To the Honourable, the Judges of the Court of General Sessions of the peace, Now Seting at George Town, in and for the County of Sussex and State of Delaware, the day of 1802.

The Petition of Sundry Inhabitants of Cedar Creek and Mis-=pillion hundred in the County of Sussex Aforesaid and Rest

Humbly Sheweth.

That Whereas, Nathan Willey an Inhabitant of Cedar Creek hundred in the County of Sussex Aforesaid; Hath at a large Exspence Erected, and Just finished, a Compleat Gift Mill, on one of the Mane Branches of Mispillion Creek, Commonly Called and Known by the Name of Bowman's Branch.

And Whereas the present existing Obstructions and Im-=pediments Relative to Roads or Pathways to and from Said Mill, Renders Intercourse Verry troublesome and disadvantagious to the Citizens of the Neighbourhood thereof

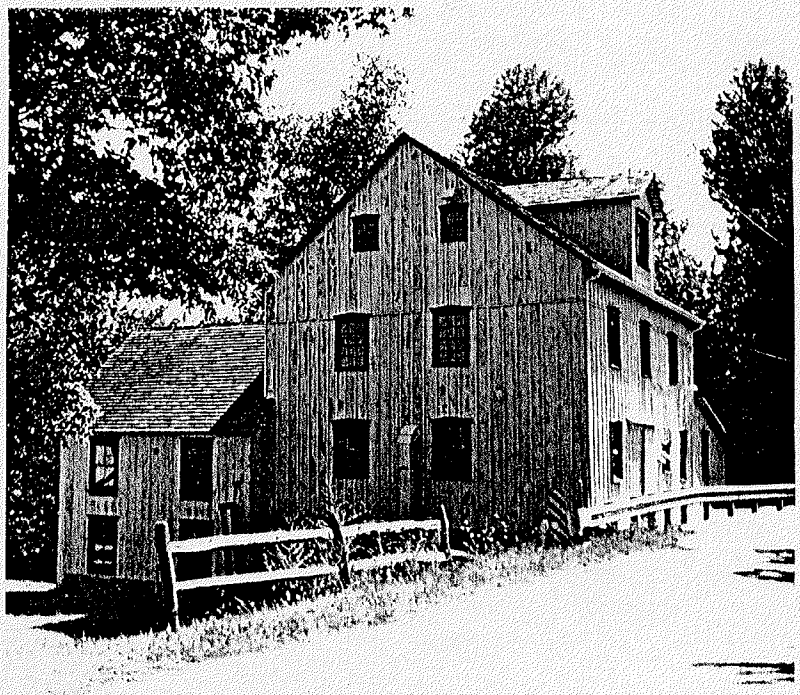
And Whereas it is thought Indespensibly Necessary that a Road Should be layed Out, to Begin on the Northermost Side of Curtis Hayes Plantation where Charles Cary now lives, and in the Old Road Leading from Tuspoky Branch to the fork Landing, and to Extend from thence Acros the Lands of your Petitioner, to the Said Mill, thence over the dam thereof, and thence Acros the Land and through the Inclosure of Levin Poynter to a line of Pemberton Carlisles Land, and thence there=-with to the Aforesaid Road leading from Tuspoky Branch to the fork=-Landing.

Therefore your Petitioner pray that Your Honourable Court, would be pleased to Nominate and Appoint, five Lawful Men of the County of Sussex Aforesaid, to Go upon, View, and lay Out a Road in or Near the direction above described, if to them the Same may Appear Expedient, And Your Petitioner as in duty Bound will Ever pray.

Nathan Willey Jr

John Richards
Levin Poynter
Isaac Rigys Se
Isaac Hammond
Pemberton Carlisle

MARKING AND PRESERVATION



OF HISTORIC SITE

Abbott's Mill

THE

FIRST STATE

CELEBRATES

THE TWELFTH ANNIVERSARY

OF THE

DELAWARE STATE SOCIETY

AND THE

STATE PRESIDENT'S PROJECT

COLONIAL DAMES XVII CENTURY

17 OCTOBER 1998

Mrs. Harry A. Donovan
State President

Ms. Harline Dennison
State First Vice-President

INTRODUCTION

The Delaware State Society Colonial Dames XVII Century celebrates its twelfth Anniversary in this year of 1998. Also, our State President, Mrs. Harry A. Donovan, has selected Abbott's Mill as her Project.

One of the stated objects of the Society is to aid in the preservation of the historic sites of our country. Therefore, the Delaware State Society feels fitting to join in this celebration by marking Abbott's Mill.

PROGRAM
HISTORICAL MARKER DEDICATION
ABBOTT'S MILL
MILFORD' DELAWARE
OCTOBER 17, 1998

INVOCATION
Mrs. James Tribbitt
Chaplain, Delaware State Society
Colonial Dames XVII C

WELCOME
Russell McCabe
Administrator of Delaware Historical Markers

RESPONSE
Mrs. Harry A. Donovan
President, Delaware State Society
Colonial Dames XVII C

INTRODUCTION OF HONORED GUESTS
Mrs. Harry A. Donovan

UNVEILING OF MARKER
Russell McCabe

HISTORICAL ADDRESS
Russell McCabe

DEDICATION
Mrs. Harry A. Donovan

SCRIPTURE READING
Mrs. J. Paul Phillips
Past President, Del. State Society
Colonial Dames XVII C

BENEDICTION
Mrs. James Tribbitt

SPECIAL THANKS

To Russell McCabe for his expertise and assistance in coordinating the dedication of Abbott's Mill.

To Representative George Carey from Legislative Hall for his assistance with helping us to obtain this marker.

To John Frazer, Office of Controller; Legislative Hall.

To Mike Riska, Executive Director, Delaware Nature Center

To Peter Flint, President, Delaware Nature Society

To Laurieann Phalen, Associate Director Abbott's Mill

Program prepared by
Mrs. Harry A. Donovan

IB-III.D1

THE ABBOTT'S MILL STORY

Compiled by: Nancy Ballinger Goggin

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Early man was primarily a hunter who augmented his diet with wild foods and seeds. He discovered that if he planted the seeds he gathered he could harvest and store them more safely against the time when wild game was scarce. Cereal grains when kept dry retain their nutritive value and as an energy source rank among the highest of all foods. These two facts led man to form the habits, develop the arts, and organize the societies which made possible a year round supply of grain food in a palatable form. It was the solving of these difficult problems that set the pace of human development and advancement as well as established the patterns of human life.

Early tools of the trade dating back to 75,000 years ago were simple, roundish stones that could be held in the palm of the hand. Through a back and forth, up and down, or roundabout motion, the grains could be reduced and separated from their outer coverings. Advancement to more sophisticated tools was a slow process at best, but one that ultimately allowed man to control his enviroment to a larger degree. The greatest amount of control occurred in areas of agriculture. Man, through cultivation, produced varities of wheat, barley and rye all suitable to the making of bread. The treatment of the various cereal grains differed to some degree, but fundamentally they all were grown and ground by the same methods and tools.

Different civilizations reflected various degrees of technology. For instance, a Mediterranean culture that existed before Christ utilized rotary motion which was quite simply the revolving of an upper stone against a stationary bottom one. This early hand-powered milling structure was known as a "quern" and its use spread throughout Europe and most of the rest of the world, remaining in use, in some isolated areas, even to this day (Howell & Keller, 1977). See Figure 1 for illustration.

By 85 B.C., the Greeks had turned to water for power and were responsible for designing a structure known as the horizontal mill. It was easy to construct and operate and was efficient enough for small family purposes. Made almost entirely of wood, it consisted of a wheel or hub, a shaft and two stones, the top one turned and the bottom one remained stationary. The power of the water hitting the wheel turned the shaft which turned the stone which ground the grain. The Romans adopted the horizontal mill from the Greeks but were dissatisfied with its degree of efficiency. They improved and eventually replaced the horizontal design with one that was vertical. This improved structure utilized a vertical water wheel that was fastened to a horizontal drive shaft which through a series of gears transmitted the necessary power to turn the stone. This milling structure was the forerunner of all mills that followed and endured as the most common for centuries (Howell & Keller, 1977).

From the early Roman days to the arrival of the first settlers in North America, the technological concept of the vertical mill changed very little, but the social importance of milling rose

dramatically in Europe, where it became a capital asset and an integral ingredient of the social order. This trend continued and advanced along with the subsequent spread of civilizations. Early colonists of America soon recognized the unlimited possibilities that the abundance of timber and the presence of countless streams presented. The first water-powered mill in America was erected in 1634 at Dorchester in New England and though the information concerning the number of mills that existed in the later seventeenth and eighteenth centuries is scarce, we know that they must have totaled somewhere in the thousands (Kuhlmann, 1929). Most of them were grist and flour mills. Grist mills were those mills used for the grinding of grain, principally wheat or corn and were usually small custom mills which ground the farmer's grain for a fixed toll. The others were flour mills which were usually built by colonist leaders to fulfill a public need. Some of them survive to this day, others were too crudely constructed to last. Those remnants that remain indicate that the structures of early American mills were of the vertical type, but ones that were slightly altered. For example, the water wheels used to power the mills were of three main types, the overshot, the breastshot and the undershot, the names indicating the point at which the water made contact. Figures 2, 3 and 4 illustrate their design. The overshot wheels were the most efficient type in terms of power. The wheel turned counterclockwise by the weight of the water falling on the paddles or into buckets from above. Overshot wheels were employed where head waters were over 10 feet high. Breastshot water wheels, most commonly used for head waters of 6 to 10 feet, received the water near the center and when properly constructed were popular and relatively efficient. For low head waters, undershot wheels were employed. They were the least efficient in terms of power and were entirely dependent upon the amount of water available. Various kinds of wood were used in construction of these wheels. Oak was popular and plentiful, pine of certain types was found to be fairly long lasting, but cypress was perhaps the best rot-resisting wood discovered for water wheel construction. Exposure to water, ice, snow, and sun, however, shortened the active life of the wood and repairs were frequently necessary. Early mills were constructed in or around water when possible and the design was such that each water wheel drove a single pair of stones. This was achieved by installing gears whose purpose was to transfer the direction of the drive from horizontal to vertical and to increase the speed of the millstones as opposed to the slower motion of the water wheel. Most of the gears were constructed of oak and as one broke or wore, another could be carved and wedged in its place.

The quality of flour was only as good as the quality of the milling equipment. This was especially true in the case of the millstones. Their one and only function was to grind grain and millers soon realized that to produce quality flour their stones had to be of equal quality. English settlers in the New World naturally favored stones from their homeland, but the best millers knew there were few stones superior to those made in France. The French burr

(bhur) stone was the best and most popular stone ever discovered for grinding wheat into white flour. It was a fresh water quartz quarried principally at La Ferté-sous-Jouarre near the town of Châlons in the Marne Valley in northern France (Howell & Keller, 1977). The actual millstones were a conglomerate of separate pieces or burrs. They produced a white flour from wheat because their extremely hard surfaces were far less abrasive than any other stone used at the time. Abrasive stones tended to shred the outer part of the grain of wheat known as bran into powder. This powdered bran was responsible for making the flour dark in color rather than white. The French burrs were also highly porous and could be worked for a long time without being refaced or redressed. The number of burrs needed to make a single millstone were imported to America where they were fitted and cemented together, then bound with iron hoops and backed with plaster. The stones varied in size, the average being four feet in diameter. Some were up to six feet wide and weighed more than a ton (Zimiles, 1973).

Both the upper stone, called the runner, and the lower stone, called the bed or nether, had to be furrowed or cut. The layout of furrows was called the "dress" and was generally of two patterns, "sickle" and "quarter." See Figure 5 for illustration. Furrows were cut on the bottom of the runner and on top of the nether; it was imperative that the faces be identical for several reasons. First, the furrows function was to create a positive shearing action whereby the kernels of grain were separated from their husks. Secondly, the furrows channeled the ground flour away from the center of the stones to their circumferences. Thirdly, they admitted enough air to pass through the stones so as to carry out the heat generated by friction during the grinding. The uncut areas of the stones called "lands" did the actual grinding of the kernels into flour.

A heavy wooden crane equipped with a large pair of iron tongs or "bails" was always stationed near the millstones. This apparatus was used to lift and turn the runner so that recutting and sharpening could take place. The bottom stone could be worked on in place. The process of redressing a stone was a long and tedious one requiring a great amount of skill. Tools made of cast iron and steel known as "mill bills" or "mill picks" were used to reshape and resharpen the stones surface. This process of redressing was important because dull stones tended to grind coarse, cakey flour which hastened fermentation. Distances between the two stones could be minutely adjusted and the degree of difference was dependent on the type of grain to be ground. The stones had to be perfectly balanced for if they touched during grinding, the grain would be ruined and so would the precious stones. The most immediate danger was sparking. Flour dust being of organic matter was highly flammable and a single spark could cause an explosion.

