

THE SPICE MILL
on the MARSH

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BY
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Privately Printed
Pneumatic Scale Corporation, Ltd.
Norfolk Downs, Mass.
MCMXXV

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Lincoln & Smith Press, Boston

DEDICATION

*We are indebted to Mrs. Adeline Frances (Slade) Fitz,
daughter of David Slade,
for much of the historical
data in this story.*

PNEUMATIC SCALE
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HENRY SLADE

THE SPICE MILL *on the* MARSH

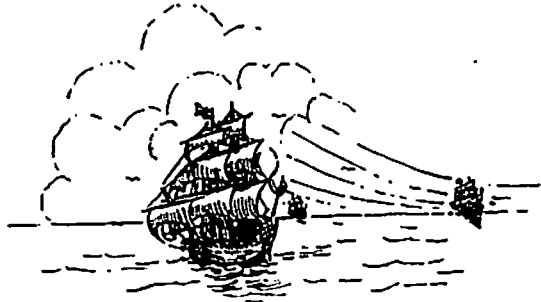
BEHIND that row of orderly little boxes of spices on your pantry shelf stretches a strange and romantic story.

Since the dawn of history, spices have been mentioned as one of the world's choicest possessions. They formed a part of the tribute paid by the Queen of Sheba to King Solomon. The Three Wise Men came from the East bearing gifts of gold, frankincense, myrrh and spices to the manger of the Christ Child in Bethlehem.

Christopher Columbus stumbled

upon America in an endeavor to find a new trade route to bring spices from India.

Spices were used not only to stim-



ulate jaded appetites, but their sweet, pungent odor made them useful as medicine, and as deodorants in an age that knew little of the antiseptic qualities of soap and water.

From the colorful shores of the

Mediterranean of the Middle Ages to the wind-swept tide marshes of the New England Coast during the Colonial days is a long stretch. Yet it was here in an old Massachusetts mill that the most interesting step in the general household distribution of spices began.

Little has been written of the old mills built along our rocky coast during the pioneer days. There are books on Colonial furniture, plate and architecture, but the struggles and achievements of the Colonial miller have remained unsung. From the outset, the early colonists began harnessing the little rivers that tumbled

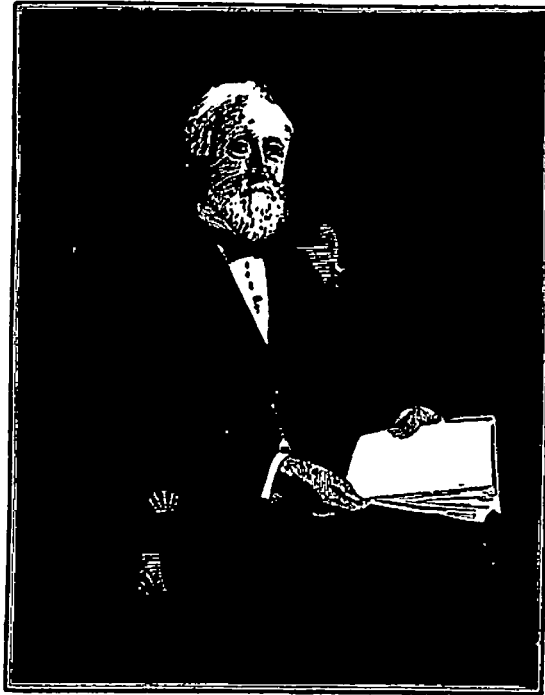
into the sea to grind their grain, and in some cases used the force of the tides to turn their wheels.

How much the early settlers depended on these mills is clearly shown by a petition of two hundred inhabitants of Medford, Malden, Woburn and Rumney Marsh, drawn about 1733 protesting that "They had been greatly damnified by reason of a certain break lying open in Spot Pond Dam in Stoneham Whereby the subscribers have been great sufferers and do still suffer for want of improvement of the benefits of said Mill."

