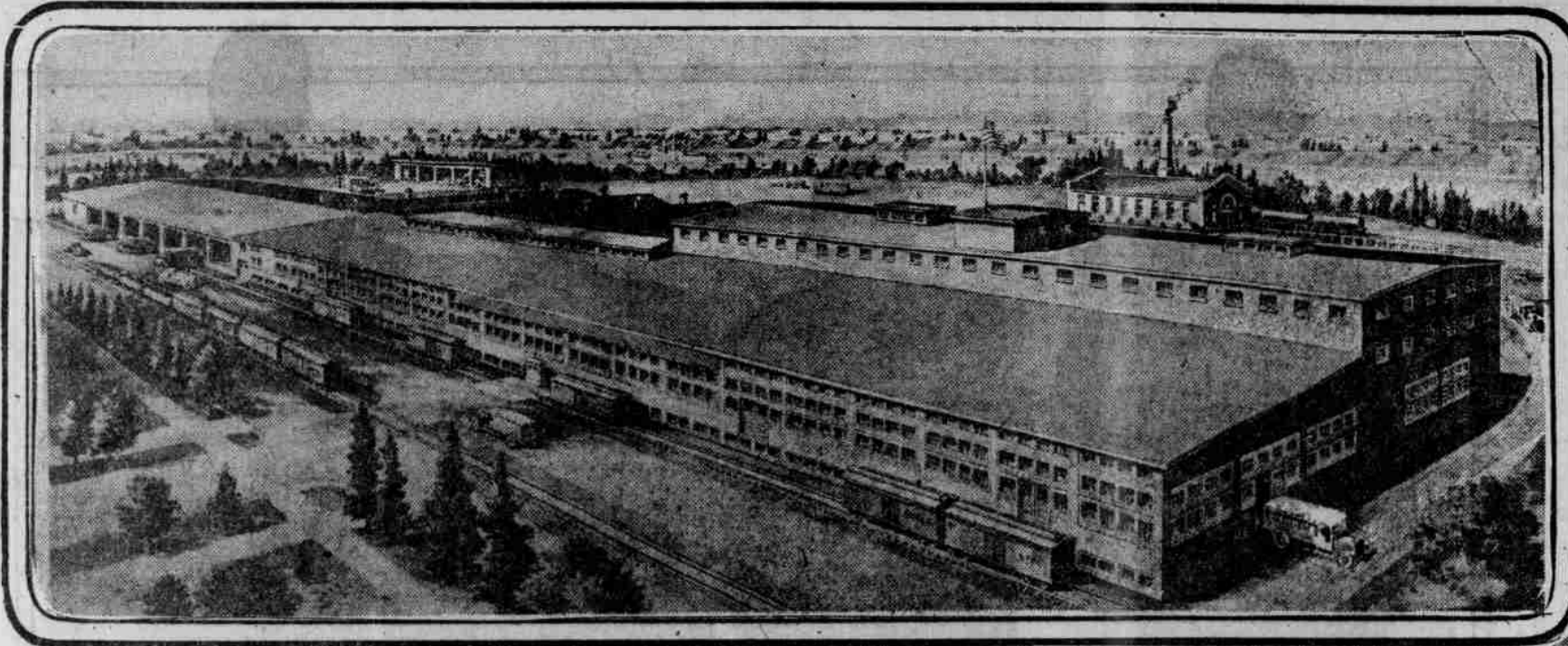


Dehydration - Food Marvel of the Age

