

**THE  
MACARONI  
JOURNAL**

**Volume 43  
No. 4**

**August, 1961**

# Macaroni Journal



*Capital on  
Stream Milling*

**AUGUST, 1961**

**Macaroni in 1970  
Semolina Milling  
Packaging Machines**

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AUGUST, 1961

The

# MACARONI JOURNAL

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Volume 43, No. 4

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## Cover Photo

Macaroni products are delicious winter or summer and can be served hot or cold as illustrated by teen-ager Sharon Hurley. The National Macaroni Institute is promoting macaroni right now in its coast to coast publicity program as a picnic dish, as a party dish, for outdoor patio meals and backyard barbecues. It's a convenience food which takes little preparation time whether served hot in casseroles or cold in salads.

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THE MACARONI JOURNAL

# THE MANY SIDES OF MACARONI

from the "Rossotti Merchandiser"

WHEREVER grain grows on the green face of earth it usually forms the staple backbone of the national diet. In reality, it is the grain itself, not the bread made from the grain, which is the staff of life. Without the grain there would be no bread. Every grain growing region has its special breadstuffs, to be sure. But it also has many special dishes based on the particular grain of the country.

Sometimes the grains are cooked to make a simple porridge or a gruel. Sometimes the kernels of the grain are combined with other local ingredients to make more flavorful, more aromatic, more appetizing dishes. And sometimes the grain is milled into flour, and the flour is combined with other ingredients, and then formed into an extensive variety of shapes which are grouped in two general classes: macaroni and noodles.

America was still a very young country when noodles and macaroni were first brought to these shores by immigrant families who regarded them as staples of the regular diet. Anyone else who developed an appetite for them had to rely on noodles imported from Germany, or macaroni shipped over from Italy. It was a case of either paying a lot of money for an expensive foreign delicacy or obtaining a recipe and making the product by hand in the home kitchen, a time-consuming activity.

### Macaroni Machine

It was Thomas Jefferson, a confirmed gourmet as well as a brilliant statesman, who determined to find a way to make the production of macaroni an American enterprise. Learning that there were machines that made macaroni in Italy, he sought to find one. Although Jefferson himself was unsuccessful, a friend managed to track down the information, and the first macaroni machine was set up in the new United States. Even so, the products of the machine were neither an immediate nor an overwhelming success. There was too much misinformation around, notably about their preparation.

It wasn't until some time after the middle of the next century, during the late 1800's, that Americans began to travel extensively throughout Europe. Here, for the first time, they tasted noodles and spaghetti and macaroni properly cooked and properly served, combined with special sauces and other



From the Durum wheat (center) comes a variety of shapes.

flavorful ingredients. Returning home, the tourists brought back with them the recipes for these interesting and delightful foreign foods. And it didn't take much longer after that before macaroni and noodles, in their several forms and guises, began to be assimilated into our American culinary way of life.

### Typically American

Since then, in one form or another, they have amazingly crossed almost all international boundaries, cut across all class lines, united all nationality groups. Macaroni-and-cheese is today as typically American as that other combination of a regional grain and a local product, succotash. In a certain sense, the bubbling kettle that cooks the once-foreign noodles and spaghetti of a former day is symbolic of the seething melting pot that is America.

It isn't known for certain precisely how long the different peoples of the world have been making noodle-like items of food to serve as both basic and supplemental portions of their daily menus. Probably for as long as they have been cultivating the grains of their native lands. The "nudeln" of Germany, the "nouilles" of France, the "nudlar" of Sweden, have been made in those countries for longer than anyone can remember. And who can accurately say how ancient the macaroni of Italy really is?

Did Marco Polo, returning from his eastern travels, carry the secret of spaghetti from China with the other pre-

cious jewels of the Orient he brought home to Venice? The story has never been substantiated. It is known, however, that the industrious Chinese had been busy making long fragile strands of noodles long before the itinerant Marco Polo's visit. So perhaps Marco did tell his countrymen about the "little strings" of the mysterious East. As a matter of fact, there is a marked resemblance between the Chinese soft noodles called Low Mein and the thin macaroni called spaghetti.

### Many Shapes

Today there are said to be no less than 150 different forms and shapes of macaroni, from the finest of threads to the thickest of tubes, from the narrowest of ribbons to the broadest of sheets. There are, as well, such fanciful shapes, as stars, discs, shells, crescents, wheels, rings, bows, crowns, animals, and alphabets. Some types are destined primarily for soups, others for stews, still others for garnishes. Most of them, however, become substantial dishes in their own right, known and loved the world over. Familiar indeed is the natural teamwork of Macaroni and Cheese, Spaghetti and Meat Balls, Pot Roast and Noodles, Macaroni and Beans, Hungarian Goulash and Noodles, to cite only a few.

### "Quiet Miracle"

The natural blandness and honest simplicity of all macaroni products qualifies them as suitable companions for just about all foods, all flavors, all seasonings. And now another dimension has been added in the form of the "quiet miracle"—vitamin and mineral enrichment that was unknown two decades ago. In this, the twentieth year of enriched macaroni products, generous amounts of thiamine, niacin, riboflavin and iron bring better health through better nutrition to American families who buy and use enriched macaroni and noodles.

The remarkable versatility of noodles, and the infinite variety of macaroni, are wisely exploited in the marketplace. New recipes, new hints and tips on preparation are receiving increasing attention from food editors and home economists in the daily press and the women's magazines. It's time to pursue the idea with equal vigor on the package itself, that valuable medium of communication at the very point of sale!

AUGUST, 1961

## SEMOLINA MILLING

by A. L. DePasquale, Durum Division, International Milling Company,  
at the Hoskins Company Plant Operations Forum.

FOR SOME time now, we have heard discussed at many of the manufacturers' meetings, "What are the mills doing about giving us a better product?"

I would like to discuss some of the things that are being done by the durum mills to give you production people the kind of semolina and durum flour you need and demand to produce the finest quality macaroni products in the world today. Before going any further, I just want to mention that our discussion here covers what we actually do at our mills, and we presume that other mills do the same.

Mills and macaroni manufacturers enjoy a good relationship and are mutually dependent on each other. This does not mean that the old time buyer-seller relationship has been done away with. Far from it—bargaining and trading will, we hope, remain with us forever. What I really want to get across is that never before have durum millers tried to do so much to give the macaroni manufacturer the kind of semolina and durum flour he wants in addition to real, constructive services.

If you manufacturers have a better understanding of milling techniques and problems, this relationship of ours can be maintained and, I believe, improved.

### Quality Needed

Durum wheat, our basic raw material used in the milling of semolina and durum flour, is most important to us. Most of the durum grown in the United States is confined to North Dakota, South Dakota, Minnesota and most recently, Montana. Durum wheat is particularly sensitive to the quality factor. This specialty crop must be carefully guarded by producers, processors, and scientists against varieties that lack quality. Millers aren't just waiting for growers to give them better wheat. We are always seeking better grades, varieties and milling wheats and are helping with talents and laboratories and many other wheat improvement groups to make new varieties available for commercial use. One of these groups is Don Fletcher's Crop Quality Wheat Council which had done a lot of work on durum. Through the cooperation of these groups, two new durum wheat varieties with resistance to race 15B stemrust were made avail-



A. L. DePasquale

able to growers. Race 15B stemrust struck the durum wheat crop first in 1950. Losses mounted each growing season until more than 65 per cent of the crop was lost in 1953 and 75 per cent in 1954.

These two new durums—in addition to having stemrust resistance—ripen earlier, yield well, and we understand the grower likes the shorter, stronger straw. One fault is the lower test weight. This has not been considered too serious because of its other excellent qualities. These wheats yield about two per cent less than Langdon or Ramsey.

The most important single factor that will give you the best quality semolina and durum flour is wheat selection. The best durum products will be milled from a wheat that produces a large quantity of middling that has a good color value and gluten characteristics. We give wheat selection top priority in our durum laboratory. In macaroni and spaghetti manufacturing, we are looking for an entirely different kind of wheat protein (or gluten) than we look for in bread flour milling. In bread flour we want an elastic, bubble gum type of gluten which will expand without breaking as the dough produces the gas which makes the bread rise. In macaroni and

spaghetti production, we want a tough, non-elastic type gluten which won't stretch when the spaghetti or long macaroni is placed on the sticks. We look for as hard and vitreous a wheat as possible because the harder the wheat, the less leaching of starches will take place when the finished macaroni product is cooked.

### Survey Team

Shortly, as the crop progresses, our survey team of trained technical personnel begin their field work. A survey is made of all the producing areas. This work continues until the harvest is completed. Samples of wheat are obtained from all areas before, during, and at the completion of harvest. The samples are sent to the laboratory where they are experimentally milled and analyzed. These samples are identified as to qualities, and this information is entered on a control map which gives us a complete picture of the durum crop. Samples are judged for quality by:

1. Color (yellow pigment)
2. Protein characteristics
3. Macaroni production
4. Milling characteristics

Environment in which the wheat is grown and the variety basically determine the quality. In the area covered by our survey team, we find that changing soil and weather conditions affect the crop. Varieties of wheat and varying climatic conditions result in differences in yield, test weight, protein, and often milling characteristics. Our crop survey team, as you can see, is of great importance because they allow us to pinpoint precisely where to obtain the wheat that will provide you with the best raw material.

### Crop Reports

Weather conditions and reports of wheat conditions in all areas are constantly reviewed during the growing period and also recorded on a huge map.

This is important because if an area had too much rain during the growing season, the wheat is apt to have a fungus damage which would give us a specky product—particularly if it is black point.

If an area gets a lot of rain after the wheat matures, it will result in starch

(Continued on page 38)

THE MACARONI JOURNAL



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## THE MACARONI INDUSTRY OF 1970

by Charles M. Hoskins, at the Hoskins Company Plant Operations Forum.

**M**OST speeches I have heard looking to the future in an industry either view with alarm or paint a rosy picture of unlimited opportunities for making money, serving humanity and promoting the good life. My purpose will be to try to predict the course of the macaroni industry and to point out things that you and I can do to take advantage of the opportunities offered and to avoid the dangers which will arise.

The principal trends of importance are:

1. The trend toward larger companies and fewer of them.
2. The trend toward more science and less art in the food industry.
3. The trend toward convenience foods.
4. The great interest of large food companies in the extrusion and drying processes as means of producing and preserving foods.

If you want your company to profit from these trends rather than being buried by them, you should:

1. Resist absorption by the giants by keeping costs low and by using your ingenuity and know-how to sell your product at a profit.
2. Take advantage of scientific developments by keeping up with engineering and scientific knowledge in your field. Install money-saving or quality improving equipment and processes when they become available. Develop new or improved products.
3. Take advantage of the tremendous potential macaroni products have in the convenience food fields as an inexpensive source of food energy and bulk when used to extend more expensive foods.
4. Aggressively explore the possibilities of the extrusion and drying unit operations to see where the equipment you have installed in your plant can be used to produce a new or better food other than macaroni.

### Production Methods

We will first explore the probable developments in the methods of production of dry macaroni products by 1970.

Sanitation is the greatest area for improvement in macaroni production equipment. The die washers available today are probably the poorest piece of equipment in the industry. Most die washers require 12 to 24 hours of soaking of dies, plus four to eight hours of



Charles M. Hoskins

cleaning. Presses and noodle cutters can be cleaned, but the amount of labor required is large. Even though great improvements have been made in the last 10 years in dryer sanitation, dryers are still large, complicated machines with many areas which are inaccessible or difficult to clean. Dust control systems for preventing the spread of flour and dust from the macaroni have been installed in many plants and will be installed in many more.

All macaroni products can now be dried continuously including folded noodles and twisted vermicelli. By 1970 macaroni dryers will be simpler and more compact and drying times will be shorter than they are now. These results will be achieved by three methods:

1. The continued use of good temperature and humidity control instruments.
2. The use of higher temperatures for drying.
3. The development of continuous dryers which take advantage of the real points of superiority of the continuous drying method. The continuous long goods dryers on the market today try to duplicate the drying conditions of batch dryers with the added complication of conveying machinery for sticks. Thus, spaghetti is alternately dried and rested for long periods of time. The drying time is no shorter than the drying time in a well-designed and controlled batch drying room. By 1970 this situation will be corrected so that spaghetti will dry at an even rate from the beginning to the end of the

continuous dryer and the dryers will be 50 per cent as big as present dryers or less. In addition, the dryers will probably operate at higher temperatures so that drying times can further be reduced.

Practically all of the operations in a macaroni packing room have now been made automatic. About the only exceptions to this rule are the packing of twisted vermicelli and folded noodles and the automatic packing of cellophane packages into corrugated cartons. These automatic machines will be used more in 1970 and they will be simplified so that they will require less maintenance. A plant manager should study materials handling in the packing room and should see that his costs are in line with competitors.

### Research and Testing

The biggest lack of information in the macaroni industry is in the knowledge of how to test raw materials to see what the cooking quality of the finished product will be. Much good work has been done in the field of color, milling quality and qualities of interest to the farmer. However, not much is known about those qualities which contribute to a finished macaroni which will have a good taste and texture and high resistance to overcooking. We expect that this problem will be solved by 1970. The time has come when every macaroni factory should have a laboratory with at least moisture testing and cooking test equipment.

The receiving, storing and shipping operations should receive considerable attention concerning efficient use of space, elimination of unnecessary labor, control of inventories and reduction of damage in shipment. Inventories should be planned to prevent unexpected short press runs and packing runs.

### Convenience Foods

One of the basic problems in the United States is that women have too much work to do. Therefore, the market for reasonably priced convenience foods will continue to increase. The most convenient foods are those which are ready to eat in the package with no preparation whatsoever such as potato chips, pretzels, dry breakfast cereals, milk, and pickles. Note that many of these products are dried and that you people are experts in drying.

