

## FOOD IN PACKETS—A PHENOMENAL DEVELOPMENT IN RECENT YEARS—FOOD IN THE BULK ALMOST A THING OF THE PAST.

The impression one gets on entering the grocery department of any large store, that it is possible to obtain the great bulk of our food supplies in packets or tins, is to a very large extent a correct one. Within the past twenty years the amount of food of various kinds done up and placed on the market in packets and tins has increased enormously. It may surprise many, however, to know that in the middle of the eighteenth century even cereal foods in packets were already being used to a considerable extent in Great Britain.

The phenomenal expansion of advertisement in recent years has been the means of establishing the proprietary article as an important factor in the people's food supplies, and, of course, a large proportion of food supplied in packets and tins comes within the category of proprietary. Each manufacturer of a specialty means to make the public conversant with the fact and to realize when it gets his product. Consequently he serves it up in packets or tins, which, of course, bear his name. In this way he certainly secures an advantage as compared with his predecessor, who sold his produce in bulk, and of whose name the consumer was seldom aware.

The more scientific preparation of many articles of food tends to further developments in the trade in food in packets and tins. Even were it possible to estimate the value of the produce packed in the United Kingdom we should still be a long way off the total, for great quantities of food in packets and tins are imported; the United States is a leading exporter. Some of our oversea Dominions, moreover, are making rapid strides in the trade.

Just as it is impossible to estimate the value of the trade, so is it impossible in the space available to detail the various articles of food obtainable in packets and tins. Tea, coffee, cocoa, spices, cereals, salt, fruit, fish; these are but a few in a seemingly endless list. The fact remains, however, that the purchaser has become so accustomed to getting various articles in packets or tins that the variety has ceased to interest, or at least to be fully realized.

On the point of cleanliness the consumer can, in general, rely upon foods in packets or tins being quite satisfactory. Their hygienic status is indeed often one of their chief recommendations. And to-day they are more hygienic than ever before on account of the supersession of hand-packing by mechanical means. As an illustration, the case of tea in packets may be quoted. In one continuous operation the tea is blended, automatically weighed, and packed without being handled once. As with tea so with many other commodities. Of course, there are many more which do not lend themselves to packing by machinery, and which have, therefore, to be handpacked. The conditions under which this is now done would, in the greater number of cases, reassure even the most fastidious. Though the bulk of the packing is done at the factories of the numerous manufacturers, there are now fewer stores of any importance in our leading cities where a very considerable amount of packing is not done.

Many of the commodities sold in packets and tins are also obtainable loose—that is, they are kept in bulk until a buyer places an order. Rolled oats are an

example. With regard to certain commodities, and perhaps more especially certain cereals, there are those who contend that a higher quality is retained in bulk than when done up in small packets. On the other hand, when kept for a long time contamination is more to be feared in bulk than in packets. Again, in regard to certain articles which are put up in tins, the quicker this is done the better. Coffee is an outstanding example; the quicker it is put in sealed tins after roasting the greater the likelihood of its retaining its flavor.

Whether it be best to pack a certain article in packets or tins depends upon the article. Some articles will keep as long as necessary in the ordinary packet, while others keep better in tins. The introduction of mechanical appliances has, of course, reduced manufacturers' expenses. Even in regard to food packed by machinery there is naturally considerable expense to be borne. Per packet or tin it may work out at a very small figure. The masses, however, are aware of the fractional difference in the article sold in packets and that in bulk—it may only amount to  $\frac{1}{2}$ d. per two or three lbs. on cereals—and for that reason they adhere to the old fashion of buying at a store which carries a big supply in bulk.

Still, everything considered, the development of the trade in food in packets and tins has given general satisfaction to the consumer. Indeed the contention is frequently made that but for that development the masses at least would to-day still be without many articles of food which they have come to regard as necessary.—*London Times*.

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## ELECTRICAL SCIENCE.

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### ROMANCE OF THE ATOMS—TRANSMUTATION OF THE ELEMENTS.

Speaking at Oxford, Sir J. J. Thomson, Cavendish professor of experimental physics at Cambridge, pointed out that the atomic theory, the theory that matter, in spite of its apparent continuity, is in reality made up of a great number of very small particles, is as old as the science of physics itself; but for two thousand years it made no progress because it had no real connection with physical phenomena. No facts were known by which it could be tested, and it was too vague to suggest for itself effects that could be put to the test for experiment. It was sterile because it was divorced from experience, and it affords a striking proof that a theory can grow only by the coöperation of thought and facts. Facts play such a large part in stimulating imagination and suggesting new ideas that every mechanical improvement in apparatus, every new method that makes it easier to investigate physical phenomena, not merely affects the technique of the science, but may originate ideas that will ultimately revolutionize our philosophy of the universe.

In giving an account of the present state of the atomic theory, the lecturer pointed out that we now know that such things as atoms exist, and that the atoms of an element are all of one kind. We know that all atoms contain electrons—minute particles charged with negative electricity—and that there is only one kind of electron; and this knowledge constitutes the first step towards a knowl-