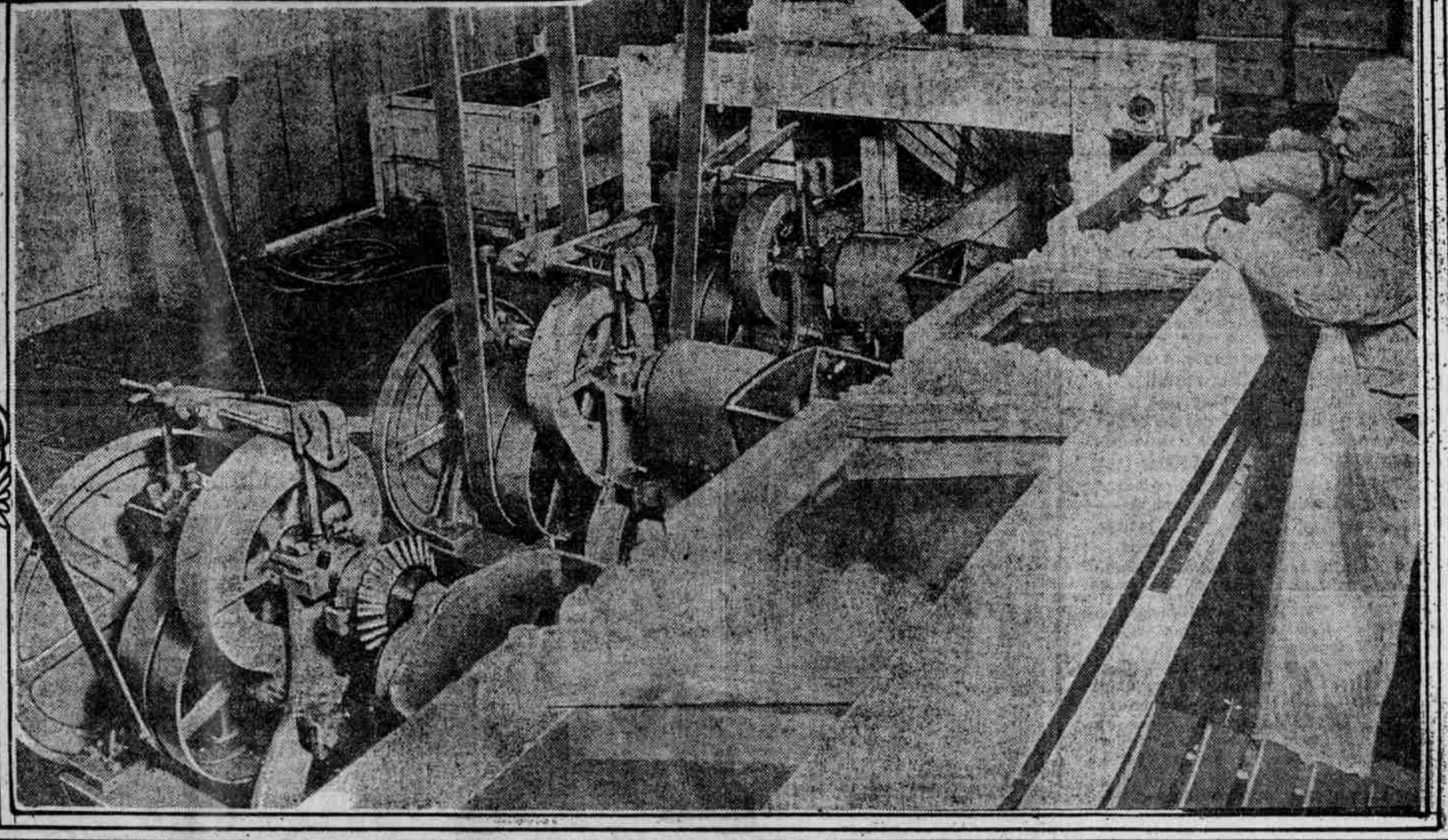


100,000 Square Feet Floor Area in this Salem Plant.