(Continued on page 18)

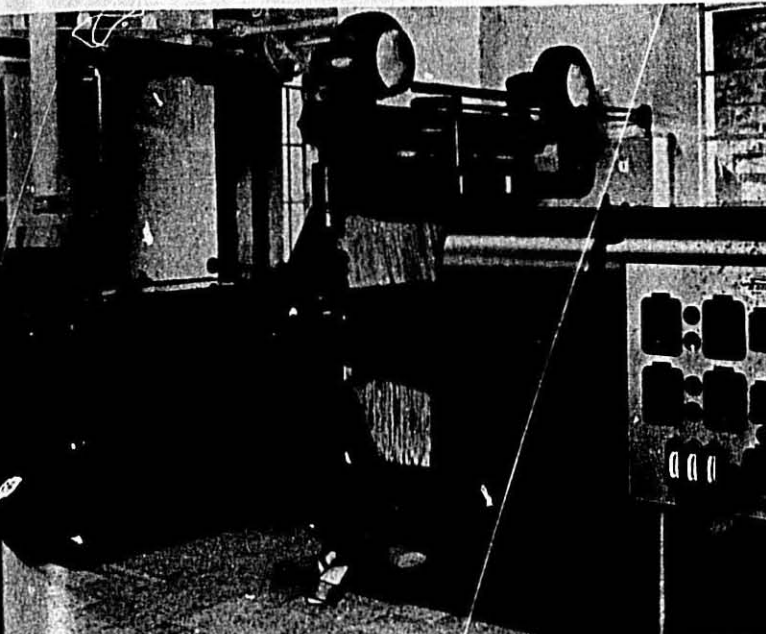
THE MACARONI JOURNAL

# LAVAN

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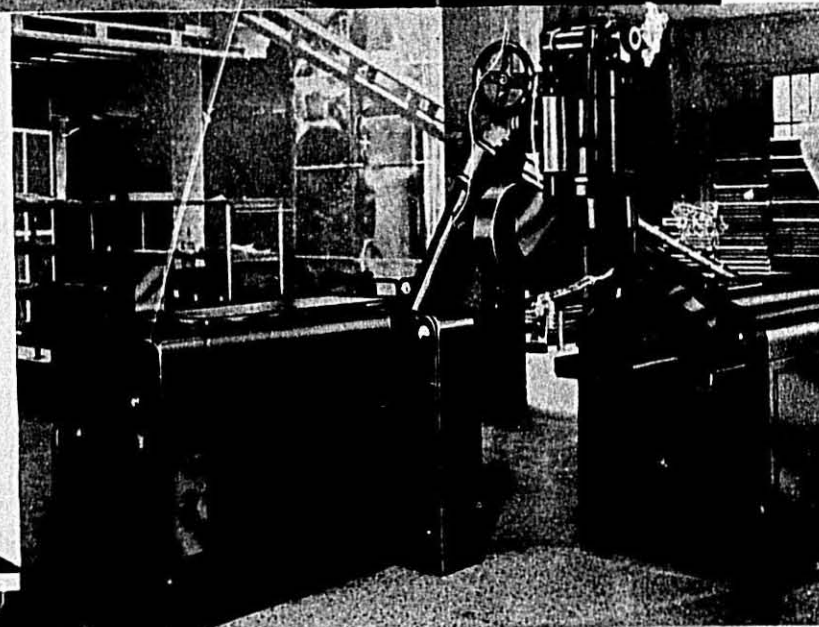
Press with Automatic  
Spreader, rectangular  
die.

REVOLUTIONARY DE-  
VELOPMENT IN THE  
TECHNIQUE OF MA-  
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Press for short goods  
with round die.

NEW TYPE PRESSES  
WITH ALL COM-  
PONENTS ON THE  
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AVAILABLE IN DIF-  
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FOR PRODUCTION OF  
700, 900, AND 1600  
POUNDS PER HOUR.



## Important New Packaging Machines

by Charles M. Hoskins

BECAUSE of the large amount of labor used in packaging long goods by hand, many companies have worked on various machines for automatic performance of this operation over the past 20 years. Several companies have now put machines into production for completely automatic packaging of long goods. Other companies are very close to bringing machines onto the market. The machines which have been developed and are being developed will perform these operations:

1. Semi-automatic weighing of long goods.
2. Completely automatic weighing of long goods.
3. Automatic wrapping of long goods in transparent film.
4. Automatic packaging in cartons.

When a girl weighs long goods by hand, much of her time is taken up by removing the spaghetti from the scale and putting it in a package or conveying bucket. If a weigher is installed having two or more weighing scoops which automatically dump into the packaging machine, the rate of production per girl can be raised for short periods of time to as high as 30 packages per minute and can be sustained at more than 20 packages per minute. Scales of this type were perfected in Germany 15 or 20 years ago, but they never achieved high rates of production because the scales were too sensitive and slow acting and usually one girl was assigned to each of the two scales on top of the machine.

Scales of this type have been worked on by Droman in Germany, Blatter in Germany, the Hoskins Company, Lynch-Robo Corporation, Asecco and

others. The Droman and Blatter scales are standard in Germany and Switzerland. The Asecco machine is being sold on the west coast and it is expected that other machines of this nature will be on the market soon.

### Senzani

A number of years ago Prince Macaroni Company worked with Senzani in Italy to develop a long goods weighing system which could be attached to the Redington machine. The system includes the Senzani long spaghetti cutter, a bucket conveyor specially designed to feed the weigher, a vibrating feed, a device shaped like a staircase and scales which dump into the Redington feed conveyor. The bucket con-

veyor for taking the product from the saw and feeding the machine was well designed and could very well be applied to other machines if it is available.

### Codie-Kay

Codie-Kay developed an automatic weigher which could be attached to their automatic saw and discharged through a horizontal spout into a cellophane bag put in place by an operator. This is now being handled by Asecco Corporation under the management of Steve Brodie. Asecco is developing a machine which will make, fill and seal a bag and which can be attached to any noodle weigher including the Codie-Kay or Asecco noodle-weigher.

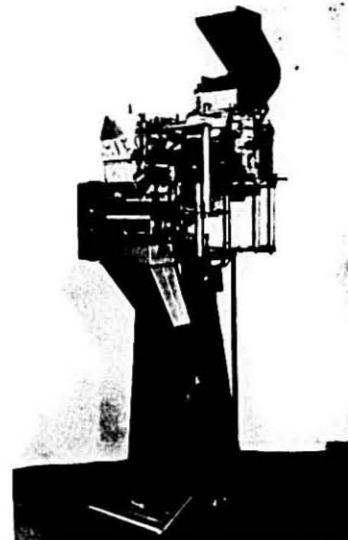
### Hoffliger & Karg

The Hoffliger & Karg machine made in Germany has proved to be practical over a period of three or four years and a large number of these machines are now in operation on the Continent. Several of the machines will be installed in the United States within the next few months. The weighing system consists of a special chimney which stores long spaghetti without allowing it to become disordered, a scale for bulk weighing of approximately 95 per cent of the final weight and a second scale into which the bulk scale discharges permitting the product to be brought up to the final weight with a dribble feed.

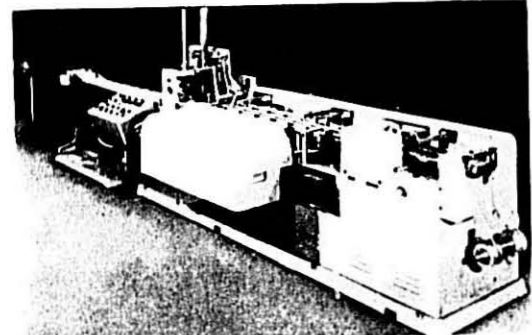
The wrapper makes a lapped seal along the side of the package and seals the ends similar to a Transwrap machine. It will package both polyethylene and cellophane.

Hoffliger & Karg manufacture a noodle weigher with a device for au-

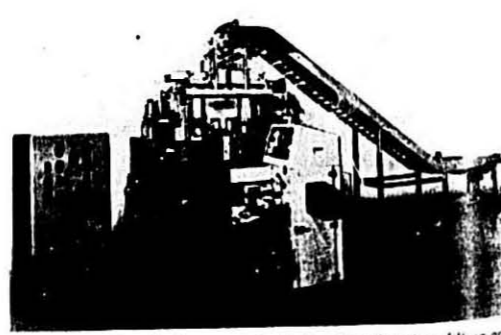
(Continued on page 32)



Hoffliger & Karg automatic noodle weighing machine. Output is approximately 22 fillings per minute.



Hoffliger & Karg fully automatic high-speed cartoning machine. Output is approximately 200 per minute. For spaghetti, up to 120 per minute.



Fully automatic cellophane or polyethylene bag forming, filling and sealing unit with automatic weighing machines for spaghetti. Output is approximately 25 packages per minute.



*Fulfillment...*

Um-m-m good! Sure improves the disposition when the inner man is well filled with those yummy macaroni products made from Commander Larabee's Comet No. 1 Semolina.

*From tots to teens... the durum taste is tops!*

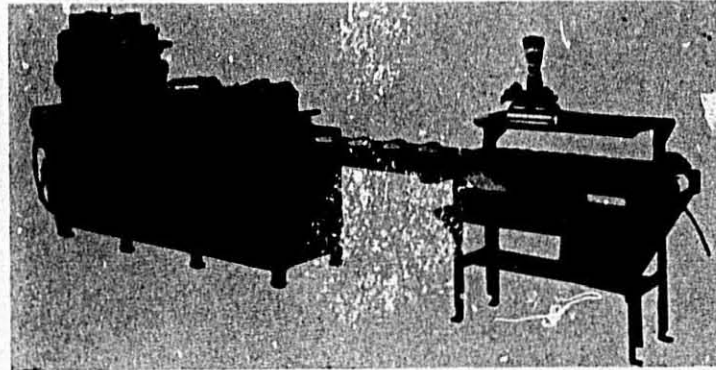
COMMANDER LARABEE

*Durum Department*

A DIVISION OF ARCHER-DANIELS-MIDLAND-MINNEAPOLIS

## GAUBERT'S LONG SPAGHETTI WEIGHER AND WRAPPER

by Rene Gaubert, R. G. Development Industries,  
at the Hoskins Company Plant Operations Forum



YOU are all familiar with the many problems presented in handling and packaging spaghetti and stick macaroni. Both products by nature are quite fragile, and extremely difficult to handle. Several methods of handling and packaging are currently being employed. Perhaps the most common method is to use a battery of girls who manually weigh the product, then insert it into a prefabricated bag, which is then either heat sealed or taped closed. This, at best, is a slow and costly operation, plus the fact that it requires considerably costly floor space.

Because of my experience in designing and building packaging machinery, I was approached by a macaroni manufacturer to develop a machine which would eliminate the packaging line bottle-necks of these products. As I analyzed the problem, I saw three separate operations which had to be combined into a single, smooth, high speed packaging machine. First, the product had to be weighed quickly and accurately. Second, this preweighed quantity had to be delivered in uniform arrangement to a packaging station. Third, the machine had to deliver a strong and attractive finished package.

This was a pretty tall order, and had I been fully aware of the many problems that were to be encountered, perhaps I would have hesitated in accepting the assignment. At any rate, I took on the project. The many problems and challenges which presented themselves turned out to be extremely interesting, and I must admit that I have received a great deal of personal satisfaction and gratification in meeting the challenges and solving the problems.

Today, we have the machine which automatically performs all three of the operations. One girl loading the machine directly from the spaghetti cutter, and another girl forming boxes and packing can produce 20 to 30 packages per minute. If the output of the cutter could be doubled, we feel that the same two girls could readily handle the 40 to 60 packages per minute which this pair of machines would produce.

### Weighing Is Difficult

The initial handling and weighing of the product proved to be the most difficult part of the project. In most cutting operations, it is impractical to completely eliminate all of the "loops" or "cane ends" of the product. Even a small percentage of these cane ends can cause all manner of problems in automatic handling. The unique and remarkable accomplishment of our weighing mechanism is that it handles the cane ends right along with the straight sticks. Briefly, this is accomplished by "two phase" weighing. First, a volumetric device bulk measures a quantity close to, but less than, the desired final net weight. While measuring, this device straightens and jogs the sticks so that they will be delivered ready to package.

The second phase of the weighing process is accomplished with scales. Here, the pre-measured or volumetric quantity of the product is brought up to the precise desired net weight. This phase of the process has a comparatively small, but all important job to do. Let's assume that for a one pound package, our volumetric measuring device has delivered 14 or 15 ounces of the product to the scale. Now the sec-

ond phase weighing device has only to deliver one or two ounces of the product to bring the package up to exact weight. This two phase weighing approach sets the pace for the machine, and insures accuracy, along with high speed.

The machine delivers a package which is both strong and attractive. The finished package is completely sealed. Both ends of the package are folded in such a manner as to accumulate material in the areas requiring the maximum strength. This prevents the sharp ends of the product from puncturing the package. These ends are sealed flat against the package, making it easy to handle and stack plus giving it a neat appearance. There are no objectionable fins protruding from the ends of the package.

Our first machines were designed to handle cellophane only. Our latest ones have been modified to handle polyethylene as well. I am very happy to say that the very same machine can now be changed from one material to the other with a very few simple and quick adjustments.

Another refinement soon available will be automatic packing directly from the Gaubert Automatic Packager.

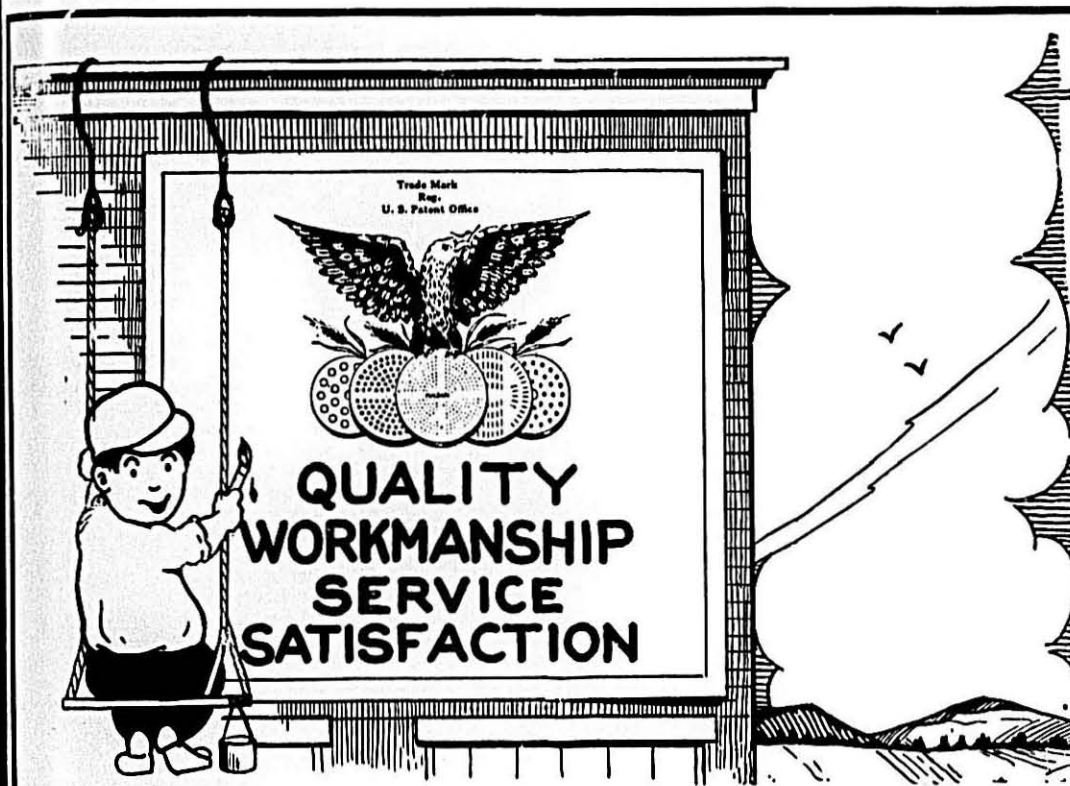
### Ideal Long Spaghetti

The Ideal Macaroni Company has introduced a new long Italian Style Spaghetti. "The increasing popularity of Italian dishes in the United States has produced a demand for authentic Italian spaghetti," said Leo Ippolito, president.

