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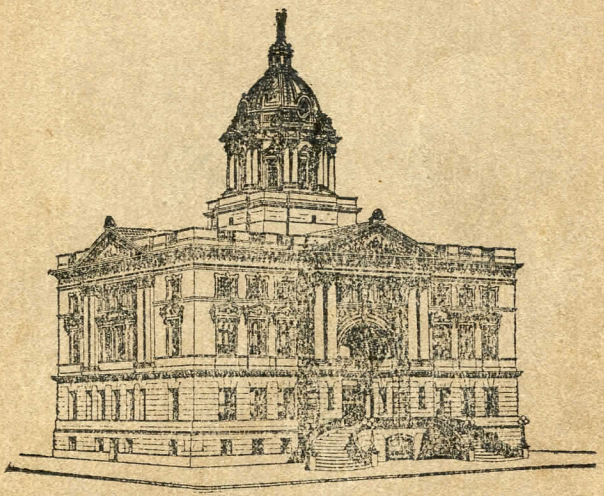

(ROOMS OF THE WEST VIRGINIA HISTORICAL SOCIETY.)

CHARLESTON, W. VA.

Published by the West Virginia Historical and Antiquarian Society.

J. P. HALE, Editor, President of the Society.

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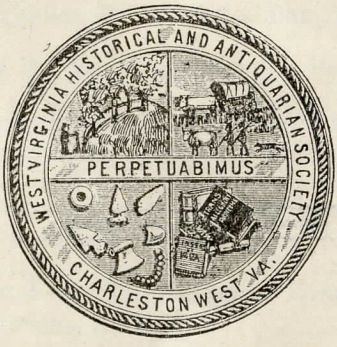

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The West Virginia Historical and Antiquarian Society.

HISTORICAL AND DESCRIPTIVE SKETCH OF THE GREAT KANAWHA AND NEW RIVER VALLEYS FROM POINT PLEASANT TO HINTON.

BY J. P. HALE.

The Great Kanawha river, or its chief formative branch, New river, or Wood river, takes its rise in the mountains of western North Carolina, a seaboard state; but, instead of flowing down through the sunny South to the welcoming bosom of the broad Atlantic, which would seem to be its natural course and destiny, it turns defiantly to the northwest, braving and overcoming the formidable barriers of the Blue Ridge, Allegheny mountains and parallel ridges, making its way to the great western continental waterways and through the Ohio and Mississippi rivers to the Gulf of Mexico.

Probably the first white man who ever saw this river at any point was Col. Abraham Wood, who dwelt at the falls of the Appomattox river, the present site of Petersburg, Virginia.

Being of an adventurous turn, he got, in 1654, from the then Governor of the Colony of Virginia, a concession to "explore, hunt and open trade with the Indians of the west."

The line of exploration and discovery was then all east of the mountains, the Blue Ridge had never been scaled, and all that lay beyond was terra incognita. This was long before the famous exploit of Governor Spottswood, who, with his Knights of the Golden Horseshoe, crossed the Blue Ridge in 1716, believing themselves to be the first to do so, and were immortalized by the feat.

Col. Wood and party followed up the Staunton or Dan river, and up the Smith's river, branch of the Dan, to the base of the Blue Ridge, where they found a mountain gap which they concluded to traverse, and named it "Wood's gap," which name it retains to this day.

When they had crossed the "divide" and gotten on to the western slope, they fell upon the waters of a small river which they named "Little river," and "Little river" it still remains. Following down this stream to its mouth, they came to a much larger stream, which being to them a new river, without a name, they then and there named it "Wood's river or New river."

When Col. Wood discovered and named this river, he did not know, of course, the extent of the river nor the destination of its waters, but these names (Wood's river or New river) were intended to attach to the whole course of the stream, from its source to its mouth, wherever that might be.

Both these names clung to the river for a long time. About a century later (1745 to 1755), there were numerous issues of land grants and petitions for land grants west of the mountains.

I find on the records of these frequent references to the river under the above names, and also as Missippi, Alegany and Cantawa. I will quote from some of the records so much as refers to the names of the river: April, 1745,— "acres on three branches of Missippi, one known as Wood's river, and the others to westward thereof." May, 1745.— "acres running on the branches of New river or Missippi." August, 1747, — "running on the branches of Missippi river." May, 1748, — "running on the branches of New river or Missippi." July, 1749, — "river known by the name of New river, and down said river to the Missippi river." Surveys laying on New river, commonly called Wood's river." — "On three branches of Missippi river, one known by the name of Wood's river." June, 1750, — "on Blue Stone creek, three miles from where it empties into Wood's river." October, 1751, — "on Alegany river and Holston river, or any waters of both rivers." March, 1752, — "New river or Alegany, thence down the said river for complement." June, 1753, — "on the waters of the Missippi, beginning at the mouth of New river, otherwise the Big Cantawa." 1754, — "on the waters of the Missippi, beginning at the mouth of the Little Cantawa."

In 1752, Peter Fontaine, surveyor of Halifax county, made, for the governor, a map of the colony as then known, which was only to the Alleghany mountains. Westwerd these mountains were laid down as "Missippi or Alleghany Ridge;" the upper New river (all that was then known of it) was called "New river, a branch of the Missippi river," and beyond was marked "Parts Unknown."

It will be seen from the above, and other records, that

the first hundred years of the knowledge of our river it had no less than nine names, as follows: New river, Wood's river, Missippi river, Alegany river, Cantawa river, China-dochetha (of the French), Pi-qquo-me-ta-mi (of the Miami's), Ken-in-she-ka-cepe (of the Delawares), the last two meaning White Stone river and "Old Greasy," a pet name given to it by the old Kanawha flat-boatmen in the days of salt shipping by flatboats, on acount of the oil escaping from the salt wells, getting into the river, spreading over the surface as it floated down, displaying beautiful iridescent colors. The point of junction of this river with the Ohio was called by the Indians Tu-edna-wie. Each of the river names above mentioned, except "Old Greasy," which applied only from the salt works down, claimed the whole stream, from source to mouth. As the country west of the mountains became better known, the names of Missippi and Alleghany were eliminated from our stream, and relegated to their respective localities. Gradually the name Wood's fell more and more into disuse, and finally became obsolete. The French name, Chinadochetha, had never gotten a hold, and the Indian names vanished with the Indians. Thus the names New river and Kanawha were left in possession of the stream, each claiming supremacy, and neither willing to yield. In this condition of the matter, the rivers seem to have resorted to compromise, as humans so often do under like conditions, New river taking the upper stream to the mouth of Greenbrier, and Kanawha thence to its mouth; but this, again like human adjustments, did not remain satisfactory. New river demanded and Kanawha has gracefully conceded a new division at the mouth of Gauley river, giving New river the smaller and longer stream and Kanawha the shorter and larger one. I say the rivers seem to have made these boundary limitations and adjustments themselves; for, so far as I know, there has never been any formal human action leading to these results. It seems to be one of those curious cases of unconscious action and concurrent common consent, by which great changes are wrought without anybody knowing when, why or wherefore.

