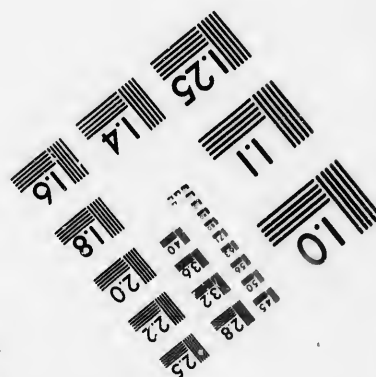
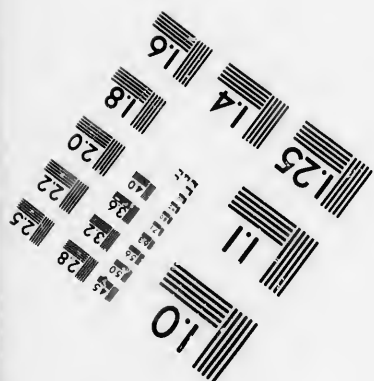
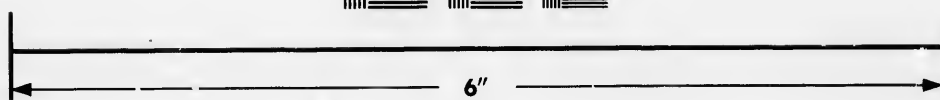
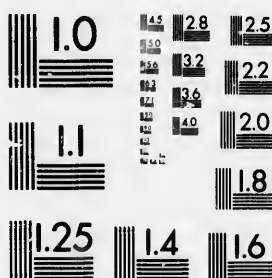


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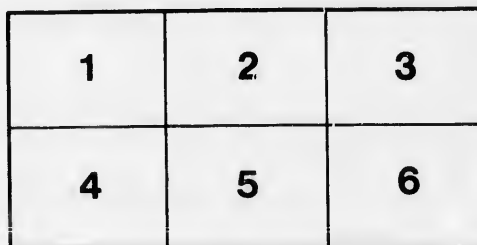
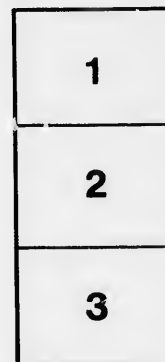
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OR, THE SCIENTIFIC PREPARATION OF FOOD

Has lately occupied some public attention, and it may be anticipated that a more general knowledge of the chemical composition, preparation, and physiological effects of food will be the result. In this connection we submit the latest theory for the preparation of a perfect beef tea or "hygienic food," and in soliciting a perusal, trust it may prove not uninteresting.

Every vital action, mental or muscular, is accompanied with a proportionate waste in the structures of the body, and to renew this continuous waste is the ultimate design of all food. In order that food may be thus transformed into the various parts of the living organism, it is first essential that the materials of such structures shall be contained in the food supplied, for the human system is absolutely incapable of producing muscular fibre, cellular tissue, blood, brain, bone, etc., out of substances which do not contain the elements of which those organs are composed. And in proportion as food contains such elements in an available form, so is it termed nutritious or otherwise. Extract of Meat, or Beef Tea, is everywhere acknowledged as a harmless stimulant, serviceable in prostration, or as an adjunct to easily digested food; but outside medical or scientific circles it is not generally known that such extracts are simply the flavor of meat (technically the soluble salts of flesh), and as such are not in any real sense nutritious. In this connection we quote from the standard authorities, Drs. Edward Smith, H. Letheby, and Baron Liebig:

In the paper read by Dr. EDWARD SMITH before the British Association, August, 1868, he says of Meat Extract: "When, therefore, you have excluded fat, fibrine,

gelatine and albumen, what have you left? Certainly not meat, as we understand the word, for nearly every part of it which could be transformed in the body and act as food is excluded, therefore "Liebig's Extract of Meat" is not meat. It is clearly meat flavor. IT IS THE FLAVOR OF "HAMLET" WITHOUT "HAMLET," IT IS MEAT WITHOUT MEAT. Its true nutritive value is that which classifies it with tea and coffee, and makes it a nervous stimulant. THE DELUSION rests with those who would regard it as a nutrient in the sense of meat or bread." And again: "Let its precise value be made known. Then we shall no longer have sick and dying men, women and children fed with Liebig's Extract of Meat, under the delusion that it is nutriment in the ordinary sense. Liebig's Extract is meat flavor—a nervous stimulant, and has good qualities, BUT IT IS NOT FOOD. All that is necessary for nutrition should be added to it."

