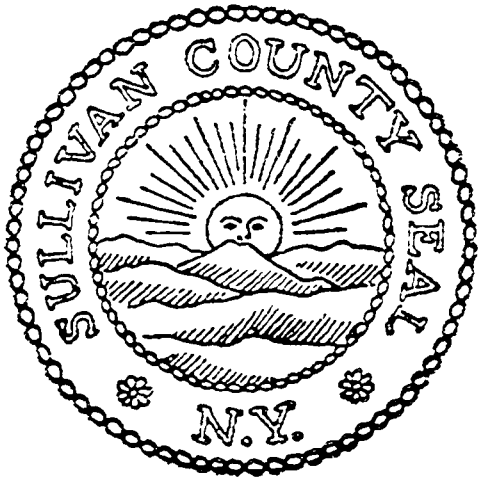
Frances J. Knapp's 103 Years

A Brief History of the Development of Sullivan County

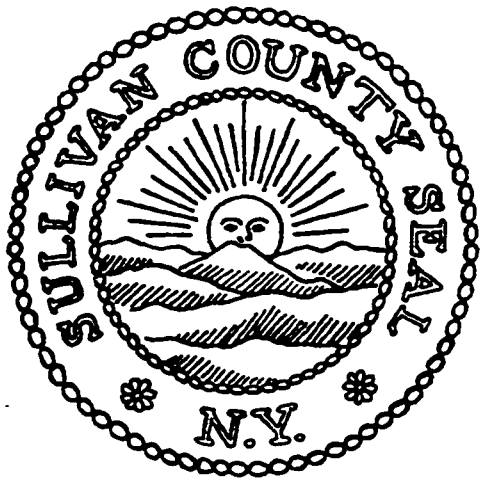


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DEVELOPMENT OF SULLIVAN COUNTY



An address delivered before the May 1956 meeting of the Sullivan County Historical Society by William Heidt, Jr.

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Introductory

To have lived within less than two months of one's 103rd birthday is an experience that does not fall to the lot of many persons. But to have lived those years during which Sullivan County emerged from its pioneer era to take its place among the other municipal components of our modern commercial-industrial nation makes such a lifetime historically remarkable.

This was the experience of Miss Frances J. Knapp. She was born in Bloomingburg Feb. 19, 1837, and died at Narrowsburg Dec. 23, 1939.

By today's automobile and modern highways, the two villages are scarcely an hour apart. Thus, her life began and ended in the same geographical setting, a circumstance that adds significance to the changes that came over the economy of her county and nation. It is the backdrop against which we may project the stirring drama of change in which she played the most minor of roles, while the nation's population expanded from 17 million to 137 million.

Of the many changes in Miss Knapp's 103 years, that of 1940 was the most poignant—for the first time in 100 years of the federal census she was uncounted!

Charles S. Hick, County Historian

Jeffersonville, New York

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A Pioneer Land in 1835

Set off from Ulster County Mar. 27, 1809, Sullivan County was only 28 years older than Miss Knapp. In 1837 it was still a land of pioneers who had come mostly from the Esopus Valley of Ulster County or from Connecticut.

The population in 1835, was 13,755, a quarter of which resided in the Town of Mamakating. Since the first federal census of the new county in 1820, this total population indicates an increase of less than 5,000. But the new county was growing: in 1835 there were 609 births, 161 deaths and 83 marriages.

In area the new county covered 587,000 acres, of which 50,674—one-tenth—were under cultivation. How sparsely settled the county was may be gathered from the fact that Liberty township had a population of 1,331 yet it embraced what are now the Towns of Callicoon and Fremont; obviously, the region was forest land.

Farms then produced wheat in some limited limestone areas, rye, oats and grasses. Dairying had a foothold and butter making had become a business of considerable volume. Sheep and cattle raising were extensively engaged in; the sheep and the cattle population each slightly exceeded that of the settlers.

An 1835 count found 2,433 horses, 15,147 cattle, 14,030 sheep and 8,179 swine. It may be concluded that oxen were counted under the cattle classification for, in a pioneer region, there were always more oxen than horses.

The many small fulling mills finished 12,382 yards of woolens; there were 17,131 yards of woolen goods

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produced but unfinished, and 18,748 yards of cotton and linen goods woven.

Taxwise, the county tax totaled $4,627 and the town taxes $4,123.

"Beautiful Bloomingburg"

Today Miss Knapp's native Bloomingburg is a pleasant little village snuggled against the eastern foot of the Shawanagunk Mountains just within the boundaries of Sullivan County. Its contact with the world is now by means of Route 17, rapid mail, telephone, radio and television. In her girlhood and before it was a cultural and thriving business center but it depended on the stagecoach for transportation. Previous to the Revolutionary War it boasted a tavern; a second one and a store were built after the war ended. In 1784—three years after peace was declared—a school was erected, and a gristmill on the Plattekill followed.

In 1797 Charles Baker, a Dartmouth College graduate of the year before, came from Connecticut and taught school there. Later he became a lawyer in the village. In 1810, an academy was founded. Before the county seat was established at Monticello in 1809, courts were held in the ballroom of the tavern in Miss Knapp's native village.

And there, too, was established in 1821 the first printing office and newspaper in the county, the Sullivan County Whig. In 1828 it was moved to Monticello and renamed the Watchman. A second Sullivan County Whig was established in 1844 by John Waller, a

name formerly well known in the county's newspaper annals. This, too, was removed to Monticello, in 1848, and rechristened the Sullivan County Democratic Republican. Long since it dropped the "Democratic" from its title, and has ceased as a separate entity.

