, and the only fact which seems clear in its pathology is that there exists a "more or less complete inhibition of the normal row formation of the proliferating cartilage cells in the preparatory stage of ossification." It resembles rickets on the one hand and cretinism on the other, but is readily distinguishable from both, although its close relationship to rickets probably accounts for the occurrence of a certain number of cases in which the characteristic features of the two disorders are more or less blended.

The prominent symptoms of achondroplasia are: A congenital origin; an abnormally large vault to the cranium; depression of the root of the nose; prognathus; arrested development of the long bones of the extremities, with exaggeration of their normal curves; normal development of the trunk; beaded ribs and enlargement of the ends of the long bones from diaphysial and epiphysial changes;

decentralization of the mid-point of the body, which is invariably and persistently above, and not below, the umbilicus; characteristic wheel-spoke appearance of the hands, described as the "*main en trident*"; excess of adipose tissue; protuberant abdomen; lordosis; smooth, pliable skin, with abundance of glossy hair in all the ordinary situations; normal mental condition; a tendency to other congenital malformations, especially to high-arched palate and inguinal hernia.

IN the *BRITISH MEDICAL JOURNAL* of June 30th, 1906, there appeared a paper by Dr. Guthrie Rankin and Dr. Ernest C. Mackay, to which we would refer those interested for a full description of this uncommon and interesting disorder.

The patient who was the text of that paper is a boy, G. G., 9 years of age, 35 in. tall, the youngest of three children, who was delivered after a normal and unassisted labour, but was observed to be misshapen at birth. He has never been seriously ill, and he is more than usually bright and intelligent. His head is abnormally large; the nose is flattened, and there is marked retraction of the bridge; there is pronounced prognathus; the abdomen is fat and prominent, partly from spinal lordosis; the mid-point of the body is immediately below the tip of the ensiform cartilage; the arms are thick and short, and the fingers barely reach the tips of the great trochanters; the humeri and femora are remarkably stumped; the bones of the forearms and of the legs below the knee are curved; the hands are foreshortened, and the fingers are of almost equal length, and deviate from the second interphalangeal joints like the spokes of a wheel. Most of these points are brought out in the annexed illustrations.

The publication of this case has brought to light two

others, equally characteristic, which we are glad to have the opportunity of presenting along with it. Dr. John Cranke sends the account of the first of these cases from Griquatown in Cape Colony. The boy, P. G., is the sixth child of Afrikaner Dutch parents, and was born under normal circumstances six years ago. His brothers and sisters are strong and healthy. He is 34 in. tall, sturdy, and intelligent. He was observed to be short-limbed at birth and he has not grown like an ordinary child. He has a large dome-shaped cranium, marked shortening of the long proximal bones of the limbs, moderate lordosis, decentralization of the mid-point of the body, and well-marked "*main en trident*."

The remaining case is specially interesting because of his age. The true nature of his dwarfism was first discovered by Dr.

Fig. 1.

Fig. 2.

Lunn when the patient presented himself for admission to the St. Marylebone Infirmary. The man, J. G., is 53 years of age, and says he can quite remember

his mother telling him he was "born short." His family history, as far as it can be ascertained, is unimportant, and he has never been seriously ill, but has suffered repeatedly from sciatica. He is strong, and, until recently,

are much shortened, and the bones of the distal segments of both upper and lower limbs are curved; the fingers are of equal length, and the same abnormality is observed in the toes; the abdomen is prominent, and

Fig. 3.

Fig. 4.

Fig. 5.

has been regularly employed as a road labourer. He is mentally acute and of average intelligence. He is of small stature; the vault of his cranium is high; the bridge of the nose is retracted; the humeri and femora

there is a considerable degree of lordosis; the palate is highly arched; and the central point of the body is nearer the ensiform cartilage than the umbilicus.

ACHONDROPLASIA: NOTES OF THREE CASES.

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THIS is a condition the considerable peculiarity and rarity of which are, I think, sufficient reasons for the publication of the following brief notes, with photographs, of 3 cases which have been under my observation during the last few months.

It would be impossible for me to add to the exhaustive description of achondroplasia which Dr. Guthrie Rankin published in the issue of the *BRITISH MEDICAL JOURNAL* for June 30th, and I therefore content myself with endeavouring to indicate certain points of interest which the patients present.

History.—W. W., aged about 80, is a widower, and father of the other two men mentioned below. He first came under my observation as a parish patient suffering from slight general indisposition, probably following a mild attack of influenza. Apart from this, and with the exception also of having become a good deal thinner during the past four months or so, he is in

good health. He has all his life been a bargeman, working most often on barges engaged in carrying ice, and being frequently occupied in pumping out the water caused by its melting. It is noteworthy that one so handicapped should be able to follow a calling entailing so much hard work and exposure to weather, especially as he frequently sailed as far down the river as Rochester and other towns on the estuary. His health has always been good, and he can remember no serious illness in his life, and only relinquished his work at the age of about 70.

Appearance.—He presents many of the characteristic features of achondroplasia—namely, marked micromelia, the shortness of the limbs affecting the upper segments more than the lower, as is usually the case, the upper arm and thigh being shorter in proportion than the forearm and leg. The affected long bones show considerable exaggeration of the normal curves, this being well exemplified in radii and femora. Long bones normally straight are also curved, notably the tibiae and fibulae, this condition being very probably attributable to superadded rickets in early life, an occurrence quite common in these people. The epiphyses are in nearly every case thickened and nodular, the result of excessive and irregular deposition of subperiosteal bone. This, though not a constant feature of the disease, is present in each of these cases in varying degree. There is but little departure from the normal in the angle formed by the neck of the femur with the shaft, the