The stones were housed in a "vat" made 2 to 4 inches wider than the diameter of the stones. They were constructed of soft woods such as white pine or poplar. On top of the vat was a wooden

hopper, a four-sided tapering chute placed above and to the side of the "eye" or hole in the top of the runner. The grain fell through the hopper into a narrow wooden trough or "shoe" which hung loosely over the eye so that it could be gently tapped to feed the grain to the stones in a slow, steady flow. A short wooden shaft called the "damsel" was attached to the bottom of the hopper. The action of the damsel hitting the shoe was responsible for the ceaseless chatter one heard as they approached the mill. After the grain passed between the stones, it dropped down a spout to a lower floor where it was stored in sacks or bins. Figure 6 illustrates the individual components of a pair of millstones.

Importing stones to America was an expensive proposition so colonists scoured the land for stones suitable to their needs. Valuable sandstone quarries were located in areas of New York, Conneticut, Pennsylvania and North Carolina and it can be noted that most of the millstones found today are those produced from such quarries (Zimiles, 1973).

Figure 7 illustrates in detail the simplicity of the early vertical mills found in America, but don't let the simplicity fool you. What is indicated here is an accumulation of technical and mechanical progress encompassing a phenomenal amount of time, from the earliest days of primitive man to those of early American colonists. This progress is worthy of notation because its profound effects were responsible for shaping man's social development as well.

If we were to retrace our steps we would note that the first social pattern to arise resulted from man's ever increasing need for food. Originally, he was a meat eater, eventually he became a food gatherer and finally he developed into a food cultivator. It was through the cultivation of grains that early man established the basis upon which later civilizations survived. A second social pattern is evidenced by early Bible scripture which states that laws governing societies were centered around the making of bread, for the Law of Moses provided "no man shall take the nether or the upper millstone to pledge; for he taketh a man's life to pledge" (Deuteronomy 24:6). A third social pattern arose during the Greek and Roman eras where for the first time the making of bread became big business, a professional activity located not in the home but in an independent industrial establishment (Storck & Teague, 1952). All three of these patterns formulated the basic foundation upon which any and all subsequent behaviors developed.

Up to this point we have discussed to a small degree the fundamental habits, social patterns, and structures associated with man and the making of bread. The settling of America, however is where we see the most noticeable changes occurring in the milling process and all the factors associated with it. In the earlier days, most of the mills were small community mills which operated on a toll system, that is the miller took his pay or tool in a portion of the grain brought to him for grinding. The miller,

in turn, could grind his toll receipts for his own use and for sale to those of the community who did not raise their own grain. With further settlement and increased population growth, these small mills were hard pressed to keep up. Additional mills were built and existing ones were enlarged to no avail. Necessity forced changes at an amazing rate and it was these changes that were responsible for initiating what became known as the great "Industrial Revolution". An individual instrumental in advancing milling technology during this era was Oliver Evans who was born near Newport, Delaware in 1755. He was apprenticed to a millwright at the age of sixteen and during this time he noticed that most mills were needlessly dirty and wasteful both of goods and labor, while producing a flour of varying quality (Storck & Teague, 1952). His subsequent attempts to redesign and improve the milling process are manifested in one of his most noted literary works, The Young Mill Wright and Miller's Guide where Evans introduces for the first time the concept of a fully automatic mill. His illustrations denote such improvements as elevators, horizontal conveyors and moveable spouts. His ideas, however, were unfamiliar, hard to grasp and at first totally unacceptable. The complexity of his designs are immediately apparent in Figure 8 which is a schematic design he arranged to illustrate his improvements. Evan's mechanization of milling, however unacceptable, did arrive at a critical moment in American history. As new regions in the West opened up, wheat became the first surplus crop of nearly every pioneer settlement. To accomodate the influx, large cities such as New York City developed international trade with foreign countries and it is at this point that America began her debute as the greatest food producing country in the world. It may also be noted that while the Middle West was becoming our grain empire, every phase of American milling was greatly improved except the fundamental operation of grinding. The reasons for such improvements were threefold: 1) the quantity of grain was increasing, 2) the types of grains were changing-new varieties replacing the old, and 3) the demand for better quality flour.

The need for improvements were precedented only by mans need to understand the very nature of the grain itself. Figure 9 illustrates the physical structure of a wheat berry and emphasizes the components necessary to the making of quality flour. The nature of this particular grain is such that the same varieties of wheat will vary considerably in size, color and consistency from season to season, district to district. It is a small nut-like seed scarcely more than a quarter of an inch long, with a troublesome beard at one end. The germ is the center most part from which new life is generated. It contains a vitamin rich oil which has an unfavorable effect on the color, baking quality and preservation of flour. The germ is surrounded by the endosperm, a nutritious conglomerate of starch cells and fibrous coatings. These starch cells, if broken during the grinding process, contribute to chemical reactions that weaken the flour. The wall of aleurone cells contains protein which if broken, sap the baking strength of the flour. Finally, the entire berry is covered by a coating known as bran which is easily shattered during grinding. Once it

is shattered, it can not be separated from the flour and if present affects the color and baking quality. Mans struggle to separate this small yet complex berry into its principal parts was intensified further by the fact that the berry is deeply folded in on itself along its entire length.. These folds allow for the collection of dirt and other impurities which again if not removed contaminate the flour.

One can readily see that the task of planning and designing a mill whose equipment would produce a quality grade flour from such an obnoxious grain was a formidable one. Man, however, met the challenge head-on. The first improvements were made in the area of cleaning. Wheat was often mixed with various kinds of seeds when collected and man soon realized that it would behoove him to remove these impurities, lest the quality of his flour be impaired. Air was used extensively along with screens or sieves to free the wheat berry from dirt and other associated materials. Brushes were incorporated in the basic design of the machine to rid the wheat of the troublesome beard, leaving the berry intact and glistening in appearance. This early nineteenth century machine was known as a separator and/or scourer whose basic design has changed very little. Figure 10 illustrates one such machine. One facet of the cleaning process that was later refined dealt with the exhaust air. Most of the earlier machines exhausted the dust-laden air into an out-of-the-way room where it was allowed to settle. It was thought that any valuable flour lost in the process could be retrieved in this manner. Later machines allowed for the disposal of exhaust air outside the milling structure.

Another area of noticeable improvements was the cleaning of the flour. Early mill-powered cylindrical bolters or polygonal reels were commonly used for flour separations. The bolters were large sack-like machines whose capacity for an equal cloth area was from ¼ to 1/3 that of the flat sifters which later replaced them. The reels were quite popular and remain in general use to the present day in some mills. With reels, separations were made by centrifugal force and the tumbling action of the machine often caused the bran to be broken into dust which could not be separated from the flour. The result was a flour that looked dark and speckled and had to be classified as off-grade.

A hybrid of both the reel and the bolter was introduced as the "Inter-Elevator" reel whose design was such that it rotated faster, was fitted inside with lifters which distributed the material over a larger surface area and whose action was much gentler than its former prototypes (Halliwell, 1904). Figure 11 illustrates this particular type of machine. Regardless of the design, the reel was incapable of producing a fine quality flour separation. Thus, another inovative machine was introduced known as the flat sifter whose attributes were many. It required 1/3 less power than the reel, less than 1/5 the floor space and would produce one to two pounds more flour from each bushel of grain whose quality was worth 5 to 15 cents more per barrel. A barrel was equivalent to 196 pounds of flour. Figure 12 illustrates the most popular type of sifter, the "Gyrator". This machine was simply constructed

and for the most part was self-contained. Figure 13 illustrates the internal construction and arrangement of the sieves. The sieve frames were divided into small squares, each one had its own cloth cleaner actuated by the motion of the machine. Note the movement of the flour as it is divided. Wool, linen and horsehair were the first materials used in the bolters, but silk was more reliable and could be woven into cloth with different sized openings to sift varying grades of flour. Silk, however, had one drawback. Mositure absorbed from the air caused it to become taut; lack of moisture caused it to grow too slack. The solution was an American invention, nylon. Nylon maintained its tautness with little change and lasted three times longer than natural silk. It is important to remember that the machines mentioned up to this point are basically early 19th century models. Most of them changed very little after the 1930's, and it can be noted that most of the machines mentioned and illustrated will be those most often found in any mill structure fortunate enough to remain intact today. Deviations do exist and were usually installed as a matter of personal preference by the miller.

The quality of flour vastly improved as a result of mans efforts to improve the cleaning and separating processes, but he still was not totally satisfied. It wasn't until much later that he realized that the grinding process needed improvement as well. Improvements in this area were hindered largely because of the importance placed on the millstones. They were an artistic symbol, products of skilled selection and construction. They were made of matched pieces of carefully chosen stones of exactly the right texture and surface, they were dressed with extreme care and were run in equilibrium at well-determined speeds. The millers reluctance to accept a roller-type system in place of millstones was due largely to his loyalty to this trusted device. However, progress will be progress and eventually most millers came to realize that the roller systems was advantageous to the making of quality flour. The rollers were made of several different types of materials to include unglazed porcelain and corrugated cast iron. They were housed in a wooden structure and most often powered by belts and pulleys. They could be set to arrange a gradual series of breaks or reductions of the grain into its principal parts. It was through the roller system that man achieved the greatest extraction of flour per bushel of grain and it is here that a new era begins. Figure 14 and 15 illustrate the rollers and the wooden structure in which they were housed. The fact that the process at this point is completely mechanized and automatic, that rollers are used to the exclusion of the historic millstones and that the process adheres to the gradual-reduction principle, whereby the stock flows through a planned sequence of operations giving individual treatment to the intermediate products at each stage and to turn out a large percentage of quality grade flour, gives it the right to be called "modern" and distinguishes it from all milling processes of the past (Storck & Teague, 1952, pg. 241).

This new era of advancement was largely responsible for the demise of most small custom mills which were replaced with large merchant types whose ultimate goals were to produce on a large scale. Those few that remained intact and operational were found in out of the way areas supporting small towns and communities. They were versatile, grinding both flour and feed for animals and often assumed the name of the owner and were usually associated with tales of ghosts and personalities of the past.

These small mills were also the scene of social activities whereby families combined work with pleasure. Bringing the grain to the mill was a weekly event, where local news and gossip was exchanged.

Abbott's Mill, located on Road 620 about two miles southwest of Milford, Delaware is one of many small custom mills that managed to remain in tact and operational as late as 1963 when it was sold to Howard and Frances Killen of Milford. Shortly thereafter, it was sold to the State of Delaware (Board of Game and Fish Commissioners). It was listed on the National Register of Historic Places in 1972 and subsequently restored by the Division of Historical and Cultural Affairs to its 1920 appearance. The grounds are currently leased by the Delaware Nature Education Society where many educational activities are offered throughout the year.

Abbott's Mill is situated in Sussex County (Cedar Creek Hundred) on a stream called Johnson's Branch or Bowman's Branch, a Mispillion tributary. It is one of seven man-made millponds located in or near Milford noted for the production of fine grade flour and cornmeal. The origin of Abbott's Mill dates back as early as 1795 (see Title Search). It is a four level wooden structure with several wings of undetermined age. Achitectural detail does indicate that the present mill building is an expanded version of a much older and more basic type gristmill, one typical of the Early Colonists period illustrated on page 21 . The mill houses a large inventory of equipment, most of which dates back to the early 19th century. Originally, the mill was powered by a wooden water wheel, probably an overshot type, which was later replaced by a water turbine. The last miller, Ainsworth Abbott, is attributed to making most of the improvements. There is little doubt that he was a skilled millwright, his buckwheat flour and cornmeal were unsurpassed. He delivered flour weekly to areas as far reaching as Vernon and Georgetown. His business was basically a one man operation, but it was often said that his wife was responsible for keeping the mill "clean enough to eat off the floor". At times a helper was hired to make deliveries.

Abbott could produce approximately 10 to 12 barrels of flour per day with the equipment presently found in the mill. He also shelled, cracked and graded untold amounts of corn as well as ground feed for cattle, poultry and hogs. Very little was wasted. Abbott's technique involved what is known as "the 3 break method", a break being just one reduction phase of the

wheat berry. Some mills had as many as 6 to 8 breaks; the object being to reduce the grain as gradually as possible, yet obtain maximum separation. Figure 16 illustrates the percentage breakdown of a 4 break mill. This would of course vary according to the type and quality of equipment being used. A mill capable of producing 20 barrels of flour per day could not expect more than 60 to 65% success in extracting a fine grade flour, 17 to 20% would be Bran, while 7.3 to 10% would probably be middlings. Maximum extraction would only be 72% fine grade flour, 28% being used for animal feed (Storck & Teague, 1952).