In 1721, the people of Rumney

Marsh (then a part of Boston but now the City of Chelsea) petitioned the selectmen for the right to build a tide mill in Rumney Marsh. The selectmen of Boston after viewing the site granted the petition provided that "They or the undertakers of said mill indemnify the town of Boston from any damage done by setting up dams or any other works belonging to the mill or any property or lands either above or below the place assigned for the mill."

The first mill was not built until 1734—originally called "The Mill" but later to be known as "Slade's Mill." A part interest in the mill was



DAVID SLADE
*Founder of D. & L. Slade Co.
Born 1819. Died 1912.*

sold just prior to 1793 for "six hundred pounds sterling and fifty Spanish milled dollars."

Except for interruptions by fire, a tide mill on this site has been in operation for nearly two hundred years, the oldest tide mill in point of continuous operation in America, if not in the world.

In 1816, after what appears to have been a disastrous fire, the town petitioned the General Court for permission to rebuild the dam across the tidewater creek on the site of the old mill. The old owners were bought out for two hundred pounds sterling and a new tide mill was erected on

the spot which has been in continuous operation ever since.

X Originally planned to be a grist mill, the charter even today states that the mill must at all times hold itself in readiness to grind corn for any citizen of Chelsea provided only that the corn is raised in the Town of Chelsea.

In 1827 a share in the mill property passed into the hands of Henry Slade. Under his management the mill began to grind snuff as well as corn.

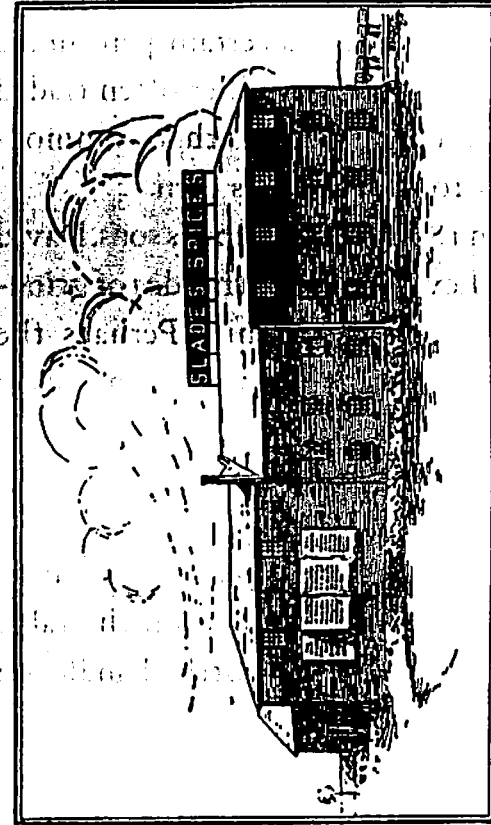
Around the mill was a growing settlement now called Chelsea, a forerunner of the modern New England mill town, with its tall chimneys,

and its busy streets filled with the argot of many alien tongues. The town of Chelsea originally consisted of four farms. The first of these to be sold was bought by Henry Slade — the Williams Farm on the water front — where he erected the first church, the first bank and later the first City Hall.

How different it was a hundred years ago when Henry Slade was running his mill! A vivid picture of the life of the times has come down through his sons and grandsons to us. How on Sunday morning the old chaise with the white mare carried the mill owner and his family to the Park Street Church which he had

built, where David pitched the tunes for the congregation on his flute and his wife led the choir. Of the little hand-ferry that used to cross the river before the bridge was built and the horses had to swim across in the wake of the ferry. How quilting parties, husking bees and sleigh rides were the only entertainments to break into the hard, stern routine of making a living out of the meager facilities at hand.

The mill in the early days was a sort of a clearing house, where the farmer transacted much of his business. There he brought grain to be ground, paying for the service a



The Spice Mill on the Marrib

millers' "dole"—a certain percentage of the grist. The miller often traded tobacco, wool and other commodities for the farmer's corn.

In 1837 two of Henry's sons, David and Levi, conceived the idea of grinding spice in the mill. Perhaps the trade in snuff was growing slack or competition was too keen. Up to this time spice had been sold to the housewife whole, and each home had to have its hand grinder. Pepper seeds were ground on the table in casters with a little handle on the top.

