

# Some of the Lost Industries of the Octorara Valley.

From the commencement of the present century, down to fifty years ago, charcoal burning was quite an important industry in the Valley of the Octorara; but since the latter date it has been rapidly on the decline, and for twenty-five years has been almost extinct.

As late as a century since, much of the lands of this valley were covered with the virgin timber indigenous to the locality, consisting of vast forests of hickory, oak and chestnut, with maple, poplar, walnut and cherry occasionally interspersed amongst the leading genera. The question how to utilize the wood, and clear the ground for cultivation, was one of serious import to the sturdy husbandmen. The solution of the problem was effected by the ironmasters or iron manufacturers bringing their plants to such localities as offered an abundance of wood, in conjunction with water power, the latter to operate the bellows, and, in the case of the forges, the tilt hammer also—the wood to be used in the preparation of charcoal, the only fuel in use at that time for the reduction of iron. Tanneries were also located where oak bark was plentiful, the bark being used in the process of converting the skins of the domestic animals into leather. The latter industry was not, however, of sufficient importance to create a demand for labor, and only served as a convenience for disposing of hides and a limited amount of oak bark. The furnaces and forges, however, gave employment to a great number of men, in digging ore, in cut-

ting wood, in coaling and in hauling to and from the manufacturing centres, together with those who were operating the plant. These employes, with their families, and the great number of horses and mules engaged in the necessary transportation, opened a market for the productions of the farms in the surrounding region. The charcoal consumed in the reduction of the ore into merchantable iron created a demand for the wood, which the landowners were anxious to dispose of. The ironmasters often bought in fee simple large tracts of woodland, but the located farmer only sold the wood-leave, retaining the land for agricultural purposes, the purchaser clearing the ground in a stipulated time. The wood-cutting was largely done by farmers' grown-up sons and mechanics who could not follow their trades during the winter months. There were a few professional wood-choppers, who were engaged in this occupation during the entire year, chief amongst whom were Nathan Jones, Mark Johnson and Ben. Green. The woodland, when prepared for cutting, was measured off in lots to suit the desire of the chopper, a line of blazed trees bounding the assigned tract, which generally contained from one to three acres, dependent upon the estimated number of cords of wood thereon. From ten to thirty wood-choppers would often be employed in one tract of woodland, each one of whom would average from two to four cords of wood every day, the cords containing 128 cubic feet, being eight feet long, four feet high and four feet in width, the length of the wood, the average price paid for cutting being about 25 cents per cord. Mess squads of four choppers were generally formed and a suitable domicile erected, in a near-to-water, well sheltered spot, not far from the scene of their daily toil. To erect the habitation a circle of ground

twelve to fourteen feet in diameter was cleared and leveled off. A vertical pole, ten to twelve feet high, was planted in the centre of the ring, poles reaching from the circumference of the circle to the summit of the centre pole were then placed in position, and the tops of the poles securely fastened together by means of hickory withes. Other poles were then arranged around the circle to give secure support to a covering of cedar or pine boughs, which were covered with deciduous leaves, the whole surmounted with a layer of earth, to retain the leaves and branches in position. A batten door, located in the continuous parietes of the cabin, determined the front of the habitation. Another opening, in the rear, built up of stones, or sticks, and mud, served for fireplace and chimney. Bunks, filled with straw, covered over with blankets, arranged upon either side of the entrance hall, served for chairs, lounges and beds. The cooking utensils were limited to a cast-iron pot, of good size, for boiling potatoes; a frying pan, coffee pot, tin cups and plates, with knives, forks and spoons; china closets were unthought of. The bill of fare seldom varied; it consisted of potatoes, bread and butter, fried mush, fried pork and strong coffee. A snared rabbit, an opossum or raccoon were occasionally added to the above collation, and, of course, were fried. Notwithstanding the above dietary, dyspepsia was unknown amongst the hardy wood-choppers. The evenings were spent in whetting their axes, in making axe helms and sockets for their wedges, with an occasional game of cards; a few spent their evenings in reading good books; but this commendable employment was not general, rather the exception to the programme of the choppers' evening pastime. Visitations between the members of the different cabins, of which there would be from three to