I have been somewhat particular about the name of our river, because there is a common misapprehension on the subject. It is often claimed and printed that Kanawha, in the Indian tongue, meant "River of the Woods." This is clearly a mistake; the river had been discovered by and named after Col. Wood, and when the name Kanawha was given it Wood's river became an alias, as Kanawha or Wood's river; and not Kanawha, the River of the Woods.

The first name given the Great Kanawha, at its lower end, by white men, was by a party of French engineers, under Capt. De Celeron, who, on the 18th of August, 1749, planted an inscribed leaden plate at the mouth, giving the river the name of "Chi-na-do-chetha," and claiming for the French crown all the territory drained by its waters. What the name Chi-na-do-chethea signified I do not know.

The French leaden plate was unearthed in 1846 by a little nephew of Col. John Beale, then a resident of Point Pleasant, and, in 1849, just one hundred years after the French had planted it, the late James M. Laidley, then a member of the Virginia Legislature, from Kanawha county, took it to Richmond, and, with appropriate remarks, submitted it to the Virginia Historical Society, where, I am informed, a copy of it is still preserved; but Mr. Laidley was required to return the original to the finder, who was afterwards cheated out of it by the fair and false promise of an itinerant sharper.

The name Kanawha was probably derived by evolution from the name of a tribe of Indians (a branch of the Nanticokes) who dwelt along the Potomac and westward to Wood's or New river. They were variously called or spelled, by different authors, at different times, Conoys, Conoise, Canawese, Conhawas, Conaways and Kenhawas. The spelling of the name has been very various in addition to those given above. Wyman's map of the British Empire, in 1770, calls it the "Great Conoway or Wood's river." The act of the Virginia Legislature in 1788-9, establishing the county, spelled it Kenhawa. In an original report of a survey near the mouth, made by Daniel Boone, in 1791, and now preserved in the West Virginia Historical Museum, he spelled it "Conhawway." This variety, in the pronunciation and spelling of the names no doubt arose from the difficulty of catching the uncertain and elusive, though often musical sounds of Indian pronunciation, and fixing them in written words. In the remote past—remote as we compute time, but comparatively recent in the geological history of the world—an important and interesting physical change occurred in the course and channel of the lower Kanawha river. Its former course seems to have been from the mouth of Scary creek, fifteen miles below Charleston, down through what is now known as "Teay's Valley," taking in Hurricane creek, Mud river and Guyandotte, and the physical appearance of the country strongly supports this contention. During the last great ice period of the earth's history, geologists teach us that the glaciers came down from the north

over Canada, down into the Ohio valley, and even crossed the Ohio river. The limits of these ancient ice sheets are approximately known and mapped from the indelible records they made. The waters of the Ohio river and tributaries were dammed back by these great masses of ice. The Kanawha-New river valleys, and others, were then long, narrow lakes. This condition must have continued for a very long time, as there are still evidences of lake shores along some of the mountain sides, in water-worn boulders, pebbles and sand. One of these places may be seen on the road leading to Spring Hill cemetery, at Charleston, and others at different points along the river. During this period of obstruction of the former channel, the Kanawha cut and wore down a new channel from the mouth of Scary creek to its present mouth at Point Pleasant; and, as this channel had been worn to a lower level than the old, the river never returned to the old, after the obstructions had disappeared.

When and by what nation, race or tribe of people this Kanawha-New river valley was first inhabited is not known to history or tradition. We know that the Moundbuilders, that mysterious people who figured so extensively over so large a portion of the country, occupied this valley for a time, and probably in large numbers, judging from the extensive earth and stone works, and numerous flint and stone tools and implements they left; but they left no written records, and their history and fate are lost in oblivion.

There was a vague and intangible tradition among the red Indians that this valley was once inhabited by a white or light-colored race, afterwards driven out westward and exterminated by a more powerful race. The red Indians—whether descendants of the Moundbuilders or a diffferent race, is not known—occupied the country north of the Ohio and westward, when the country was discovered by the whites, but they did not then hold this valley. The last tribe known to have had a settled residence here was the Cherokees; but they had retired from it several generations, perhaps centuries, before, and were settled in southern Virginia, the Carolinas, Georgia and Tennessee, but they still claimed title to the lands of this region. This title was so far recognized by the whites that in October, 1768, Mr. Steward, superintendent of Indian affairs, concluded a treaty with the Cherokees, in which he induced them to cede to Virginia their right and title to the lands on the north side of New river and Kanawha to the mouth, and in October, 1770, another treaty was made, in which they ceded all their lands on the south or west side of said rivers.

The first white families ever in the upper Woods or New river valley were the Ingles and Draper families, and some others who accompanied them, in 1748, and settled at a place they named Draper's Meadows, now in Montgomery county, Virginia. In 1750, Dr. Thomas Walker, of Virginia, with others, made an expedition into Kentucky by way of Cumberland Gap, and in returning, came along the Cumberland mountains, crossed New river at the mouth of Greenbrier river, the present site of Hinton, and then up Greenbriar river. These were the first white persons ever in that part of New river valley. In 1755 a party of Shawnees, from Ohio, made a raid upon the Draper's Meadows settlement, above mentioned, killed most of the colonists, burned their houses, and took Mrs. Mary Ingles and Mrs. Bettie Draper prisoners, down the New river and Kanawha and over to the Scioto Indian settlement, north of the Ohio. These were the first white persons ever in the Kanawha valley.

In 1764, Matthew Arbuckle, an adventurous pioneer of the Greenbriar frontier settlement, came down the New river and Kanawha to the Ohio and returned. He was the first white man ever in the Kanawha valley. Ten years later he piloted the Virginia army, under General Andrew Lewis, from Fort Savannah, now Lewisburg, to the mouth of the Kanawha, where, on October the 10th following, the bloody and decisive battle of Point Pleasant was fought, and the Indians, under their famous leaders, Cornstalk, Logan and others, were defeated.