The rear entrance to the mill which faces due north, allows access to the basement floor level. A Fairbanks, Morse and Co. Disel Engine is situated immediately to the right upon entering the rear door. It is a 20 horsepower, 350 RPM style H engine, serial number 366247. These types of engines offered the most economical force of power for operating a mill. Any style, F thru M, whether used for driving generating equipment or for direct-connection loads provided power units of unusual effeciency and reliability. Those few moving parts are enclosed and pressure lubricated. Starting is accomplished by compressed air. This machine has hotpoint ignition and pitcher pump cooling. The time period for this type machine is the early 1920's and 30's.

A frequent visitor to the mill is quoted as saying "Ainsworth fired the old disel maybe twice". However few times it was actually needed is irrevelant, his sole purpose for installing it was to guarantee power to run the mill when and if water levels dropped too low to provide the necessary power. When the disel was installed a hole had to be opened in the brick wall approximately 15 feet in front of it in order to allow access to the pulleys. A huge leather belt was stretched from the engine to a large cast iron pully which was connected in series to three other pullys. All power needed to run the cast iron shaft which connected the pulleys was derived from the water turbine, located in the mill stream, to the far left of the mill. These water turbines were designed in the early 19th century to replace the old wooden type water wheel. They were constructed of heavy iron and their design was such that water is admitted through a series of fixed guide vanes which allows for reverse direction of rotation of the water in the motor (example: whirlwind). Two cogwheels, housed in a large wooden frame and located to the extreme left of the pulleys were also run by the turbine. These cogwheels provided the power to run the millstones which are situated directly above them on the upper floor. Early cogwheels were constructed of hard woods mainly oak and persimmon and were pegged in a circular frame to correspond or mesh with a metal gear wheel.

The elevators located immediately behind the pulleys are the mainstay of the milling structure. It is through the elevators that grains can be channeled anywhere the miller desires. Figure 17 provides a cross sectional view of a basic type elevator. Looking at it from the side, note that the series of cups on the left are descenders, whereas the series of cups on the right are

ascenders. In other words, the cups on the right pick up grain fed to it by a spout, ascend upward to its destination, usually a storage bin. The cups relieved of their load make a turn at the top of the elevator and descend downward to the lower floors to pick up another load. A series of spouts are strategically located up and down the elevators to allow the miller to direct the grain to individual machines. (Think of the elevator as the trunk of a tree, the spouts its branches.)

The internal mechanism, aluminum cups attached to a cloth belt are housed within a wooden structure, those found in this mill were made by The Wolf Co. located in Chambersburg, Pa. The only other piece of equipment found on this level is an Imperial Wheat Scouring and Polishing Machine, serial number 561, size 00, speed 700 RPM. This particular machine was manufactured by The Wolf Co. prior to 1900.

The first floor level is accessed by a set of stairs which lead into a rather large room that Mr. Abbott used to store bagged grain, flour and feed. The front portion, that which faces the millpond, houses most of the equipment used by him. It is also the floor that underwent a major remodeling in 1905 and 1906. During this time I strongly believe the entire right section of the mill was added on to the existing brick foundation and rooms on the left which house the millstones. Along with the addition new equipment was added to include three Wolf Co. Single Roller Machines, serial numbers 11920, 11922, 11923, 11924, 11925, one Eureka Wheat Scourer and Polishing Machine, number 16, one Wolf Drop Gear Packer, number 724 and one DeCamp Speed Indicator. The Wolf Single Roller Mill is especially well adapted for cracking corn, grinding screenings and such cereals as make up the special brands of horse, cattle, hog and poultry feed. These machines are so constructed as to abundantly care for the grain as it comes to it from the scourer. The grinding adjustments are positive and the rolls retain their proper position whether grain is passing through or not. They are run by belts and pulleys. Most of the belting utilized by Mr. Abbott was manufactured by The Thermoid Rubber Conveyor Belt Co. located in Trenton, N.J.. The three roller machines are situated side by side, to enhance the gradual reduction process. Spouts leading from the rollers to the elevators, spouts descending from the upper floor and spouts leading to the receiving separator, all contribute to the confusion as to where the grain goes and where the grain comes from. Even Mr. Abbott needed reminding, for every elevator is marked with his familiar scrowl, 1st break, 2nd break, 3rd break, middlings, flour, etc.

The Eureka Wheat Scourer and Polisher, manufactured by S. Howes Co. Inc., Silver Creek, N.Y., sits just in back and to the right of the first roller. It is a horizontal type, heavy duty, dust proof, self-oiling bearings, excess ventilation, long wear scouring case, positive type adjustable beaters and comes equipped with shoe and scouring regulator control. The date of this particular model is 1937.

Directly to the left of the Eureka is the Pearl Drop Gear Packer, again made by The Wolf Co.. This model has center equalizing platform lift which eliminates friction; bevel gears with positive "throw-in" and quick release. This model packs barrels of any size from 12 to 196 pounds and sacks or bags ranging in capacity from 12 to 98 pounds.

The spouts feed the grain in all of its various stages to each machine in a constant, even flow. Their construction requires minute detail, for they must allow the stock to run freely, yet in the case of middlings and other stock, not too fast. Each spout section must be accessible to the mill operator. They must provide adequate loose covers and inspection holes and must allow free access to any and all machines by the operator. All spouting must be securely fastened to the building or to some machine unit and each section fastened, one to the other, so that there is no possibility of it becoming loosened from vibration or jarring. The angles of attachment must be exact to allow as little dust to escape as possible. All in all, they are an important aspect to consider when constructing any type of mill. Most of the spouts found in Abbott's Mill are made of yellow pine or popular, a few are aluminum. All of them have access holes referred to as "wickets" whose design is that of a tear drop. The one spout leading to the first roller from the scourer has a dual function, it allows stock to flow freely, yet it is equipped with "magnets" whose purpose is to extract pieces of wire, nails and other iron and steel particles which unaccountably find their way into the wheat. The magnets are horseshoe shaped and are inserted in this particular spout to prevent the debris from damaging the rollers during the first break. Directly in front of the third roller on the wall is a clock-like device referred to earlier as a DeCamp Speed Indicator manufactured by The Wolf Co., This device controls to a single revolution the exact speed at which a mill runs. If the speed increases or decreases, a bell rings, warning the operator.

The fact that all the equipment on this floor with the exception of the Eureka scourer, is manufactured by one company and dates back as early as 1900 further substantiates my earlier belief that the whole wing was not present prior to 1905.

The left wing, however, does indicate an older side to the mill structure, for it is here that we find the millstones, those ageless artifacts of yesteryear. The entire assembly, millstones, vat and feeder were manufactured by The B. F. Star Co., of Baltimore, Maryland. They are 36 inches in diameter and are constructed of pebble and grit, whose grinding ability is not equal to the French Burr, but whose price more than makes up for the difference. Mr. Abbott really had the best of two worlds, he could grind corn on the stones and wheat in the rollers all without adjusting and cleaning to prevent any cross-mixing. The stones were quarter dressed and it was said that Mr. Abbott rarely redressed his stones more than twice a year. Directly behind the stones are two feed grinders, one is a McCormick-Deering

type D, the other is an International Harvester. In front of the elevators is a Massey-Ferguson Corn Sheller, a perculiar machine because I could find little data pertaining to this model after 1900. I strongly believe this machine to be one of the original machines used in the earlier days of the mill. To the left of the sheller is a small room used by Mr. Abbott to store the corn cobs. To the immediate rear of this room is an open area where one can view the gear assembly that runs from the water turbine to the shaft in the basement to which the cogwheels and pulleys are attached. The wall between the two rooms supports four chutes which were labeled by Mr. Abbott to indicate the various grades of cracked corn. The spouts were operated by the miller via fancy handles attached by rope to the end of the spout. All he had to do was pull to open and pull to close. Simplicity and gravity are the millers best friends. Wooden doors were just as effective in shuting off the flow of grain to different areas. The second floor level is very different from the others in that there is little room to spare. Immediately to the left of the stairs is The Wolf Co. Gyrator, the workhorse of the mill. It was discussed earlier in greater detail, but its importance cannot be expressed enough. This serial numbered 240S, size 3-30 model was responsible for separating and reseparating the stock to obtain maximum extraction of flour. It was easily maintained, dependable and efficient. Surrounding the sifter are large storage bins, all with spouts running to various machines and floors. Situated to the far left is a conglomerate of assorted screens and sieves to which a fan assembly is attached. It is a Unique Cracked Corn Separator and Grader manufactured by the Robinson Co., located in Muncy, Pennsylvania. Again this is an older machine on which little data was found after 1900. Its function, however, was very simple, to crack and grade corn which then fell to its associated chute below and bagged according to the wishes of the buyer. The antique fan assembly separated and blew any debris outside the mill. The third floor is virtually empty of machinery. In the center of the floor is the Philadelphia Inter Elevator Flour Dresser, manufactured by Grisom and Company and McFeely. Again this machine was discussed earlier, but some added facts include a serial number 1202, size 2 and dimensions which are 5 feet high, 11 feet long and 33 inches wide. The only other machine found on this floor is in a separate room directly in front of the Dresser. It is a later model of the Unique Cracked Corn Separator and Grader. This machine is much more sophisticated than its counterpart on the lower floor. The stock on entering the machine falls on the top scalping sieve which is quite coarse and is for the purpose of removing whole grains, pieces of cob or any other material too coarse for the finished product. After being graded to a uniform size the stock falls on a middle sieve which allows the fine cracked corn to pass through while the coarse grade tails over and into the air chute. The material after passing through the middle sieve falls on the lower sieve which is for separating the fine cracked corn from the meal. The elevators and chutes to this machine were closed off during the restoration of the front of the mill. It is thought that Mr. Abbott added this machine to his repertoire to further improve

the refinement of his cornmeal. All the equipment on all the floors testify to the concentrated efforts of one man to preserve a part of America's heritage. His efforts have not been forgotten, for they have been rightfully preserved to enlighten future generations. His methods were simple but effective and few people have forgotten his contributions to the community in the form of cornmeal and buckwheat flour.

The simplicity of the milling process is enhanced by knowledge and with this in mind I have provided the necessary background in order to now outline the basic steps involved in the making of flour and cornmeal.

1. The grains, wheat and corn are brought to the mill and weighed. The farmer leaves with a predetermined amount of processed flour, the scale usually hung on a wall nearby, or he left with an "I owe you" to be delivered on such and such a day.

2. The corn was usually shelled first then dumped below and feed to an elevator which would carry it up to its respective storage bin. The wheat may or may not be sent to a scourer first depending on how dirty the grain was, where it was partially cleaned and then feed to its respective elevator which carried it up to the storage bins. Keep in mind that the grains were never mixed.

3. In the case of Abbott's Mill, the corn was then fed through the separator and grader and then on to the millstones to be ground. The wheat was sent to another scourer and polisher for the final cleaning and then on to the rollers where it was subjected to three breaks. Note: the millstones and the rollers are both equipped to handle the grinding of both grains. Mr. Abbott was fortunate enough to have both systems.

4. The corn after it has been ground falls below to another elevator which carries it up to be stored until cool when it is then further separated and graded to extract a quality cornmeal. The wheat goes through the first roller or break then up to the sifter where ultimate separation occurs. Parts such as the bran are sifted and carried to the bolter for a final separation. The bran is usually sold or given back to the farmer for his horses. The middlings are sent back down to undergo a second and third break. Remember, there is extraction of flour throughout all the breaks and separations. Those middlings from which all flour is extracted is usually used for the grinding of hog and cattle feed. The quality flour extracts are then sent to the bolter to further refine the separating process. Again keep in mind, this entire process could be changed to suit the needs of the grain being ground and the ultimate product desired by the miller.

4. (continued)
The finished product is then sent to the packer where it is bagged, tagged then delivered. All dust is removed by fans for the most part.

The milling industry of earlier years was effective largely due to the efforts of the miller to "make do" with what he had. This is not the case of the milling industry of today. Little or no time and money can be wasted, the special handling that a small custom mill provided is just not available anymore. Thus the cost of progress I guess.

The aged water-powered machinery and hand-hewn timbers are the supports upon which Abbott's Mill rests. However, it is the personality of Mr. Abbott and the remnants of his comings and goings that make Abbotts the living relic that it is.