Bloomingburg has played its part in the political history of the county. The village has furnished a district attorney, a county judge and surrogate, and four assemblymen.

The village was given its name at an Independence Day celebration in 1812. Washington Irving described it as the "beautiful village of Bloomingburg" in his "Hans Swart, a Tale of Mamakating Hollow".

Perhaps the rows of Lombardy populars planted along each side of the highway through the village impressed Irving as forming a link with the culture of Europe. However, these trees were early replaced with elms and maples, in a dramatic effort to break with old traditions and establish a truly American motif. Busy as it was commercially, it must be recognized that the village carried its cultural development forward simultaneously with its business activities.

Geographically and historically, Bloomingburg belonged to Orange County, eastern neighbor of Sullivan which had been settled for some 150 years previously. But until General John Sullivan, in whose honor the county is named, broke the power of the Iroquois in Central New York during his campaign of 1779, lands west of the Shawanagunk Mountains remained an Indian hunting and fishing ground. A few intrepid traders had located within the region, but only ad-

venturous hunters and trappers had penetrated its forest-covered, lake-dotted fastness. The red man stayed on his side of the hill and the white man on his.

Thus the village early stood as an outpost in the march of civilization until the Indian danger was eradicated. Then settlers from the eastward began straggling over the mountain and spreading through the valleys.

Turnpike Speeded Development

Newburgh was a thriving Hudson River village, and its leaders began as early as 1800 to seek the business of the back country of New York State that was steadily being settled. Consequently, a network of roads was built into the new country west of the Hudson.

Important to Sullivan County was the Newburgh-Cochecton turnpike, a mail-carrying route. It passed through Montgomery, 12 miles; Bloomingburg, 11½ miles; over the mountains and on to Monticello, 14½ miles; through Bethel and to its Delaware River terminal at Old Town Cochecton, 22 miles—for a total of 60 miles. Later other 'pikes were constructed to carry the traveler on to Great Bend and Bath, a distance of 165 miles that was covered by stagecoach in 65 hours.

The Newburgh-Cochecton 'pike, chartered in 1801 was completed in 1809, and for the next thirty years or so, Bloomingburg enjoyed the heyday of its prosperity. Then the Delaware and Hudson Canal, com-

pleted in 1840, challenged the stage lines by offering greater facilities and lesser transportations costs for bulk goods. Miss Knapp's native village, incorporated in 1823, began to lose its commercial activity and it subsequently sank into such a state of oblivion that even its charter as an incorporated village was forgotten for a hundred years. Its academy lapsed and became a public school which Miss Knapp attended. Lacking a railroad or canal and the mountains offering no other resource than their beauty, the village receded from the man-made business mart to the role of "beautiful village".

No doubt Father Knapp weighed the future of Bloomingburg against that of Narrowsburg, with the Erie Railroad construction approaching the latter. Deciding in favor of the river village, the family "migrated" to it in 1853, when Miss Knapp was 16.

Mamakating, Mother of Towns

Miss Knapp's native township of Mamakating has been called the "Mother of Towns". Organized as a precinct in 1743, it became a township 45 years later when it included a part of Orange County and all of Sullivan except the townships of Rockland and Neversink. The latter was a part of the township of Rochester in Ulster County, but Neversink was set off in 1798, and in 1808 Rockland was separated from Neversink.

Towns that have been organized from the original Mamakating, with date, are: Lumberland, 1798; Thompson, 1803; Liberty, 1807; Bethel 1809; Falls-

burg, 1826; Cochecton, 1828; Bethel, 1828; Callicoon, 1842; Fremont, 1851; Tusten, 1853; Highland, 1853; Delaware, 1869. Five of these towns were organized during Miss Knapp's lifetime.

While there is no more than a sketchy reference to the fact, Mamakating was the first part of the county to be visited by Europeans. The Dutch had a trading post in the town as early as 1614 when they were primarily interested in the new land as a source of furs. Swedes on the lower Delaware may well have visited the section since the Bashakill, flowing southward along the western slope of the Shawangunks and into the Delaware River, afforded a natural pathway for trappers penetrating the region embraced by Sullivan County.

Although never rediscovered, there were lead and zinc mines operated in the township by the Dutch. Manual Gonzales, a Spaniard from Esopus, built a house near the present site of Wurtsboro, cultivated a farm, built a sawmill and traded with the Indians. The approximate date is 1730.

Over a Planked Road

Perhaps one of the changes that most impressed Miss Knapp in later years was that of improved roads. The "improved" road she traveled over on her way to Narrowsburg in 1853, was made of plank, contrasted with the ribbons of concrete she knew seventy years later on the same route. Stage coaches did well to maintain a speed of six miles an hour, while automobiles travel at sixty.

In the days when the plank roads were built, there was not the vast public capital to expend on highways. Nor was there machinery to construct them. But there was an abundance of human labor and vast stands of forest; the inefficient up-and-down sawmills abounded on every stream of any size and made planks available along a given route.

Because of these factors, planking was adopted for early-day road improvement. Another factor that suggested planks was the number of rival roads under construction; to meet this rivalry dispatch was essential. Nothwithstanding the availability of material and labor and the necessity for rapid construction, building these improved roads was a considerable undertaking for any community—even hustling Newburgh.

Financing of a road was done by banks and business firms within the city to be benefitted, at a time when there was no great accumulations of wealth. The roads cost up to $2,500 a mile, with an average of $1,500—and some of the roads were 100 miles long. The 60-mile Newburgh-Cochecton Turnpike was capitalized at $126,000.