In 1770 General Washington was on the lower Kanawha, locating and surveying lands granted to him for his military services in the northwest, the expedition to Du Quesne, etc. In 1772, he was again locating military lands for himself and companions in arms, higher up the valley. It is claimed that he was again in the valley in 1784, but his own diaries give no account of it.

In 1771, the renowned pioneer, Simon Kenton, and two companions, Yeager and Strader, were the first to build a cabin or camp and make a settlement in the Kanawha valley; they were located about the mouth of Two-Mile creek of Elk river; here they hunted and trapped until early in 1773, when they were attacked by the Indians, Yeager killed and both Kenton and Strader wounded. The survivors made their way to the mouth of the river, where they fell in with some French traders, who took care of them. Later in the year, Col. Thomas Bullitt was here taking up and surveying the lands on which Charleston now stands, for military services in Braddock's army. The same year (1773), Walter

Kelley made at the mouth of Kelly's creek the first family settlement in the Kanawha valley. In the same year, John and Peter Van Bibber and Rev. John Alderson came down the New river and Kanawha, and on the trip discovered the so-called "burning spring," then considered a great mystery, but now known to be simply an issue of natural gas, which will bubble a pool of water through which it rises, resembling boiling, and burn if set on fifire.

In 1774, William Morris settled at the mouth of Kelly's creek (where Kelly had been killed by the Indians), John Flinn, on Cabin creek, Leonard Morris at the mouth of Slaughter's creek, and Thomas Alsbury and others at points lower down.

In 1775, Generals Washington and Lewis "took up" 250 acres, including the wonderful burning spring.

In 1776, Robert Hughes, the first settler at the mouth of Hughes creek, was captured by Indians and remained a prisoner for two years.

In 1777, Cornstalk, his son Elinipsco, and Red Hawk, were killed at Point Pleasant.

In 1782, Thomas Teays was captured below the mouth of Coal river, taken to Ohio and condemned to be burned with Col. Crawford. He was recognized and saved by an Indian with whom he had hospitably divided his salt when surveying in Teays' valley the year before.

In 1785, Captain John Dickinson located 502 acres at and above the mouth of Campbell's creek, including the "Big Buffalo lick," or Salt Spring. This spring was largely resorted to by buffalo, elk, deer and other game, when first discovered by the whites.

In 1786, the first wagon road was made from the Greenbriar settlements to the Kanawha river; the route was by Muddy creek, Keeneys knobs, Rich creek, Gauley river Twenty Mile creek, Bell creek, and Campbell's creek, with side trails down Kelly's creek and Hughes' creek to the boat yards.

In 1788, George Clendenin built the first house and fort where Charleston now stands. This house was immediately followed by six other houses built by his co-colonists, and in front of the Clendenin house a picket fort. In the same year Lewis Tackett was captured by Indians on his way down the Kanawha river, and tied to a tall pine tree on a high knob near the river, while they went off hunting. During their absence a rain wetted and stretched the buckskin thongs with which he was tied, and he made a wonderful escape. This tree, known as "Tackett's pine," stood until

within a few years past, and was used as a landmark by steamboat-men to steer by. Soon after this, Tackett settled and built him a fort at the mouth, on the lower side of Coal river. This fort was soon after captured, and several persons murdered by the Indians. John and Lewis Tackett and their mother were captured near the fort while gathering turnips. Chris Tackett and John McElhany were the only men in the fort when captured. Chris Tackett was killed in the action. McElhany and wife, Betsy Tackett, Sam Tackett and a small boy were taken prisoners; McElhany was tomahawked near the fort. John Tackett succeeded in making his escape, but Lewis Tackett and his mother were taken to the Indian town on the Scioto, where they remained as prisoners two years, when they were ransomed and returned.

In the young family is preserved an interesting tradition in relation to the capture of Tackett fort. When the attack commenced, John Young with a young wife and a one-day-old babe, were in the fort; but upon the final surrender, and under the friendly cover of the approaching shades of night, Young picked up the wife and babe and the pallet on which they lay, made his way unobserved to a canoe at the river bank, laid them in it, and, through a drenching rain, poled his canoe with its precious freight up the river during the night, to Clendenin's Fort, and they were saved. Neither father, mother, nor babe suffered from the effort, fright or exposure. The babe, Jacob Young, lived to about ninety, leaving a large family of worthy descendants in the valley.

During the same year, Ben Eulin, while hunting in the hills below Point Pleasant, was pursued by Indians, and to escape them, jumped over a cliff said to be fifty-three feet high. He fell in a clump of pawpaw bushes covered with wild grape vines, which broke his fall and saved breaking his neck. He then jumped from another ledge twelve feet high and finally escaped, but little worse for the wear and tear.

About the same time, Capt. John Van Bibber and family were attacked near Point Pleasant; his daughter, Rhoda, was killed and scalped, and Joseph, a younger brother, taken prisoner to Detroit. He made his escape and returned home in 1794. Captain Van Bibber, aided by his faithful negro servant, Dan, killed two or three Indians during this attack.

In 1788-9, Daniel Boone and Paddy Huddlestone caught the first beavers ever trapped in this valley, at Long Shoal, below Kanawha Falls. The trap is now preserved in the West Virginia Historical Museum.

In 1789, Mad Ann Bailey, the fearless and famous frontier messenger, made her daring and lonely ride through the woods from Charleston to Lewisburg and back on her black pony, which she called Liverpool, bringing a supply of ammunition for Fort Clendenin (or Fort Lee, its official name), which was short of ammunition and in daily dread of Indian attack.

In 1789, Kanawha county was organized; its boundary was from Pond creek, some miles below Little Kanawha, down the Ohio to the mouth of Big Sandy, up Big Sandy to the Cumberland mountains, thence along the Cumberland range and across to a point nearly opposite the mouth of Pond creek, and thence to the beginning at the mouth of Pond creek, being about one hundred miles square, and comprising about ten thousand square miles of territory. The little Clendenin settlement, with its seven log houses and about thirty inhabitants, was made the capital and seat of government of this vast territory. In the official organization provided at the first court, held at the house of George Clendenin, the following "gentlemen justices" were severally sworn and qualified as members of the Court: Thomas Lewis, Robert Clendenin, Frances Watkins, Charles McClung, Benjamin Strothers, William Clendenin, Daniel Boone, George Alderson, Leonard Morris and James Van Bibber. Thomas Lewis was entitled to the sheriffalty of the county. He was duly commissioned, and appointed John Lewis his deputy. William Cavendish was appointed clerk and Frances Watkins his deputy. Reuben Slaughter was appointed county surveyor, David Robinson and John Van Bibber were appointed commissioners of the revenue, and William Drawdy and Williams Boggs, coroners.