The boys ground up a half barrel of cinnamon, slung the barrel be-



The boys trudged off across the marshes

tween two poles and trudged off across the marshes to Boston with it. The cinnamon was soon sold to local grocers and a new industry was born—the business of spice grinding.

David, though still in his teens, had all the instincts of a Captain of Industry. One year his father turned the mill over to him and young David made a profit of \$500 in a twelve-month.

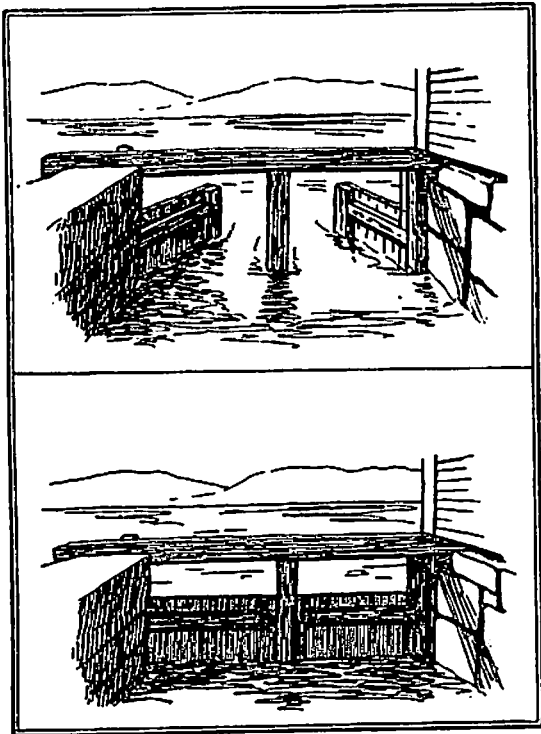
In great alarm the father hastily took the business back again. The youngster was getting rich too fast!

Nevertheless the experiment in spice grinding was too successful to be sidetracked. David took his broth-

er in with him and under the name of D. & L. Slade began the great business which today, nearly a hundred years later, is still being carried on by David's grandsons.

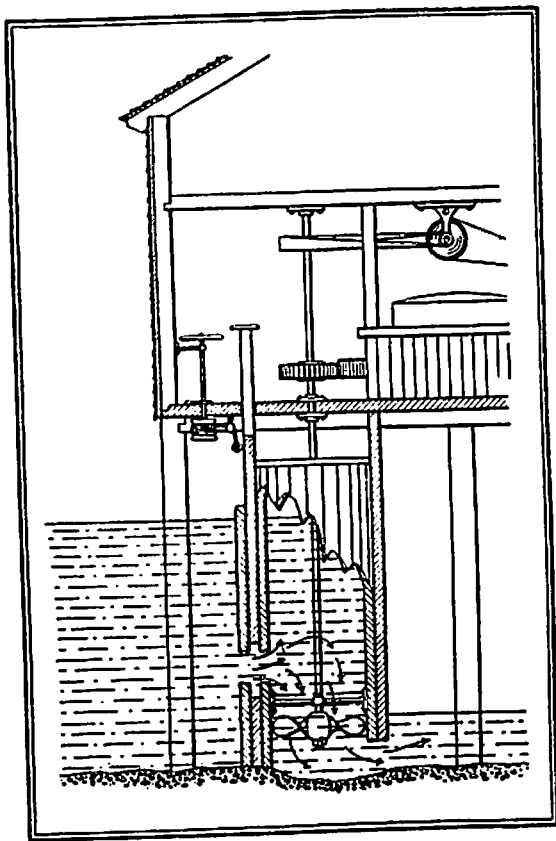
While many changes have occurred, the spice mill still stands in the same spot on the edge of the marshes under the shadow of the Old Powder Horn Hill in Chelsea.

Beneath its time-stained beams lie huge crates and bundles of spices from the far corners of the world—cinnamon bark from Java and Ceylon, paprika from Spain, pepper and nutmegs from the East Indies, cloves from Penang and Zanzibar, ginger



*Upper picture shows the incoming tide opening
the sluice gates*

*Lower picture shows the tide on the ebb closing
the gates*



Showing how the tide machinery operates

from Jamaica and the Orient. From the steaming heat of the tropics these cargoes have come to be ground and prepared for your table in prosaic New England.