Its route lay across Orange and Sullivan Counties. At Cochecton it was carried by a bridge across the Delaware River, thence by other 'pikes through Mount Pleasant, Great Bend, Owego, Bath, Batavia to Buffalo.

After the route had been surveyed and staked out, hundreds of men, armed with saws and axes, felled the giant trees along the way. Others, using horse and ox teams, plows and scrapers, grubbed out the

stumps and more or less levelled the roadbed. Stringers faced from some of the trees removed were bedded lengthwise of the roadbed, and then planks were laid diagonally across these supports.

The planks were not nailed, but their ends were buried under earth newly removed from the roadbed. The planks withstood the wear from transportation and the elements for about seven years, then they were replaced. Use of the earth to hold the planks in place served the double purpose of hastening construction and at the same time reducing costs of spikes—then handmade—and the labor for nailing. Dirt was both handy and cheap to apply.

These turnpikes twisted and turned to avoid the heavier grades and swamps. While this saved capital outlay, it added mileage. Where the obstacles could not be circumvented, the road plunged up hill and down. Swamps that must be traversed were corduroyed—that is boles of trees were piled in crosswise of the roadbed until of sufficent density to hold the stringers. Travelers referred to these corduroyed sections as "bone-rattlers".

Streams large and small were bridged with wooden structures, simple stringer bridges for most part. Over the Neversink at Bridgeville a covered bridge was built, and it carried traffic for a century and a quarter. It withstood the wear of stage coach, automobile and truck alike. This bridge was erected in 1807 and still stands although displaced in recent years by a modern structure to the north.

These turnpikes were toll roads: users paid to pass over them, as on our Thruways and motor vehicle

'pikes today. Usually at the expiration of the state charter for these 'pikes, their routes were surrendered to the townships wherein they lay and became the route of the modern concrete roads. When these modern roads were built, the farmer's stonewalls that ultimately lined each side of the 'pike disappeared into the new roadbed.

The word "turnpike" is of European origin. Pikemen used to guard roads on the continent, and when they permitted passage they turned their pike from a challenging position. Of course, there were no pikemen along the Newburgh-Cochecton 'pike, but there were frequent toll houses. Here the toll-master dropped a gate; when the toll—usually a few cents —was paid, the gate was lifted and the traveler passed through.

Delaware and Hudson Canal

When the stagecoach carrying Miss Knapp had descended the steep western slope of the mountains, it came to a level stretch across the narrow Bashakill. Northward up this valley ran the newly built Delaware and Hudson canal on its route from Honesdale, Pa., to Roundout, outside Kingston. She may not have known it, but this new transportation method was soon to sap the business life of her native village and destroy the stagecoach line.

Designed to transport anthracite coal from the Northern Pennsylvania mines to the Hudson and thence by riverboats to growing cities along the coast, the canal was begun in 1826 and completed in 1828.

It was capitalized at $1,500,000. Its slow-moving boats drawn by mules or horses walking a towpath beside the waterway, carried 25 tons. The plan proved so successful that in 1844 it was enlarged so as to accommodate 40-ton loads. Demands of the Union forces in the Civil War necessitated a further enlargement in 1862 that enabled boats of 125 to 140 tons to pass in safety if not with great speed.

As the canal brought an end to stagecoach routes, so did the development of the Erie Railroad spur from Lackawaxen to the coal fields doom the canal. The waterway lingered on until 1899, when it was abandoned—the last barge passed through the aqueduct over Roundout Creek on Jan. 3, 1899.

The building of the canal was reckoned a feat of engineering. It passed through some rough terrain which presented the engineers with difficult problems. It twisted and turned along the foothills in the ravine-like valley, and was carried on a wooden viaduct from Lackawaxen over the Delaware to Minisink Ford. Hugging the foot of the hills and using it as the northern bank, it passed on to Port Jervis.

Then it turned northeastward through the more favorable terrain of the Bashakill Valley until it reached Summitville, so named for the summit of a spur of the Shawnagunks. Until this point, the canal lay in the Delaware basin, but over the summit it entered the watershed of the Hudson River. Here, again, the engineers were compelled to wind the canal along the foot of the hills through Ulster County on to Rondout.

Monticello, the County Seat

After Miss Knapp's stagecoach crossed the bridge at Bridgeville, it made a long, steady climb until it reached Monticello, the county seat. It was a primitive village, only 18 years older than Miss Knapp herself. In Liberty and Thompsonville, Monticello had had contenders for its selection, but the turnpike saved the day for it. It may be that the young traveler noticed the new courthouse, built after the great fire of 1844, and heard of a second struggle to relocate the county seat. Again Monticello won on the strength of its better travel facilities offered by the turnpike.

Then in 1908 this courthouse was burned in a fire that wiped out a large area in the business section of the village. Liberty again made a bid for location of the county seat in that village, claiming better railroad facilities and nearness to the mass of population of the county. But Monticello won for the third time.

When passing through the county seat in later years, Miss Knapp must have marvelled at the present courthouse and thought back to the modest wooden structure she beheld the day she passed through in 1853.

Sawmills and Tanneries

As the family passed diagonally across the county, more than a century ago, the young traveler noticed many small lakes and man-made ponds. In close proximity to them she saw numerous sawmills and here and there a tannery. In 1836 there were 208 sawmills and gristmills in the county.