To answer the requests of retailers, Ideal has produced a 19-inch thin spaghetti, packaged in a colorful polyethylene bag. The design features red and green stripes and lettering, the colors of the flag of Italy. An Italian lace design completes the authentic Italian look. Ideal Italian Style Spaghetti is packed 24 one pound bags to a box.

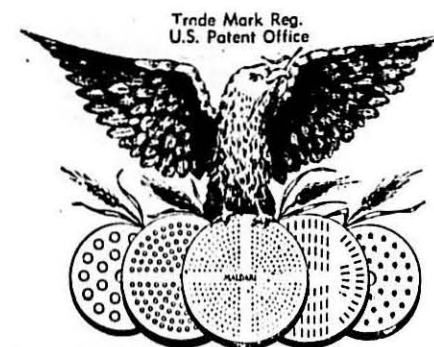
### LaRosa Acquisition

LaPremiata Macaroni Corporation in Connellsville, Pennsylvania, has been acquired by V. LaRosa & Sons. This company has been owned for a number of years by David Vinocur and Harold Stull, who purchased it from Vincent Cuneo. The plant will be operated as a division of V. LaRosa & Sons.



## EXTRUSION DIES FOR THE FOOD INDUSTRY

Makers of



Macaroni Dies

**D. MALDARI & Sons, Inc.**  
557 THIRD AVE. BROOKLYN 15, N.Y., U.S.A.

America's Largest Macaroni Die Makers Since 1903 — With Management Continuously Retained in Same Family



## Spaghetti Cooker Patented



Inventor Peter Rossi (second from right) looks on as Peter Mecca, chef, drops spaghetti into cooking basket of his newly patented automatic cooker. Rossi's son, Eugene (left) and son-in-law, Steve Marciw (far right) watch the demonstration. Steam is coming from water which surrounds lower two-thirds of basket and agitates spaghetti so that it does not stick fast.

**A**N AUTOMATIC spaghetti and macaroni cooker has been patented by a Pennsylvania resort owner, Peter Rossi, of Pocono Gardens Lodge, in Cresco. The United States patent number 2,78,975 issued to him is titled "Apparatus for Cooking Farinaceous Materials."

In an interview with a Stroudsburg, Pennsylvania, Daily Record reporter, Mr. Rossi explained that farinaceous materials are those which are made of flour or meal. Typical of them is spaghetti, which is prepared for consumption by cooking in water, and is one of the most popular foods served in restaurants.

The required time for cooking spaghetti is dependent primarily upon the nature of the product. It ranges from about seven minutes for the thinner walled types to about eleven or more minutes for the heavier types. Proper cooking time for any given type of spaghetti is also dependent upon the hardness or softness of the cooked product desired by the consumer. Incorrect cooking time can result in either an overcooked or undercooked product.

According to Rossi, the conventional practice in restaurants and other eating places where relatively large quantities of spaghetti are served involves quantity cooking or precooking, which necessarily prevents even a close approach to the desirable cooking requirements. In most cases, a greatly overcooked product results.

Another problem encountered in cooking spaghetti is the fact that the quality of the cooked product is determined at least in part by the amount of starch-laden cooking liquid adhering to it when served, says Rossi. Conventional practices in restaurants are not satisfactory because they preclude the removal of starch from the cooking liquid during the cooking cycle or the removal of the starch-laden cooking liquid from the surface of the food product after the spaghetti has been removed from the cooking utensil.

To cope with these problems, inventor Rossi has devised a novel apparatus with which he claims spaghetti and like products may be cooked automatically in accordance with the nature of the product and the taste requirements of consumers.

### Cooking Method

How does this automatic cooker work? The cook, upon receipt of an order for spaghetti, manipulates valves to cause hot water to enter the cooking well of the mechanism, at the same time setting into action the burners that raise the temperature of the water to the boiling point. The desired quantity of spaghetti is placed in a container which, in turn, is positioned in the cooking well. Next, a timer is set for the proper cooking period. From then on, the cooking operation is automatic. A bell summons the cook at the expiration of the preset time, when the spaghetti is ready to be served.

One of the chief advantages of Rossi's cooker is that it frees the chef to do other duties around the kitchen and the kitchen efficiency is increased correspondingly. If the cook happens to be busy when the timer bell rings, the cooker automatically drains away the water, washes the spaghetti, and keeps it warm.

Rossi claims his invention has the problem of starchy froth licked, too. His apparatus is so constructed that the starchy froth which accumulates on the surface of the cooking liquid is removed automatically and continuously during the cooking process. Thus only a minimum amount of liquid needs to be removed from the finished product.

The new cooker should enable restaurants and other eating establishments to prepare cooked spaghetti and like food products of improved palatability on an individual order basis and in a minimum of time.

The cooker also may be used advantageously for frozen and fresh vegetables and is ideal for corn-on-the-cob and lobsters. Using gas to heat the water in a 75,000 BTU unit, the cooker can be converted quickly to a double boiler by placing a large pot into the water. The pot is supported by an attachment that fits over the cooker and has a hole cut in the center to fit the size of the pot.

Application for the patent, which consists of four claims of originality, was filed November 10, 1958.

### Church Notes

In "Trinity Tidings," a publication of the Trinity Methodist Church at Ventner, New Jersey, Minister C. Wesley Crosley recently wrote: "Get to know what good is" are the words that come from the lips of a Pennsylvania Dutch girl in a television commercial. You have heard the commercial so often that you can anticipate what she is going to say and how she is going to say it. Her suggestion is that the only way you can know real goodness is to buy a bag of Pennsylvania Dutch noodles (no commercial intended) and taste them. Then you will 'get to know what good is.'

"Long before noodles were thought of as such, the psalmist put the same idea into words: 'O, taste and see that the Lord is good; blessed is the man who trusteth in Him' (Psalm 34:8). 'Get to know what good is'—see you in church Sunday."

THE MACARONI JOURNAL

T S M

## No. 8 "FOR MACARONI"

In Paris when you tip a cab driver, he calls it a *pourboire* . . . literally, *in order to drink*. In sunny Naples your cabbie likely will descend from his horse-drawn vehicle, smile and say, "For macaroni".

And likely as not he's referring to his horse.

The custom of nicknaming cab horses "macaroni" began when during great Italian festivals, the studs were decked out in flowers and wreaths, to which a crowning touch was added . . . a long pheasant feather fastened atop the bridle.

This was superb, elegant, "macaroni"!

Macaroni, a word of many meanings . . . a food of many delights.

"Superb", "elegant", well describes the Macaroni made from high quality King Midas Semolina—it does make a difference.

**King Midas** DURUM PRODUCTS  
MINNEAPOLIS  MINNESOTA



## Macaroni Industry—1970—

(Continued from page 8)

The next most convenient foods are those which can be prepared by taking them from a can or package with or without addition of water and heating in a saucepan. These include dried soup mixes, canned spaghetti, canned pork and beans and boil-in-the-bag dinners. The two most convenient warm meals in the United States are canned pork and beans and canned spaghetti. The sales of canned dried beans in 1958 were \$167 million and the sales of canned spaghetti were \$56.2 million. If the quality of canned spaghetti could be made equal to that of canned pork and beans, we see no reason why the sales of canned spaghetti should not be increased to equal or surpass the sales of pork and beans. In our opinion, this is one of the most fruitful lines of expansion available to the macaroni industry.

Boil-in-the-bag frozen foods are truly a convenience food because they can be cooked in 10 minutes without dirtying the cooking pan. The frozen foods which must be cooked in the oven are convenient, but they take a long time to cook. Many pounds of macaroni products will be sold in boilable pouches by 1970.

Probably the greatest rate of expansion in the macaroni industry is taking place in the field of macaroni dinners containing dried spaghetti. These are of two types, the completely dried product and the dinner containing a wet sauce in a can. The competition in this field is severe as can be expected in any field where the rewards are high. The possibilities of dried macaroni dinners have barely been touched.

A few years ago one of the big breakfast food companies suddenly discovered that such a thing as the continuous macaroni press existed and began to produce all of their extruded breakfast foods on macaroni presses. Since this time many of the big food companies have become extremely interested in extruded foods and the amount of research being done is very large. The extrusion process is the ideal way of combining several ingredients into a formed food. The possibilities of combining various ingredients to make nutritious and delicious products are large and include candy, high protein spaghetti, rice noodles, snacks, artificial meat, fish sticks, cat food, and other possibilities. I would like to see the macaroni industry corral some of this business rather than letting it go to companies who are newly arrived in the extrusion field.

## Freeze-Drying

The United States Government and the Quartermaster Corps have been stimulating a tremendous amount of research on dehydration because the Army believes that it has a great need for lightweight foods which can be preserved for long times without refrigeration to yield palatable products. The process causing the most excitement in the food industry at the present time is freeze-drying. The important thing is that many foods which previously deteriorated when dried can now be dried in large chunks to yield a product almost as good as the fresh product. Some of the products which have been dried successfully are sirloin steaks, shrimps, fresh peaches, mushrooms, scallops and asparagus. The principal value of these products to the macaroni manufacturer would be in the field of dehydrated soups and dried macaroni dinners of various types. The cost is now high but the total cost of a dinner might not be high if the principal ingredient were macaroni and the ingredient which gave it the distinctive taste were freeze-dried.

Foam-mat drying is another process which is promising. Such things as tomato paste can be dried by this process which consists of forming a stable foam of the liquid product and then drying this foam. The surface area of the foam layer is increased by blowing air up through the foam through a perforated plate to form craters or by laying the foam on a steel plate in the form of spaghetti strands.

The armed forces have indicated that they would like to buy these dehydrated foods even at a high price in order to build up a dehydration industry to support them in war time. They have been saying this for years, but I detect a note of urgency in the way they are going at this problem today. This is a field which we should all study carefully to see where our industry fits into the picture. Macaroni is probably the most satisfactory dehydrated staple food which could be combined with more expensive dehydrated foods to form satisfactory prepared dinners. The dehydration process has the advantage over the canned process that the weight is reduced and it is superior to the frozen process in that no special refrigerated conditions are required for storage.

## Summary

Here is an outline what the macaroni industry may be like in 1970 if you people are alert and take advantage of the possibilities. First of all, many of the companies which are in

business now will be in business in 1970. The products made by the industry will be tailor-made for many uses such as high protein products for institutional feeding, products resistant to overcooking for restaurant preparation, canned products of good texture and firmness. There will be more variety in the products produced by different companies. This does not mean simply different shapes, but it means that the dinners produced by one company will not be identical to other dinners and that some companies will be producing products which we have not thought of yet. Some companies will be sub-contracting products developed by the giant companies using extrusion equipment. The production of canned spaghetti, sauces and dried macaroni dinners will be greatly expanded.

Presses will be bigger and easier to clean. Dryers will be smaller and easier to clean. Most factories will be equipped with a laboratory and will have at least one engineer or chemist on their staff. Most factories will have other processes than pure macaroni production such as a canning line, a freezing line or some other type of process related in some way to the macaroni production process.

It is going to be difficult to keep up with new developments in this industry in the next ten years, but I predict that it will be more interesting and more fun than it has been for the last 10 years if you can stand the pace.

## Summer Promotion

American Home Foods, division of American Home Products Corporation is featuring a Chef Boy-Ar-Dee spaghetti with tomato sauce and cheese summer promotion offering a premium of a 24-inch rubber Playball, with inflating pump, for \$1.00 and two labels from 15½-ounce cans or one label from a 40-ounce can.

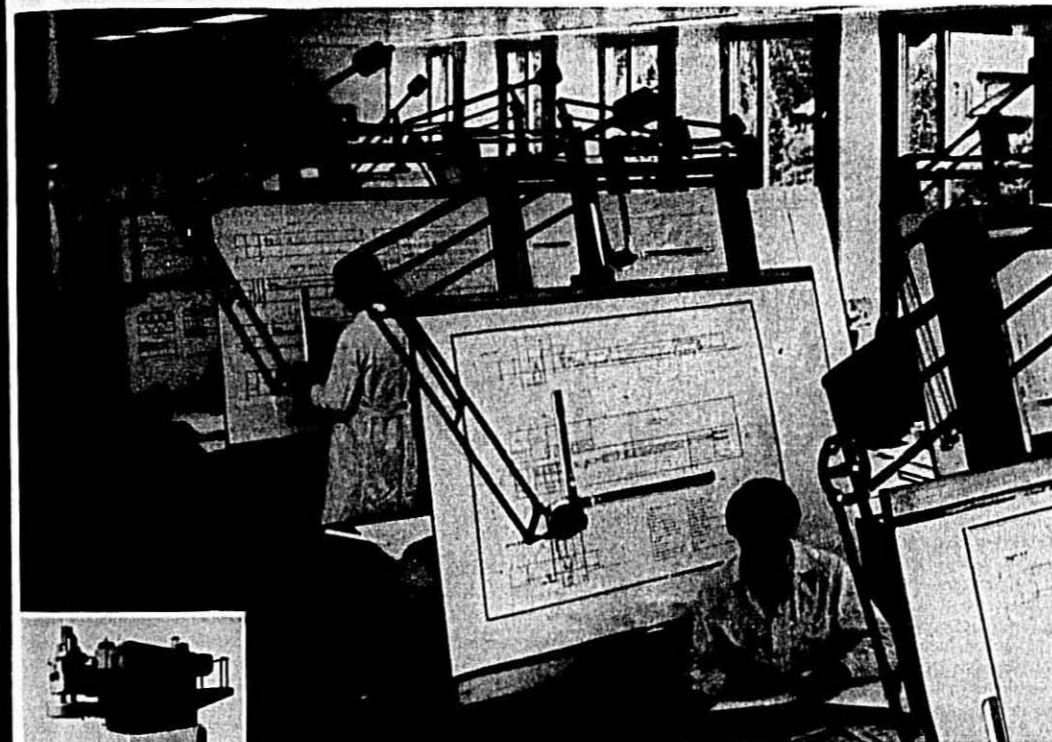
A display unit, point-of-purchase tearoffs, and tearoff shelf hangers are available.