17,000 Tons of Fruits and Vegetables Being Reduced to 2000 Tons This Season



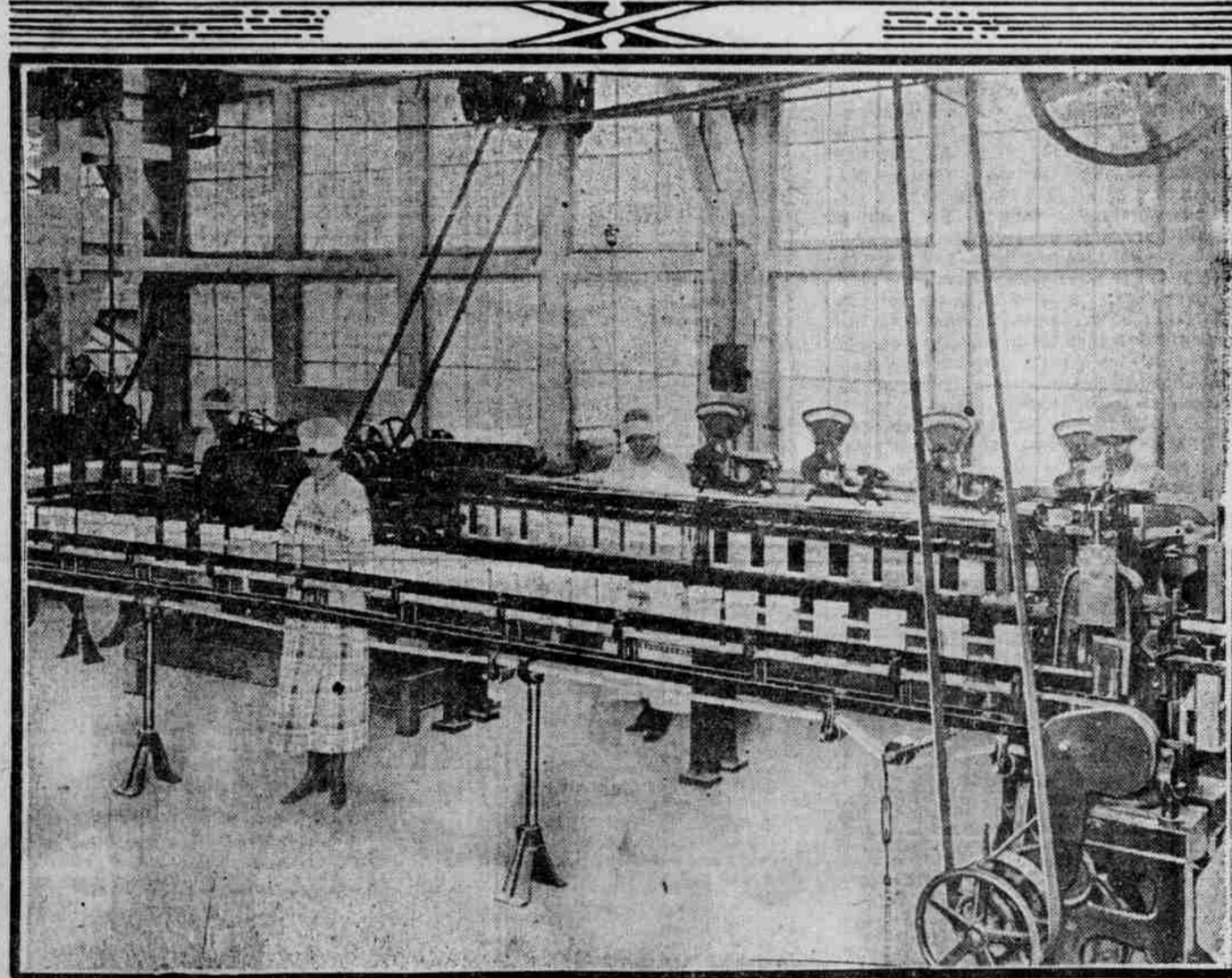
3,500,000 Pounds of Apples Handled Last Year in One Plant.



Machines Dicing and Slicing Vegetables.



Girls Trimming Fruit After Machine Peeling.



Final Inspection, Automatic Weighing, Packing and Sealing.

THE three wise men, called from the far corners of the world to see the son of God in Bethlehem, feasted on dates in the desert. This was just before the beginning of the Christian era and the dried fruit they ate was preserved by means of evaporation in the sun. It is a difficult matter to trace the origin of this natural process of preservation, but it likely existed for many centuries before the birth of Christ. Arabs used the date for food, as the natives of Greece used the dried grape. Here, masked in antiquity, we have the birth of dried food storage. Until a few years ago man seemed to have progressed but little along this particular line, persisting in drying his fruits in the open air. It has remained for Oregon to blaze the way for a new industry, dehydration.

Food preservation probably began with the storage of such grains and fruits as were naturally dried in ripening; wheat, corn, barley, or which readily were dried in the sun, such as figs, dates and grapes. These articles of food could be placed in crude granaries and store houses during the harvesting season and these reservoirs of food tapped when necessary. It soon became a practice to ship this sun-treated fruit or food, and, as the bulk was substantially reduced and the keeping qualities assured, ready markets were found in far-distant parts of the globe where it was not possible to grow them. For centuries this "drying" and storing of food was practiced with very little

improvement even so late as our colonial days. Every old colonial homestead had its yearly store of dried apples and other fruits; the pioneers of the west even learned from the Indians how to dry meat to make it keep.

Foods Kept On Long Journeys.