The story of the milling industry, how it began and how it would end was of little importance to the locals of Sussex County who benefited from Abbott's Mill. As far as they were concerned, life could stand still if only for a while, in order to preserve this vital part of American past. In the minds of some of these people today remains the story of this one man and his lonely gristmill; his words and actions will never be forgotten. Thus it remains the job of all people today to seek the knowledge from our pasts and preserve it forever against the future. Many a story has been told in poem form, the following is my salute to them!

Thus, the story has been told
of an ole gristmill, musty and cold.
It stands so forlorn beside a millpond,
silently awaiting another day, another dawn.
The machinery sits idle and covered with dust,
where once upon a time it was do it or bust.
Gone but not forgotton are those ole stories of yore
neither were they fancy, neither would they bore.
With aged machinery and hand-hewn timbers for support,
stands the ole gristmill like a ship in port.
But even though the making of flour is a job well done,
the gamet of life the miller has run.
For the past is past, forever is no more,
Thus said the miller, as he closed and locked the door.

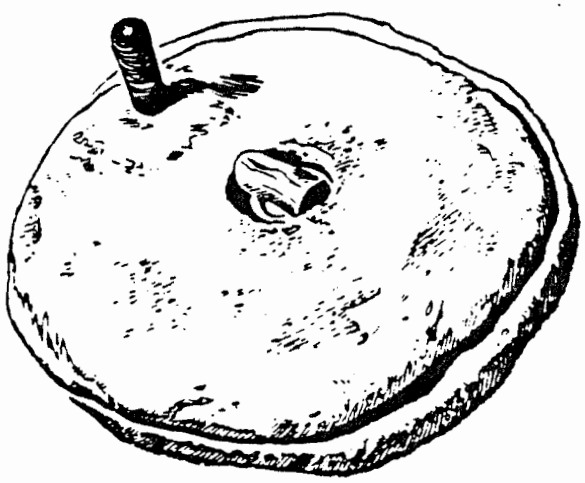


Figure I Quern

Rotary motion was used to grind grain in a Quern an early mill structure consisting of two circular flat stones, the upper rotated upon the lower stationary stone.

(Howell & Keeler, 1977. 19 p.)

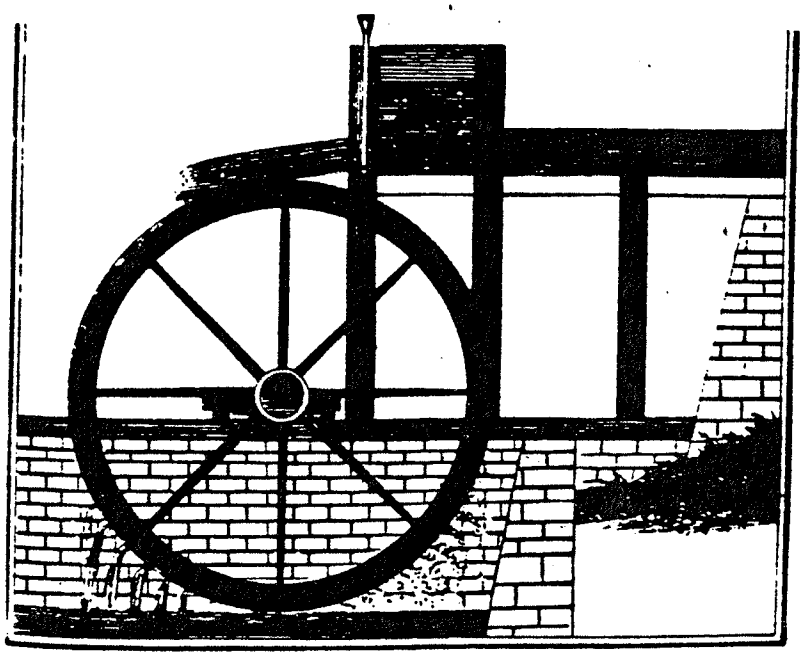


Figure 2 Overshot Wheel

An overshot wheel is powered by head waters striking the wheel just forward of its highest point.

(Howell & Keller, 1977. 36 p.)

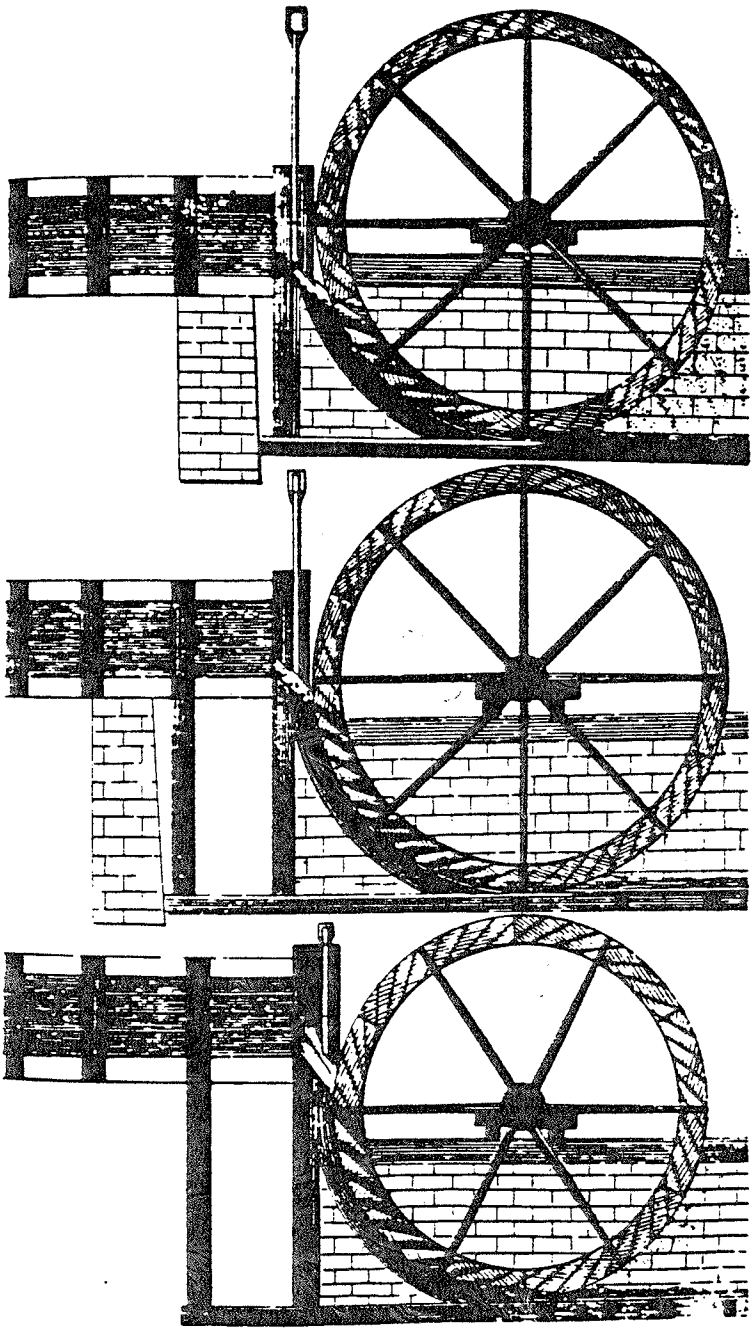


Figure 3 Breast shot wheel

This illustration, represents 3 types of breast shot wheels-from top to bottom, a low, middle, and high wheel.

(Howell & Keller, 1977. 40 p.)

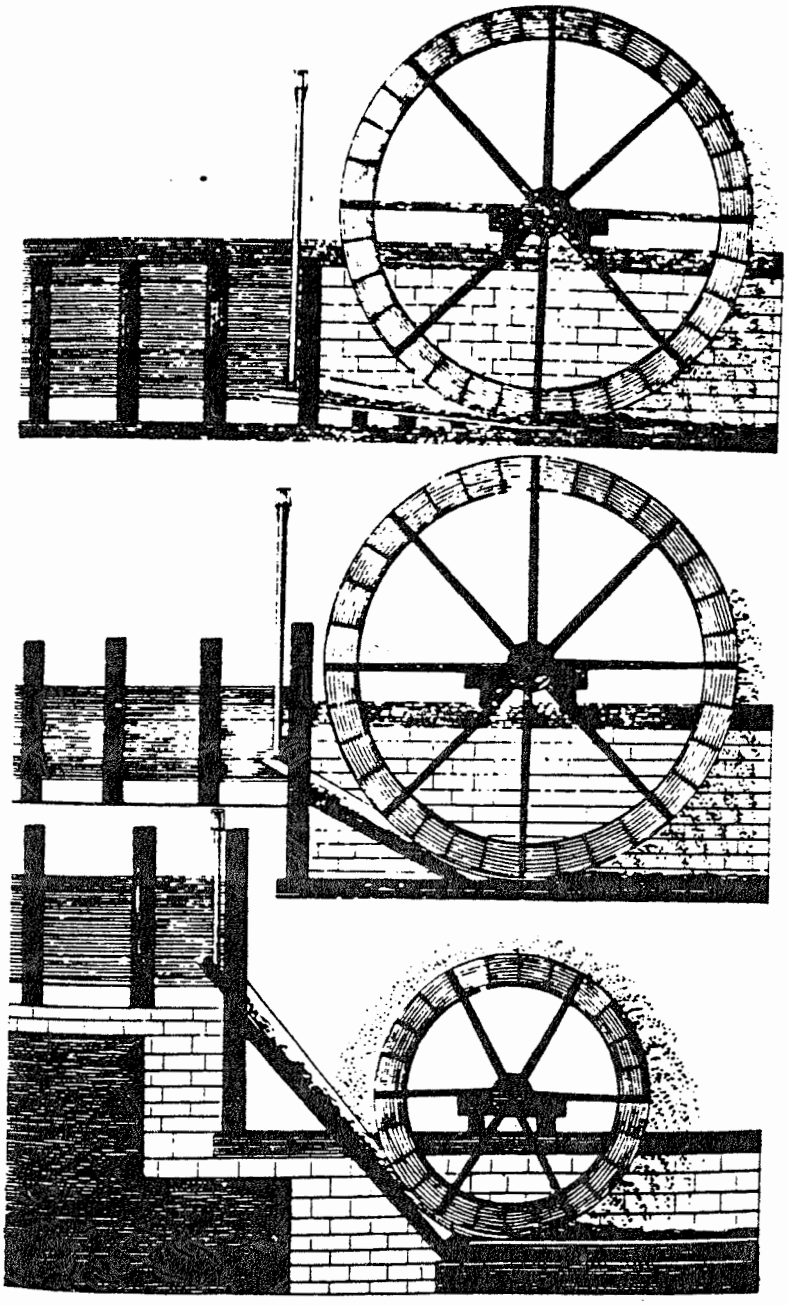


Figure 4 Undershot wheel

In an undershot wheel, water strikes the wheel near the bottom.

(Howell & Keeler, 1977. 43 p.)

