Periscope.-Diseases arising from the Manufacture of Zinc and Copper

morbid kidney, which tended to confirm the views of Dr. Johnson.

Dr. TODD remarked, that if Dr. Copland would weigh well the observations made, he would change the order of his treatment. Small bloodlettings in the early stage did harm, for it was only in the more advanced stages of the disease, when the accumulation of fat had taken place in the kidneys, and the organ became congested, that small bloodlettings did good.

Dr. C. J. B. WILLIAMS was not present when the paper was read, but he had gathered sufficient from the speakers to arrive at a knowledge of the main points of treatment advocated by Dr. Johnson, and that he deprecated any depletory measures, particularly in the earlier stages of the disease. Now he (Dr. Williams) knew no treatment so beneficial and successful as cautious bloodlettings in the early stages, particularly in the acute form of the disease. He had recorded twenty or thirty cases of albuminuria, altogether independent of scarlet fever, and coming on as an acute disease, in which in the early stages, he had employed cupping on the loins, hydragogue cathartics, conjoined with medicines calculated to improve the general health, with the greatest success. He had found no improvement in the condition of the urine, until these means had been applied. The enlarged and congested state of the kidney, together with tenderness over the organ, demanded this plan of treatment. Depletion, on the contrary, was contra-indicated in chronic cases; he agreed with Mr. Toynbee as to the importance of attention, in the first instance, to the condition of the parenchyma of the organ, as he (Dr. Williams) considered that the deposit of fat was a secondary effect, and not the fons et origo of the disease. There were certain conditions of the kinneys, somewhat resembling Bright's disease, in which there was diminution of the urine, with albumen, but the water of the urine was diminished in quantity as well as the natural constituents of the secretion; but here, instead of having a mottled kidney, you had simply enlargement and induration; the organ did not abound in fatty, but in granular matter; and the cells constituting the parenchyma were increased in number, and contained granules. Dr. Quain had also discovered these granules in the tubuli.

Dr. GOLDING BIRD, whilst according his fullest approbation to the ingenuity and industry displayed in the researches of Dr. Johnson, still felt compelled to withhold his acquiescence in the statement that the hypothesis now propounded was adequate to explain all the phenomena observed in the disease under consideration. The late hour of the evening prevented his alluding to more than one or two of the most important points, in which he felt inclined to regard Mr. Johnson's theory as insufficient. The great novelty of his views consisted in the parallelism he had drawn between fatty degeneration of the liver and the state of the kidney under dis-cussion. Yet what was the fact? In fatty liver, the secretion of bile went on tolerably well; at all events, remarkably so when the state of the gland itself is borne in mind, there being no evidence of the retention of bile in the blood, jaundice being by no means a necessary concomitant even of a very fat liver. Yet how different are the facts observed in the granular kidney which Dr. Johnson assumed to be in the state of fatty degeneration ; here the two elements of urine are not properly excreted; on the contrary, albumen and certain elements of the blood appear in the secretion, whilst the patient is poisoned by the retained elements of urine. Hence, if Dr. Johnson's views be accepted, we must admit that fat deposited in the cells of the liver and tubes of the kidney produces very different results on the secreting powers of the organ. Further, the fact of diuresis, often copious in the latter stages of morbus Brightii, appeared to him to be quite opposed to the belief that increasing pressure on the vascular plexuses, by deposited fat, was an active agent up to the last stages of the disease.

Dr. WATSON having passed a high eulogium on Dr. Johnson's paper, the society adjourned.—Lancet.

## DISEASES ARISING FROM THE MANUFACTURE OF ZINC AND COPPER.

The March number of the Journal de M'décine contains a very interesting article by M. Blandet, on the diseases arising from being employed in the manufacture of articles of zinc and copper. Christison asserts, that in the few and rare cases supposed to be colic from copper, the disease is due, not to the copper but to the lead which is often united with the copper to prevent its oxydation, where, as the fact is that no lead whatever is used to alloy the copper employed in the arts; and even were the proportions of lead made use of which have been recommended in one receipt, we can scracely suppose that the dust of an alloy containing only 1-200 of lead could suffice to produce lead colic. It is zinc and not lead which is employed in the proportion of from 33 to 50 per cent. to prevent oxydation. The popular notion, that the disease is due to the lead contained in the solder, is equally false; no lead whatever being employed for this purpose. Physicians in all countries being unwilling to admit the existence of a colic caused by copper, have been in the habit of setting down as colica pictonum every case of colic met with in a worker in metal, whether the fact of his making use of lead was or was not ascertained; and, consequently, on looking over the records, for the last two years, of the hospitals Saint Antoine la Charité, Hotel Dieu, and La Pitié, M. Blandet found no less than 18 cases of colic, which had there been met with in turners, founders, polishers, &c., of copper, many of whom ascribed the symptoms solely to the use of that metal. Mr. B. remarks, that the number would have been much greater, were it not that many physicians finding it impossible in any way to father the disease on the handling or inhalation of lead, set it down as enteritis, &c. M. Blandet seems to look on the introduction of particles of copper into the prima via, by their being diffused in the atmosphere, or communicated by the hands or benches of the workmen to their food, &c., as the most fruitful source of disease : and hence he recommends covering the mouth with a cloth to strain the air, strict attention to personal cleanliness, and the prohibition of eating in the workrooms, as the best preventive measures. The workmen universally rely on the use of milk as the most effective means of warding off an attack of colic.

The symptoms in trifling cases, which for the most part do not prevent the patient from working, consist merely of colic pains, lasting one, two, or three hours, and often leaving after them great abdominal tenderness, so that the patient cannot bear to button his trowsers. During the fit, relief is obtained Pressure may or may not cause from bending forwards. pain. In more severe attacks there is diarrhoa, the evacuations being generally greenish, (in some of the cases given in the paper of M. Blandet, copper was distinctly recognized by the usual tests.) In other instances, their is bilious vomiting, and occasionally passing of blood. The circulation is rarely affected ; but sometimes a kind of excitement, analogous to intoxication, has been observed. Cough is a very frequent symptom; but the affections of the respiratory system, the author promises to make the subject of a distinct memoir. The following is a tabular view of the means of distinguishing colica pictonum from the colic produced by copper :-

## COPPER COLIC.

- 1. Diarrhœa frequent.
- 2. Alvine evacuations, greenish.
- 3. Abdomen generally pained by pressure.
- 4. Vomiting frequently met with.
- 5. Sanguinolent evacuations.
- 6. Duration, forty-eight hours.
- 7. No affection of the nervous system,

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