Of course, sawmills and gristmills were as much a necessary part of pioneer Sullivan County as were the ax, log cabin, rifle and ox team. Timber grew abundantly and mills were needed to adapt it to the settler's needs for buildings that followed the log cabins. Similarily, the gristmill was an essential component of the new communities: there were no commercial mills so local needs were supplied locally.

Water powered and employing an up-and-down saw, the early sawmills produced from 500 to 1,000 board feet a day—when there was water. Later steam engines furnished the power and freed the operator from depending on unreliable water supplies. To make the most of the water available, saws were early arranged in gangs so that double footage was cut in a given period. The device was appropriately called the "Yankee saw". In many old buildings planks cut by the up-and-down saw may be identified by straight-line kerf marks where those made by circular saws are arc-shaped.

About the time Miss Knapp was born, steam was being applied to sawmill operations in the larger milling centers, and steam mills gradually penetrated the back country. Then about the time she was transferring her home to the Delaware Valley, the circular

saw was perfected and generally adopted in 1855. Combined with steam power, it enabled the mill to operate in drouths and to produce 20,000 board feet a day. The effect of this modern method on lumbering in the county is suggested by the fact that 13 billion board feet were produced in 1869. Forty years later, in 1909, the all-time peak of production was attained with 44½ billion feet.

However, Miss Knapp lived to see lumber production fall drastically and all but disappear. The original forests were gone and some one hundred building materials had come in to compete with lumber. In 1932 production was 10 million board feet less than of 1869.

Nothwithstanding the heavy growth of timber over most of Sullivan County, lumber production never brought great revenue to the county. Most of it was consumed in the rapidly developing area, and until the Erie railroad was built in 1849 transportation was difficult. Even the raftsmen took to loading lumber on their rafts of logs. The coming of the Erie brought in the great commercial tanneries which in a few years depleted the majestic stand of hemlock. Thus large-scale lumbering was impossible by the time transportation was established with the out-of-county demand.

Over the greater portion of the northern United States from Wisconsin to Maine, hemlocks grew in unbroken forests. Sullivan County, lying within this belt, was full-dressed by hemlocks when the first settlers arrived. Aside from the need for buildings and rail fences, hemlock posed a serious problem for the man who cleared land. The trees could be readily

felled, piled, dried and burned, but their stumps lasted a generation or more if not grubbed out. Stump removal was a tremendous task, for the settlers were without adequate devices; yet uncounted thousands of stumps were grubbed out and piled into stump fences that were observable well toward the close of the century.

On the other hand, and in contrast with the lumber, hemlock bark was a source of cash income. Since the coming of the Dutch into the Hudson and Mohawk valleys, hemlock tanbark had been almost exclusively used in tanning hides of cattle into leather. But as long as Sullivan County was open to Indian raids, cattle raising was not a possible venture. Neighboring Orange County, early freed of this menace, had a well-developed tanning industry when Sullivan County was a paradise for the hunter and trapper.

The best the early Sullivan County settler could do was to transport his hemlock bark to a tannery in Middletown, by ox team over difficult roads. This was expensive transportation that materially reduced the revenue from the county's leading natural resource of timber at a time when the money-poor settler needed the income.

Tanning had long been an active industry in both Ulster and Greene counties so that by 1830 their hills and valleys were becoming denuded of hemlocks. Tanners surveyed the possibilities in Sullivan County and in 1831, despite the transportation problems, a tannery but built at Thompsonville and another at the falls of the Neversink River at Old Fallsburg. These ventures really marked the advent of large-scale tan-

ning in the county, for the smaller tanneries then operating in the towns of Mamakating, Thompson and Fallsburg confined their activities largely to supplying local needs. One of these early tanneries was built by Platt Pelton in Monticello in 1804 and it operated until around 1920. Transportation hampered the tanneries before 1849. Insufficient hides were produced in the county and, until the Erie railroad began serving the Delaware Valley in 1851, foreign hides were costly to transport. The larger plants maintained teams for hauling hides, bark and leather.

Nevertheless, in 1836—the year before Miss Knapp was born—there were 21 tanneries in operation in the county. They employed 147 men and tanned 11,000 sides a month. Only Ulster and Greene county production outranked that of Sullivan.

In 1864—13 years after completion of the railroad—40 tanneries were operating in the county and producing 8½ million pounds of leather that was valued at $2,500,000. Something of the scale on which these newcomers operated may be gathered from the fact that the Palen plant at Old Fallsburg consumed 4,000 cords of tanbark and 700 cords of hardwood each year. Its vats accommodated 25,000 sides at a time.

Miss Knapp saw this tanning boom carry on until after the Civil War, but it fell off rapidly when the demand came for oak-tanned leather—and the county had no appreciable stands of oak. Then, with the formation by British investors of the leather trust in 1890, all but one or two tanneries—whether operating or abandoned—were bought up by the combine, and the industry became a dead letter in the county.

She saw even the last one close—Pelton's at Monticello.

"Tanbark Slaughter"

From this rise and that in the turnpike, Miss Knapp on her historic trip saw towering forests of hemlocks stretch mile on mile and cover much of the countryside with their natural beauty. There had been no vast cuttings of the hemlocks, although the pines of the river bottom had been rafted downriver for more than 75 years. Handicapped by a lack of practical transportation, the settlers had never converted the hemlocks into a source of income.

But the coming of the tanneries launched the "tanbark slaughter," as one observer appropriately described it. Bark peelers passed through the forests not unlike the army worm through a cornfield. The majestic trees fell this way and that under a sturdy attack by saw and ax, and their boles were greedily stripped of the bark. The naked remains were left to decay.