Inside of the Slade Mill the air is golden brown with the finest dust from countless grindings of pure spices. Over it all hangs the sweet, clean, pungent odor of cinnamon, of thyme and nutmeg, redolent of the atmosphere of lands of color and romance.

While more than half of the mill is now equipped with modern electrically driven machines, it is in the tide-driven machinery that interest naturally centers, because here, in all

probability, are the oldest tidewater machines, on a large scale, still being operated every day in America, if not in the whole world. Electricity as a motive power has increased the efficiency at the expense of the romance because the power from tides alone is intermittent, averaging only about six to seven hours in every twelve.

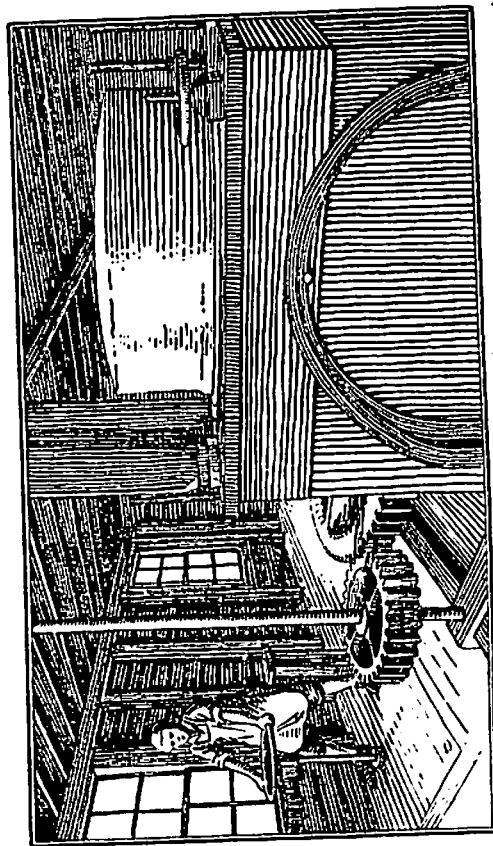
The machinery for harnessing the tide, though simple, is very ingenious.

The old dam spans a tidewater creek and makes an artificial pond for storage of water. In the dam is a sluiceway with gates hinged with great round wooden dowels. As the

tide comes in the pressure of the water opens the gates. Then when the tide turns and the current catches the gates on the other side, they are forced shut and hold the flood tide in the pond.

With this head of water averaging from eight to ten feet, depending on the course of the tide, three of the grinding machines in the Slade Mills are operated.

When the tide begins to ebb and the water recedes below the dam, gates are opened in the mill and water from the pond starts to flow into round cylinders, about six feet in diameter, set upright. In each cylinder



Opening the sluiceway to start the wooden cog-wheels that operate the 1800-pound grindstone. This machinery is still running today.

or barrel is a shaft with pitched blades on the lower end, very much like the blades of a propeller. The current of water falling on the blades starts the shaft rotating.

On the upper end of each shaft is a great gear wheel with wooden cogs, connecting with the shafting, that turns the grinding mills.

One of the old grinding wheels still remains in use—a great round stone that weighs eighteen hundred pounds. No one knows just how old this stone is—it has “always been there.” Day in and day out the old stone turns, slowly and methodically, grinding its daily quota of spice.