eight in large tracts of woodland, were always in order, and cards, dominoes and checkers entered into the evening's entertainment. This outlines the life these choppers led during the winter, and until the springtime invited them into more lucrative employment. Then their cut wood was piled up in ranks (often by experts, who could outline a cord with three-quarters of 128 cubic feet). Some ranks were longer, some shorter, depending upon the proximity of the wood. After the ranks were finished they were measured by the agent of the ironmaster and the choppers were paid for their laborious work. These workmen then deserted their habitations, and the way was clear for the colliers, who, with their adjuncts, the wood haulers, then took possession of the field of operations.

These charcoal burners, as they have been called—but the term is evidently a misnomer, they should be called wood carbonizers—selected suitable sites for their charcoal pits, where access was easy for the teams engaged in hauling the coals from the pits to the iron plant. The ground was leveled in a circle 30 to 40 feet in diameter, sufficient of the surface earth being retained around the border to cover the pit and smoulder the burning pile. As soon as the pit site was prepared the wood haulers, with their horses and sleds, commenced operations by hauling thirty to forty cords of wood, which was placed around the circumference of the leveled site. The colliers then commenced in the centre of the ring to build the pit. First leaves and fine dry wood that would ignite easily were heaped up three or four feet high, then the cord wood on end was stood around and over the ignition point, gradually extending the pit until the thirty or forty cords of wood had been arranged to form a conoidal pile twelve to fifteen feet high. The entire pit was then cov-

ered with leaves, upon which a coating of earth or breeze was placed, to prevent the free admission of air and determine the amount of ignition, the object being to simply ignite and drive off the liberated gases, retaining the carbon of the wood. The fire was applied around the circumference of the pit, and also in the centre, where an opening was prepared, which acted as a chimney. Now the expert knowledge of the colliers was put to the test; judgment and vigilance, with experience, were all in requisition. If the fire burned too fast in certain parts of the pit, due to a change of the direction of the wind, it must be checked by applying more covering to exclude the air; should other parts not burn well, air must be admitted through properly located openings, so that the wood of the entire pit would be perfectly charred. When two or three pits were burning at the same time the collier had to be on the alert and walk his beat from one pit to the other every few minutes, until relieved by his associate, who then attended during the succeeding watch. One of them had to be constantly on duty, and it was interesting to notice the grimy collier as he passed around his pits with his long-handled shovel; here he threw on some earth to stay the fire, there he made an opening to assist the ignition, for which procedures you could see no reason, but his trained eye could detect at a glance what was required to perfect the charring process. These men were certainly skilled in their calling, and commanded high wages. Each ironmaster having his own collier, the business was confined to a few experts, chief amongst whom, fifty years ago, were John and Samuel Montgomery, brothers; John and Guy Hetherington, also brothers; the Waterson brothers and Henry Noggle. Later, Samuel Montgomery, Jr., William Montgomery, sons of Samuel, Sr.; John Hetherington, son of Guy, and Billie Burgin mo-