How wasteful this method was is suggested by a sight in the Town of Callicoon 60 years ago. An area of some 20 acres was strewn with these decaying hemlocks 70 and 80 feet long which lay where they had been dropped perhaps 40 years before. The outer layers had fallen away so that the knots projected several inches. Men armed with single-bitted axes went among the prostrate giants and knocked the knots loose for use in the kitchen range and under the sap pan.

After the pines and hemlocks were gone before the

century's end, Miss Knapp saw the acid factories come in to wreak havoc upon the hardwoods, principally beech, birch and maple. In 1878, a plant was built at Acidalia by the King Brothers. It was the seventh known factory in the United States, the first having been built near Binghamton in 1849. The Kings built a second factory at Fernwood in 1881, and some time before 1890, Charles G. Armstrong built a plant at Long Eddy.

Other plants in Sullivan County were located at Livingston Manor, Roscoe, Willowemoc, DeBruce, Grooville and Hazel. Just over the line in Delaware County there were plants at Methol, Cooks Falls, and Spring Brook; across the Delaware River there was an acid factory at Milanville and another at Lookout. While these two did not feed upon hardwoods grown in Sullivan County, those across the Delaware County line consumed thousands of cords of hardwoods from the nearby Sullivan County hills.

The chief products of the acid factory were wood alcohol (known as Methyl), acetate of lime, and charcoal. These were the raw products; when refined, many other products were derived. The process was developed in Turnbulb, Scotland.

As improvements in the process were made, new and larger plants were constructed so that by 1914 many of the older ones had been closed. The heavy demand for these products created by World War I brought a temporary boom and the final elimination of the wood chemical industry, when research developed a synthetic product at lower cost and of superior quality. However, it was not until 1948 that the last acid fac-

tory in Sullivan County yielded to the new techniques: that year the Long Eddy plant closed its career of nearly 60 years.

The six Treyz brothers were the leading operators in the region that embraced adjacent areas of Sullivan and Delaware Counties. They got their start at Acidalia and were owners of the Armstrong plant at Long Eddy when it closed. Hammond & Fish operated four plants in the county between 1880 and 1943, when the one at Livingston Manor shut down.

Miss Knapp witnessed the appearance of the wood chemical industry in the county and saw all but two of the plants disappear. Today their crude buildings have crumbled and their huge kilns and furnaces have been converted into scrap. She saw Nature begin redressing the hillsides with a new growth that hides the desecration of a generation ago.

Tanbark and tanneries and large-scale lumbering are now history. The humble mine prop and railroad ties became articles of commerce, and logs are worked up today that a century ago would have been used as fuel in the steam mills. Lumber comes from the far-off Pacific forests, a transformation that occurred during Miss Knapp's lifetime.

Charcoal, Pot and Pearl Ashes

During the land-clearing era in the county, charcoal burning was an activity that brought in considerable revenue. This income was doubly important: it paid taxes, interest and mortgage, and it recompensed the settler for his efforts in clearing the land of hardwoods. Used for smelting iron ore in the many small furnaces in the eastern part of the state, a market for charcoal continued until coke became available for the blast furnaces, then its market disappeared. But as late as 1880, some furnaces in the state were denuding 1,000 to 2,000 acres of hardwood each year to supply them charcoal.

There were neither iron ore nor smelters in Sullivan County, so charcoal burning never attained more than a part-time activity. But its light weight and its ability to withstand transportation made charcoal an important contribution to the economy of the earlier days in the country. Upland the farmers were struggling to bring under cultivation were densely covered with beech, birch and maple—which made the most marketable charcoal because of their weight. Poplar, willow and similar light woods produced an inferior grade, and the evergreens went unused because their resins and tars made charing difficult.

The hardwoods were cut into four-foot lengths and split into small dimensions, six or eight inches were the maximum sizes. They were allowed to season well, for the green wood required extra time to boil out the sap and there was danger of steam explosions and fire that would destroy the timber. The timber was piled end to end in mounds perhaps 30 feet across and 10

feet high, and covered with hay, straw and a layer of earth. The pit had to be airtight so the fire would not blaze but smoulder. An opening was left in the top through which the pit was fired. When the wood was burning well, the hole was capped with earth and a series of holes punched in the mound covering just below this cap to permit the escape of steam that otherwise would explode.

Constant watching was necessary, for as the charring advanced the pile shrank. The flexible covering shrank also, and cracks appeared that had to be patched with earth to prevent entrance of air and the ignition of the wood. It required two weeks to burn a pit and another week for it to cool down. When cool, the covering was removed, the charred sticks broken up, and the charcoal was bagged and sent to market. The yield was about 32 bushels for a 10-cord pit.

Selection and preparation of the pit site were of great importance. A level spot was cleared of all vegetation and roots, and all stones were grubbed out. Sap in vegetation could cause explosions of steam and when overheated stones, too, exploded; the explosions tore the covering of straw and earth off the pile and ruined it. Drainage was no less important because of the hazard of steam explosion water caused. It was best to use over and over an old pit site.

Hardwood ashes were another cash crop of the pioneers. These ashes were converted into potash, an essential of early soap making and glass manufacture. Treated with water, the ashes produced a lye that was distilled into potash. It required an acre of hardwoods to produce a ton of potash which sold for $25. This

indicates how large a portion of the early settler's dollar was hard labor. In a highly refined state, potash was called pearlash. This was used extensively in the manufacture of glass, and glassmakers of Germany were heavy users of the local product. In fact, pearlash was the one Sullivan County product that entered importantly into the export trade.