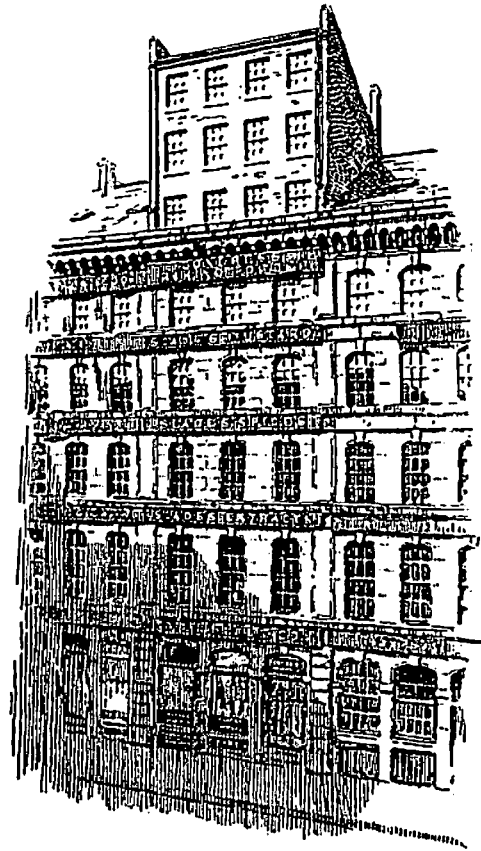
“Though the mills of God grind slowly
Yet they grind exceeding small;
Though with patience He stands waiting
With exactness grinds He all.”

Standing beside this machinery, much of it built before the days of steel, your mind goes back instinctively to generations of stout millers whose brawny arms have turned cumbersome wheels that start the water flowing through the sluices. You recall cold winter nights when they stood drenched in icy water waiting for the tide to turn, with their feet frozen in their shoes. You see the strips of dried beef hanging from the rafters from which they snatched a brief meal at intervals

during the long watches of the night. Or again you picture the coming of spring with the sluiceway crammed with alewives fighting their way against the current to their spawning beds in the marshes above the dam. A story of iron men and wooden machinery doing an honest day's work that we, a hundred years later, might live in greater comfort and ease.

Side by side with the old tide driven machines stand modern electrically driven machines with their polished steel grinding wheels whirring at high speed.

On the top floors the great bundles



Boston office and packing plant of D. & L. Slade Co.

of fragrant spices are broken open and fed into chutes to the grinders. First of all the spice passes through magnetized steel plates to take out all foreign matter. And a motley collection these magnets gather—bits of steel, nails, wire, and so forth. New England habits of cleanliness do not pervade the Orient to any great extent.

After passing the magnets and a sieve the spice goes through two sets of grinding rolls which pulverize it to fine powder. Then this powder is picked up in endless chains of buckets and carried back to the top floor for resifting and loading into barrels pre-

paratory to being sent to the packing plants in Boston.

So far we have followed the making of spice in the bulk. What housewife today would buy spices by the pound for her small kitchen! If we were dependent on the paper bag for a carrier and the wooden scoop and the open barrel of the old time grocer for our supply of spices, limited indeed would be our use for many of the savory seasonings we know today.

The modern package has made possible the wide distribution and use of pure spices of all kinds. The neat sift-proof package with its identifying label has replaced the unsightly

leaky paper bag whose contents were only recognizable by the sense of smell.

In the great plant in Boston the work of packing Slade's spices for the market is taken up by several batteries of Pneumatic Scale Corporation machines. All the work the two Slade boys did so laboriously years ago by hand is now done on these wonderful machines in a fraction of the time without a hand touching package or contents from start to finish.

What a saving in cost this means to the consumer, we know from the old record books of the D. & L. Slade Company kept by Mr. David Slade in

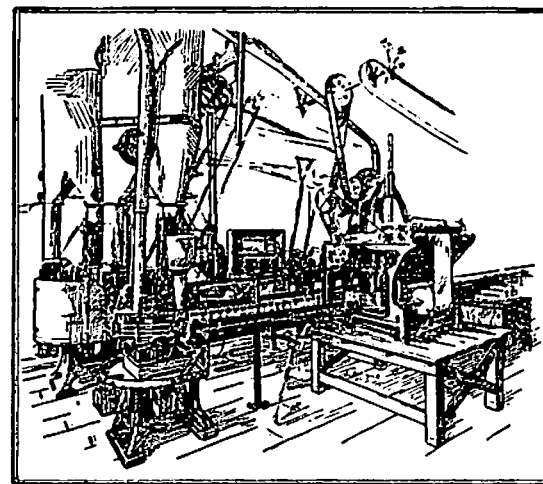
his old fashioned, neat handwriting seventy odd years ago. The present-day housewife would be appalled at the cost of her month's supply of pepper for instance, as compared with what she pays now.