Then came the development of world commerce, a progressive series of astounding steps in trade, wherein the products of all corners of the globe could be marketed at great trading centers. It was found that certain heavily populated sections of the world could better apply themselves to manufacture and therefore could not produce enough food to feed the inhabitants. This again necessitated a further development of commerce and the brokers, or those interested in the import and export of foods, began to cast about for means of preserving their wares until they could reach the consumer. Of late years we have been treated to the spectacle of grains, meats, fruits and vegetables, all perishables to a greater or lesser degree, going on long journeys and arriving at their destination in as good condition as when they left their place of origin. This has been made possible by refrigeration and sun-drying processes.

Antique as some of these methods undoubtedly are they were the only means known for preserving food. The world is entering a new era of food preservation, an astounding yet a simple system, all embraced in the one word—dehydration. Stopped for centuries by an obstacle seemingly insurmountable, mankind has finally managed to evolve a new and as-

tounding process for insuring the keeping of foods, on a near-permanent basis. It is not too far-fetched an idea to picture the men centuries from now dining on the foods that we now use. For, judging from the success of the past very few years, dehydration is just in its infancy. Already it is recognized as one of the marvels of the age. It is revolutionizing the marketing and food problems of the world and it is an Oregon discovery and an Oregon industry.

Tons of Water Removed.

Simplicity itself is this astounding achievement that takes front rank in these days of applied efficiency. It is merely the removal of some seven tons of water from every eight tons of food. Within a very few years the experts intimately in touch with the work predict its application to the handling of meats and many other foods, in short everything of a perishable nature that man eats and that contains moisture. It's water that has been the stumbling block for centuries in the way of the scientists who would keep his food, and he could not find any way of evaporating it except the most apparent, by use of the sun's rays.

Decades ago California stepped into and rapidly forged to the front as a fruit and garden center because her favorable climate enabled the producer to dry his grapes or prunes and other such crops in the open. Spread on trays, exposed to the sun, the moisture was rapidly absorbed and only the mass of pulp remained. True much of the residue was liberally besprinkled with grit, dust and

other foreign matter, but it was the best that man could do. In the canneries the fruits were subjected to yet another process, and both methods can best be described as cooking, one in the sun and the other in vats. With the prune industry the fruit was "checked" in a chemical bath and then taken to huge ovens and evaporated. None of these systems could be described rightly as "natural" ones, for the resultant product unquestionably changed its identity, as those who have eaten fresh and preserved fruits and vegetables can testify.

Dehydration Idea Is Born.

Yet it remained for this Oregon concern, mainly through the efforts of a man not familiar with the industry but who had an idea, to perfect the real "natural" process, dehydration. R. W. King came to Portland in 1911 to sell real estate and got his inspiration while here, an inspiration born of necessity. The northwest, while growing unquestionably the best of fruits and vegetables, did not have a climate that would permit of "sun-preservation." The tremendous can-

ning industry did not seem to fill the bill so King set about to develop his plan. He sought some means of drying out the fluid content of fresh-grown perishable produce and at the same time retaining the natural flavor. The present highly successful process makes a staple of fresh fruits and vegetables—as easy to get in one place and season as in another.

Fruit, Refreshed, Is Natural.

Place a moist sponge on a radiator and allow an electric fan to blow on it and the water will gradually disappear. The sponge will be reduced in size; will weigh much less. In that condition the sponge may be carried anywhere, it will not change in any extreme of temperature. Yet the moment you place the sponge in water, because the walls of the minute little holes or "cells," in the sponge retain their elasticity, the moisture is re-absorbed and swells the sponge again to the original form. King merely proved that fruits and vegetables were made up very much like a sponge, that there were millions of little holes or cells filled with water or other elements that give aroma

or flavor. He sought the natural drying system that would take away the 80 per cent or more of water from the bulk and leave the fresh fruits or vegetables as near their natural state as possible.

So, by standardization and control he subjected the produce to be treated to certain warm air currents and found that he could abstract this seven-eighths bulk and the concentrated product that remains needs but a few hours refreshing in water to regain its original identity. Months, yes even years, after fruits or vegetables have been dehydrated they can be brought back to their original state by the mere addition of water. Water not only gives fresh products weight and bulk and luscious appearance, but unfortunately furnishes the element that causes decay. Highly concentrated, their bulk reduced so that they easily can be handled, the dehydrated foods of the west are now reaching the markets of the world and the growth of the industry, fortunately in the hands of men who understand thoroughly problems of mar-