Traffic on the 'Pike

On that first cross-county jaunt, Miss Knapp saw the stagecoach-and-six that still clattered over the route of the 'pike, and raised a cloud of dust in dry weather. Then 15 miles or so on, the coach pulled up at a tavern, the horses were changed in the matter of minutes, and it was off again to maintain a schedule of 6 miles an hour. She saw few pleasure vehicles, for there was then a minimum of private travel—and that out of necessity. A rider on horseback may have been a doctor on his mission, a juror hurrying to court, or even the judge himself.

But she did observe many heavily laden ox-freights lumbering by, moving merchandise into the county or its products out. Newburgh on the Hudson was the commercial and banking center for the whole region and with commercial ramifications that reached well into the upstate settlements That city harbored the banks, warehouses, wholesale establishments, and the river docks were there. Turnpikes radiated from the hustling commercial center. It was the exchange point for a new country, a vast and rapidly developing area.

These huge hand-made freight wagons carried tan-bark, after the tanneries opened. Often there were whole cargoes of hand-shaved hemlock shingles destined to villages as well as distant cities where building created a vast demand for shingles that lasted for 50 years or more. Other forest products on out-bound trips included charcoal and potash, grain scoops and shovels laboriously fashioned from hard-woods by hand or with the aid of primitive water-powered machines. And there were butter firkins, bar-rel staves and hoops made from poles.

Products of cultivation transported to market by these freighters included, at different seasons, firkins of butter, dried apples, barrels of vinegar, honey and beeswax, barrelled pork, wool, hand-knitted socks, mittens, fringe mittens, scarfs. There may have been maple syrup and sugar, wheat and buckwheat both as grain and flour. Hides, horns, bones and tallow were other products of an early agrarian economy that made this slow journey to the world's markets. Nearly all the farmers hunted and trapped during the winter months, so spring cargoes often included pelts of beaver, bear and fox that represented a few dollars earned in the forests and along the streams of still thinly populated sections.

When the teams came lumbering westward they hauled goods from the warehouses on the Hudson a hundred miles away. This merchandise was gathered from the world over and included spices, sugar, mo-lasses, coffee, tea, hardware, woodsmen's tools, farm tools and implements, gunpowder, blasting powder, nails, iron pots and kettles, leather boots, cotton and

woolen bolt goods. There were cooking and heating stoves, too—about the last word in modern equipment of the day for farm and village homes. And great crates of crockery, tinware, barrels of coal oil—and barrels of whiskey, too.

The exchange of home products for those of the world were made through the intermediary of the local merchant. He took the products in trade and sent them out into the world. Almost no money exchanged hands between merchant and customer: it was an era of barter and little cash money.

As the national economy expanded, goods varied with the years. Startling new products were brought back by the freighters almost each year.

An illustration of this change to the county residents is the displacing of red flannel underwear by the fleece-lined product. It came about through the demand for underwear by the Union forces. There wasn't enough wool but cotton was plentiful; so, when the war ended, the manufacturers kept their wheels turning by making fleece-lined apparel. Lacking the power to restore red flannel, the county dwellers grudgingly accepted the substitute. Other manufacturers of wartime goods continued their lines, and soon the county was flooded with factory-made shoes, boots, and clothing. Earlier, the settlers relied on "store goods" for only those items they could either not produce for themselves or could not go without.

Ride-and-Tie

It may well be that Miss Knapp witnessed the "ride-and-tide" mode of travel. This was used extensively in early pioneer days. Two men going the same way would engage one horse; one would mount and the other follow on foot. After the first had ridden a reasonable distance, he dismounted, tied the horse to a tree and proceeded on foot. When the walker came up to the horse, he mounted and rode until he overtook the walking first rider. Then they exchanged places. This mode reduced the walking distance by half for each man and gave the horse a reasonable length of rest on a long journey.

Irish Brawn

Along the way Miss Knapp heard a speech that was strange to her and quite unlike that of her more cultured Bloomingburg. It was the speech of Irish immigrants newly arrived from the Old Country to seek their fortunes in the new. With heavy heart, she may have learned the whole story.

These immigrants were some of the hundreds of thousands that had been driven from their native homes by famine. They had been attracted to Sullivan County by the opportunties for work on the Erie railroad and in the sawmills and tanneries. Today's Irish family names in Sullivan County stem from these newcomers of Miss Knapp's girlhood.

Had little Miss Knapp sought an explanation of the famine, she would have been dumbfounded at the one-word answer: "potatoes"! To her potatoes were an

everyday matter; you planted them in season, cultivated them, and harvested the crop; then you used them as an article of food or commerce. But as for causing a famine, how could they? If the troubled traveler ever found the answer to her question, it took time to accomplish. It is a story that merits recounting here.

One of Sir Walter Raleigh's captains nearly 400 years ago captured a Spanish ship, and in looting the cargo found tubers of what we know as "Irish potatoes." Natives of South America, the captain was carrying them to Spain as a possible new source of food. Instead of reaching Spain, the tubers arrived at Raleigh's estate near Cork in Ireland.

The soil and mild climate of Ireland were favorable, so the new plant grew thriftily. Wheat had been one of the most dependable food staples of Ireland, but it required eight months for each crop to grow and much work in cultivation, harvest and storage. On the other hand, the potato required but four months, little labor for planting and cultivation and none at all for storage—for the tubers were left in the ground to be dug as needed from day to day.