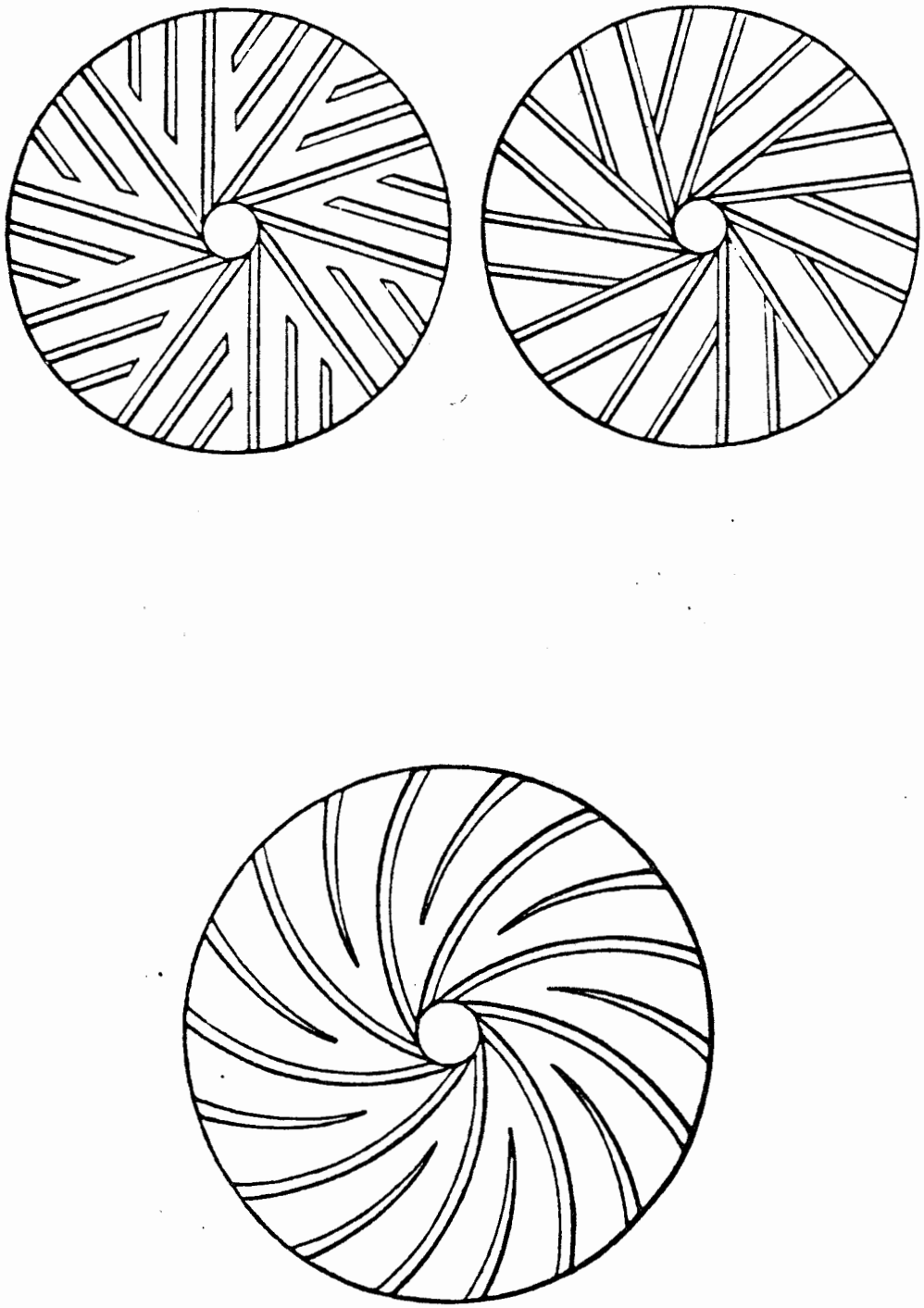


Figure 5 Millstone Press

— These illustrations depict the main types of millstone dress: "quarter" dress (above), and circular furrow or "sickle" dress (below.)

(Howell & Keller, 1977. 77 p.)

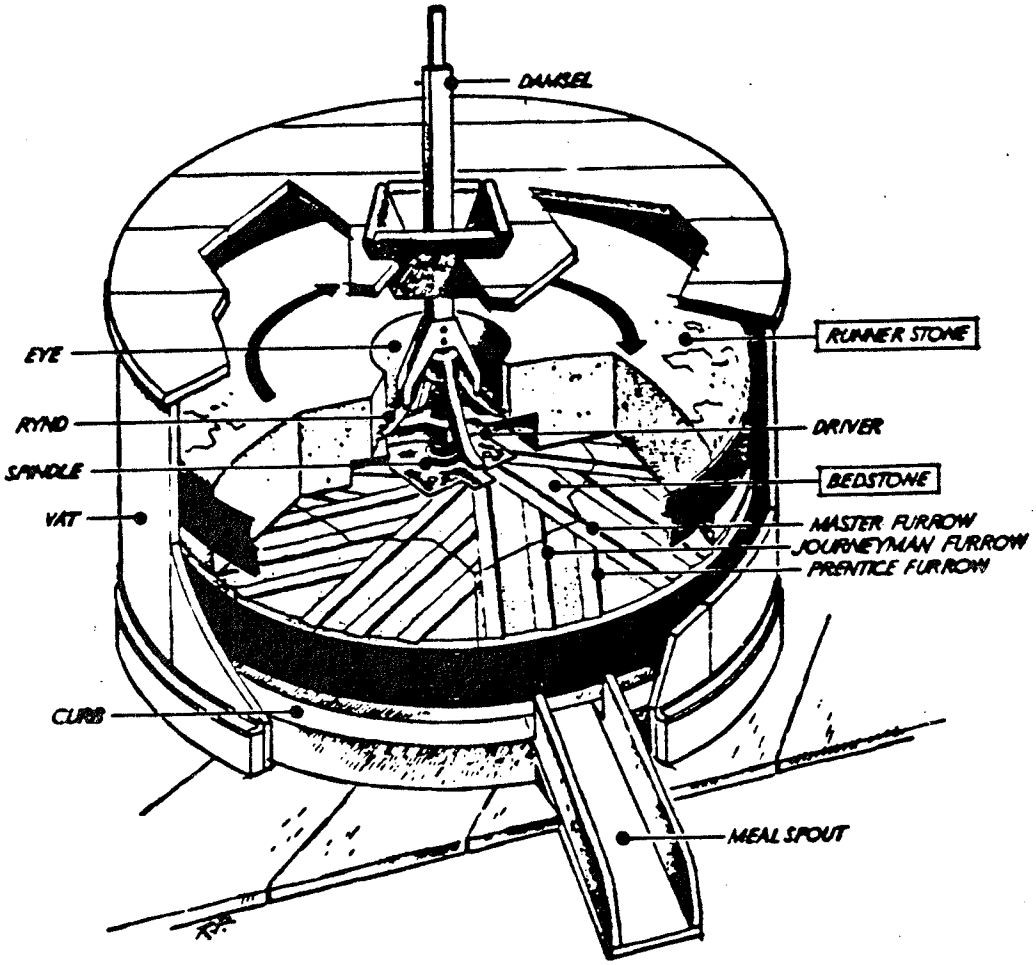


Figure 6 Cutaway drawing of millstones

This drawing shows the internal parts associated in the grinding assembly.

(Howell & Keller, 1977. 53p.)

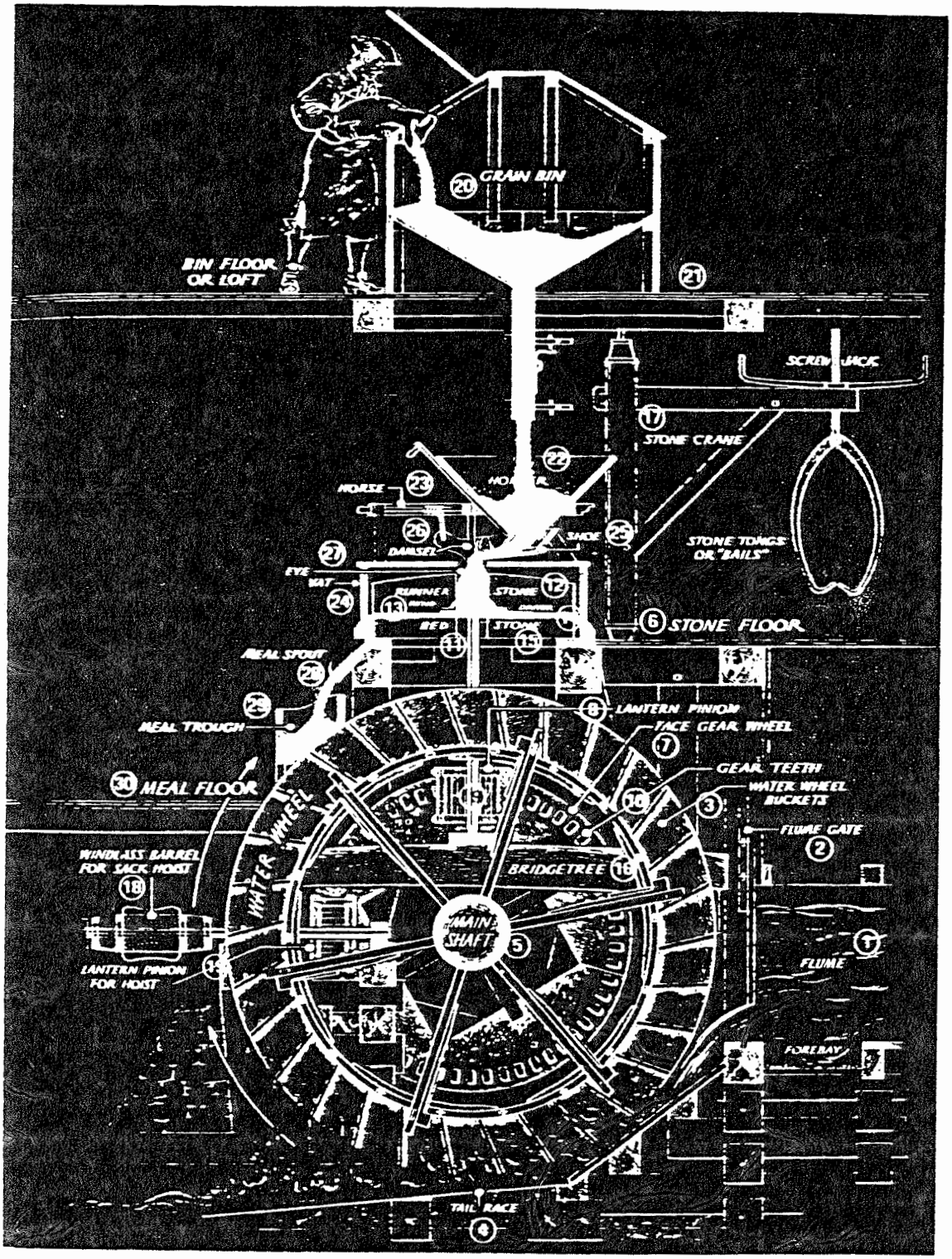


Figure 7 Cross section of an early American gristmill.

(Howell & Keller, 1977 55p.)

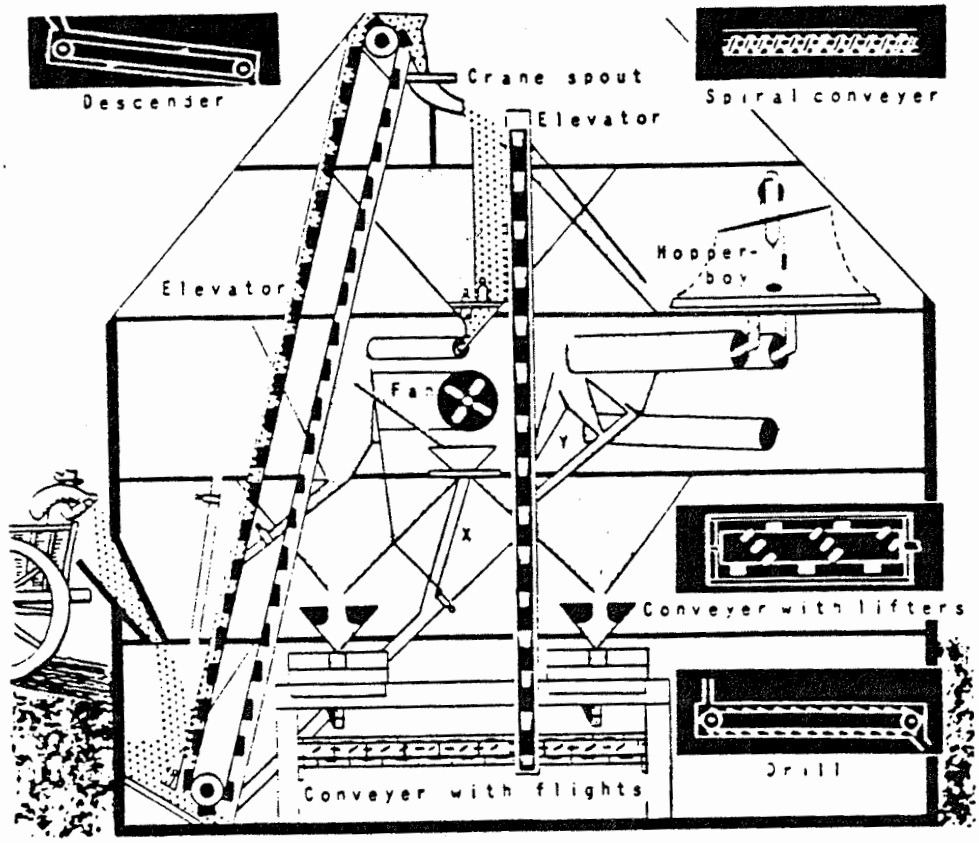


Figure 8 Evan's own schematic plan of his mill "improvements"

(Storck & Teague, 1952. 164p.)