In those days counties had military organizations ofter the English style. For Kanawha, George Clendenin was county lieutenant; Thomas Lewis, colonel; Daniel Boone, lieutenant-colonel; William Clendenin, major; Leonard Cooper and John Morris, captains; James Van Bibber and John Young, lieutenants, and William Owens and Alexander Clendenin, ensigns.

The first house built by George Clendenin was, for a time, used, not only as his private residence, but as a fort, a place of public entertainment for the few who came this way, for a court house and clerk's office, and the only voting precinct in the county. The year in which Kanawha was organized was an eventful one; in this year (1789) the first United States Congress, met, the federal constitution became operative, and George Washington took his seat as first President of the Republic.

In 1790, at the first election held in the county for legislators, Col. George Clendenin, the founder of the settlement, and Col. Andrew Donnally, Sr., the hero of the Indian fight at Donnally's Fort, were elected. At the election of 1791, George Clendenin and the renowned pioneer and frontiersman, Daniel Boone, were elected.

For six years after the founding of Charleston, the place had not distinctive name; it was called indiscriminately, "Clendenin's Settlement," or "the town at the mouth of Elk." In 1794, (Dec. 19), the Legislature of Virginia enacted that forty acres of land, the property of George Clendenin, at the mouth of Elk river, in the county of Kanawha, as the same are already laid off into lots and streets, shall be established as a town, by the name of Charlestown (so named after Charles Clendenin, father of George Clendenin), and appointed Reuben Slaughter, Andrew Donnally, Sr., William Clendenin, John Morris, Sr., Leonard Morris, George Alderson, Abraham Baker, John Young and William Morris, "gentlemen," as trustees. Surely, no set of men ever had such a "corner" on public offices as these few gentlemen who early settled about Charleston. The original map of the town is now preserved in the West Virginia Historical Museum. It is a curious fact that, while the county was officially named "Kenhawa," and the town "Charlestown," they both, without legislative, municipal or any public action, became gradually changed and finally crystallized as Kanawha and Charleston.

The Kanawha and New river valleys, from Point Pleasant to Hinton, about 150 miles, lies within five counties: Mason, Putnam, Kanawha, Fayette and Summers. Mason county was organized in 1804, with the county seat at Point Pleasant, which has been a continuous settlement since the battle of Point Pleasant in 1774. It now has a population of about 2,000. Putnam county was organized in 1848, with Winfield as county seat; it is a small village, with but a few hundred people. Fayette county was organized in 1831, with county seat at Fayetteville, a village of only a few hundred people. Summers county was organized in 1871, named after the distinguished statesman, orator and jurist of this valley, George W. Summers. The county seat was located at Hinton, a settlement which sprang up after the opening of the C. & O. railway, and has now grown to an active, thriving town of 5,000 population. There are numerous other villages and towns along the valleys, some of them growing and promising places; among them may be named, in the order of their location going up the valley, as follows: Leon,

in Mason county; Buffalo, Redhouse and Raymond City, in Putnam county; St. Albans, Spring Hill, Malden, Lewiston, East Bank, Cedar Grove, Coalburg, Dego, Handley and Cannelton ,in Kanawha; Montgomery, Deep Water, Mount Carbon, Kanawha Falls, Gauley Bridge and Thurmond, in Fayette county. The population of Mason county was, in 1890, 22,863; Putnam county was, in 1890, 14,342; Kanawha county was, in 1890, 42,756; Fayette county was, in 1890, 20,542, and Summers county was, in 1890, 13,117.

Since 1890, the population of these counties has largely increased. The transportation facilities of the valley are excellent. The slack water navigation of the Kanawha river, which has been in process of construction by the general government since 1873, is now practically completed, at a cost of about $4,000,000, and gives a constant boating stage of six feet water all the year round, from Loup creek shoals to the Ohio river, where it connects with all the 16,000 miles of navigable water-ways of the Mississippi valley. The C. & O. railway, from the Chesapeake bay to the Ohio river, and connecting with the Eastern and Western systems of railways, was opened in 1873, and runs through these valleyes from Hinton to the mouth of Scary creek. The O. C., now K. & M. R. R., was opened from the Ohio river to Charleston in 1884, and afterwards extended to Gauley Bridge. This road runs along the north bank of the river and connects by steel bridge across the Ohio river with the Ohio system of roads, to the lakes and westward. The C. C. & S. R. R. runs up the valley of the Elk river from Charleston, intending to connect with the roads of the northern part of the state at Sutton, Braxton county. Besides these roads there are numerous short branch roads running up the smaller streams into valuable coal and timber districts, and serve as valuable feeders to the trunk lines. These branch roads run, respectfully, up Pocatalico river, Davis' creek, Campbell's creek, Len's creek, Field's creek, Paint creek, Kelley's creek, Morris' creek, Armstrong's creek, Lower Loup creek and Mann's creek. The Ohio River railroad, which runs up and down the east bank of the Ohio river, crosses the Kanawha to its mouth, and a road is projected from Hinton up New river to the Norfolk & Western railroad.

The tpography and scenery of the two valleys is of quite different character. The lower, or Kanawha valley, is picturesquely beautiful, with broad alluvial bottoms of rich agricultural lands, well tilled, bounded by gently sloping, well wooded hills of 200 to 300 feet, near the lower end, gaining in height as you ascend the river, to more than 1,000

feet at the upper end, while the New river valley from Gauley to Hinton has, practically, no bottom or level land; it is simply a gorge or canon, with a rushing, roaring torrent at the bottom, with almost precipitous mountains rising to 1,200 or more feet above the river level. This is one of the wildest and grandest pieces of natural scenery this side of the Rocky mountains.

Before the C. & O. railway was built down this wonderful gorge, it was with difficulty accessible; but now, it is a hive of busy industry from one end to the other from Gauley to Hinton, with a large population engaged in coal mining, coke making and timber getting .