As you watch one of these fascinating packaging machines at work you have to remind yourself again and again that it is not human and that it has no brain to guide it.

From a stack at one end, the flat cartons are fed in an endless stream and carried from flat pieces of cardboard to complete packages full of spice. Mechanical fingers open the carton, seal and gum the bottoms, line

the box with paper cut and shaped to fit, and pass the package along beneath great hoppers filled with spice. Automatically these hoppers open and the spice pours into the waiting cartons weighing exactly the right quantity for each. Then the packages pass on, being joggled to make the contents lie even, to be picked up again by these uncanny metal fingers which seal the tops down securely. Then the packages pass on to the shipping bench under pressure until the glue is set, to be packed in containers ready for their journey to the grocery store.

In an endless orderly row they pass



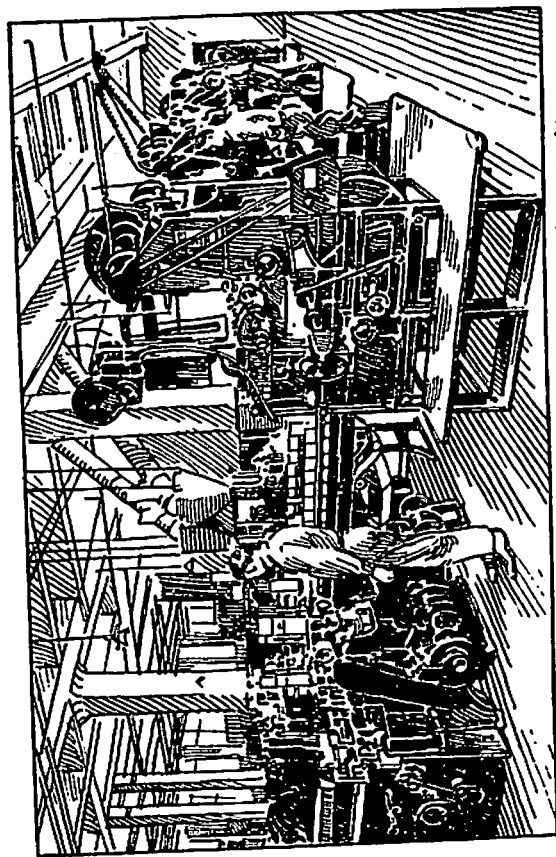
One of the first Pneumatic Machines made for the D. & L. Slade Co. in 1909, which still turns out its daily quota of 14,000 packages

like toy soldiers before your eyes — thousands upon thousands every day. No human hand is there to guide them on their journey — it is all

automatic from beginning to end.

Near this latest type of Pneumatic Machine stands one of the first installations ever made by the Pneumatic Scale Corporation. Some of the look of newness has worn off but it is still turning out its daily quota of 14,000 packages just as steadily and regularly as it has done ever since it was set up. There is an affectionate gleam in the eyes of the superintendent when he puts his hand on it and says, "She goes just as good as she ever did."

It is an old American tradition that there are only three generations "from shirt sleeves back to shirt



The Modern Pneumatic Filling, Weighing and Sealing Machines

sleeves again." The D. & L. Slade Company is one of the remarkable exceptions to the old rule, for the company is now being managed by two great grandsons of Henry Slade and the ownership has passed on through the family by inheritance.

The Pneumatic Scale Corporation is proud of the part its machines have played in making possible the present Slade Spice packages which have enabled the energetic managers of that business to extend their field of operations far beyond the narrow borders that limited the activities of their grandfathers and great grandfather.

Because of the economies effected in packing, spices are now a common household necessity. No longer are they counted as the choicest possession of the wealthy alone. No longer are spices used as medicines and deodorants, and yet it is interesting to know that men who live long lives in a spice laden atmosphere have very little sickness. Henry Slade lived to a ripe old age and David was ninety-two when he died—so perhaps after all there is something in the ancient theory that spices have a beneficial effect on the health as well as the appetite of the human race.