The "London Examiner" says: "In making up the International Scientific Series, Dr. Edward Smith was selected as the ablest man in England to treat the important subject of foods." In his treatise on food, page 88, Dr. Edward Smith says:—"There is but little left in the extract to nourish the body, and the elements which it really possesses are salts and the flavor of meat which disguises the real poverty of the substance. If it then be asked why so much of the flesh is thus unused, we answer that only the soluble parts of the meat could be obtained in this form, whilst the insoluble but most nutritious parts are left behind, and only such of the soluble parts are retained as do not put on the putrefactive process, and hence nearly all nutritious matters are excluded. If it be further asked whether the popular belief in the value of this food is altogether based upon fallacy, we answer no, for it is a valuable addition to other foods, since it yields an agreeable flavor, which leads to the inference, however incorrect, that meat is present. If, however, it be relied upon as a principal article of food for the sick, it will prove a broken staff. ALL that is required for nutrition should be added to it. Liebig, in a letter to the "Times," stated that it is not nutriment in the ordinary sense, and Prof. Almen has shown the small nutritive value of this substance in the Transactions of the Medical Society of Upsala, in 1868. "USED ALONE FOR BEEF TEA IT IS A DELUSION."—Page 88.

Dr. H. LETHBRIDGE says: "False views have been entertained of the nutritive power of Extract of Meat, for as one pound of it represents the soluble constituents of 34 pounds of lean meat, it has been assumed that its nutritive power is in like proportion, but Liebig has taken care to correct this error by showing that the Extract merely represents the soup or beef tea obtained from that quantity of meat, and as it is deficient in albumen, it must be conjoined to substances which are rich in this material."—Cantor Lectures on Food, p. 165.

In the "Lancet" of November 11, 1865, Baron Liebig says:—"Were it possible to furnish the market at a reasonable price with a preparation of meat combining in itself the albuminous together with the extractive principles, such a preparation would have to be preferred to the 'Extractum Carnis,' for it would contain ALL the nutritive constituents of meat." Again:—"I have before stated that in preparing the Extract of Meat the albuminous principles remain in the residue; they are lost to nutrition; and this is certainly a great disadvantage."

For further reference see the works of Voit, Meissner, Bunge, *The British Medical Journal*, 1872, or any late authority on the subject.

To obtain a perfect Beef Tea, then, it is essential that the albumen and fibrine (which are the flesh-forming or nutritious qualities of meat) shall be added to the extractive or stimulative qualities, and that these shall be present in a form admitting of easy digestion by the most capricious and irritable stomach. This is the theory which led to the preparation of "JOHNSTON'S FLUID BEEF" (the only meat extract which fulfils all the conditions of a perfect food).

The "Christian Union," Glasgow, Sept., 1878, says:—"Some time ago a leading London journal threw out the suggestion that it would be a good thing if some practical analyst, or somebody else, would discover an extract of unusual strength-renewing property to resuscitate the enfeebled constitution of those who, by overwork or study, had sacrificed themselves. The idea was admirable, and one which thousands have often expressed. And it will be surprising and welcome to such to learn that there is already an Extract just of the nature so ardently longed for. We refer to JOHNSTON'S FLUID BEEF which possesses all the nutritive properties that can possibly be contained in any preparation."

The "Lancet," London, July 13, 1878, says of JOHNSTON'S FLUID BEEF:—"The peculiarity of this preparation is that the ordinary Extract is mixed with a portion of the muscular fibre in a state of such fine division that the microscope is required to identify it. It is unnecessary to say that the actual food value of the Beef Tea is greatly increased by this admixture, and the medical profession have now a Fluid Meat which is comparable in nutritive power to the solid. The new preparation is excellent in flavor, and we cannot doubt that it will be very extensively used."

JOHNSTON'S FLUID BEEF, then, is essentially an Extract of Beef, prepared upon the most approved principles, but differing from all other Extracts or Essences or Beef Tea, inasmuch as it is in combination with the actual Beef itself, and that in a form so assisting nature in the process of digestion that it is readily absorbed by the most hopeless dyspeptic or prostrate infant. Animal food offers a means of strength not furnished by any other article of diet, but from an enfeebled state of the digestive apparatus such nourishment has not hitherto been available to many who most require it. Digestion proper is the process by which food is chemically dissolved so that the nutritious elements which it con-

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tains may be absorbed by the system. With the lean of animal food this change is effected in the stomach by the action of the gastric juice, but when this juice is deficient in quality, or quantity, it is incapable of affecting the centre of the morsels of food presented to it, and they in this unprepared state leave the stomach, bearing with them the causes of dyspepsia and its train of concomitant evils.

