

THROUGH TIME

The production of Naval Stores was always a picturesque industry with a language all its own. It is older than the lumber industry and its history reaches back to days many centuries before Christ, when the natives of Asia manufactured pitches and oils from gum or resin of the trees which grew on the shores of the Mediterranean Sea. In the early days the gum was gathered, put into pots and cooked down to a thick mass. Over the pots while it was cooking, fleecy sheep skins were stretched, which condensed the rising vapors or oil distilled out of the resin. This oil was recovered by the crude method of wringing out the fleeces. Oil recovered this way was used in the arts and industries. One of its interesting uses was in the manufacture of the age-enduring mummy varnish.

The thick mass left in the pot was pitch. It is recorded that in the building of the Ark, Noah was commanded to pitch it within and without with pitch.

Four-fifths of the Naval Stores were harvested from live trees and were known as Gum Naval Stores. Turpentine and rosin were essential ingredients in many commodities. They were used in printing ink and for color printing processes and lithographs, as preventive for bleeding, in the manufacture of cotton and wool print goods and the manufacture of patent leather, as a thinner for waxes, and leather, floor and furniture polishes, as an ingredient in belting greases, laundry glosses, washing preparations, stove polishes and sealing wax.

It was a raw material for producing synthetic camphor, and, indirectly, celluloid, explosives, fireworks and medicine. It was also used in making disinfectants, liniments, poultices, medicated soap, ointments and internal remedies.

A large percent of the turpentine produced was used in the manufacture of paints and varnishes. Rosin was used in the manufacture of soap and in the surfacing of paper suitable for writing and printing. It was also used in the manufacture of rosin oils, varnishes, ink dryers, waterproofing compounds, roofing materials, leather dressings, shoe polishes, sealing waxes, linoleum, oil cloths, floor waxes and printing inks.

In the United States, the collection of gum from pines and the making of pitch and tar date back to the early part of the 17th Century. However, the first records of importance are of a century later. At that time the gum was gathered from pines in Virginia and North Carolina. It was placed in kettles and heated until most of the volatile part had been steamed off and only a pitchy mass remained.

This pitch was strained and used in caulking the seams of wooden ships. With the growth of the colonies, a small Naval Stores industry grew up along the middle Atlantic coast and slowly extended south.

The method and equipment were still very primitive and there was little thought of improvement or expansion of the business. Later, however, the resin obtained from the trees was shipped to distilleries located at the leading markets, such as Philadelphia, New York and London, where it was cooked in closed retorts. Here a portion of the volatile oil, hitherto wasted, was condensed and saved. This product was called spirits of turpentine, or oil of turpentine, and was used extensively for lighting and as a solvent for other materials.

Naval Stores

"Naval Stores" is the inclusive term used to denote products obtained from the oleoresin or resin of pine trees.

The term originates from the days when wooden sailing ships, including naval ships, were waterproofed using pitch and tar and other resinous products from pine trees. Although the connection with ships is now remote, the term is commonly used by those in the trade and elsewhere.

The two major products of the naval stores are rosin (a brittle, transparent, glossy, faintly aromatic solid) and turpentine (a clear liquid with a pungent odor and bitter taste).

For many years rosin and turpentine were used in an unprocessed form in the soap, paper, paint and varnish industries. Today, most rosin is modified and used in a wide range of products including adhesives, printing inks, rubber compounds and surface coatings.

Turpentine Production in the South and in Florida

In 1936 in the Deep South, about one half million Naval Stores units were produced. A unit consisted of one 50 gallon barrel of turpentine and three and a third 420 pound net barrels of rosin.

The annual production amounted to 25 million gallons of turpentine and 490 million pounds of rosin. The entire production for the United States came from a few Southern states. The percent produced by Georgia was about 60% and for Florida about 30%.

Almost 60% of the world production of turpentine was from southern United States.

Much of the Naval Stores were produced at what were called Turpentine Camps. There were about 1000 such camps in the South, with more than 40,000 men engaged in collecting and processing gum.

The camps were located conveniently near sufficient timber to support the continuous operation for at least 10 years. About six crops of faces were necessary to operate a typical turpentine camp.

BOXING

The practice of cutting a gum cavity (box) in the base of the tree was called boxing the tree.

Collecting the gum at the base of the tree began about 1700 and continued until the invention and use of the HERTY CUP in 1902.

The collection of raw gum for distilling became an important part of the Naval Stores industry after the invention of the copper still in 1834.

ROSIN

Dark color on the rosin indicates that its not a good grade.

The lighter color indicates a good grade.

The quality of the rosin depended on the care and skill which marked every step, from the tree to the shipping container. To make a high grade rosin the gum had to be free from pine needles, chips, trash and dirt.

The heat of the still had to be regulated with great accuracy to produce the best results. If the gum got too hot, it would discolor. Rusty cups discolored the raw gum and caused the rosin produced from it to be a darker color, thus lowering the grade.

Rosin varied in color from black to pale lemon yellow. The grades were based not only on color, but clarity, the palest, clearest grades being the highest priced.

BARRELS

GUM BARREL - a container used for transporting gum from the woods to the still.

TURPENTINE BARREL - a barrel used for transporting distilled turpentine from the still to the market.

A 50 gallon barrel of raw gum after being distilled would yield about 11 gallons of turpentine and about 330 - 440 pounds of rosin.

The Cup, Tins and Streaks on the Tree

From the scar on the tree, the gum oozed out and ran down the face into the cup.

Once a week for about 36 weeks, each year, a new cut was made into the bark.

Each cut was just above that of the previous week. By the end of the first season, early November, there was a face on the side of the tree varying from 10 to 15 inches in width, depending on the size of the tree and about 16 inches in height,

The face would be extended during the following year to a height of eight to ten feet.

The Herty Cup

The Herty Cup was patented in 1902 and used in the industry until the 1930's. It was hung on a nail at the bottom of the face with two gutters to direct the gum into it.

After 1915, cups were made of galvanized tin or aluminum were used, and later were made of plastic. The lip of the cup was hung under the apron with the cup supported by a nail.

The aprons and gutters were placed on the trees to direct the flow of the gum into the cup.

Scrape Bucket

The Scrape Bucket was used to scrape the lower part of the cat face.

The straight part across the back was placed against the tree. Scrape that was removed with a push down scrape iron fell directly into the scrape bucket.

This same bucket was mounted on two wooden legs about 3 feet long and used with the pull down scrape iron on higher cat faces.

The Box Axe

The Box Axe was used for cutting an 8" to 10" hole in the base of the tree. This was the system used to collect the gum before the cup was invented.

The "box" would hold about two quarts of gum.

Using this axe, one person could box about 60 trees in a day.