Wars had made life precarious in Ireland. Industry was all but destroyed and the people lived from hand to mouth. Crops of grains could easily be devastated in the fields or grain in storage carried off by the armies or seized for taxes. On the other hand, potatoes meant little to the military forces, so the Irish came to depend upon the tuber for food.

Just a few years before Miss Knapp was born, a heavy frost in Ireland produced a famine. Added to

this constant threat of crop failure was the rapid increase in the population of the country—from three million to almost nine million in the sixty years preceding the great famine of the early 1840's. There was insufficient land to feed this population so that during June, July and August, when the new potato crop was developing, the people subsisted in scanty grain supplies. These months were called the "meal months."

Then the soil became infected and the tubers rotted so badly that between 1831 and 1842 there had been six years of suffering for want of potatoes. In 1847 three million persons were employed on relief projects in Ireland but they were so badly nourished that labor and exposure killed thousands of them. It is estimated 300,000 died of hunger. Small wonder the Irish referred to these hard years as the "Black Forties."

But the Irish heard of the endless opportunities for work in America—on the canals, railroads, in the tanneries, and lumber mills—and a veritable exodus from the Old Country began. During the ten years after 1841 one and a quarter million Irish migrated to this country, and in the year Miss Knapp came to the Delaware a quarter million Irish arrived in America.

Thoughts of this famine and migration must have recurred to Miss Knapp in 1913 when widespread blight produced a shortage of potatoes in the United States. That year residents of the Delaware Valley ate potatoes imported from Ireland!

Another strange fact that Miss Knapp must have learned about the potato was the origin of its name. Commonly called the "Irish potato", it had been in-

troduced into North America by Irish settlers who located in Southern New Hampshire. These pioneers were of Scotch ancestry and came from Northern Ireland to bring the potato back to the new world.

Her Village Host to President

The year before Miss Knapp came to Narrowsburg, the village was host to President Millard Fillmore and Secretary of State Daniel Webster. The presidential party traveled from Piermont on the Hudson to Dunkirk in Western New York on the initial trip of passenger service over the Erie railroad.

The Erie was a primitive railroad when compared with what she came to know in later years. The single track was wide gauge, the locomotives were small wood-burners. Coaches and freight cars were crude affairs, and there were no electric lights in them or at the station. Nevertheless, the year after Miss Knapp reached Narrowsburg the road operated 83 locomotives and 29,935 cars, carried 1¼ million passengers—and earned nearly 17 per cent of its original cost.

The Erie locomotives continued to burn wood until about 1870, when coal came into use. Just west of Narrowsburg where the overpass is now there was a huge woodyard. The wood was cut and hauled to the yard by farmers who were still clearing land. It was in four-foot lengths, but railroad employes using bucksaws or horse-powered saws, cut it into two-foot lengths.

When it came time to "wood up," as it was called,

the train was halted at the woodyard and the crewmen tossed the sticks into the tender. There the engineer and firemen piled them in as snugly as possible to make sure of enough fuel to carry the train to the next fueling point. Trains were light, consisting of about 30 freight cars of 10-ton capacity.

At the height of its development, Miss Knapp saw the Erie carry the products of the world through her village. There were the fruits of California, the products of the packing houses of the Midwest, wheat and corn from the Prairie States, automobiles and motor trucks and huge machines from the industrial centers. Even the silks and spices of the Orient went by. And millions of passengers rode in modern coaches that were air cooled in summer, steam heated in winter, and electrically lighted. There were dining cars, sleepers, Pullmans and all the devices for comfort and safety. The locomotives were unbelievable giants—and their day, too was numbered, with the diesel on the way.

As she lived quietly on, Miss Knapp saw the world change from her front porch. In season the Delaware River, too, had teemed with activity as each year with millions of feet of logs went down river in rafts. With depletion of the forests before the century closed, she saw rafts disappear from the stream. A little later she witnessed the end of the bluestone industry of the valley as it slowly succumbed to granite and concrete.

In the area of earth-bound transportation, contemporary with Miss Knapp's 103-year life span was the disappearance of the turnpike and the stage coach; abandonment of the D&H canal; development of the

Erie railroad into one of the nation's chief carriers; the building and ultimate decadence of the O & W railroad; and the development of the modern highway system. But there was also still another system of transportation—the pipeline down the Delaware Valley.

In 1880, the Standard Oil Company purchased a right-of-way from Olean, N. Y., to Garfield, N. J. This strip was a rod wide. Promptly the company began ditching and the laying of a six-inch wrought iron pipe, and by September the line reached Cochecton. Here land east of the village was purchased of the John M. Tyler estate and a pumping station was erected.

To the westward the nearest stations were located at Hancock, Sanitaria Springs, Catatonk; to the eastward at Hugenot and Otisville. At the last-named, there was a loading dock where the petroleum was transferred into tank cars and transported by rail to the refinery at Bayonne, N. J. Later the line was extended with pumping stations at Newfoundland and Garfield, both in New Jersey, which pumped directly to the refinery.

The Cochecton station was a large one. There was a pump house, boiler house, shop, an oil tank with a capacity of 35,000 barrels, and a coal storage that held 3,000 tons. The smokestack was 108 feet tall and came to be a landmark. The buildings were of brick construction. Pumping began in the spring of 1881. Besides the traveling carpenters, boilermakers and machinists, a resident staff of 14 men were required to operate the station. This included telegraph-

ers, for all communications were carried on by telegraph. The station operated 24 hours every day and pumped 50,000 barrels of oil and burned 25 tons of coal each day.