The theory of JOHNSTON'S FLUID BEEF has however solved the hitherto insurmountable difficulty, and furnishes all the desirable results of meat diet to those who are otherwise unable to digest animal food. In its manufacture the albumen and fibrine (or rather the entire lean of beef) is by a special process desiccated and mechanically pulverised to such a minute degree of subdivision that it is almost imperceptible in water. By this means the entire surface of every microscopic atom is presented to the direct action of the solvent juice, which, acting chemically and in combination with the digestive properties of meat essence, at once prepares the food for assimilation, and with the least possible expenditure of vital force, furnishes to the blood all that is necessary to impart tone to the nerves and substantial food for brain, bone and muscle.

CHEMICAL ANALYSES.

By WM. HARKNESS, F.C.S., L., Analytical Chemist to the British Government. —Laboratory, Somerset House, London, England.—I have made a very careful chemical analysis and microscopical examination of Johnston's Fluid Beef, and find it to contain in every 100 parts:

Albumen and Gelatine	21.81	Flesh-forming Food.	Ash or Mineral Matter	14.57
Fibrine in a readily soluble form	37.48	Moisture		26.14

The mineral matter is rich in phosphates. The microscopical examination shows the Fluid Beef to contain good, sound beef, ground to a very fine powder. There is not the slightest trace of fungus, spores, or any other organism which would tend to produce decomposition. I consider this a most valuable preparation, combining as it does, a concentrated extract of beef with the solid beef itself, the latter being in a form easily digested. It is also free from the burnt flavor so much objected to in ordinary extracts of meat. IT IS ONE OF THE MOST PERFECT FOODS I HAVE EVER EXAMINED.

By Dr. J. BAKER EDWARDS, Ph. D., S.C., L.; F.C.S., Professor of Chemistry and Inland Revenue Food Analyst, Montreal—I hereby certify that I have made a careful analysis of the proximate constituents of "Johnston's Fluid Beef," and find it to contain:

Salts of Flesh and Moisture, Beef Tea Food	35.40	Fibrin or Meat Food	35.50
Albumen or Egg Food	22.50	Mineral or Bone Food	1.70

I consider this an invaluable preparation, containing as it does, in addition to the well-known Liebig's Extract—which has been aptly named "Wine of Meat," the nutritive value of EGG diet and MEAT diet in a form readily soluble in the gastric juice. It is therefore a more complete and perfect food for children and invalids than Meat Extract alone; and moreover, having inspected the process of manufacture, I am satisfied that it may be relied upon as a uniform and very superior preparation.

By STEVENSON MACADAM, Ph. D., F.R.S.C., F.C.S., Lecturer on Chemistry.—Analytical Laboratory, Surgeons' Hall, Edinburgh, 6th March, 1873. I have made a careful chemical analysis of a sample of Beef Powder, manufactured by J. L. Johnston, and find it contains as follows:

Albuminous or Flesh Matter	63.38	Moisture	13.23
Ash or Saline Matter	10.62	Oils and Fatty Matter	12.77

This is a highly nutritious article of diet, contains all the elements of Flesh Food in a concentrated form, is very palatable and easily digested, and is eminently suited for dietetic purposes, especially for invalids.

Extract from "Papers on Health," by Professor KIRK, Edinburgh.—"Suppose we take such a substance as Johnston's Fluid Beef, which we feel sure must become a most popular food for invalids. This readily passes into the circulation, and is changed into the actual living substances that make up the body of man. It does not cause accumulation of fat, for instance. Those who, to our knowledge, have been strengthened by its use, have got firm in muscle and nerve, but less stout than before they used it.

In submitting the following extracts from the letters of our leading local physicians, we feel justified in stating that few if any of the gentlemen named have ever before given a certificate for any proprietary article. Unsolicited testimonials from medical men reach us daily.

Dr. NICHOLS, 631 Spruce Street, Philadelphia, says:—"I have used it in a case of a child suffering from extreme debility after an attack of cholera infantum, the child began to improve immediately, and is still taking the Fluid Beef. I find it very palatable and nourishing, easily digested, and am satisfied that the contained fibrine is perfectly assimilated by the tissues of the body, as shown by a great gain of strength, &c. I feel assured it will meet with general favor."

SIR THOMAS WATSON, QUEEN VICTORIA'S PHYSICIAN.
PRESCRIBES JOHNSTON'S FLUID BEEF.