## Noodles Romanoff

Betty Crocker Noodles Romanoff, tender egg noodles in a gourmet cheese sauce, was introduced by General Mills in June. It will be sold in Peoria and Hartford.

Noodles Romanoff, along with Betty Crocker Mashed, Au Gratin and Scaloped Potatoes, make up the line of Betty Crocker Cookbook Dishes.

Advertising began in mid-June with full-page, four-color ROP ads in the two markets. Sunday supplements started carrying ads on July 9, and a heavy spot television campaign began in mid-June.



Presses



Automatic Spreaders



Automatic Short Goods Dryers



Automatic Long Goods Dryers



Automatic Cutters

## Why Buhler-Designed Macaroni Plants are the World's Most Efficient

Whether you wish to build a new plant or modernize your present one, BUHLER offers you the services of a large and experienced team of macaroni manufacturing engineers.

The Sales Engineer who visits you to survey your needs . . . the Project Engineer who analyzes your operation and develops the best drying diagram for your requirement . . . the Draftsman who draws up the detailed plans . . . and the Head Erector who supervises the installation; all these are factory-trained and qualified specialists in the macaroni field.

They are also skilled at finding ways in which you can save money through good plant design and efficient operation.

Behind these engineers is the experience gained from designing and operation of hundreds of modern macaroni plants located in practically every country of the world where macaroni is made.

If you are interested in learning how you can improve the quality of your product at the same time you are increasing the output and efficiency of your plant, write or call BUHLER . . . today!

## Complete Macaroni Plants by BUHLER

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NEW YORK CITY—230 Park Avenue (MU 9-5446)  
CHICAGO—Room 515, 327 South LaSalle Street (HA 7-5735)

Sales and Service Representatives

LOUISIANA: Arthur Kuntz, 10200 Pressburg St., New Orleans (CH 2-4139)  
CALIFORNIA: Hans Zogg, 1715 Juarez Avenue, Los Altos (YO 7-7556)  
CALIFORNIA: E. C. Maher Co., 1248 Wholesale St., Los Angeles (MA 7-3909)  
WASHINGTON: Ben Borg, 8056 Sunnyside Avenue, Seattle 3 (LA 2-5418)

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8925 Wayzata Blvd., Mpls. 26, Minn.  
Phone: Liberty 5-1401

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Phone: EMpire 2-2575



## Color Plus Automatic Dryers

by Paul Ambrette, Ambrette Machinery Corporation

Paul Ambrette, 46, was fatally stricken by a heart attack June 26. He leaves his wife Josephine and three small children. Sympathies go to his family and colleagues.



Paul Ambrette

THE Ambrette Machinery Corporation of Brooklyn, New York, has introduced a new continuous automatic line for macaroni and noodles consisting of an Ambrette continuous press with force feeder and an automatic color plus dryer. The macaroni is extruded out of Maldari bronze dies and the noodle sheet is extruded through a Maldari teflon die. This system produces an exceptionally strong product with an unmatched bright color.

This excellent color is accomplished with optimum internal climatic control in each drying stage of these automatic dryers. Drying is gentle and temperatures are held in a moderate range while maintaining a relatively small depression between dry and wet bulbs.

In most drying systems, there is a progressive loss of color from the preliminary dryer through the finish drying stages. In the Ambrette dryers, a remarkable phenomena occurs. From the very beginning of the drying cycle in the preliminary dryer, a bright color is developed. This bright color is maintained uniformly in the cut macaroni and noodles throughout all the drying stages to its completely dry state so that, when they are ready for packaging, no color bleedout is evident.

### Unmatched Color

This drying system couples unmatched color with an exceptionally strong product. The maintaining of excellent color and strength are characteristics developed simultaneously in this controlled drying system.

This drying system has been applied to Ambrette's new automatic long goods preliminary dryers. Excellent color is developed in the long goods while in this dryer and moisture is brought down to less than 10 percent.

The performance of this long goods preliminary dryer gives every indication that a complete automatic long goods finish dryer can be built which would be smaller in size than units of comparable capacity that are now on the market and will dry a product with excellent strength and color.

Long goods taken out of this preliminary dryer and finish dried in the rooms have an improved color over the long goods dried in rooms that were preliminary dried with older preliminary dryers. Therefore, some color-bleed-out was evident while finish drying in the rooms. This color delay is only partially responsible for the color bleed-out. Color bleed-out can also be attributed in the rooms to the fact that conditions in them cannot be duplicated to the full extent as they would exist in an automatic continuous dryer.

An automatic long goods finish dryer would bring out the color in the long goods as it has in the new cut macaroni and noodle automatic dryers. The evidence that this can be accomplished is in this new preliminary dryer. Color is developed in the automatic long goods preliminary dryer to the same extent that it is developed in the cut macaroni and noodle dryers. The system of climatizing the long goods preliminary dryer is the same as the system in the cut macaroni and noodle preliminary dryers. Therefore, applying the same climatization principles to the long goods finish dryers will bring forth the same color plus and strength in the long goods as developed in the cut macaroni and noodles.

### Uniformly Maintained

With color being maintained uniformly throughout the drying system, it stands to reason that the internal climatization of these dryers must be constant—a uniform condition that is maintained while drying at all times.

This uniform condition eliminates abusive, excessive case hardening.

When excessive case hardening develops in the preliminary or in any other drying stage, a loss of color becomes immediately apparent. This excessive case hardening also sets up structural strains in the macaroni and noodles which must be counterbalanced in the return chamber to eliminate these undue stresses and bring the macaroni and noodles back into structural equilibrium.

The determining factor in maintaining color and structural equilibrium in macaroni and noodles is the internal climatic conditions of any dryer. The internal climatic conditions must create a constant rate drying cycle. The Ambrette system accomplishes this.

A constant rate drying cycle does not overdry or underdry in any given period while the macaroni or noodles are passing through the drying stages of the automatic dryer. This does away with the abusive shocking of macaroni and noodles through excessive case hardening caused by overdrying or sticking through underdrying in the preliminary or finish drying stages. Excessive case hardening is damaging to the color and to the strength of macaroni and noodles.

### Strength

Strength can usually be brought back by plasticizing in the return chamber. However, color once lost, is at best only partially recaptured.

Therefore, to maintain color and strength, a constant rate drying system is necessary in which case hardening is used sparingly, only to the extent required to maintain the physical shape of macaroni and noodles.

At this point, the impression may have been created that the Ambrette system does not use a return system in their automatic dryers. Returns are used in these dryers in the conventional way to plasticize the slightly case hardened macaroni and noodle products to maintain maximum structural equilibrium. This plasticizing eliminates the slight stresses developed in case hardening slightly these products so that they will hold their physical shape. Basically, very little difference is apparent in the strength of these products prior to entering or leaving the return chamber.

By using relatively low temperatures in this constant rate drying system, another product advantage is created.

(Continued on page 28)

## RONCO PLANS NEW PLANT

ALBERT ROBILIO, President of Ronco Foods, Memphis, announced early in June that ground had been broken for construction of their new 74,000 square foot plant in Memphis.

Planning, architectural and structural design has been handled by Hoskins Company of Libertyville, Illinois. Ost and Fells, Memphis, have been retained as associate architects for on-site supervision and coordination. C. Arthur Urfer, A.I.A. has handled architectural design for the Hoskins Company.

Planning for the new plant has been under way since the summer of 1959. Mr. Robilio says, "Careful, thorough advance planning in a project of this type is vital to an economical, efficient new plant design. The macaroni industry is a low-margin, high volume industry. It is important that all costs, including those involved in new plant and machinery, be kept within reason. Careful planning is going to make it possible for us to have an efficient plant and at the same time utilize as much as possible of our existing equipment."

"In our early stages of planning we hired the Hoskins Company to help us, since they have had more experience with macaroni plant design than anybody in the country. Careful analyses were made of the costs of dismantling, moving and re-erecting. Complete layouts were made of plant equipment, handling systems and other features so that builders would be able to give realistic prices on the building, and all necessary facilities such as electrical work, heating, air conditioning, ventilating and plumbing.

"We feel that our careful planning is going to pay off handsomely in efficiency and minimum over-all costs.

### New Plant Requirements

"Mr. Hoskins and I set up certain basic requirements for the plant which guided all our planning." Here are those considerations:

1. The plant should be all on one floor. We wanted to be able to use lift trucks not only for the transportation of semi-finished and finished goods, but also for moving machinery, packaging supplies, etc. Also, the cost per square foot of floor space for a single floor building is less than for multi-story.
2. We wanted to have both the manufacturing and shipping facilities near the office. This has been accomplished, as can be seen on the plant flow diagram.



Ronco Foods of Memphis, Tennessee has begun construction of a new plant. The manufacturing, warehouse and office space will contain 74,000 square feet and should be in operation by the end of the year. With new equipment being added and a bulk handling system being installed, it will be a completely modern plant. The plant was engineered by the Hoskins Company of Libertyville, Illinois. Architect is C. Arthur Urfer, Morton Grove, Illinois, and associate architect Ost & Fells of Memphis, Tennessee.

3. Manufacturing area was to have no outside walls. This is desirable because of the elimination of condensation on the walls of the manufacturing area.
4. An important requirement was a straight through flow of materials without criss-crossing of production lines.
5. A logical means to expand both the manufacturing and warehousing facilities.
6. Adequate control of air conditions in the manufacturing area.
7. Sanitary building construction.

In the plan the manufacturing area has practically no outside wall area, and what walls there are are insulated. The entire roof of the manufacturing area has extra insulation to prevent condensation due to the high moisture conditions inside the building.

The intake and exhaust system was designed to provide a maximum amount of air circulation within the manufacturing area in order to prevent stratification of air in this area. Control of air conditions in the manufacturing area is vital. Indicating controllers will adjust the amount of fresh air brought in, provide heat as required. Humidifiers will also be available to build up moisture, or to provide evaporated cooling.

Electrical power distribution in the new plant will be 480 volts. This is being done because of the fact that the higher voltage requires a smaller and less expensive distribution system.

Bulk flour handling for the new plant will be completely automatic. Contractor for the bulk flour handling is Flotronics, Inc. of Minneapolis, Minnesota. The bulk flour system was de-

signed jointly by Hoskins Company and Flotronics. The system will provide ability to blend five different types of flour and semolina and regrinds, if required. An in-line system will be available for the automatic blending of ingredients for special products. Press operators will be able to select, by means of a switch box in the press area, any combination of materials that they choose for any one of the presses.

### Materials Handling

Another important feature of the new plant will be the in-plant materials handling system. Noodles and short cut macaroni coming off dryers will be stored, prior to packaging, in "Porta-Bins." Porta-Bins are cylindrical steel containers designed to be handled by lift trucks. The containers are approximately four feet in diameter by six feet high, and each has a capacity of 69 cubic feet. Special filling stations will be provided so that the "Porta-Bins" will be filled with a minimum of breakage.

Special dumping stations will be provided to permit dumping the Porta-Bins by tilting them into position into systems that feed noodle and short cut machines. One of the features of the Porta-Bin system is that materials are dumped over the top of the bin and will, therefore, flow without restriction. This is particularly important in the case of noodles which tend to break in other methods of handling. Porta-Bins are arranged so that they can be stacked one on top of the other in storage. This makes possible the storage of as much as 3600 pounds of macaroni products in an area of 16 square feet, or approximately 220 pounds per square foot of floor area.

(Continued on page 37)

**FOR YOU  
ADVANCED TECHNOLOGICAL IMPROVEMENTS**

Save Space — Increase Production  
Improve Quality

★ **NEW POSITIVE SCREW  
FORCE FEEDER**

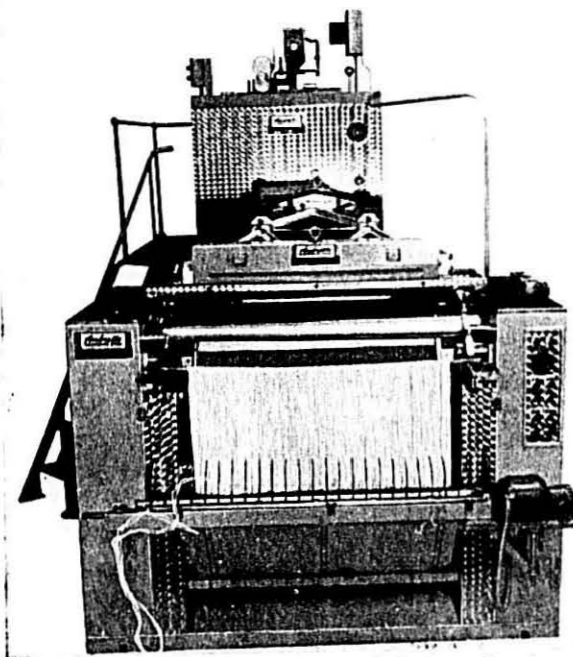
improves quality and increases production of long goods,  
short goods and sheet forming continuous presses.

★ ★ **NEW 3 STICK 1500 POUND  
LONG GOODS SPREADER**

increases production while occupying the same space as  
a 2 stick 1000 pound spreader.

**NEW 1500 POUND PRESSES  
AND DRYERS LINES**

now in operation in a number of macaroni-noodle plants,  
they occupy slightly more space than 1000 pound lines.



MODEL BAFS — 1500 Pound Long Goods Continuous Spreader

These presses and dryers  
are now giving excellent  
results in these plants.

★ Patent Pending  
★★ Patented

*Ambrette*  
**MACHINERY CORP.**

156 Sixth Street  
Brooklyn 15, New York

THE MACARONI JOURNAL

**NEW SUPER CONTINUOUS  
PRESSES**

**SHORT CUT MACARONI PRESSES**

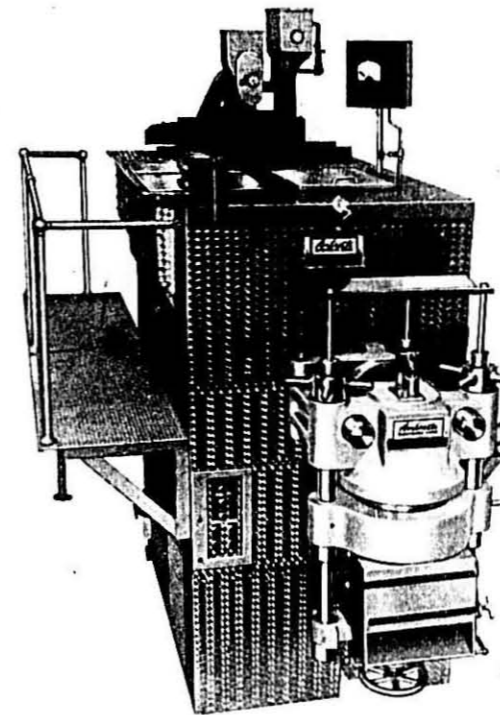
Model BSCP — 1500 pounds capacity per hour  
Model DSCP — 1000 pounds capacity per hour  
Model SACP — 600 pounds capacity per hour  
Model LACP — 300 pounds capacity per hour

**LONG MACARONI SPREADER PRESSES**

Model BAFS — 1500 pounds capacity per hour  
Model DAFS — 1000 pounds capacity per hour  
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**COMBINATION PRESSES**

Short Cut — Sheet Former  
Short Cut — Spreader  
Three Way Combination



Model BSCP

- ★ **QUALITY** — — — — A controlled dough as soft as desired to enhance texture and appearance.
- PRODUCTION** — — — — Positive screw feed without any possibility of webbing makes for positive screw delivery for production beyond rated capacities.
- CONTROLS** — — — — So fine — so positive that presses run indefinitely without adjustments.
- SANITARY** — — — — Easy to clean and to remove attractive birdseyed stainless steel housing mounted on rugged structural steel frame.

