among the cattlemen and shepherds. Lumpy jaw, it is said, is not rare among cattle, but seldom affects man (Fig. 34).

In his book, "Contribucion al Estudio de la Actinomicosis Humana Su Frecuencia en la Republica Argentina," Dr. Daniel J. Cranwell gives an excellent account of this disease, with beautiful colored illustrations of the fungus, but reports only 10 cases which came under his observation, the best possible proof that the disease is rare in Argentina. Anthrax in man is more common. In the report of the Board of Health of Buenos Aires for June, four deaths from malignant pustule are recorded. Dr. Lignieres, a veterinary surgeon and graduate in medicine, chief of the bacteriologic laboratory in Buenos Aires, has prepared a serum for the treatment of anthrax in man, but I was unable to learn to what extent it has proved successful during the four years it has been on trial.

In the northern part of Argentina, where horse breeding is an important industry, tetanus appears to be a rather frequent and fatal disease, as the mortality statistics of Buenos Aires for June credit 12 deaths to this cause.

Early in the morning, on approaching Punta Arenas, we encountered a slight snowstorm. The Antarctic breeze was

Clinical Notes

A CASE OF POISONING BY METALLIC NICKEL.

GEORGE RICHTER, M.D.

Formerly Professor of Physiology, Beaumont Hospital Medical College.

ST. LOUIS.

It is well known that a number of metals like zinc, lead, etc., when inhaled or swallowed with atmospheric dust may produce symptoms of poisoning, but of poisoning by metallic nickel I have found no record. The case I report was not observed so closely as might be desired, yet a number of facts have been recorded which may be of interest.

History.—C. S., male, aged 24, of slender build, weighed 116 pounds (never over 119 pounds), height 5 feet 7 inches. Worked as a metal polisher, polishing aluminum, copper, brass, and mostly nickel. The process generates considerable dust, which is only partially removed by "sucking blowers" instituted for the protection of the workers. Gave a history of diphtheria and typhoid fever in childhood, otherwise healthy. Inclined to be constipated. Denied syphilis and other contagious diseases. In his work the patient was of cleanly habits, always washing his hands before eating. He consulted me September 17, complaining of great prostration, pressure on stomach and slight headache. He thought he had an attack of influenza.

Examination.—His skin was pale, complexion sallow. There were no enlarged glands anywhere and no skin lesions. Tongue was slightly coated; no fetor to breath; teeth sound. On left margin of tongue and corresponding buccal surface there was an extensive leukoplakia of which patient was not aware, i. e., a row of slightly prominent white plaques on normal ground, not sensitive, from 1 to 4 mm. in diameter. Respiratory and circulatory systems were normal.

Subsequent History.—The same evening of the day he consulted me a most severe pain set in, located on both sides of the lower abdomen, not increased on pressure. There was 1.0 fever. He received but little relief from morphin 0.02 gm. (1/3 gr.) in repeated doses. The next day there was some improvement. Epsom salts had caused large stools. The pain was now located only around the navel. A sample of the urine examined the same evening contained neither albumin nor glucose, but the following morning it exhibited by daylight a peculiar light green color. The pain on this day was confined to the stomach, being severer when lying than when standing or walking. Deep pressure on the abdomen just below the ribs on the left side caused diffuse resistance and acute pain.

The urine of twenty-four hours (September 22-23), amounted to 675 c.c. (23 ounces); was of a pale, greenish color, transparent, normal odor, acid reaction (litmus), specific gravity 1.0135 (Westphal balance) at 20 C., no albumin (Spiegler test), no glucose (Nylander-Almén's test), little uric acid (murexid test), phosphates seemed normal in quantity, trace of oxalic acid (Salkowski's test), no urobilin (spectroscope), no methylen blue, some indican (Jaffe's test). The fresh urine gave no reaction for nickel so 400 c.c. (13½ ounces) were evaporated, then incinerated with some loss that precluded any quantitative determination. The ash was treated with hot concentrated nitric acid and the acidity reduced. The filtrate from this after removing iron with soda, showed:

1. With oxalic acid, faint greenish-white sediment.
2. With caustic soda (sodium hydroxid), slight greenish sediment.
3. With ammonium sulphid (excess), distinct brown coloration. After adding drop of acetic acid and boiling, dark brown sediment.
4. Shaking with amylic alcohol-ether and examining with spectroscope, negative results.