Dr. NOLAN, of the Academy of Natural Sciences of Philadelphia, says:—"Johnston's Fluid Beef has given entire satisfaction."
 JAMES TYSON, M.D., Professor of Gen. Pathology, Morbid Anatomy, in the University of Pennsylvania, says:—"I am using Johnston's Fluid Beef with a confidence which I have in no other preparation."

Dr. MALCOLM MACFARLANE, 1805 Chestnut Street, says:—"It is with unusual pleasure and confidence that I give my recommendation to Johnston's Fluid Beef. It is in the best form and the best preparation with which I am acquainted or have used."

Dr. LEONARDO JUDD, of Philadelphia, says:—"I can endorse thoroughly all that is claimed for Johnston's Fluid Beef, and am delighted with its superior excellence."

Dr. HORNER, of Philadelphia, says:—"It is the most elegant preparation of the kind in the market."

Dr. SAMUEL ASHHURST, 1423 Walnut Street, Philadelphia, says:—"I have tested Johnston's Fluid Beef and find it to be strictly what it is represented. I prefer it very much to any extract of beef with which I am acquainted, and unhesitatingly recommend it as a most desirable preparation."

Dr. C. S. MIDDLETON, of Philadelphia, says:—"Johnston's Fluid Beef has given me the most satisfaction of any article of the kind heretofore brought to my notice."

Dr. DANIEL KARSNER, 4845 Girard Ave., Philadelphia, says:—"I have pleasure in confirming manufacturer's statements concerning its excellent and substantial food properties. It is exceedingly pleasant to the taste, and is in my opinion of incalculable value to the invalid."

Dr. JOSEPH KLAPP, 622 Spruce Street, Philadelphia, says:—"I feel assured that invalids and delicate persons in search of strength need only to use it in order to be convinced of the great advantages it possesses for that purpose."

Dr. S. R. SKILLEREN, 120 South 31st Street Philadelphia, says:—"It is the only preparation of beef that I have come across in which I have confidence, and I am sure its merits will recommend it wherever it is introduced."

Professor G. P. GIRDWOOD, McGill University, Montreal, says:—"I can strongly recommend its use to the public as supplying in the most easily digested form all the materials necessary for renewing the tissues wasted by disease."

Dr. ROSS, Montreal General Hospital, says:—"I believe it to be a most excellent nutrient for invalids and delicate persons."

Professor CHARLES CAMERON, Dublin, says:—"I can very strongly recommend Johnston's Fluid Beef."

Dr. MILLER, Edinburgh, says:—"It is a great boon to the invalid and to the public."

Dr. SMART, Edinburgh, says:—"I fully expect that it will ere long take precedence, both in professional and public favor, of all articles of a like kind, as it possesses qualities superior to all of them."

Dr. C. H. F. ROUTH, Senior, Physician to the Samaritan Hospital, London, says:—"It seems to me to fulfil a desideratum long sought for, and will prove of the greatest value in the treatment of disease."

Dr. DUNCAN, Surgeon, Allans S.S. "Polynesian," says:—"Patients suffering from vomiting in sea-sickness seem to retain it much better than any other preparation I have ever tried, and do not complain of the nauseous taste so often objected to in some other preparations."

Dr. JOHN RUSSELL, Surgeon to the Newcastle-upon-Tyne Infirmary, says:—"The theory of its manufacture appeals to one's idea of what PERFECT BEEF TEA ought to be."

Dr. S. FRED. PEARSE, South Kensington, London, says:—"I find your preparation of Fluid Beef the best in every respect I have ever met with."

Dr. R. CLARK NEWTON, Surgeon to the Newcastle Lyng-in Hospital, says:—"Johnston's Fluid Beef contains 50 per cent of nitrogenous or flesh-forming material. All other Extracts of Beef I have seen may be looked upon as stimulants only, and I have always deplored the confidence in their nutritious powers placed by invalids and the public."

JOHNSTON'S FLUID BEEF is now extensively used in British and Continental institutions, Hospitals and Asylums, and is prescribed by the medical faculty wherever it has been introduced.

Its adaptability is general to the invalid, the convalescent and the vigorous. To children it secures a strong muscular development, and for maternal nursing, imperfect mastication, athletic training, physical exhaustion, indigestion or mental overstrain, it is the perfection of known food.

DIRECTIONS FOR USE.—Add a small teaspoonful to a cup of boiling water and season to taste; or as a sandwich paste it may be used on toast, with or without butter. The can may remain open for weeks without detriment to the contents.

Sold by Druggists and Leading Grocers. Price 35c, 60c, & \$1.

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