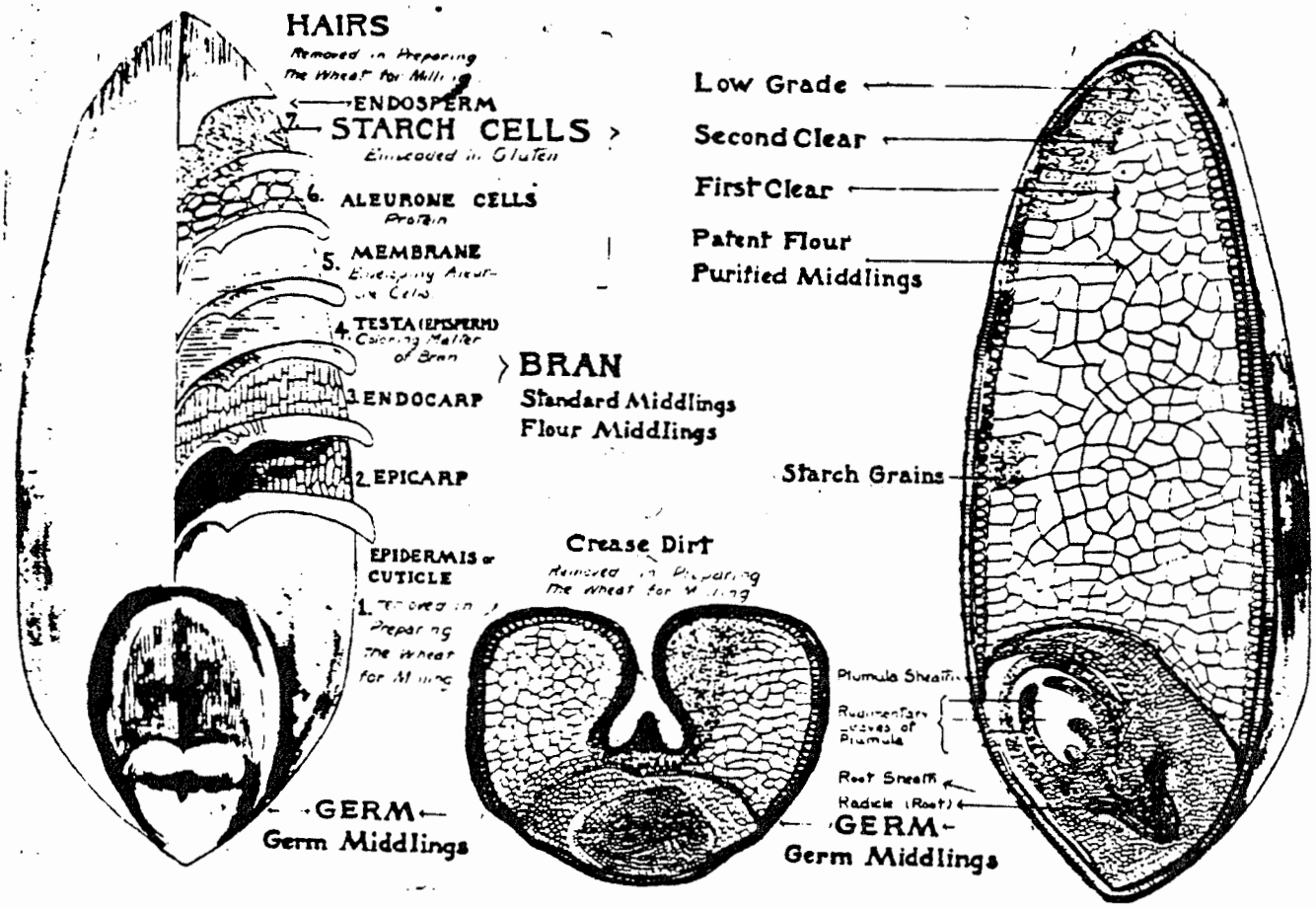


Figure 9 Wheat Berry highly magnified to show structure. .

(Consolidated Grain milling catalogs, 1937. 327 p.)

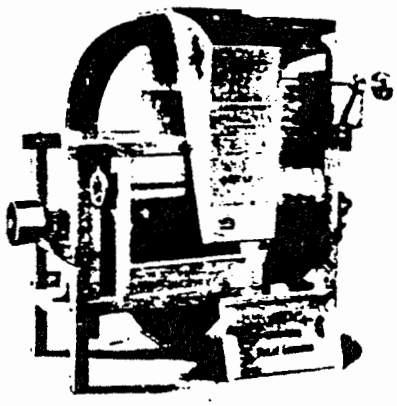


Figure 10 Wheat Scourer and Polisher
"Horizontal Type"

Eureka S. Howes Co., Inc.
(The Consolidated Grain Milling Catalogs, 1939, 128p.)

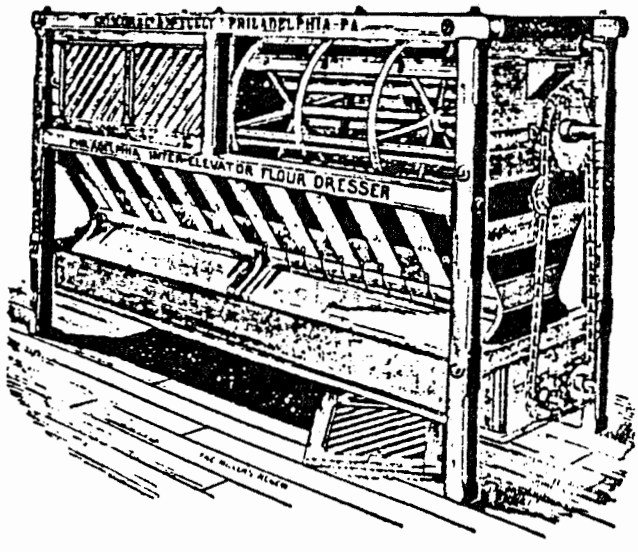
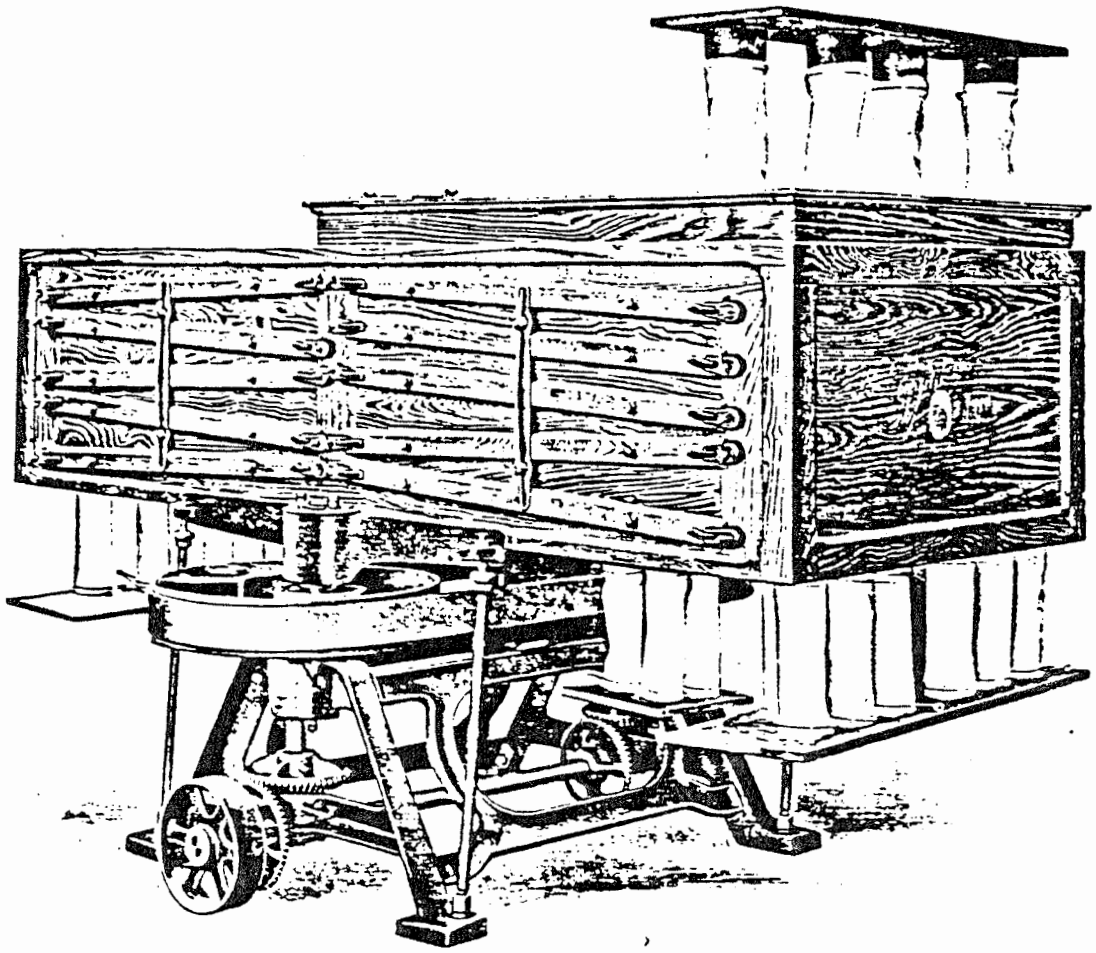


Figure 11 Philadelphia Inter-Elevator Flour Dresser

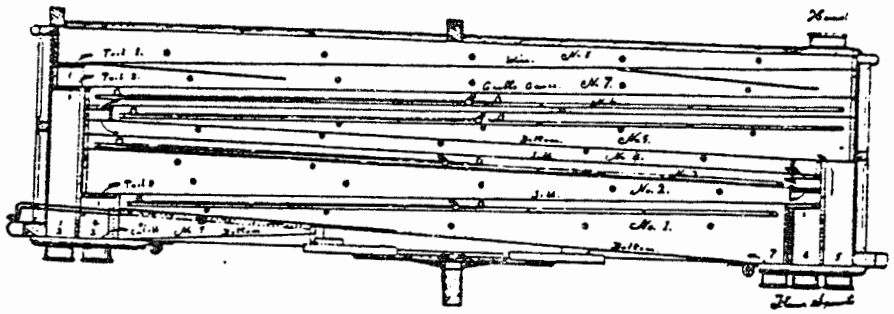
(Griscom & McFeely catalog, 1900. 19p.)



Patented

THE GYRATOR

The Construction and Arrangement of the Sieves



When the stock enters the head of the machine it travels over a coarse wire screen (No. 8), the tailings passing over into the outlet marked No. 1, as indicated by the arrow.

The stock from screen No. 8 passes to screen No. 7, which is made of Grit gauze, the tailings passing off into outlet No. 1, as indicated by the arrow.

The stock from No. 7 then passes to screen No. 6, which is of fine silk, after which it passes to sieve No. 5.

From sieve No. 5 the stock passes off into flour spout indicated by the arrow.

This constitutes the first series of sieves.

Starting from screen No. 4, the unscreened stock from No. 5 is sifted through No. 4 and thence to the bottom marked No. 3, where it passes off through flour spout marked No. 6.

The stock from screen No. 4 which does not pass off into the flour spout then passes to sieve No. 2, as indicated by the arrow, and finally to the bottom through the flour spout marked No. 7, as indicated by the arrow.

Reference: _ The Wolf Co. Catalog, 1929. pg. 59.
Sprout, Waldron & Co. Catalog 1934. 52 p.