The fall from Hinton to Kanawha Falls is about 680 feet, including the falls of New river and the falls of Kanawha. It will readily be seen what enormous water power this would give; so far it has not been used (except to a small extent at Kanawha Falls), and is still running at waste; but, may we not hope that, ere long, it will be largely utilized for manufacturing, either direct or by conversion into electricity to be more conveniently available for power, lighting, etc.

As may be expeected from the character of the country, the Kanawha valley, as now limited (from the mouth of Gauley to the mouth of Kanawha) long antedated the settlement of that portion of New river valley now under consideration (from the mouth of Gauley to Hinton).

The traditions which relate to the early settlement of the Kanawha valley abound in adventurous eperiences and tragic incidents which befell the brave and hardy pioneers who came here to conquer the wilderness and win themselves homes, through dangers and hardships; but the prescribed limits of this article will not admit of my writing them out with that fullness and particularity which alone would do them justice. I can only as herein above, and as will follow, make meager mention of some of them, to preserve the incidents and the dates, while many must be left even unmentioned.

In 1790, Clendenin's Fort, on Fort Lee, was again threatened by an attack of Indians, and was short of ammunition. Fleming Cobb, an expert woodsman and waterman, was detailed to go to Point Pleasant for a supply. He started by canoe with his ready rifle and enough cooked food for the trip. He floated down by night to avoid being seen by Indians along the shore—by daylight next morning he had made forty-eight miles of the fifty-eight miles distance. He drew his canoe into the mouth of Ten Mile creek and secreted it

and himself under overhanging boughs and took a refreshing sleep in the bottom of the canoe. During the next day, while he was waiting for another night to complete his journey, he saw passing up the opposite side of the river about twenty Indians, they did not discover him, but the sight at once suggested to him the danger he had to encounter on his up trip.

When night came he went on safely to the fort at the Point. Next day he got his powder, lead and gunflints, and, at dark, set out on his perilous return. After a few hours' travel, poling his canoe up stream, he was discovered and pursued by a party of three Indians, but as they were on the opposite side of the river, and he kept his canoe close to his shore, he managed, during the night, to escape harm. Next morning, being near the mouth of Coal river, one of the Indians undertook to swim the Kanawha, so that if he (Cobb) escaped the two on one side, he would inevitably fall within range of the deadly rifle of the one on the opposite side. Cobb at once saw the danger that threatened him, and started his canoe full speed for the crossing Indian, being determined to kill him if possible. When within good rifle range he fired and wounded his man. He did not wait to see results, as the other two were firing at him, but started his canoe up stream with all the energy he could command, and while the two Indians were rescuing and taking care of the wounded one, he (Cobb) had gotten out of sight, and about 10 o'clock reached the fort safely, having made about fifty-eight miles by canoe, up stream, without food, sleep or rest, most of the way by night and most of the way pursued by three armed Indians, one of whom he succeeded in killing or wounding and thereby escaping them all. What wonderful power of physical endurance these early frontiersmen had—without it they could not, with all their nerve and pluck, have executed such daring, dangerous and desperate undertakings. Cobb's powder bottle, made of hickory, which he carried in this and other expeditions, is preserved in the West Virginia Historical Museum.

This Fleming Cobb brought here from eastern Virginia, the first fruit trees ever in the valley. Ann Bailey brought on horseback the first geese ever in the valley, and also brought on horseback a copper worm still, to distill the first whisky ever made here. Ann was English by birth and never lost her cockney dialect; she was a first-rate shot, and in telling her friends of one of her recent feats, she said she had just "killed a howl hoff a helf tree across the Helk river."

In 1794, John Harriman, living on the south side of Kanawha, two miles above the fort, was the last white person killed by Indians in this valley. In the same year the Legislature of Virginia granted ferry franchises to George Clendenin and Thomas Lewis, the first to establish ferries across both the Kanawha and Elk rivers at Charleston, and the latter to establish ferries across both the Kanawha and Ohio rivers at Point Pleasant. The first ferries ever across New river between Gauley and Hinton were Miller's ferry at Hawks Nest, and Bowyer's ferry at Sewell mountain. The first post office established in the valley was at Charleston, April 1, 1801, Edward Graham, postmaster. For ten years or more, there was only a fort-nightly mail, brought here on horseback from the east, via Lewisburg. The first Alsbury at the Falls of Coal river, and run by water-power. wheat and corn mill established in the valley was by Thomas To this the early settlers had to send their grists of wheat and corn and wait their turn, according to millers' rule. In those days flour and meal were not kept in the stores for sale. The first houses were, of course, built of logs; the shingles for roofs and lumber for internal finish were rived, or whipsawed by hand. Between 1815-20, sawmills were erected on Two Mile creek of Elk, with corn cracker attachments. Tobacco was largely raised by the early settlers, and, in the great scarcity of money, became a legal tender. Taxes were paid in tobacco, public officers were paid their salaries in tobacco, the courts gave judgments for debts payable in tobacco, and tobacco became the ordinary medium of exchange for property and commodities. Early in the settlement, the woman's wash kettles were called in requisition to boil the water of the salt spring to make the family supplies of that indispensable article. As the demand increased one Elisha Brooks, in 1797, under lease from Joseph Ruffner, who then owned the spring, erected a little furnace consisting of two dozen small kettles, set in a double row, with a chimney at one end and a fire-bed at the other. Using wood as fuel, he made about 150 pounds of salt per day and sold it for ten cents per pound at the kettle. Later, David and Joseph Ruffner bored a well in the salt spring, and secured, as they hoped, a larger supply of stronger salt water. This well at first only about sixty-five feet, was probably the first salt well ever bored in America. They built a larger furnace and had a full demand at good prices for all the salt they could make. This success gave great impetus to well-boring and furnace building on both sides of the river, up and down, and salt making soon became, and long remained the lead-

ing industrial interest of the valley. In the 40's and 50's the product went up to about 4,000,000 bushels per year; but stronger brines and shorter freights to the great consuming markets of the northwest gave advantages to newly discovered salt districts, which enabled them, by competition, to break down the interest here; and now, but one furnace is left (that of Mr. J. Q. Dickinson) to supply a good local demand. Kanawha was the birthplace of American well-boring; and Billy Morris, an ingenious well-borer, invented a tool which has done more to render deep boring practicable, simple and cheap, than anything else since the invention of steam. This tool is called, here, the "Slips;" but in the oil regions and elsewhere, they give it the name of "Jars." Morris never patented nor made a dollar out of his invention; but, as a public benefactor, he deserves to rank with the inventors of the sewing machine, reaping machine, planing machine, printing cylinders and cotton gin.