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*Ambrette*  
**MACHINERY CORP.**

AUGUST, 1961

21

## Buhler Banquet at Giggi Fazi, Roma



Ladies at the Buhler banquet, Giggi Fazi, Rome



At the far right, Restaurateur Giggi Fazi makes a point with Dr. Barracano of the Department of Agriculture



Fortunato Vannucci, Buhler Brothers representative in Rome on the left. Mrs. Linthroth, Mr. and Mrs. Schmidt, Miss Madeleine Constant, John Linthroth, Manny Ronzoni, and Giggi Fazi.



Giggi Fazi and Robert Ernst check on the welfare of the study tour group.



Vincent DeDomenico, Mr. and Mrs. Mike Vagnino, Paskey DeDomenico with cigarette, a guest, and Mrs. Vincent DeDomenico.



Richard Weiss, William Berger, Fran and Bob Green, Esther Kay and Giggi Fazi.



Mr. and Mrs. Ernest Scarpelli, Ed Green, Liliane Ernst, and Ettore Tini.



Robert Ernst, Emanuele Ronzoni, Jr., Giggi Fazi, and Fortunato Vannucci.

### Roman Holiday

Buhler Brothers of Uzwil, Switzerland entertained the Study Tour Group soon after their arrival in Roma at the Villa della Patrizia Giggi Fazi on Via Lucullo. A typical Italian banquet, the menu included Bucatini all'Amatriciana (a thin spaghetti with an excellent tomato sauce); Arrosto misto (roast meats—veal, lamb and goat) con carciofo (artichokes); Insalata (lettuce salad with oil and vinegar); Formaggio e Dolce (cheese or sweets); fruit and coffee espresso. There was also white wine, red wine and champagne. Apertifs before dinner, liqueurs after dinner. Truly a gourmet's delight.

The restaurant is a charming place decorated with modern Italian art.

we weren't; rather Alfredo had been flown from Rome to Cincinnati, Ohio, by the Kroger Food Foundation and DeLmonco Foods, especially for the occasion. "A Chef's Tour of Italy" for fifty visiting food editors.

"After watching Alfredo's spectacular fettuccine performance and sampling the dish as well, we feasted on a memorable Italian meal done in a gourmet manner.

"In Italy, of course, the term 'Italian' in reference to cooking is never used. Instead folks identify dishes with the area with which they are associated, such as 'Bolognese,' 'Milanese,' or 'Roman'.

"So while some of the visiting food editors dined in the cooking of Rome and Milan, our table sampled the hearty and luxurious cuisine of Bo-

logna, considered by many to be the best cooking in all of Italy.

"We began with a sprightly appetizer, chilled hearts of artichokes with anchovies. Then came the pasta, cooked al dente and served with a bewitching meat sauce. Beet and sweetbread, sparked with an herb-flavored dressing and served with tiny buttered peas followed.

"And as if this weren't enough we then enjoyed a crisp vegetable salad that had been tossed with a zesty wine-vinegar-olive oil dressing. Italian bread and unsalted sweet cream butter was also served, as well as wine, a separate one for each course.

"For dessert we sampled Bologna's favorite ice cream also fruit and cheese and espresso coffee.

"Buon appetito, Bolognese style."

### The Famed Alfredo Performs

John H. Bos, Chicago Daily News Home Economics Editor writes "Dinner with the famed Alfredo of Rome, Italy was an experience I will never forget."

"The room was dim, violins played softly. Alfredo came on stage, smiling, and with his eyes closed he pulled his cherished gold fork and spoon from his pocket, then he went to work.

"Performing with an artistry no less skillful than that of the late Toscanini conducting a Beethoven symphony, this King of Fettuccine (noodles) tossed a giant size plate of piping hot pasta with a drift of cheese and a large chunk of sweet butter.

"So this was Alfredo's performance, it seemed as if we were in his own restaurant, the world famous Alfredo all'Augusto at 30 Piazza Augusto Imperatore in Rome. Except, of course,



The Greens at Alfredo's restaurant. Mrs. E. M. Green, Ed Green.

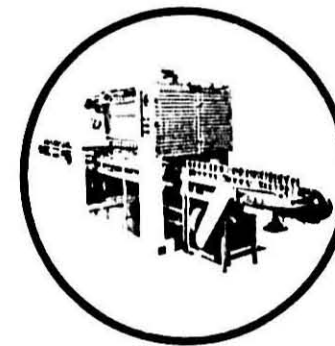
DEMACO

has the direct  
Canning Spreader—

Only Demaco's new direct canning spreader offers you the unique advantages of a spreader with an accurate measuring system plus direct feed into cans. All originated, engineered and manufactured by the same company. This results in unequalled flexibility and provides the greatest possible degree of freedom for the operator and the process planner.

If you are planning to can spaghetti and want this investment to pay back full dividends—come see the Demaco direct canning spreader. Make sure the press you choose offers all the important features that Demaco offers you.

Write in for 16mm film showing the Demaco can spreader in actual operation.

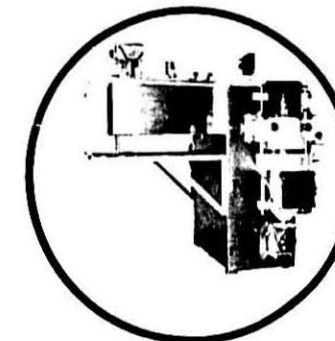


Only

DEMACO

has the "trade approved"  
Single Mixer—

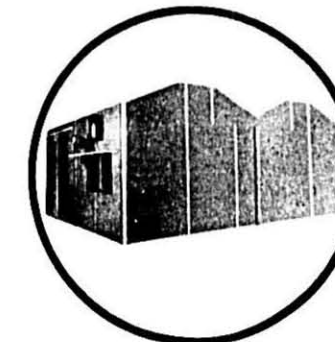
The Demaco Single Mixer feeds directly into the feed screw. No erratic feed from one mixer into another causing overfeeding or starving of the feed screw. No complicated force feeding. The better design of the Demaco Short Cut Presses and spreaders is the result of advanced engineering techniques. The better quality is the result of constant advances in manufacturing method. And proof of the better Demaco performance of short cut presses and spreaders are the hundreds of users of Demaco equipment.



DEMACO

has fully automatic Long  
Goods and Short Goods Dryers—

When it comes to a showdown on fully automatic dryers, either short cut, noodle or long goods dryers—Demaco is hard to beat. Here's why—the dryers are fully automatic complete with temperature and humidity controllers. Demaco dryers are designed to perform under all weather conditions with perfect results, day in and day out. Demaco dryers are improved by continuous research and development. That is why Demaco dryers are the standard of reliability and are the reasons for their broad acceptance.



**DEMACO - the full line:**

SHORT CUT PRESSES, AUTOMATIC SPREADERS,  
SHEET FORMERS, SHORT CUT DRYERS, NOODLE  
DRYERS, LONG GOODS PRELIMINARY DRYERS,  
DRYING ROOMS.

**De FRANCISCI MACHINE CORPORATION**

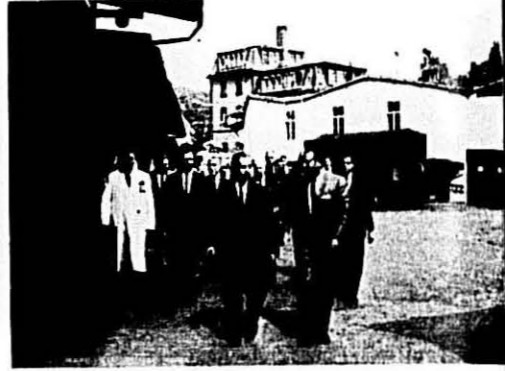
45-46 Metropolitan Avenue • Brooklyn 37, New York

Phone EVe:green 6-9880

## At Drei Glocken, Weinheim, Germany



President Marianne Rihm of Drei Glocken welcomes the study group to Weinheim, Germany. (Interpreter stands at the left.)



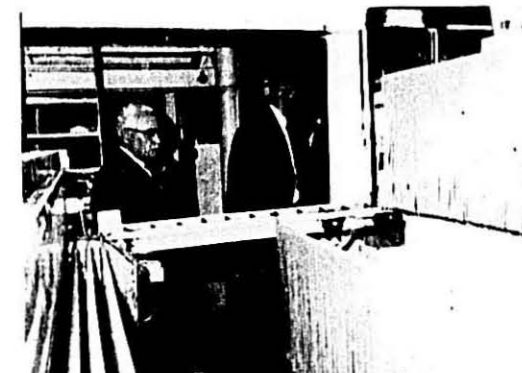
The group moves through the courtyard toward the plant for the tour. Plant superintendent is in white coat on the left.



Macaroni men always check the goods coming out of the press.



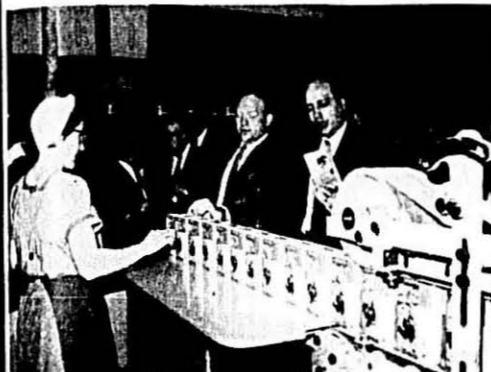
Dr. Rihm in the center explains a conveyor system to the group.



Donato Maldari and Leonard DeFrancisci watch the operations of an automatic spreader.



Dr. Rihm explains procedures in the packaging department.



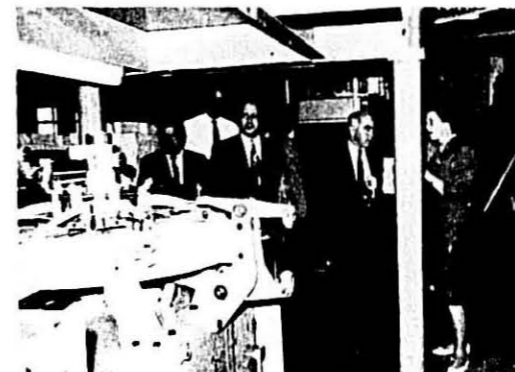
Vincent and Phil LaRosa check the seal on macaroni cartons.



Robert Ernst (in white shirt) makes a point about a noodle shacter.



In the quality control laboratory the group inspects an organizational chart.



Mrs. Rihm tells the group about packaging and merchandising practices.

### The Egg Market

With the passing of spring, many of the industrial users, who had been waiting for lower prices, decided that it would be a good idea to begin accumulating at least minimal inventories against later needs. This combination of heavy purchases along with a seasonal drop in egg yield per case and a strong and active futures market in Chicago in shell eggs led to firm markets for all egg products.

Shell egg prices for the third and fourth quarters of 1961 will be higher than were expected earlier. Where there had been talk of a late summer or fall flush of shell eggs, predictions are now for relatively stable prices.

With the United States government still purchasing large quantities of whole egg solids and the egg noodle industry largely using whole egg instead of yolk, less separating is being done this year than in past years. This has led to lesser amounts of surplus whites than in most recent years and a firmer albumen market.

### Search for Quality

Poultry & Eggs Weekly, a national business paper of the poultry, turkey, egg industries, in its June 3, 1961 issue had this to say:

"The big hue and cry in the egg industry for quite a while now has been for quality, and just about every segment of the industry, including the breakers, are or have been so engaged.

"For years, the breaking industry has been considered not just as a blow-off valve for overproduction, but as a dumping ground for inferior eggs. Now, breakers are busily seeking improvement of the quality of eggs they receive so that they, in turn, can produce a finer quality product.

"We like the way Henningsen, Inc., has approached the quality egg situation at the Norfolk, Nebraska, plant.

"Henningsen has no direct contact with producers, and purchases its eggs from the dealers who buy from producers. In order to spread the appeal for quality preservation through careful handling of eggs, right to the producer level, the firm is using a five

week campaign built around five promotion pieces.

"Each of the promotion pieces features a cartoon character as an attention-getter and incorporates a message stressing the importance of proper production or handling practices. There is also a message on each asking that the piece be tacked on the wall of the farmer's casing area so that everyone handling the eggs will see it.

"The promotion pieces are distributed to producers by slipping one into each case as it is emptied at the Henningsen plant, before it is shipped back to the farm. In addition, a full set of the series of promotion pieces was sent to each egg dealer from which Henningsen purchases, with a covering letter explaining its purpose.

"The promotion pieces do a good job of urging careful egg handling practices and of explaining why preservation of quality is important not just to Henningsen, but to dealers and producers, too.

"For instance, the first piece answers the question 'Who uses eggs that we break and dry in powder and flake

form?" The second deals with handling, saying in part, "The greatest cause of broken eggs, which we cannot use in our product, is rough handling. You have tried to care for your eggs on your farm by gathering often and keeping them clean, but you still have a stake in your eggs after they leave your farm. Sell to a buyer who takes care of your eggs carefully."

"Another of the pieces cautions the producer to gather the eggs often, emphasizing that new markets can be realized by arriving at a better quality product. The fourth in the series urges the producer to cull out poor layers and asks for care in storage and handling of empty cases.

"The final piece is entitled 'The Pay-off' and briefly summarizes the points emphasized in the preceding four promotion pieces.

"This is a good campaign. No doubt it will have to be supplemented through the year to keep the plea for quality in front of producers and handlers. But it effectively reaches the producer, it tells a good story, and it should have beneficial results."

#### Patent

Henningsen, Inc. has been granted a patent on the process of producing egg albumen solids with low bacteria counts and negative pathogenic microorganisms in such egg white solids.