ncopolized the business. These colliers, although not understanding the theory of combustion nor the laws governing chemical affinities, yet thoroughly understood the practical part of the operation. They knew that a cord of wood would make thirty or more bushels of coal, if properly manipulated, dry wood giving best results. That the lower the temperature to which the wood was subjected during carbonization, the easier the coal would ignite; that chestnut wood coal made a stronger fire than oak wood coal, and, in fact, without theories or chemical knowledge, they understood how to obtain the desired results. After the pit had been burning from five to eight days, and no blaze was emitted from any part of it, then it was completely closed from two to four days and permitted to cool. By this process, 15 per cent. of the weight of the wood was obtained in charcoal; by distillation 25 per cent. is obtained. The charcoal was then drawn by means of strong iron-toothed rakes, the coals separated from the brands not fully carbonized, which underwent another term in the coal pit. After there was no apparent danger of combustion, the coals were then loaded, by means of large paraboloid-shaped baskets, into a wagon with an immense bed, capable of containing from 250 to 300 bushels of coals, which was unloaded by using the lead horses to pull the bottom boards out of the bed. These wagons were drawn by six large horses or mules, nicely mated, and often decorated with festoons of ribbons dependent from arches attached to the hames, from which arches a series of bells fastened thereto made a musical noise not always in symphony; nevertheless, the horses seemed proud of the music. Certainly the teamsters were, since, in accordance with the unwritten law, none but blue ribbon teams were permitted to wear bells. The most aristocratic coal hauler I

ever saw was the late Prof. D. Hayes Agnew. When proprietor of Pleasant Garden forge, in Chester county, he often drove the teams when the drivers were off duty.

After the coal had all been removed from the pit it was then prepared for another setting of wood, which was carbonized as before. Repeated burnings seemed to improve the site; perhaps due to the collection of breeze or coal dust, which was utilized for covering the wood when undergoing the process of carbonization. Inexperienced colliers often, from want of judgment or from inattention, permitted whole pits of wood to burn into ashes, entailing a great loss upon the ironmaster, who was exceedingly careful regarding the efficiency of his coaling employes. The colliers generally appropriated a deserted cabin, built by the woodchoppers, for a habitation, when one suitable for their purpose could be found; if not, they erected one of the same style of architecture to subserve their wants. Their bill of fare was a duplicate of that of the woodshoppers, except green vegetables, planked shad, spring chicken and hard-boiled eggs were occasionally added to the menu.

Some estimate may be formed of the great quantity of wood consumed in the Valley of the Octorara sixty years ago when we remember that within a radius of seven miles we had one foundry, two furnaces and seven forges, all using charcoal for the reduction of the iron output; in addition, all blacksmiths, and every cross roads furnished one of these mechanics, used charcoal in their forges.

On the east branch of the Octorara we had the Nobleville foundry, now Christiana machine shops; the Buckley forge, in Penningtonville, now Atglen; the two Sproul forges and Ringwood forges, in Sadsbury and Pine Grove forge, below the junction of the east and west branches of the Octorara. On

the west branch were Mt. Eden and Black Rock furnaces and White Rock forge. Estimating the output of the furnaces at 2,000 tons of furnace iron, requiring from 150 to 200 bushels of charcoal, weighing from fifteen to twenty pounds to the bushel, to reduce each ton, some estimate of the charcoal used in the furnaces can be made. The six forges averaged about 250 tons of forge iron, requiring from 100 to 120 bushels of coal to reduce each ton. From these dates can be calculated the forge consumption of charcoal. Allowing thirty to forty bushels of coal to each cord of wood, the enormous quantity of wood consumed may be approximated at 20,000 cords. In localities where the cleared land was unsuited for agricultural purposes the tillers were permitted to grow into trees, and in thirty to fifty years the woodland would again be ready to undergo another season of woodchopping and coaling, as before. The late Dr. Peacock, of this city, who was acknowledged to be high authority on this subject, verified the above estimates.

Where, fifty years since, the primeval forest trees, arrayed in their garniture of fading summer foliage, swayed in the fierce blasts of the autumn storm, now in the harvest season is often found the golden grain, waving in response to the gentle zephyr's kiss, and the husbandman rejoices in his abundant crops, often forgetting the unrequited labor expended by the hardy pioneer in removing the forest and preparing the ground for agricultural purposes. The rivulet which pursued its winding way through the woodland disappeared with the forest; its source, the fountain, around which the farmer boys were wont to congregate, to drink from its cooling, limpid waters, has ceased to flow, and you wonder at the "mutations of time." The old, notched