The Kanawha well borings have educated and sent forth a set of skilled well-borers all over the country, who have bored for water, for irrigation on the western plains, for artesian wells, for city factory and private use, for salt water at various places, for oil and gas all over the country, for geological and mineralogical exploration, etc. Capt. James Wilson, in 1815, bored within the present limits of this city, the first gas well in America. He bored for salt water; but getting very little, and an abundant supply of gas, of which he did not know the use or value, abandoned the well.

In 1840, William Tompkins, a salt maker, boring in one of his wells just above the mouth of Burning Spring branch, struck a large flow of gas and had the good sense to use it in boiling his brine. He was the first in America to utilize natural gas for manufacturing purposes.

A year later (1841), Messrs. Dickinson and Shrewsbury bored on the old Burning Spring tract and got the largest flow of gas ever struck in the valley. They used it in salt making for a number of years. Several others got gas in their wells and used it in salt making, but, finally, a scale deposited from the gas and salt water and clogged the wells and pipes until the gas was shut off.

In 1817, David and Tobias Ruffner discovered the first coal known in Kanawha and after much difficulty in arranging suitable grates and fire-beds, succeeded in using it, instead of wood, in their salt furnace—the way having been shown, all the manufacturers soon adopted it.

In 1846, T. S. A. Matthews discovered cannel coal on

Falling Rock creek, the first ever discovered in America. Discoveries were soon after made at Cannelton, on Mill creek, Paint creek, Coal river and other localities. In 1849, Mr. William Tompkins first shipped cannel coal from Kanawha by boat to New Orleans, and for several years cannel coal was shipped from here to New York via New Orleans.

In the 50's large oil works for the manufacturing of oil from cannel coal (the first in America) were erected at Cannelton and afterwards at Falling Rock, Paint Creek, Mill creek, Len's creek, etc., and promised to be a most important and profitable industry; but the discovery of oil in wells was a death-blow to the "infant industry" and all hopes in that direction.

Before the discovery of oils from wells, in large quantities, nearly all the salt wells in this valley yielded a little oil. The late John Slack, Sr., from his well at Black Rock, sold fifty barrels of oil to a Cincinnati druggist, to be put up in small bottles and sold as "British Oil," "Oil of Spike," etc., then popular as a liniment for bruises, sprains, rheumatism, etc. This is believed to have been the first barrel sale of well oil in America.

In 1855-6, the first commercial shipments of splint and bituminous coals from this valley were commenced; but, owing to the difficulties and dangers of navigation, at that day, not much was done until after the war. The first coke made in Kanawha valley was by Wm. Wyant, in 1878. A few years later, numerous coal and coke works were started on New river. The output has been increasing very rapidly until 1896 (although a year of business depression) the shipments by rail and river, east and west, amounted to 2,492,291 tons of coal and coke combined. These coals and cokes are equal to the very best in any market; and, by virtue of their superior quality, are rapidly increasing their product and extending their markets into new and wider fields. Building stones and fire clays of superior quality abound in both valleys, and brick clay in endless quantity in the Kanawha valley.

We have in these valleys, and tributary to them, a great variety of valuable timbers, and of various superior quality. The timber and lumber trades are very large and increasing rapidly. Our hardwoods are especially abundant and fine.

The first steamboat ever to enter the Kanawha river was the "Robt. Thompson," in 1819. She got as far as Red House shoal, but not having power to stem the swift current, she had to return. The next, and the first to reach Charleston, was the "Andrew Donnally," December 20, 1820.

After her came the "Eliza," and since then the steamboat supply has kept pace with the increasing demands of the valley.

Public sentiment in these valleys was very much divided on the issues involved in the late civil war, and both sides contributed liberally, in volunteers, to their respective armies. The valleys were occupied several times alternately by each army, and one of the first battles of the war was fought at the mouth of Scary creek, fifteen miles below Charleston, on the 17th of July, 1861, just one week before the first battle of Bull Run.

This valley was one of the principal routes through which the Ohio river states were populated; they came this way from Maryland, Virginia and North Carolina, taking flat boats on the Kanawha, and floating down the Kanawha and Ohio to their destination.

Many of Gen. Lewis' army, who were at the battle of Point Pleasant, came back this way, some settling in this valley and some going to Kentucky and Ohio.

Three of the earliest settled towns of the west—Marietta, Charleston and Cincinnati, in the order named—were founded in the same year, 1788. Marietta in April, Charleston in May, and Cincinnati in December.

It is not generally known outside of these valleys that the renowned pioneer and frontiersman, Daniel Boone, lived here, an active, useful and honorable life, from 1788 to 1799. This was after his Kentucky exploits and experiences, which gave him so much fame, and before he went to Missouri, where he remained until the end of his wonderful career. On of his sons, Jessie, married here, and their connections are among the best families in the country—Van Bibbers, Hills, Donnallys, Reynolds, Frys, etc.

The Kanawha river at its mouth, at low water is 510 feet above sea level; Charleston is 555 feet; the mouth of Gauley 650 feet, and Hinton 1,300 feet. From the mouth of Kanawha to Cincinnati is 205 miles; to Pittsburg, 262 miles; to Charleston, 59 miles; to Gauley, 96 miles, and to Hinton about 150 miles.

These valleys (Kanawha and New river to Hinton) lie in the north temperate zone, about 38½ degrees north latitude, nearly on a line with Yeddo, Japan; San Francisco, Cal.; Salt Lake City, Utah; St. Louis, Mo.; Lexington, Ky.; Washington, D. C.; Madrid, Spain; Athens, Greece; and Peking, China.

This is the most favored belt on the globe for comfortable temperature, high health, physical and intellectual devel-

opment and progressive civilization. The mean annual temperature of our valleys is about 53 degrees, the mean annual rainfall, about forty inches, and elevation above tide 510 to 1,300 feet at water level. We are free alike from the extremes of heat and cold that prevail to the north and south of us. Being south of the great storm belt, and protected by our hills, we are free from the tornadoes, cyclones and blizzards that devastate the western plains. We are free from the epidemic fevers often so fatal in other parts of our country, and free from the wearing and torturing malaria that makes life a burden in other sections. With delightful climate, pure mountain air and pure water, we have as healthful a region as can be found anywhere in Uncle Sam's broad dominions, as is evidenced by the large number of aged people among us and our remarkably low death rate.

WEST VIRGINIA'S BIRTHDAY.