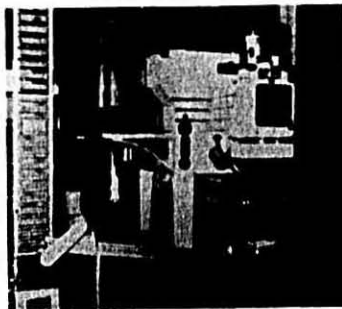
The process is covered by Patent No. 2,982,663 issued on May 2, 1961. No companies have been licensed at this time under this patent; however, it is Henningsen's intention to share this discovery with other producers by granting them a license under a nominal royalty arrangement.

#### Stock Sale by Doughboy

A public offering of 100,000 shares of common stock of Doughboy Industries, Inc. at \$18.50 per share was made recently by an investment group headed by Kalman & Company, Inc., St. Paul. Proceeds from the new shares will be used to build working capital by retiring outstanding bank loans.

Prior to the new issue, a total of 134,175 shares of common stock was outstanding. Doughboy's sales in the year ended January 28, 1961, totaled \$24,934,939 and its net earnings were \$532,914, equal to \$3.32 a share.

Doughboy mills semolina and durum flour, conducts a grain brokerage and printing business, processes and sells poultry, and makes livestock and poultry feeds, plastic swimming pools and toys and plastic heat-sealing and labeling machinery.

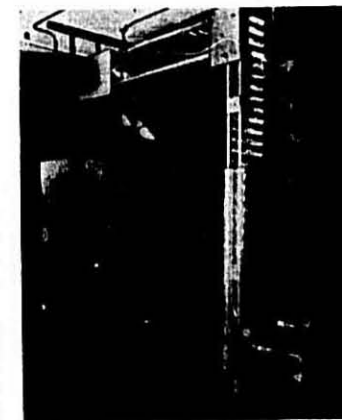


Bucket Conveyor receiving short cut product from small preliminary shaker underneath the press and transporting to preliminary dryer on upper floor.

#### Conveying Short Cut Products

One of the main problems in macaroni plants has been safe conveying of short cut product from a press to a short cut preliminary dryer when the dryer is located on a different floor from the press. Formerly the only means of transport was by blowing the product, and in doing so there was a tendency for white marks to be caused on the product plus a tendency for the air to close holes in the product which, in turn, caused checking.

Clermont Machine Company of Brooklyn, New York, has designed and developed unique bucket conveyors which carry the product without damage from the press to the preliminary dryer whether the dryer is located one, two or three floors distant. Many companies have taken advantage of this solution to their problem and additionally have bucket conveyors transporting the product between dryer units and to storage bins. The product first goes through a small preliminary shaker after discharging from the press



Bucket Conveyor discharging short cut product in storage bins.

which gives a slight preliminary coating to the product to maintain its shape.

Clermont claims its bucket conveyor design has buckets that won't loosen, fall out or jam; won't swing or tilt to spill contents; handles contents gently without breakage.

#### Color Plus Dryers—

(Continued from page 18)

The natural, nutty flavor of durum wheat is maintained. When high temperatures are used, this nutty flavor is cooked out, thus making a less desirable product.

Excellent color, strength, cooking characteristics and good flavor are factors that go hand in hand in good macaroni and noodle products. Uniform constant rate drying at relatively low temperatures attains these results.

Cooking characteristics are also greatly improved. In the process of cooking, very little cloudiness is evident in the water. Eating characteristics are excellent.

Of these four factors, color brings a macaroni or noodle product eye appeal. Color plus will help to strengthen and reinforce this in merchandising.

Ambrette's progressive management is constantly endeavoring to develop superior machines for industry. For instance, we just have developed a new combination die cleaner for long or round dies that cleans these dies in less than two hours without soaking.

In recent years Ambrette has developed machines which are now operating in the chemical, pharmaceutical and food industries. This overall, broad experience has developed a know-how for infinite control of equipment. Positive feed equipment for metering liquids, slurries and dry ingredients has been developed. New concepts for mixing and extruding are being applied to a wide range of products. These new ideas and principles—wherever applicable—will be applied to macaroni and noodle products.

Progressive management operating modern plants today requires positive systems to automate and bring out the best characteristics of their raw materials. Ambrette's broad line of production equipment fulfills this requirement.

#### True Worth

As in other things, so in men, not the seller but the buyer determines the price. For let a man (as most men do) rate themselves at the highest value they can; yet their true value is no more than it is esteemed by others—Thomas Hobbes.

## JACOBS-WINSTON LABORATORIES, Inc.

EST. 1920

Consulting and Analytical Chemists, specializing in all matters involving the examination, production and labeling of Macaroni, Noodle and Egg Products.

- 1—Vitamins and Minerals Enrichment Assays.
- 2—Egg Solids and Color Score in Eggs, Yolks and Egg Noodles.
- 3—Semolina and Flour Analysis.
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James J. Winston, Director  
156 Chambers Street  
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## N-RICHMENT-A<sup>®</sup> FOR PLUS QUALITY

—in handy wafer or powder form

—convenient nationwide stock locations

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THE MACARONI JOURNAL

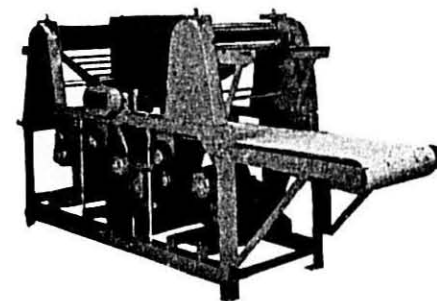
For dependable uniform quality

## DURUM SEMOLINA GRANULAR FLOURS

Call Ray Wentzel  
CHapel 6-2101  
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Doughboy

DOUGHBOY INDUSTRIES, INC.  
Milling Division New Richmond, Wis.  
Quality Since 1856



Western States Representative for macaroni factory suppliers and repairing specialists for dies and macaroni presses.

Manufacturers of ravioli and tamale machines.

40 Years Experience  
**Bianchi's Machine Shop**

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### Durum Prospects Dim

Durum wheat production was estimated June 1 at 28,000,000 bushels compared to final production of 34,000,000 bushels last year. It is expected that North Dakota will raise 14 per cent less than a year ago. Spring wheat production was estimated at 195,000,000 bushels compared with 212,000,000 bushels produced last year.

A serious shortage of moisture with high temperatures caused a sharp lowering of prospects for crops through the first two weeks of June. With temperatures running into the nineties and with short supplies of moisture, damage to stools was evident and widespread in eastern Montana and in western and central North Dakota. Numerous hailstorms have been reported, and while individual storms have not been extensive the total damage is still to be estimated. Spring grains now indicate by color and general appearance the need of moisture in most areas. The crop has had a good potential, but without the buildup of moisture as we have advanced well into the growing season, the prospects of an average yield or better are beginning to fade. In spite of the recuperative ability of crops in early stages of growth, better than normal rainfall, coupled with moderate temperatures, will be needed to realize at least part of the earlier possibilities.

The North Dakota Disaster Committee in mid-June recommended the entire state be declared a drought disaster area. It cited the lack of subsoil moisture due to a dry fall and winter and the effects of an abnormally hot, dry and windy spring.

### Export Push

Cash durum scored spectacular gains in early June as exporters attempted to accumulate supplies. Domestic mills followed reluctantly but competing for daily cars of best color. A large terminal purchase of 500,000 bushels of Commodity Credit Corporation durum May 25 sparked exporter activity. Canadian supplies were reported exhausted and CCC stocks in terminal situation low, but free offerings were substantial.

The net result was sales of about 2,500,000 bushels in a day or two, compared with previous business of 3,550,000 bushels since the establishment of the durum wheat subsidy toward the end of last year. It may be recalled at the time of the durum subsidy last December 27, the Department of Agriculture indicated that it was hoped that 5,000,000 bushels would be sold and that the subsidy would be withdrawn. Most of the sales were to France and Algeria with smaller

amounts to Italy and Switzerland and one lot to Venezuela.

Export interest cooled considerably when the government subsidy was reduced to 42 cents a bushel at Gulf and Atlantic ports. The reduction of the subsidy in the amount of five cents a bushel took place June 9, more or less without regard for market changes. On the same date the Canadian Wheat Board advanced its sales price on durum five cents a bushel. No. 2 durum at Vancouver for international wheat agreement sales was quoted at \$1.91125. The cash durum range in Minneapolis for the same quality was \$2.30 to \$2.33.

### Wire to Washington

In late June cash durum advanced sharply because of the abrupt change in sentiment concerning drought conditions in the durum area. In the third week in the month cash durum advanced from 15 to 20 cents a bushel depending on quality, with lower qualities advancing more than the top. Better qualities were traded as high as \$2.50 a bushel and fairly substantial amounts were purchased on a to-arrive basis. The United States Department of Agriculture sold 55,000 bushels of No. 2 Hard Amber Durum for export at \$2.42 delivered track Duluth-Superior on June 19.

The Herold of the Farmers Union Grain Terminal Association reported that the durum trade was alarmed because the 1961 seeded acreage, under normal conditions, will not produce any more than domestic requirements. The Commodity Credit Corporation was reported to have some carryover at country points, but terminal supplies have been exhausted because of export demand.

Because of this situation, on June 27 Phil Von Blon, chairman of the Durum Wheat Institute, and the committee, A. L. DePasquale, International Milling Company, E. W. Kuhn, Amber Milling Company, C. W. Kutz, Commander Larabee Milling Company, E. L. Merry, General Mills, Inc., L. S. Swanson, Russell Miller-King Midas Mills, R. R. Wentzel, Doughboy Industries, sent the following telegram to Mr. John Tripp, Deputy Director, Grain Division, Agricultural Stabilization Service, Washington, D.C., with copies to Senators Allen J. Ellender, Milton R. Young, Hubert Humphrey, Eugene J. McCarthy, Representative, Walter H. Judd, and to Orville Freeman, Secretary, Department of Agriculture:

"Attempted to reach you by phone. As durum millers we wish to express the extreme concern of our industry over the effect of continued export subsidies

on durum wheat on the future of the macaroni industry, durum wheat milling industry, and durum farmers. Dry conditions in North Dakota indicates a durum crop of 25,000,000 bushels at the most which is 3,000,000 to 5,000,000 bushels less than required for domestic usage alone. After allowing for export licenses already granted, carryover of durum wheat at this time is down to about 4,000,000 bushels which would result in an absolute shortage of durum wheat for the current year leaving no carryover at all in August of 1962. Because of the durum crop failures of 1954 to 1956 and the necessity for using other wheat, national per capita consumption of macaroni products fell from approximately seven pounds per person to near six pounds per person. Recovery took at least three years. We are concerned over the possibility of a serious decline in macaroni consumption and the consequent decline in the all important domestic market for durum farmers. Please advise what action can be taken to remove the subsidy on durum wheat immediately to prevent further depletion of durum wheat supplies."

### NMMA Wire

On the same date Lloyd Skinner wired the North Dakota Wheat Commission urging their support in asking for removal of the export subsidy. His wire said:

"As head of Durum Relations Committee for the National Macaroni Manufacturers Association, I view with deep alarm the durum wheat supply situation. While I was originally in sympathy with your subsidy program for export to the extent of three or four million bushels, the present situation is completely out of hand. Already, 10 million bushels have been exported and the little remaining carryover plus this year's crop (which could be any amount from five to 20 million bushels) is insufficient for domestic needs. As you know, when durum is in short supply, a great many domestic macaroni manufacturers will substitute for durum. This will definitely hurt consumption and will hurt manufacturers, millers and farmers gravely in the long run. Think it imperative that Commission ask for an end to subsidy on durum wheat for export."

### Bleak Morocco Prospects

Rains that came to Morocco in late March were not sufficient to alter reduced prospects for cereal crops. The durum harvest is expected to be off 36 per cent from last year, to 477,000 metric tons, and soft wheat down 43 per cent to 169,000.



# Ardex 550

Uniquely bland  
protein supplement for  
macaroni products

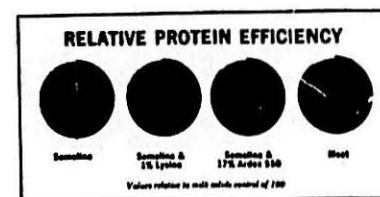
Expand your macaroni sales, profit margin, and merchandising appeal with new Ardex 550 protein supplement.

Ardex 550 is uniquely bland—neutral in taste, odor and color. It is extremely high in well balanced protein—higher than meat or milk solids . . . yet, per pound of protein, it costs only about one-fifth as much as milk solids, and many times less than meat.

Ardex 550 also gives you more merchandising appeal. It resists over-cooking and maintains appearance and nutrition without altering flavor. Boosts tolerance to matting on steam tables and is preferred in canned or frozen foods because it imparts firmness to individual strands of macaroni products.

By adding 17% Ardex 550 to semolina you can increase the protein content of macaroni to 20%, on par with fresh meat.

For more information on building sales and profits with Ardex 550, write ADM today.



Archer-Daniels-Midland  
700 Investors Bldg - Minneapolis 2, Minn.

### Packaging Machines—

(Continued from page 10)

tomatically feeding, opening and filling bags. The top of the bag must be sealed by hand. It is usually fed from a conveyor on the floor above in Europe, but could probably be modified for one floor operation if necessary.

#### Other Weighers

The Rovema machine, which is made in Germany, measures the bulk volumetrically and makes up the final weight by means of a special clefted conveyor which picks up individual strands of macaroni or spaghetti and feeds them slowly into the scale. The machine can be used with cellophane but not with polyethylene. Rovema has developed a vertical polyethylene machine for packaging short goods and within a year or so may convert the long goods machine to polyethylene.

Aldo Curioni in New Jersey worked on a long goods cutter which fed directly into a weigher making a very simple system. It has not been put on the market to our knowledge.

The interesting Farrington machine weighs 60 packages per minute with a single electronic load cell. The major portion of the weight is picked up by a pocket in a rapidly revolving wheel and weighed by the load cell. An electric memory determines the amount of additional spaghetti which should be put into the product to make up the final weight and this small amount of spaghetti is automatically added from smaller pockets on the wheel. We have not heard from Farrington for some time and assume that work has been discontinued on this machine.

DeFrancisci Machine Corporation is developing a weighing machine which is almost ready for marketing. The bulk measurement on this machine is by volume and the dribble is by weight.

Zamboni, a part of the Braibanti organization, has developed an automatic long goods weigher. The bulk quantity is measured by volume and the final weight is by gravity.

F. R. Hesser, a German company, was one of the first to develop an automatic long goods weigher and wrapper. We understand that the Hesser weighing machine attached to a car-toner is operating successfully in Germany at the present time.