log pioneer dwelling has been razed, and in its stead you find a stately mansion, with all modern improvements. The straw-thatched stable is seen no more, the site has been appropriated by beautiful and commodious farm buildings. "The old oaken bucket which hung in the well" has given place to the wind-wheel pump, with its capacious cistern, furnishing, as required, the supply of water needed for household and farm-yard purposes. Upon this scene you gaze and "behold the onward march of time." The pioneer farmer, the woodchopper, the collier, the ironworker, have all gone to their reward above, but they left behind a race whose intelligence, integrity, patriotism and Christianity make the Octorara Valley a region of which her sons and daughters may justly feel proud. And, while pre-eminently an agricultural locality, yet no profession extant but has been honored by her children, and though the seasons may come and go, generations be born and die, still, judging the future by the past, the Octorara Valley will continue to furnish her quota of "Living Leaders" for our grand old county of Lancaster.

These colliers generally owned small farms, which they frequently visited to see their families and obtain provisions during their summer season of coaling. They were well-to-do, thrifty citizens, and some of them kept themselves posted on the questions of the day. I remember of frequently seeing one of them as I passed his habitation in the coal fields during my morning drives. He was seated upon a stump attentively reading his weekly paper when he could snatch a few minutes from his rounds.

Yet I would not have infer that all of them were literary characters, for certainly Henry Noggle laid no claims to belonging to this class, as illustrated by the following incident:

Upon the organization of the Steelville debating club no suitable hall could be obtained in which to hold the sessions, except one in charge of Mr. Noggle, who was averse to letting it to the club, fearing disorder on the part of those who would congregate to hear the discussions. The contract, however, was consummated, with the understanding that Mr. Noggle should be made President of the club and have full authority to preserve order. At the first session under this regime the resolution, Resolved, That the females of this nation should enjoy the right of suffrage and the elective franchise, was chosen for discussion. The hall was well filled with a fun-loving audience. When Henry called the meeting to order Prof. G. F. Baker stated the question for discussion; also cited the by-laws, limiting the speeches to fifteen minutes, and intimated that the President would decide upon the merits of the arguments produced in closing the discussion. A youthful M. D. championed the forces on the affirmative and Prof. Baker commanded the negative warriors. After some two-and-a-half hours of earnest discussion the debate closed, and Professor Baker suggested that the President give a synopsis of the arguments advanced previous to rendering his decision. The use of that word synopsis proved a boomerang to the negative, although the sympathies of the President were up to this time with the opposers of the resolution. The doctor obtained the floor and accused Prof. Baker of exacting duties not required of presiding officers in deliberative bodies and suggested that the professor was actuated to this course by a desire to embarrass the chairman, who had not taken notes of the discussion and certainly was not prepared to rehash all of the verbiage produced by the negative; the idea of

requiring a synopsis of the so-called arguments of the opposition to the resolution was absurd. The constitution only required the simple decision of the President as to whether the affirmative or negative had adduced the stronger arguments and that no interference by suggestion should be tolerated by the chairman. The professor claimed the floor, but the doctor advised the President that the professor was out of order, and the President affirmed this position. The professor appealed to the house, but the President, by the doctor's advice, would not tolerate the appeal, and the decision was in favor of the affirmative. The professor then appealed from the decision of the chair, the Vice President stated the question of appeal and the house sustained the appeal and the decision was reversed. The doctor obtained the floor on a question of privilege, and claimed that the reversion of the President's decision was a direct insult, and that out of self-respect no course was open to the President but to resign. In accordance with his advice the President tendered his resignation, which was accepted and a pro tem. officer elected.

The contract for the hall had been secured for the desired term and Henry had voluntarily relinquished the honors and emoluments of the office and could not recall the contract.

It is needless to say that there was a conspiracy against Henry. And, although he was not successful as a presiding officer, as a collier and angler he was A No. 1.

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