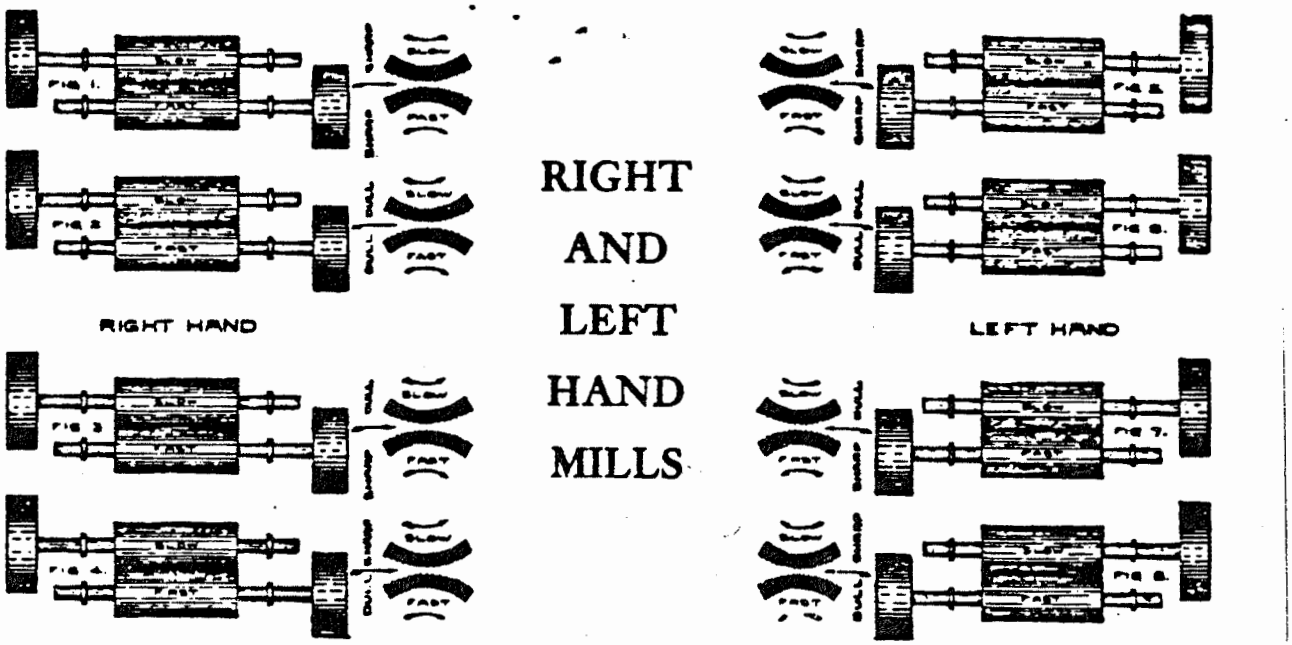


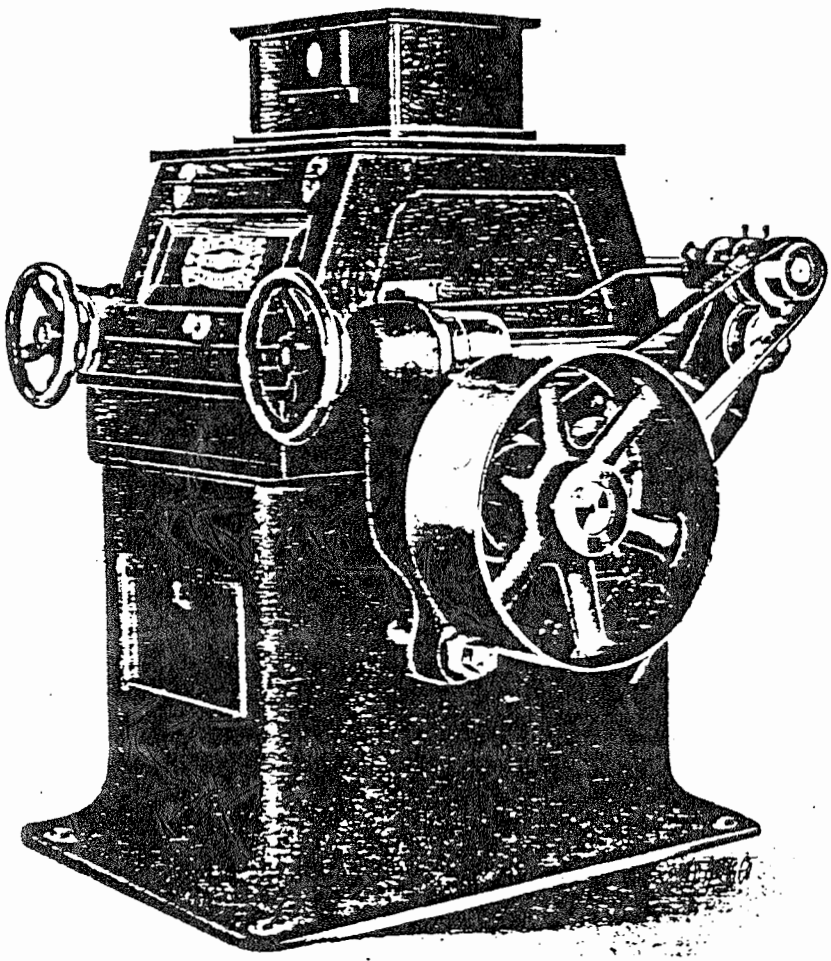
Figure 14 A study of the above illustration reveals the characteristics of the "hand" of the mill. Standing with face toward the machine the fast roll next to you, if the drive pulley on the fast roll is on your right, the machine is a right hand mill. If the drive pulley on the fast side be on the left side, the machine is a left hand mill.

On either a right or left hand mill the corrugations indicate the following:

1) Teeth inclined downward when rolls are in operation, run sharp to dull.
2) Teeth inclined upward when rolls are in operation, run dull to sharp.
3) Fast roll teeth inclined downward and slow roll teeth inclined upward, the rolls run sharp to sharp.
4) Fast roll teeth inclined upward and slow roll teeth inclined downward, the rolls run dull to dull.

Rolls cut to run sharp to dull, or dull to sharp, their action is reversed by reversing the hand of the mill.

(The Wolf Co. Catalog, 1929. 32 p.)



WOLF SINGLE ROLLER MILL

Figure 15 Reference: The Wolf Co. Trade Catalog, 1929. 30 p.

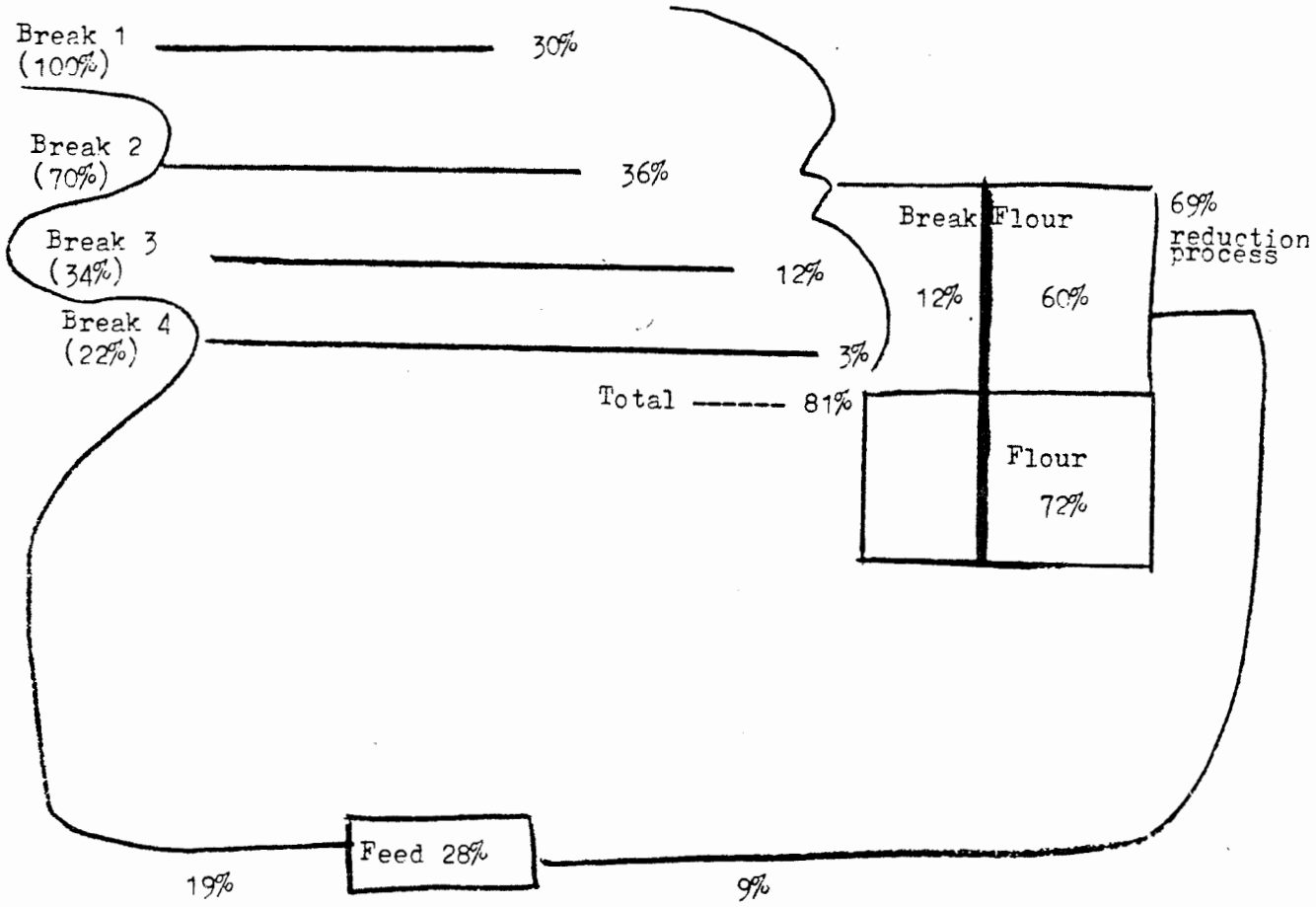


Figure 16 Schematic indicating the percentage extraction breakdown of a typical 4-break mill.

(Storck & Teague, 1952, 290p.)

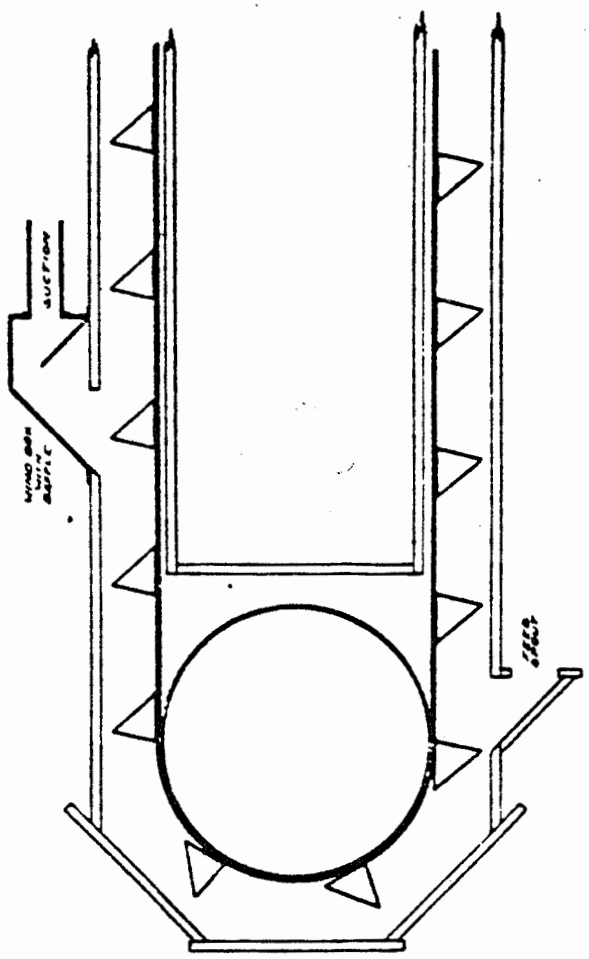


Figure 17 A cross-section of the elevator. The aluminum cups on the left are descenders, the cups on the right are ascenders.

(The Consolidated Grain Milling Catalog, 1937, 324 Pg.)

Title Chain Summary

William Poynter
Levin Poynter - inherited property from his father William Poynter.

1795 - Nathan Willey - built mill
1812 & 1813 - 1815 James Owens
1815 - 1821 Isaac Riggs - (farmer and miller)
1821 - 1835 James Johnson
1835 - 1842 William Johnson (son of James)
1842 - 1868 Nathaniel Johnson-sheriffs sale.
1868 - 1874 William H. Richards
1874 - 1875 Nelson J. Nickerson
1875 - 1889 Julio Rae
1889 - 1897 James Kibler
1898 - 1919 William W. & Alfonza E. Hendricks
1919 - William Shockley Daugherty bought it for 7,000 on June 5, 1919
1919 - Ainsworth Abbott & Joseph Smith bought it for $1.00 on June 5, 1919.
1921 - Clara Lofland bought it on July 27, 1921 for $3,000.
1922 - Ainsworth Abbott bought it on July 24, 1922 for $1.00.
1963 - Howard & Frances Killen bought it on Oct. 22, 1963 for $16,000.
1963 - State of Delaware (Board of Game & Fish Commissioners) bought the house for $6,000 on October 31, 1963.
1964 - State of Delaware bought the mill for $10.00.
1965 - State of Delaware bought the mill pond for $10.00.

Title Search

The following was largely compiled by James A. Stewart Curator of Historic Buildings, Dover, DE with a few revisions and additions made by the author.

The earliest recorded deed to Abbotts Mill was iniated by the Poynter Family in Oct. 1795. The recording is confusing but it is noted that on Oct. 3, 1795, Levin Poynter and his wife Unicey, were bound unto Nathan Willey for $1,000.