#### Wrappers

Long goods wrapping machines already operating successfully include the Hudson-Sharp (a division of Food Machinery Corporation): The hand-weighted spaghetti is put into a trough in this machine and is conveyed to the wrapping portion by pusher plates.

The heat seal is a vertical fin along the length of the cellophane package.

Conopac Corporation: Two rolls of transparent wrapping material fit into the machine. One roll forms the bottom of the package and the other forms the top. The seal is made around the four sides of the package to make a pouch. This machine can be used for transparent packaging of the 19 or 20 inch spaghetti generally called "Italian Style."

R. G. Development Industries has a long goods weighing and wrapping machine invented by the owner, Rene Gaubert. The bulk weight is measured volumetrically with a device which straightens out strands and breaks the crooks which might interfere with orderly feeding. The final weight is made by a dribble into a scale. The product is gently lowered into a cradle holding a rectangle of transparent film and the film is automatically folded over the top of the packet of spaghetti. The longitudinal heat seal is made with the product as the backing. The ends are folded in the same pattern as the standard wrapped spaghetti and the two outer flaps are heat sealed against each other with a thin piece of metal as a backing to the heat sealer. This machine will handle crooks.

#### 200 Bags Per Minute

Hayssen is developing a High Speed Bag Making and Filling Machine which should have enough speed to make 200 bags per minute on a double spout machine. Because of difficulties in filling the bags that fast, the maximum speed of the machine will probably be 120 bags per minute. This machine will be watched with interest.

General Packaging Machine Company is making a horizontal bag making machine to be attached to the Aseeco semi-automatic long goods weigher to make transparent packages

for long spaghetti. This will also probably be available for attaching to the Aseeco completely automatic long goods weigher which is attached to the Aseeco automatic saw. The wrapping machine should be on the market soon.

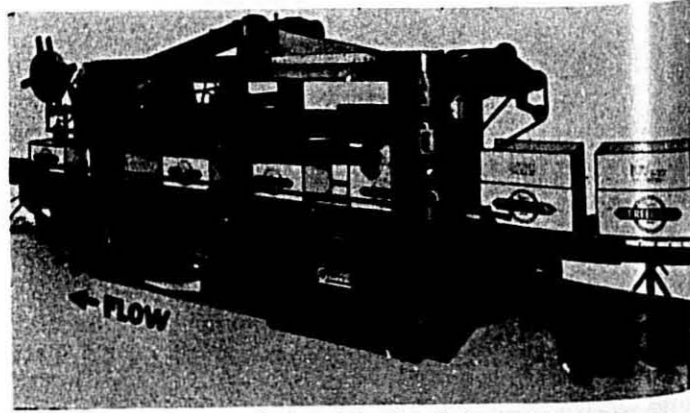
Many companies are close to solving the problems of completely automatic packaging of noodles and long goods. The machines which are commercially practical today for weighing long goods are the Hoefliger & Karg and the Gaubert machines for weighing and wrapping in transparent film. Other machines will be commercially available soon. The Hayssen noodle packer is the only complete noodle packer we know of at present, but again other companies are close to a solution of this problem.

#### Tape Sealer

This new General Case-Tape-Sealer automatically adjusts to seal cases of varying widths and heights. Cases are closed and sealed with tape on top and bottom at the same time.

It is now in operation at Fresno Macaroni Manufacturing Company, Fresno, California, to seal cases containing cellophane bags of various macaroni products or dry beans.

As each group of from two to 15 packed cases of a given size arrives at the inspection station, the cases are inspected for quality of product and pack. The inspector then pushes a conveniently located remote control switch to start the taping machine through its self adjusting cycle for the new size case. Inspected cases are then transported by belt conveyor to the General Case Sealer Taper for sealing. As the last case of one size clears through the machine, the inspector merely flips the remote control switch and the machine automatically re-sets for the next size.



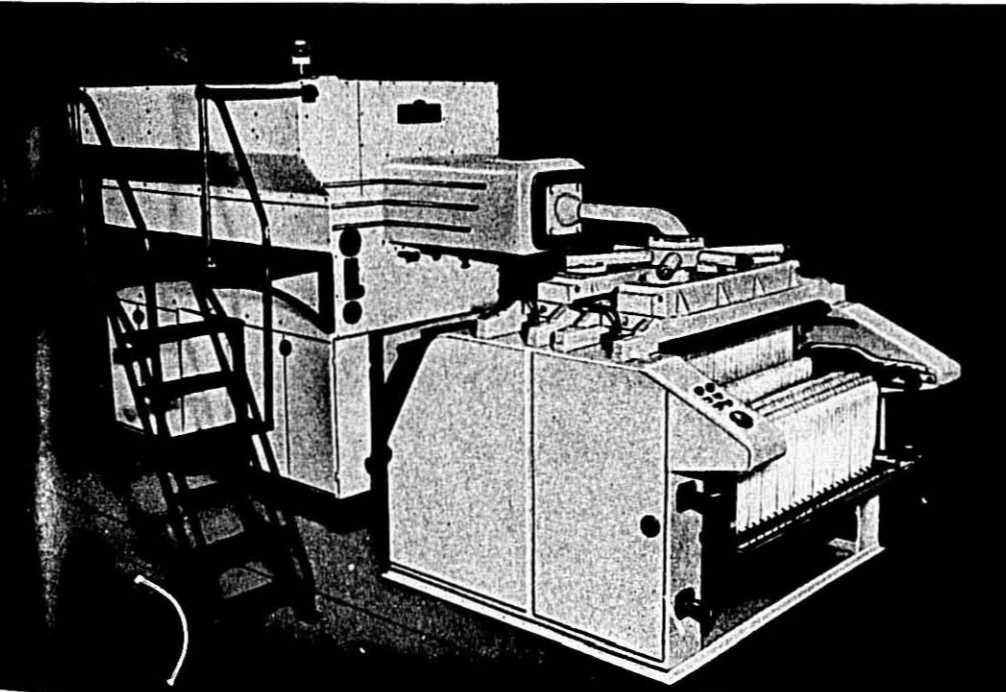
The General Case-Tape-Sealer.

## AFTER YEARS OF RESEARCH, EXPERIMENTATION AND ENGINEERING, *Clermont* HAS ADDED THE MISSING LINK

TO ITS DISTINGUISHED CHAIN OF COMPLETELY  
AUTOMATED MACARONI PRODUCING EQUIPMENT . . .

a SPREADER which combines slow extrusion for a superior quality product with top production for increase in volume; a SPREADER which extrudes uniform stick patterns for minimum trim and an eye-appealing product of invariable smoothness, color and consistency; a SPREADER which produces continuously on a 24 hour daily operation with the Clermont VMP-5A, 2000 lbs/hr press—"The Greatest of All Long Goods Presses."

This SPREADER is destined, like other Clermont long goods equipment, to meet the exacting requirements of particular manufacturers. After you have studied the features of this machine only a personal inspection can reveal the full measure of its superiority.



**Clermont**  
MACHINE CO., INC.

280 WALLABOUT STREET BROOKLYN 6, N.Y., U.S.A.

Telephone: EVergreen 7-7540

VISIT OUR NEW ENGINEERING & ADMINISTRATION OFFICES.

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of Automatic Equipment  
for all Shapes of Macaroni*

*Largest Company in the World  
Specializing in  
Automatic Lines for  
Long Goods, Short Cuts,  
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*Automatic Production  
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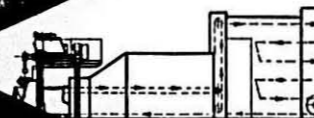
**Braibanti**

THE MACARONI JOURNAL

**Braibanti**

Scheme of sticks travel

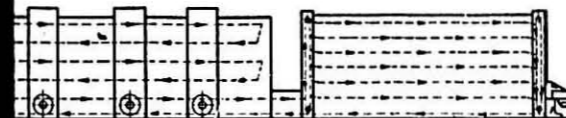
Automatic Press MABRA-L



Automatic Line for Macaroni products with storage section for discharge

GPL-Dryer

Storage Section



Automatic Line for Macaroni products with storage section for discharge  
ytime only



Automatic  
Press MABRA-L  
simple type  
Spreader and  
Predrying Tunnel

Storage  
section with  
sticks stripper  
breaker and saws  
for multiple cut



## Semolina Milling—

(Continued from page 6)

kernels instead of vitreous—and the color bleaches out. Of course, if we get rain for a prolonged time after maturity, we will run into sprout.

All of this information is of great importance to our Grain Department, as this assists them to select and buy the best quality wheats.

### Control Laboratory

Our next step is to have our own quality control laboratory set up a standard for a wheat mix. An experimental procedure is to produce semolina and durum flours in small amounts. This allows us to evaluate our wheat purchases and assures us proper rating of the wheat going into storage bins. This is a very important step in semolina quality control as it allows us to formulate uniform quality wheat mixes. At the same time, a rigid permanent standard is set up for the Milling Department which assures you of getting a uniform product. Semolina and durum products standards are:

1. Color
2. Protein
3. Dices (or shreds)
4. Granulation
5. Ash
6. Moisture

In addition to the standard, macaroni dough is processed to evaluate color and uniformity.

The durum crop is laboratory milled. Frequent checks of the semolina and durum flour blend must be made to insure that the required standards for all factors are met. Quality checks of the various mill-streams and finished semolina or durum flour are made by the

millers during the milling operations.

A few manufacturers put a lot of emphasis on the ash content. The quality of the macaroni that semolina or flour produces rather than the ash content should be of primary importance to the manufacturer. If you become too concerned over the slight differences in the ash, you may possibly overlook the more important points which are color and dress.

The term ash is used to represent the mineral matter contained in a sample. This ash consists mainly of potassium, sodium, magnesium, calcium, and phosphorus. Iron is also present in small amounts. These mineral salts are obtained by the wheat from the soil in which it is grown and vary from one crop to another depending on the varying soil and climatic conditions.

Mill control laboratories have found that the ash determination is advantageous in checking the manufacturing process. To emphasize that wheat selection is most important and ash content secondary.

Consider two samples which are identical in granulation, milled on identical units from wheat which was identical in grade and test weight, but grown in different areas. Extractions are the same, yet it is very obvious that the two finished products are not alike and that the one with the higher ash would, without a doubt, be picked as the better of the two because of the better color.

We have established then that production of quality uniform semolina and durum flour is dependent on wheat selection, proper formulation of wheat mixes, rigid standard with laboratory control and next is the actual milling. Before getting into milling, I would like to mention that laboratory control and testing is a very important

part of our business. We have stepped up our technical programs with larger staffs and increased expenditures. This is in addition to large sums of money spent on milling modernization programs.

### Scientific Process

Milling semolina is one of the most scientific of all milling processes. Exact knowledge of millflow is necessary. Our purpose is to break the wheat berry into separate various parts and recover as large a percentage of the wheat berry as possible. In breaking the berry, we want to separate the inner portion, or endosperm, from the outer branny portions and the germ, thus producing semolina or durum flour and by-products.

This milling process has developed over the centuries. Originally it was a one-man operation, grinding wheat between two stones, producing small amounts of a whole wheat product. The operation today has developed into a delicate highspeed one involving mills with modern machinery and exact scientific controls which daily reduce thousands of bushels of wheat into semolina, durum flour, millfeed, and other by-products.

Mr. DePasquale then showed slides illustrating equipment that is used in the durum milling process.

**Unloading.** After our Grain Department carefully selects the durum wheat, it arrives at the mill in a boxcar for unloading. Power shovels or augers from the car into the unloading pit.

**Scalperator.** From the unloading pit, the wheat goes to the scalperator which removes sticks, paper, and other objects. The machine also removes some of the fine wheat dust by as-

**Belt to Bins.** From the scalperator, the wheat moves on a distributing belt into storage tanks. As the wheat is loaded, it is transferred from these tanks to a series of elevator legs from the cleaning house to the mill.

**Millerator.** The first of these operations which cleans the wheat is the millerator. It separates the light chaff and dust from the wheat by aspiration. Sand and small seeds are also removed through wire coverings on the gyrating sieves.

**Gravity Tables.** From the millerator, wheat is directed to the gravity tables. These tables classify the wheat stream into three classes—heavy, medium, and light wheat.

**Carters Discs.** The medium and light streams of wheat are directed to these carter discs for the removal of seeds and oats.

**Destoner.** After the seeds and oats have been removed, the wheat is directed to the destoner which removes further grit and stones. The wheat also goes through a magnetic separator, taking out all metallic objects.

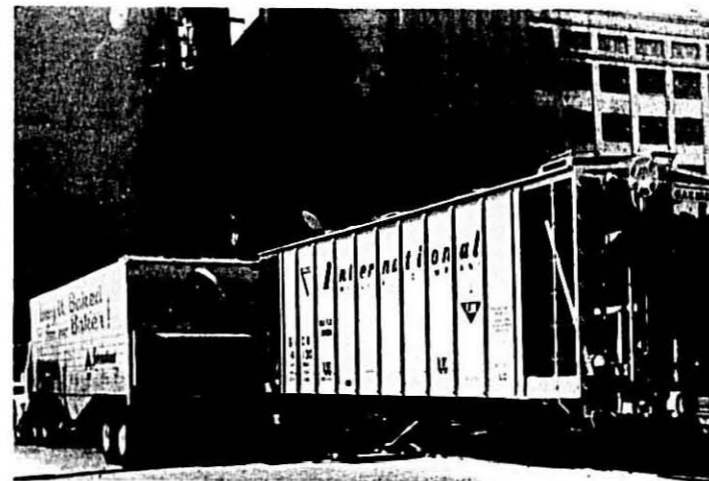
**Washer.** After the durum wheat has been cleaned by this method, it is subjected to a washing process. After it has been washed, it rests in temperature bins for approximately eight hours. Wheat must be tempered or conditioned to prepare it properly for efficient milling. There must be just enough moisture added to condition the endosperm for milling and to toughen the branny coat for grinding.

**Roll Stands.** After the wheat has been washed, it moves to the roller mills where the grinding operation begins. The rolls are corrugated and furnished with large rolling pins. They revolve in opposite directions at varying rates of speed.

**Sifters.** After the wheat is thus ground the first time, commonly called the break, the next step is a sifting operation. This machine contains 10 sieves, some of which are covered with silk while others are covered with wire. The purpose of this operation is to classify the material for further processing.

**Silks.** Some of this expensive bolting (sifting) silk such as is used in the milling of flour is so fine that it contains about 16,000 meshes to the square inch. Some silk is 11 times finer than the finest silk hose. Hundreds of yards of silk are used each year in the sifting process.