In spite of the failure with the spectroscopic test (4) the presence of nickel in the urine seems certain. The sediment

Fig. 34—Alacalufas Indians, Tierra del Fuego.

piercing cold, but during the day the sky cleared and the bright warm sunshine made the usually sullen foggy Strait of Magellan cheerful and attractive with ever-varying panoramas of rugged foothills with snow-capped mountain ranges and peaks in the background and myriads of waterfowl in the air and on the peaceful bosom of the famous natural interoceanic canal.

PUNTA ARENAS, August 17.

(To be continued.)

Osler on Pancreatitis.—Dr. William Osler, at the meeting of the British Medical Association, opened a discussion on the diagnosis of acute pancreatitis. He said that three groups of causes could be distinguished: 1. Mechanical, such as from stone in the duct, rendering it vulnerable to bacterial invasion. 2. Chemical irritation, from substances, such as bile and gastric juice which on experimental injection in animals produced acute pancreatitis. 3. Bacterial, this occurring only after stasis, causing the pancreatic juice to lose its bactericidal properties.

of the fresh urine was that of a healthy secretion. The feces were not analyzed, but were described as of usual character. The examination of the patient's blood showed hemoglobin 70 per cent. (Talquist scale); erythrocytes normal in shape, size and staining characteristics (Triacid, May-Gruenwald, Giemsa-Romanowski); a striking number of blood platelets in aggregations; lymphocytes apparently normal in number and proportion (not counted); no eosinophiles and no nucleated reds. Under symptomatic treatment and purging all symptoms disappeared in about ten days.

Reviewing the case, we find: General cachexia, anemia, prodromal stage of general malaise, followed by a severe colic. The stomach itself was probably not involved. It would seem plausible that a certain amount of metallic nickel dust had accumulated in the bowels, that some of this had passed through the intestinal walls, probably after formation of a salt (oxalate?), or that some of it had been dissolved by the action of the hydrochloric acid of the stomach. The masses of blood platelets (with very little blood pigment) may have been created by a poisonous action of the nickel salts. In consequence thereof, anemia and cachexia.

Possibly some other metallic dust also had exerted an adverse influence. The patient stated that his co-laborers frequently complain of ailments which they refer to the inhaling of aluminum dust. The case reported showed symptoms only from part of the intestinal tract, there being absolutely no symptoms from the lungs.

407 North Broadway.

PLUGGING WITH SOFT TISSUE TO ARREST HEMORRHAGE FROM BONE.

GEORGE TULLY VAUGHAN, M.D.

WASHINGTON, D. C.

Hemorrhage from the cut or broken edges of bone is often a great annoyance, if not a serious condition, during surgical operations—amputations, resection and curettage—on the skull or other bones, especially when the bone is congested. The control of such hemorrhage is sometimes a difficult matter, as one can not ligate the bleeding vessels and pressure often fails. Mashing or crushing the edges of the bone is objectionable, if not impossible, and often fails to accomplish the desired result. I have never been able to use with any satisfaction Horsley's antiseptic wax because it will not stick to a wet bone—one that is bleeding—and it is not needed on any other kind.

For four or five years I have been using the soft tissues—muscle or fascia—rubbed into the cut or broken surface of the bone. A fragment, preferably of muscle, is cut off wherever most convenient in the field of operation. It is then applied to the bleeding bone by means of the fingers or some suitable instrument like a spatula or flat chisel and rubbed hard so that the little vascular openings in the bone become plugged with minute fragments of soft tissue. The advantages of the method are obvious—that material is always accessible during the operation, it does not require special preparation, it acts not as a foreign body but more like a blood clot, and seems to be always efficient.

1718 I Street.

A Little Knowledge is a Dangerous Thing.

Professor.—Explain the meaning of diagnosis.