BY W. S. LAIDLEY.

Some one will say that states are made, not born; which if true, would not prevent them from having a day on which they began their existence as a state, and this we call its birthday.

Neither shall we attempt to define what a State is! Some say it is a body of persons united together in one community for the defence of their rights, the body politic, and thus the State and the people are one and the same. Others define a State to be a territory occupied and ontrolled as a state, and others say it is the organization of the executive, legislative and judicial powers, which constitutes the state—

"What constitutes a State?
Not high raised battlement or labored mound,
Thick wall or moated gate,
Nor cities proud with spires and turrets crowned;
Not bays nor broad armed ports
Where, laughing at the storm, rich navies ride;

Not starred and spangled Courts
Where low browed baseness wafts perfume to pride—
No. men, high minded men,
With powers as far above brutes endued
In forest, brake and den.
As beast excel cold rocks and brambles rude,
Men, who their duties know,
But know their rights and knowing dare maintain,
Prevent the long aimed blow
And crush the tyrant while they rend the chain—
These constitute a State!"

Whether West Virginia is a state, and when it became one, are questions that with the facts before you, you shall determine for yourself.

If you should enquire of the school children of West Virginia or of any one of the citizens of the state, that are supposed to know, they would all tell you that the "Birthday of the State of West Virginia was June 20th, 1863."

They would say so because the State histories say so; because it is the date engraved on the State seal; because on this day it is supposed the State became one of the United States of America, and on this day the officers elected as the State officers were inaugurated, and because this is the gen erally accepted date, and everybody says so.

And who says otherwise?

The government of the State of Virginia had jurisdiction and control of the territory and people, at least up to the passage of the Ordinance of Secession, probably until the State of Virginia united with the Confederacy, but all this is somewhat of an enigma, which we are unable to solve. Whether secession dissolved the union, whether the States could secede, and if they did whether Virginia could take with her that part, that did not wish to go into the Confederacy—this the readers can determine for themselves.

It is sometimes called a situation or condition, either *de fine* or *de facto*. As a fact that part of Virginia lying west of the Alleghenies, or a very large part of it, did not intend to, nor did it ever become subject to the Southern Confederacy, but parts of it, for short periods, were held at different times ,under the control of the Confederate army.

Soon after the passage of the Ordinance of Secession, by the Virginia Convention, at Richmond, the members from the Western counties, left for their homes, and practically severed their connection with the old Commonwealth. From that time, the west repudiated the authority of the old State,

and from that time, there was the beginning of the separation, which grew into the new State. The people of Virginia were conscious of the immensity of the step they were taking and they were slow to take it. No doubt the problem before them was as great or greater than that of 1776. If the State of Virginia remained in the Union, she would be called upon to act with the other States of the Union, to assist in restoring the Union and quelching the insurrection, or rebellion or revolution, as you may name it. She would be required to furnish her quoto of men and means to subdue the Southern States that had seceded, and as she then believed, help to destroy the South and Southern institutions.. If she united with the South, she would have to fight with them to maintain their separation, and prevent the destruction of said institutions, and slavery.

This was the question for the Convention to determine.

The western members cared nothing for slavery, they had but few slaves and this was a small interest compared with the sacrifice they would have to make, if they went with the South, and there were many in the west, that wished to see slavery abolished anyhow, and there were few that were willing to risk their lives and fortunes to sustain it. The Convention went South, and the western members went home. The last sad farewell was spoken!

The western people immediately organized their opposition to the adoption of the Ordinance thus passed by the Convention, and submitted to the people for ratification or rejection, and when the vote was taken, the eastern vote overcame that of the west, and secession was ratified by the people of the whole State, but the west was greatly in the majority in opposition to it.

Then began the separation to take form and action.

A Convention was called at Wheeling and on June 13, 1861, and a Declaration of the People of Virginia was made and issued, whereby the action of the Convention in Richmond were declared null and void, and the offices of the State of Virginia were vacated. On June 19, 1861, an Ordinance was adopted at Wheeling, by which the State government of Virginia was reorganized, appointing a governor, lieutenant governor and attorney general, and calling together the members of the Legislature that had been elected in May preceding.

On June 21, 1861, another Ordinance providing for the Legislature to select an Auditor, Treasurer and Secretary of the Commonwealth, and to take steps to secure the revenues, &c.

On the 25 June, 1861, an ordinance was passed to furnish to the United States soldiers "to execute the laws of the Union and to suppress insurrections and repel invasions." and other Ordinances reorganizing the State government, on the basis that Virginia was yet in the Union.

On Aug. 20, 1861, there was passed "An Ordinance to provide for the formation of a New State." Whereby it was ordained "that a new state, to be called the State of Kanawha, be formed and erected out of the territory, &c."

The voters within the said territory, were called upon to vote on the question of the formation of the said new State, at an election to be held on the fourth Thursday in October, 1861. The governor was to declare the result of said election on the 15 Nov. 1861, and if the result was in favor of the new State, he was to call together the delegates on Nov. 26, 1861, to organize themselves into a Convention, to form a Constitution for the proposed State and to submit the same for ratification or rejection to the voters of the proposed State.

On Aug. 20, 1861, an Ordinance was adopted providing for the election of Representatives from Virginia in the Congress of the United States.

The General Assembly called together as aforesaid, met in Wheeling, and passed acts concerning the revenues of the State, to regulate the military force of the State, to declare certain offices vacant, a resolution to elect two United States Senators in the place of R. M. T. Hunter and James M. Mason.

Again in Dec., 1861, the General Assembly of Virginia met in Wheeling, and among other things informed the Secretary of the Treasury of the United States of their inability to pay the part of Virginia's direct tax, and giving the reasons therefor.

Again the Legislature of Virginia met in Wheeling, May 6, 1862, in extra session, and on May 13, 1862, passed an "Act giving the consent of the Legislature of Virginia to the formation and erection of a new State, within the jurisdiction of this State."

This was after the adoption of the Constitution by the Convention, which met in Wheeling Nov. 26, 1861, when the Convention changed the name of the new State from "Kanawha" to "West Virginia," and which Constitution had been adopted by the people in Apl, 1862. And by said act, the Senators and Representatives in Congress of the United States, were requested to obtain the consent of Congress to the admission of the State of West Virginia into the Union.

Was there yet a State of West Virginia?

There was a territory set apart for the new State, and the people had formed for it a Constitution, and had adopted that Constitution, but, was there in existence the State of West Virginia?