Additional pipes were laid and more boilers installed so that there were four and five lines. Eventually connections were made with the Indian Territory oil fileds. However, in 1925 this system was displaced by oil tankers that traveled out of the Gulf of Mexico and up the Atlantic coast to the refinery. The line was sold to the American Gas Company which began transporting gas through the pipes. The stack dynamited and the station dismantled, state highway 97 now traverses the site of the station.

Rocks 400 Million Years Old

On her trip from Bloomingburg in 1853, Miss Knapp's route crossed the Shawanagunk Mountains lying just west of her native village. Little could she have dreamed that twenty years later she would ride on a train through a tunnel that extended from the eastern to the western slopes of this range. But she did, and saw rocks that the geologists tell us are 400 million years old—so old, indeed, that there were no animal life above the invertebrates, and land plants had just begun to appear.

The old demand for better transportation facilities had led to the construction of this tunnel. When the Delaware and Hudson canal was developed, it brought prosperity to the adjacent country; likewise, the Erie railroad had hastened the development of the whole

southern section of the state and had offset the dismal effect of the Erie canal upon land values in the young county. These had dropped to $2 an acre while along the Erie canal route there was a land boom. The central part of the county still needed a railroad. A section of the state that included the counties of Delaware, Chenanago, and Otsego lacked rail transportation.

To answer this demand a railroad from New York to Oswego was constructed, and that is the way Miss Knapp came to see the rocks under the Shawanagunk Mountains. The new line built the tunnel.

The new railroad was the New York and Oswego Midland Railroad, and later became the New York, Ontario and Western. The original plan did not embrace western connections, but to make a bid for the heavy immigrant travel of the day as well as tap the grain and meat traffic the reorganized road sought the business and added "Western" to emphasize the fact.

Construction work was started at Norwich on June 21, 1868, and the road was completed July 9, 1873, with the laying of the last rail at Roscoe. And the road served this "back" country well. It became an important anthracite coal-carrying line with the building of a branch from Cadosia to Scranton, and it developed dairying in all the counties it served.

To agriculture of New York State this was most important. Since the early days, farmers of the section had grown wheat and fattened beef cattle. It was the latter that accounted for the many droves of cattle witnessed along the highways before the railroad came

to provide transportation to market of these herds. But railroads had penetrated into the vast West and products from the region—particularly wheat, corn and meats—stifled the New York State producers. With the new rail transportation connecting the farms along its route with the growing cities at its eastern terminus, these farmers turned to producing milk for those cities. The farmer was saved, at least for the time being.

For the county as a whole the new railroad did still more by introducing a new scource of income. The climate of the county had long been noted as a healthful one, but lack of transportation made it impossible to develop the area as a health resort notwithstanding its nearness to the congested New York City area. Also appealing to city dwellers were its excellent hunting and fishing grounds, but they, too, could not be utilized by property owners because of inaccessibility for large numbers from the cities.

Shortly after the new rail line began serving Sullivan County, a fluid milk industry began, game preserves were established, sportsmen came in large numbers to the trout waters of the Neversink and Beaverkill streams, and there was an influx of well-to-do persons who established summer homes. Then, after the turn of the century the development of the summer resort business began to expand rapidly until today it is the prime industry in the county. The O & W railroad has succumbed to motor traffic much the same as the stage coach business yielded to the combined competition of the canal and the Erie railroad, and it is now struggling for an existence only eighty years after its promising start.

Lived Under 31 Presidential Administrations

Miss Knapp lived under thirty-one of the first thirty-eight presidential administrations. This remarkable record stretched from Andrew Jackson to the second term of Franklin D. Roosevelt. When she was barely two weeks old, Martin Van Buren took the oath of office—the first president who had been born under the American flag. Jackson was born a British subject as was William Henry Harrison, who succeeded Van Buren.

During her lifetime the three martyred presidents were assassinated and of the seven chief executives who died in office, six died during her 103 years.

The American flag that floated from its staff in the Bloomingburg village square the year she was born contained but twenty-five stars—but there were actually twenty-six states. Michigan had been admitted a scant three weeks before her natal day but no star had yet been placed in the field of blue to commemorate the new state since such stars are added on July 4 next following a state's admission. As the little Bloomingburg girl grew, so grew the number of stars in the flag, the last two being added in 1912 to mark the admission of Arizona and New Mexico. Thus she saw the addition of twenty-three of the thirty-five states added to the original thirteen.

The stars in the flag floating in the Independence Day breeze of 1837 represented states that embraced forty-seven percent of the area of the country she came to know. And the expansion of population was from 17 million to 137 million.

Saw Modern America Develop

During the life span of this Bloomingburg native, the telegraph was developed, the telephone invented. She witnessed the birth of wireless, radio, television and aviation, and saw coal oil displace the tallow dip for illumination, and then the electrification of her adopted home in the Delaware Valley.

Although the common-school system originated some 25 years before she was born, its development began and reached its acme during Miss Knapp's lifetime. She witnessed the Little Red Schoolhouse dot the county, and she saw them replaced by our modern school buildings, and she saw thousands go on to higher education where in her youth only the most fortunate boys received college educations and girls went no further than finishing school, if so fortunate as to go that far.

In 1836 there were 88 school districts in Sullivan County with 3,358 pupils attending. Public money received totaled $1,910. The teachers were paid a countywide total of $2,579 in addition to the public money.