Student.—It is another term for phenomenal ignorance.

Professor.—How do you make that out?

Student.—It is derived from *di*, a Greek particle signifying double, and *agnosis*, ignorance.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(For list of all accepted articles, see advertising page 14, Nov. 2.)

(Continued from page 1367.)

HOLADIN.

EXTRACTUM PANCREATICUM INTEGRUM.

An extract of the entire pancreas containing all the constituents of the gland and exhibiting great potency in respect to the several known enzymes, trypsin, amyl-opsin, lipase and the milk-curdling ferment.

Holadin is a grayish-white powder, slightly aromatized, somewhat hygroscopic, freely, but not wholly soluble in water.

Tests.—The tryptic power is tested as follows: 0.10 Gm. is placed in a flask, mixed by agitation with 25 Cc. of tepid water containing 0.20 Gm. sodium bicarbonate; at once 100 Cc. of milk at 40 C. added, and then the flask kept in a water bath at 40 C. From time to time small portions are withdrawn in a beaker glass, when the addition of a few drops of dilute acetic acid will show a constant diminution in the volume and character of the curd until finally only minute, flocculent coagula are observed. Holadin should not remain in contact with sodium bicarbonate for more than a brief interval before adding the milk, as its enzymic power is rapidly decreased thereby.

To test for the fat splitting action, 0.10 Gm. of holadin is mixed with 25 Cc. of water and 100 Cc. of milk and maintained at 40 C. In about 15 minutes the presence of fatty acids can be detected by odor and taste and confirmed by chemical tests.

The action of the milk-curdling ferment is shown in the following way: 0.20 Gm. holadin is mixed with 10 Cc. water in a beaker and then 100 Cc. fresh milk, previously warmed to 40 C., poured on, with sufficient stirring to mix thoroughly, and the mixture digested, without agitation, in a water bath at 40 C. In a few minutes the milk will begin to show the characteristic evidences of curdling similar to that produced by the milk-curdling ferment of the gastric juice. When the milk, however, has acquired the semi-solid, jelly-like consistency, if it then be stirred constantly with a glass rod, the curd will break down, become diffusible and in time disappear, a behavior which is in marked contrast to the action of the milk-curdling ferment of the gastric juice which causes the formation of a firm curd, easily separable from the whey.

The starch-converting power is determined as follows: Triturate 15 Gm. of arrowroot or potato starch with 500 Cc. of distilled water, boil for 10 minutes, allow to cool, and make up to 500 Cc. with distilled water. Prepare an iodine test solution by diluting 0.5 Cc. of *Liquor Iodi Compositus*, U. S. P., with water to make 500 Cc. and have ready a sufficient number of tubes containing an equal quantity of this solution.

Triturate 0.130 Gm. of holadin in a perfectly dry mortar with 1.170 Gm. of lactose. Place 100 Gm. of the starch mucilage in a Florence flask in a water bath at 40 C. and mark "A"; place in the water bath also another flask of the same content and mark "B." Add to flask "A" 0.20 Gm. of the holadin triturate; to flask "B" add 0.05 Gm. of the holadin triturate; maintain both flasks in the water bath at 40 C. At the expiration of ten minutes withdraw from flask "A" one drop of the solution and add to one of the tubes of the iodine solution, when no coloration will occur. At the end of fifty minutes take one drop from flask "B" and add to one of the tubes of iodine solution, and at intervals of a few minutes repeat this until when, in about sixty minutes, no coloration, or at the most a very faint coloration, will appear. Under these circumstances, one grain of holadin will convert 135 grains of starch completely in ten minutes, and 600 grains in about sixty minutes.

Actions and Uses.—Holadin has power to digest starch and proteids and to split fats. It is said to be useful in diseases in which digestion of food is imperfect.

Dosage.—Holadin is furnished only in capsules, each capsule containing approximately three grains. One capsule should be given about three hours after meals and one capsule at bedtime. The dose can be gradually increased to two or three capsules at a time.

Manufactured by Fairchild Bros. & Foster, New York. U. S. trademark No. 60625.

(To be continued.)