**Purifiers.** Further classification of the millings is accomplished by a purifier machine. Strong, controlled air currents in the purifier permit the removal of small undesirable particles from the endosperm which are objectionable in the milling process.



Shown here during a demonstration at International's Detroit, Michigan, mill are a bulk truck, Airlide car and portable transfer device. These are the three principal units that contribute to International's efficiency and flexibility in bulk flour handling and transportation.

**Bran Dusters.** Before the by-products of the grain are directed to the feed bins, they are given a thorough brushing in these bran dusters where remaining particles of endosperm are removed.

**Enrichment.** Enrichment, as you know, adds certain B vitamins; namely, thiamin, riboflavin, and niacin as well as the food mineral, iron. In 1941 enrichment was chosen as the most economical way to improve diets without changing food preferences and habits.

**Laboratory.** Before the finished semolina or durum flour is shipped, it is tested in the plant laboratory. The samples are then forwarded to our main laboratory for further testing.

**Packing and Loading.** From loading bins, the finished product is loaded into bulk cars or packed in bags. From the packer, bags are loaded into boxcars for final delivery to you.

With an understanding of our mutual problems, and continued cooperation, it is the durum mill's desire to supply you with the most uniform quality and most economical product.

### Ronco Plans New Plant—

(Continued from page 19)

The Porta-Bin system was designed by the Hoskins Company. Flotronics, Inc. of Minneapolis will be the primary contractor for the Porta-Bin system. They have been licensed to distribute the Porta-Bin system throughout the United States.

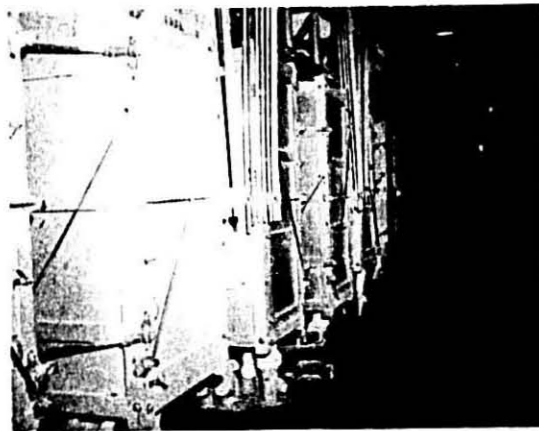
William Hoskins stated recently "The approach to the design of this new plant at Memphis has been very sound. We feel that Mr. Robilio is one of the most capable operations men in the business. Ample time has been allowed for planning, and the whole project has gone forward in a logical, orderly fashion, starting with the initial survey of equipment and facilities and carrying on through to the hiring of contractors, and actual construction. This should be an excellent plant."

It is expected that the new plant will be in operation about the first of 1962.

### Egg Processing Report

Production of liquid egg and liquid egg products (ingredients added) during May totaled 99,107,000 pounds, compared with 100,549,000 in May 1960 and the 1955-59 average of 93,781,000 pounds. The quantities used for immediate consumption and freezing were smaller than a year earlier. The quantity used for drying was considerably larger.

Liquid egg used for immediate con-



Shifters shake the flour with a good right will. Portion for flour gets more grinding.



Sam Kuhl, chemist, runs tests with ro-top filter for granulation. Constant surveillance of the milling process is maintained.

## WAY BACK WHEN

### 40 Years Ago

• The Fordney Bill, supposedly a "protective tariff" on all imported macaroni products and the Underwood Act was viewed by the industry as a joke. This act "a tariff for revenue only" bill, provided an import duty of one cent a pound on macaroni, which would be increased one-half cent a pound and calling it "protective."

• At the Tariff and Cost Conference the following figures were given for the cost of producing 100 pounds of macaroni in the United States: Bulk—\$9.9107, divided as follows: material, \$6.3148; labor, \$1.1241; sundry materials, \$1.0370; overhead, \$1.4348. Package—\$13.2560; material, \$6.7041; labor \$1.5544; sundry materials, \$2.7318; overhead, \$2.2657.

• According to the trade press the good news for the macaroni manufacturer is that the slump in the industry has struck bottom and that recovery will be faster than the industry thought.

• A general decrease in exportation of macaroni products resulted in 69,070 pounds exported for eleven months ending in May. Goods imported has shown a steady increase with 81,404 pounds imported compared to 35,237 pounds in 1920.

### 30 Years Ago

• Mr. Robert B. Brown, Fortune-Zeega Macaroni Company, Chicago, Walter F. Villaume of Minnesota Macaroni Company, St. Paul and R. V. Golden, West Virginia Macaroni Company, Clarksburg, West Virginia, were appointed to the Board of Directors of the National Macaroni Manufacturers Association.

• Mrs. A. Dietrich of St. Louis won \$500 as the first prize in the contest staged by the Nation-Wide Service Grocers of St. Louis. The prize winning recipe was called Checker Spaghetti.

• American Beauty Macaroni Company tied up with the National Macaroni Publicity Campaign by personalizing the "Energy Trio" and giving them the names of "Macaroni Mac," "Spaghetti Joe," and "Egg Noodle Nell." They were used to announce a \$500 letter contest for boys and girls 12 years or younger.

• The 1931 durum wheat crop will be even smaller than estimated by the government which was 32,220,000 bushels. The 1930 yield was recorded at 55,665,000 bushels.

### 20 Years Ago

• Manufacturers of macaroni products are in a quandary as to just what to do about enrichment of their products. Millers and bakers have gone "hook, line and sinker" for "enriched" products.

• Kurtz Brothers, Inc., Philadelphia, was destroyed by fire and the firm estimates the loss at more than \$300,000.

• When the Italian consuls sailed back to Italy they carried along with them 300 pounds of spaghetti. It seems that, with a Mussolini decree limiting the wheat content of spaghetti in Italy, the stuff they get over there now can't compare with the kind we can make in the United States.

• The spaghetti bar at the World's Fair served 200 pounds of spaghetti daily. At the end of a year 450,000 guests had been served spaghetti. This rambling bar was established to introduce Americans to an Italian spaghetti firm then 113 years old on the Continent and moving to the United States.

• Fire, caused by an overheated motor, caused damage at two macaroni plants. W. Boehm Macaroni-Noodle Factory, Pittsburgh, received damages estimated at \$35,000, and the A. Russo & Sons Macaroni Company, Cleveland, had damages estimated at \$1,500.

### 10 Years Ago

• Macaroni Week means more sales dollars, the lead story in the Journal said. Plans to promote the event were to be heralded by gummed stickers while shelf talkers were to aid merchandising.

• Food Values of Macaroni Products were reported in a digest from the American Medical Association publication "Accepted Foods and Their Nutritional Significance" and "Nutritional Data" from the Heinz nutritional research division of the Mellon Institute.

• Macaroni Institute accomplishments were reported at the convention by Gerald T. Lynn of Theodore R. Sills & Company. He said approximately 352 recipes, photographs and stories had been sent out during the twelve months ending June 1 and that more than 5,500,000 lines of publicity on macaroni, spaghetti and egg noodles had appeared in upward of 8,000 papers.

• Viviano's "Zoo-Mac" went to a costume ball at the convention of the Advertising Federation of America held in St. Louis.

### CLASSIFIED ADVERTISING RATES

Display Advertising ..... Rates on Application  
Want Ads ..... .75 Cents per line

**FOR SALE**—Buhler Press, like new. Box 175, Macaroni Journal, Palatine, Ill.

**FOR SALE**—Ambrette Press with Spreader. Box 178, Macaroni Journal, Palatine, Ill. nois.

**FOR SALE**—Two Clermont automatic lines for long goods each one including press, spreader, continuous dryer, stick stripper and aluminum sticks. To be sold as two units or separately. Can be seen on application. Reply Box 180, Macaroni Journal, Palatine, Ill.

**FOR SALE**—Used Senzani Spaghetti Cutter. Box 181, Macaroni Journal, Palatine, Ill.

**WANTED**—One Egg Doser, complete with one stainless steel mixing tank equipped with double blade agitator and one stainless steel storage tank; also equipped with one centrifugal pump and one proportionate pump with graduated dial, plus necessary valves, fittings and dial. Box 182, Macaroni Journal, Palatine, Ill.

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### Pin Money

Pin money from eggs is a thing of the past for most housewives, the Wall Street Journal reports. About 20 years ago, more than 80 per cent of United States farms sold eggs, with the wives often handling the chore in return for personal spending money. Now production of about 4.5 billion dozen eggs a year is concentrated largely in big commercial ventures; more than two-thirds of all farms have no eggs for sale.

THE MACARONI JOURNAL

## How to make your macaroni and noodle products better

One word gives the answer—*enrichment!* Why does enrichment make them better? Because enriched foods are nutritionally more valuable. People want nutritious foods. Enrichment makes food more nutritious. You should make your products more nutritious by enriching them. Qualified authorities—physicians, nutritionists, dietitians—support enrichment.

### 'ROCHE' SQUARE ENRICHMENT WAFERS for batch mixing

1 wafer, to 100 lbs. of semolina, disintegrated in a small amount of water and thoroughly mixed in your dough, gives a macaroni or noodle product fully meeting the minimum FDA requirements (per lb.—4 mg. vitamin B<sub>1</sub>, 1.7 mg. vitamin B<sub>2</sub>, 27 mg. niacin, 13 mg. iron). Only Roche makes SQUARE enrichment wafers designed for easier, accurate measuring and to mix in solution within seconds.



### ENRICHMENT PREMIX CONTAINING 'ROCHE' VITAMINS

for mechanical feeding with any continuous press



1 ounce of this powdered concentrate added to 100 lbs. of semolina enriches to the same levels as above. We have helpful information on available mechanical feeders.

**ROCHE**® *Fine Chemicals Division*

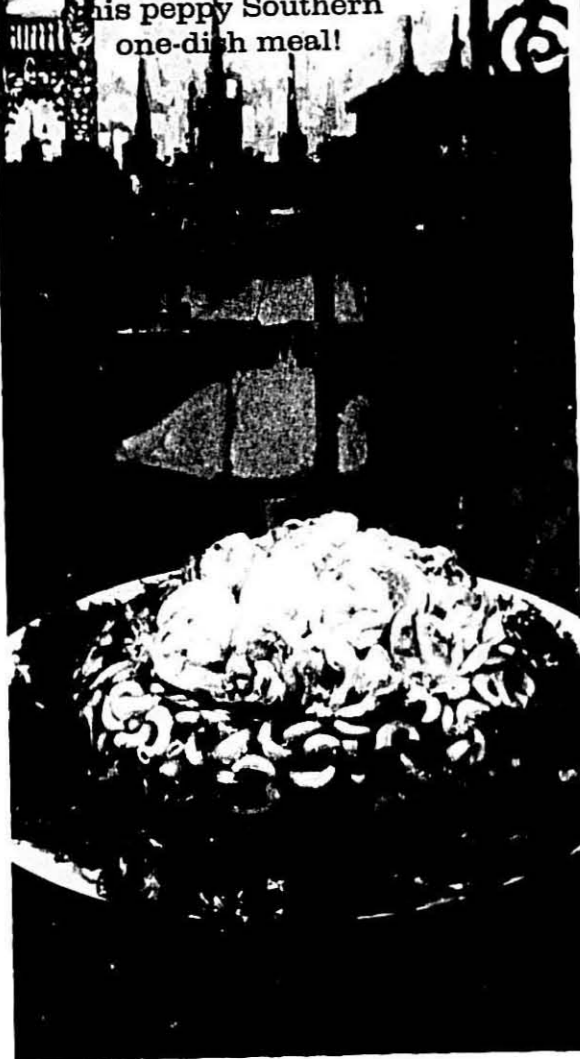
HOFFMANN-LA ROCHE INC., NUTLEY 10, NEW JERSEY

ENRICHMENT WAFERS AND PREMIX DISTRIBUTED AND SERVICED BY WALLACE & TIERNAN CO., INC., BELLEVILLE 9, N. J.

# MACARONI USA

## Betty Crocker Presents Creole Macaroni Ring

Deliciously cool on a  
warm summer night,  
this peppy Southern  
one-dish meal!



### CREOLE MACARONI RING

1 pkg. (3 oz.) lemon-flavored gelatin	$\frac{1}{2}$ tsp. salt
$\frac{1}{4}$ cups hot water	dash of pepper
1 can (8 oz.) tomato sauce	1 pkg. (7 to 8 oz.) macaroni (elbow or small shells)
1 tbsp. vinegar	$\frac{1}{2}$ cup each green pepper, diced, and stuffed olives, sliced
few drops each Worcestershire sauce and Tabasco	$\frac{1}{4}$ cup chopped onion

Dissolve gelatin in hot water. Add tomato sauce, vinegar, salt, Worcestershire, Tabasco and pepper. Chill. While gelatin is setting up cook macaroni, following manufacturer's directions and drain. Rinse with cold running water.

When gelatin has thickened slightly, add rest of ingredients and blend well. Pour into a 9" ring mold. Chill thoroughly until gelatin is set. To serve, unmold Creole Macaroni Ring on large serving plate. Line center with lettuce cups and fill with Shrimp Salad (recipe below). 6 servings.

#### Shrimp Salad

2 cans (5 oz. each) shrimp	4 hard-cooked eggs, cut up
$\frac{1}{2}$ lb. fresh shrimp, cooked	2 tbsp. lemon juice
$\frac{1}{2}$ cups sliced celery	$\frac{1}{2}$ to $\frac{3}{4}$ cup mayonnaise

Combine cleaned and cooked shrimp, celery, eggs and lemon juice. Chill. Just before serving, fold in mayonnaise.

#### Success tips:

1. Macaroni is best when slightly chewy, do not overcook.
2. To unmold macaroni ring—tip mold to let air in at one side; loosen with spatula thrust around edge, turn upside down on plate.
3. Do not combine mayonnaise and shrimp until serving time.
4. Celery that is "thinly" sliced is more attractive than larger slices.

A delicious macaroni aspic ring mold surrounding fresh shrimp salad nested in lettuce cups

Once again, General Mills and Betty Crocker offer you and your customers a great new salad creation... this time tuned to the Southern taste. We do this, in support of the National Macaroni Institute's "A Salute to the 50 States." Creole Macaroni Ring has met the exacting standards of taste-testing in the Betty Crocker Kitchens and in typical homes in the South. It, too, will be another savory example of how your customers can serve macaroni products easily, imaginatively, deliciously.

As a leading producer of the finest Semolina and Durum flours, it is a pleasure to serve the macaroni industry. Look for more recipes from Betty Crocker in our Macaroni U.S.A. program to help you increase your profits through the broadened use of your products.

For more information on this new Betty Crocker recipe program ask your Durum Sales representative or write:

**DURUM SALES**  
MINNEAPOLIS 26, MINNESOTA