The property on the west side of Boaman's Branch consisting of 113 acres and 141 sq. perches (1 sq. perch=30¼ sq. yds) was willed to Levin Poynter by the last will and testament of his father William Poynter before his father died. Levin Poynter died before the agreement between he and Nathan Willey was completed. A little later Nathan Willey died and the next owner James Owens bought it from his estate; the title was cleared by Poynter's widow (Unicey) in order that a deed could be obtained.

Vol. 27 pg. 272 October 3, 1795 Bond $1,000. The one condition that stands out in the original deed from Poynter to Willey was "...by a sufficient deed of sale called a general warrant all the above described 113 acres and 141 square perches of land with the appurtenances thereunto belonging...." excepting the two story house that is raised thereon and not finished." There was no mention of a mill on site in the deeds to Willey from the Poynters.

Nathan Willey, listed as a carpenter in the deeds, is the probable builder of the mill. This is substantiated only by one, an undated assessment for Cedar Creek Hundred lists "1 grist mill" under Nathan Willey and two, several later deeds refer to the mill as being late of Nathan Willey.

Vol. 31 Pg. 130, 113 acres 141 perches $2,495.
Nathan Willey - upon his death deeded his estate both real and personel be sold on a credit (Nathan Willey's will of Jan. 10, 1812, recorded Jan. 18, 1812).

Joseph Sudler Executor upon due notice sold Nathan Willey's real estate to James Owens on a credit (the purchase money being secured by Judgement Bond).

Description gives miles and bounds - "Beginning at the run of Bowmans Branch"..."being the same land which was by a patent of the State of Delaware bearing date the thirty first day of December Eighteen Hundred and Five granted unto a certain Levin Poynter and which said Levin Poynter sold to said Nathan Willey and for the conveyance where of a bond was given by said Levin Poynter to said Nathan Willey bearing date the Twenty Third day of October Seventeen Hundred Ninety Five....."

Nathan Willey died. "Seized to have & to hold said tract of land... the buildings, improvements, wood ways, water courses, rights, liberties, privileges, hereditaments and appurtenances."

James Owen from Sussex County was the highest bidder at a Public Vendue held at the dwelling house on the said premises on the Nineteenth day of November 1812. Recorded February 2, 1813. Payment received was $2,495.

Vol. 31 Pg. 495 January 14, 1815, $3,000.
Notes, previously mentioned deeds and that "James and Mary Owens are conveying this property with its water gristmill... together with all and singular the houses, buildings, orchards, gardens, fields, fairway, woods, underwoods, timber, and tree ways, watercourses, improvements, tenements priviledges..." to Isaac Riggs. James Owens built a house on the mill property which was later consumed by fire. This is substantiated by a Chancery Court (1822-1824) case that occured between Isaac Riggs and James Johnson, both subsequent owners of the mill.

Isaac Riggs was a well known farmer and miller of the Williamsville area. At one time he owned most of the property leading from Abbotts Mill to the historic Williamsville Church. It has been said that he sold several of his farms to his children with the stipulation that they would provide him with a place to live an average of 3 months out of the year.

Vol. 35 Pg. 568 $1,500, 120 Acres, March 8, 1821.
Sold by Isaac and Nancy Riggs to James Johnson (Surveyor from Missipillion Hd.). "...water gristmill and streams..." which was formerly the property of Nathan Willey.
-Miles and bounds include a notation "...whereon a house stood which was erected by a certain James Owens and was after wards consumed by fire..."
-One hundred twenty acres"...including the grist mill..."

At this point, the idiosqncrasies of the Abbotts title search begin for it is here that one of the first recorded disagreements between owners occurs. A Sussex County Chancery Court file discloses the details of a major disagreement that occured between Johnson and Riggs between 1822-1824. The story begins with a debt owed to James Johnson by Isaac Riggs to the tune of $4,990, with a condition for the payment of Two Thousand Four Hundred and Ninty Five dollars ($2,995) with interest..."
Isaac Riggs sold the Grist Mill to James Johnson for the price of $1,800 (the deed says $1,500) which was to be credited against the debt Riggs owed Johnson. Johnson's filed complaint stated that this amount plus $82 was all he was ever paid. The original debt dated back to 1816.

Plus Johnson filed further complaint on the fact that Riggs was felling timber to be sold for fire wood. He said that Riggs and his"...workmen, laborers and servents...absolutely desist from felling or cutting down any timber, trees, underwood or other trees..."

Riggs on the other hand noted that he never received word of the sale for $1,800 discounting against his debt and that furthermore he thought the entire debt would be clear since he sold more land to Johnson then he purchased from Owens.

On and on it goes until a compromise was reached 2 years after the iniatiation of the complaint whereby they, Isaac Riggs and James Johnson, respectfully withdrew the suit.

Vol. 46 Pg. 256 September 4, 1835 $750 "About 10 or 15 acres." Manlove, Alexander, Mary Ann & George Johnson (Executors and children of James Johnson) to William Johnson"...water grist mill... formerly property of...Nathan Willey...lately of...James Johnson (deceased)...also the saw mill since erected on the same."
Note: Here is the first indication whereby the properties and grist mill were separated to remain so henceforth.

Vol. 51 Pg. 94 October 14, 1842 $620.
Venditroni Exponois No. 80 October term of Superior Court, William Griffith against William and Alexander Johnson for $620.00-sheriff seized land of William Johnson (son of James & lawyer in Dover)-sold at public sale on August 4, 1842.
11 acres of upland and 6 of cripple and branch with grist mill and saw mill hereon.
Nathaniel Johnson bid $620.00.

Vol. 80 Pg. 3 November 11, 1868, $1,000.00.
Nathaniel H. & Elizabeth Johnson of Milford sold to Richard M. & William T. Johnson of Cedar Creek Hundred sons of Nathaniel.
"...all that contain mill stream, mill seat, dam and pond, mill house and machinery. Together with ten acres of land more or less consisting of upland, branch and cripple and land in pond covered with water...all buildings...on a stream known as Bowmans Branch or Cedar Creek Hd."

Vol. 86 Pg. 164 September 15, 1874 $6,000.
Richard M. (Cedar Creek Hd.) & William T. (Smyrna) Johnson to William H. Richards.
Same property description as given in previous deed.

Vol. 86 Pg. 325 April 29, 1875 $1.00.
William H. and Elizabeth A. Richards to Nelson J. Nickerson of Philadelphia"...water mill thereon...same as sold by Richard M. & William T. Johnson to William H. Richards."
Note: This was only one of 6 tracts of land bought by Mr. Nickerson in the general area of Abbotts Mill and Road 620. In reality Mr. Nickerson paid more than $500.00 for the property which is decephered from the state tax code found at the end of the deed. The fee of $1.00 was annotated to prevent other parties from assuming ones wealth.

Vol. 110 Pg. 321 April 27, 1889 $1,000.
William H. & Elizabeth E. Miller, Charles M. & Jane S. Palmer and Sarah Bunker (widow from Philadelphia) heirs and legal representatives of Nelson J. Nickerson to Julio Rae.

"...water mill thereon...known as Johnson's Mill..."

Vol. 126 Pg. 99 $5,500 August 16, 1897.
Julio H. and Louisa Maria Rae (of Cedar Creed Hd.) to James Kibler (Hundred County)
"...all that certain tract, piece or parcel of land and the water mill thereon...known as Johnson Mill."
"...also being the same land and premises perportioned and attempted to be devised and bequeathed by the same Julio H. Rae..." in his last will and testament (Libro R. No. 17 folio 241)

Vol. 131 Pg. 371 April 13, 1898 $1,000.
James Kibler to William W. and Alfonza E. Hendricks
"...water mill thereon known as Johnson's Mill."

Vol. 215 Pg. 170 June 5, 1919 $7,000.
William W. and Alfonza E. Hendricks to W. Shockley Daugherty
"...water mill thereon known as Johnson's Mill."

Vol. 214 Pg. 552 June 5, 1919 $1.00.
William Shockley Daugherty (single man of Milford) to Ainsworth Abbott and Joseph J. Smith.

"...tract of land and water mill thereon."

Vol. 228 Pg. 538 July 27, 1921 $3,000.
Ainsworth Abbott bought Joseph J. Smith out at this time and sold the property to his mother Clara Lofland (widow) of Milford. (Abbott wrote this info. on one of the elevators in the mill itself).
"...water mill and buildings..."

Vol. 235 Pg. 249 July 24, 1922 $1.00.
Just less than one year later Answorth Abbott buys the property back from his mother Clara Lofland.

"...water mill and buildings...known as Johnson's Mill."

Note: There was a mortgage note found and given to the museum by his granddaughter Bernice Hyler of Magnolia which records on 24 July 1922 the sum of $3,000 to be paid on or before 24 July 1926.
Recorded mortgage #55 Page 315 indicates the loan was paid in full.

Vol. 566 Pg. 400 $16,500 October 22, 1963.
Ainsworth Abbott to Howard H. and Frances Killen of Milford.
Parcel No. 1 Frame dwelling house
Parcel No. 2 Grist mill
Parcel No. 3 Mill pond

Vol. 567 Pg. 314 $6,000 October 31, 1963.
Howard H. and Frances Killen to State of Delaware
"Frame dwelling" being Parcel #1 conveyed by Ainsworth Abbott widower, to Howard H. and Frances Killen.

Vol. 582 Pg. 90 November 13, 1964 $10.00.
Howard H. & Frances Killen to State of Delaware

"...tract of land with grist mill thereon erected..."

Vol. 588 Pg. 137 May 5, 1965 $10.00.
Howard H. & Frances Killen to State of Delaware

"Mill pond-Parcel 3 from Abbott to Killen."

Abbotts Mill - Assessments
Cedar Creek Hundred

No date - Circa 1795-1812

Nathan Willey

1 grist mill	700
113½ acres of land	567
2 cows and calves	19
28 hogs	42
his person	3

1869

Richard M. and William Johnson

1 mill property	2,000

1892-1896

Julio Rae

Mansion Farm
Grist Mill

1896-1900

James Kibler

Grist Mill and property

William Hendricks

Grist Mill from James Kibler 1897

1901-1904

William Hendricks

Johnson Mill Property	900

1905-1908

William Hendricks

Mill Property	1,600

James Stewart file

1909-1912

William Hendricks

1 Flour Mill	2,000
1 House	1,000

1913-1916

William Hendricks

Flour Mill	1,500
5 acres land & house	800
5 acres	50

James Stewart file

Vol. 27 Pg. 272
October 3, 1795
Bond 1,000

Nathan Willey (carpenter)
from
Levin and Unicey Poynter

Levin Poynter and Unicey were bound unto Nathan Willey for 1,000 on October 3, 1795

"Whereas Levin Poynter by the last Will and Testament of his father William Poynter became seized and possessed of 113 acres and 141 square perches of land situate on the west side of Boaman's Branch...."

Condition of the obligation of the Poynters to Willey was that they or their Executors etc. would "...by a Sufficient Deed of of sale called a general Warrant all the above described 113 acres and 141 Square Perches of la with the appurtenances thereunto belonging .... Excepting the two Story House that is raised thereon and not finished...."

Agreement witnessed by William Poynter and Shepard Bryan.

At the Court of Common Pleas on April 19, 1808, Shepard Bryan testified that he saw Levin and Unicey Poynter sign the agreement and saw William Poynter witness it and notes that he also witnessed it.

Vol. 31 Pg. 130

113 acres 141 perches
$2,495

James Owens
from
Joseph Sudler
(Executor of Nathan Willey's estate)

Deed noted in first paragraph -- Joseph Sudler Executor - for Nathan Willey and James Owens of Kent County, Delaware

-Notes Nathan Willey's will (Jan. 10, 1812 - recorded Jan. 18, 1812) - directed his estate both real and personel be sold on a credit - Sudler after due Public Notice - sold Nathan Willey's real estate to James Owens on a credit (the purchase money being secured by Judgement bond)

-Notes Sudler after receiving $2495 conveyed the land to James Owens

-Description gives metes and bounds - "Beginning at the run of Bowmans branch..."

-"being the same Land which was by a patent of the State of Delaware bearing date the thirty first day of December eighteen hundred and five granted unto a certain Levin Pointer and which said Levin Poynter Sold to said Nathan Willey and for the conveyance whereof a bond was given by said Levin Pointer to said Nathan Willey bearing date the Twenty Third day of October Seventeen Hundred Ninety Five---

Nathan Willey died "Seized to have and to hold" said tract of land "....the buildings improvements woodsways water watercourses rights Liberties p privileges hereditaments and appurtenances

-Notes Sudler- after Public Notice - sold to Owens - highest bidder "... at a Public Vendue held at the dwelling house on the said premises on the nineteenth day of November 1812

- Recorded February 2, 1813

James Stewart file