On May 13, 1862, Virginia gave her consent to the formation and erection of the State of West Virginia, and asked Congress to consent to the admission of the State of West Virginia into the Union.

On the 14 May, 1862, there was passed an "Act making an appropriation to the proposed State of West Virginia," which gave "to the State of West Virginia one hundred thousand dollars, when the same shall become one of the States of the Union." Here it is called the proposed State, and the appropriation is made contingent upon the new State being admitted into the Union.

On the 25 May, 1862, the Senate of the United States was a;sked to give its consent to the admission of the State of West Virginia into the Union. Congress required an amendment to the Constitution of the new State in regard to slavery, and authorized the President to make proclamation, admitting the new State into the Union, when the proposed amendment of the State Constitution had been made and adopted by the people of West Virginia, but the act was not to take effect until sixty days after the date of said proclamation.

Was there yet a State of West Virginia?

On Jan. 30, 1863, the Legislature of Virginia authorized the Governor, on the event the people of the proposed State of West Virginia, ratified the proposed amendment to its Constitution made by Congress, to postpone the May election until October, 1863.

On Jan. 31, 1863, said Legislature enacted that the troops raised within the boundaries of the proposed State, in the event it shall become one of the United States, should become the volunteer militia of the State of West Virginia as if they had been raised and organized under the Constitution and laws of the State of West Virginia.

Feb. 3, 1863, the Legislature transferred to the proposed State of West Virginia certain property, when the same shall become one of the United States, and on Feb. 4, 1863, made appropriation on same terms.

In the act of Feb. 4, 1863, the State of West Virginia gave its consent to certain counties of Virginia to become part of the State of West Virginia. It speaks of the new State of West Virginia and does not use the word "proposed" State.

On Feb. 16, 1863, an Ordinance for submitting to the people of West Virginia the amended Constitution, was adopted. The vote thereon was to be taken on the 26 March, 1863, and a committee of five were appointed to cause the said election to be fairly taken, in every part of the proposed State of West Virginia, and to procure the admission of the said State into the Union, if the amended Constitution shall be ratified by the people.

On February 19. 1863, another Ordinance was adopted, "to provide for the organization of the State of West Virginia," which says "When the President of the United States issues his proclamation under the act of Congress, approved Dec. 31, 1862, entitled an act for the admission of the State of West Virginia into the Union and for other purposes, then an election shall be held on the Thursday next succeeding the thirty-fifth day from the date of said proclamation, for the election of Senators and Delegates, a Governor, Secretary of State, Treasurer, Auditor and Attorney General, three Judges of the Court of Appeals, Judges for the Circuit Courts, Clerks of Circuit Courts, Sheriffs and Prosecuting Attorney, &c. The term of office of the persons thus elected shall commence on and include the sixty-first day from the date of the said proclamation, but shall continue and be computed as if the same had begun on the first day of Jan. 1863, except that the terms of the Governor, Secretary of State, Treasurer and Auditor shall continue and be computed as if the same had begun on the 4th day of March, 1863.

The vote was submitted and the Constitution as amended was ratified by the people.

The President was informed of the ratification, and he issued his proclamation on the 20 Aprl, 1863. The first Legislature of West Virginia began June 20, 1863. On June 20, 1863, a joint resolution was adopted declaring that certain officers were elected, naming the State officers, and on that day the said State officials took the oath of office and began their official duties.

On Oct. 15, 1863, Joint Resolution No. 24 was passed, a joint resolution respecting the construction of the second section of the Ordinance of the Constitutional Convention for the organization of the State of West Virginia:

Resolved, That the terms of all officers, legislative, executive and judicial, elected on the 28 May, 1863, began on the 20 day of June, 1863, and not previously.

No such officer is or was at any time entitled to salary or compensation for any time preceding the 20 June, 1863.

On Nov. 12, 1863, Joint Resolution No. 30 was adopted, concerning the Auditor and Secretary of State, viz:

Whereas, it appears by the recent report of the Committee on Executive Offices, that the Auditor and Secretary of State, had on the first and second days of this month, overdrawn from the treasury, the former, the sum of $454.00 and the latter the sum of $393.28, alleging such overdrafts to be due to them respectively, for their salaries from the 4th March, 1863, to June 20, 1863, the latter being the day on which the State was inaugurated and the Constitution thereof first came into operation. And whereas the Legislature by a joint resolution, which formally passed on the 14th day of October, 1863, have formally declared that the terms of all officers, legislative, executive and judicial, elected on the 28 May, 1863, began on the 20 June, 1863, and not previously and that no such officer is or was at any time entitled to salary or compensation for any time preceding the 20 June, 1863:

Therefore, Resolved by the Legislature of West Virginia, Any officer who has drawn from the treasury of the State or in any way received compensation as such officer for any time previous to the 20 June, 1863, is hereby required within ten days from the passage of this resolution, to refund the same to the Governor, to be by him deposited in the treasury to the credit of the proper appropriation.

No officer, failing to comply with the requisition of the foregoing resolution, shall be enttiled to draw or receive from the treasury for his own use, any sum of money whatever whether on account of salary, or as compensation for his official services, until the money improperly drawn from the treasury by him as aforesaid, is made good.

Here was a very emphatic avowal that the State did not exist until the 20 June, 1863, and that it could not have had officers until that time and that they could not be paid salaries previous to that date as such State officers.

As a logical statement of the proposition, it does not look as the same could well be contradicted, if the facts were as stated, that the State began its existence on that date.

The Secretary of State, J. Edgar Boyer, did not submit to the diction of the Legislature, but applied to the judiciary to settle his questions of law and fact, and salary. He filed his petition in the Circuit Court of Ohio county on the 18 Mar., 1864, alleging that he had been, prior to October 1, 1863, duly elected to the office of Secretary of State, that he had faithfully discharged the duties thereof, that on the

first day of Jan., 1864, there was due to him on account of his said services in said office $325.00 and that he had on 4 Jan., 1864, presented his claim to the Auditor, who disallowed and refused to pay it. He prayed for process against the Auditor, Saml. Crane, to show cause why judgment should not be rendered against the State for said sum with interest from Jan. 1, 1864.

The Auditor answered, that on the 10 Aug., 1863, the Secretary drew compensation for services for the period between the 4 March, 1863, and June 20, 1863, at the rate of $1,3$$ per annum and that he had not refunded the same as required by the joint resolution of the Legislature passed on the 12th Nov., 1863, which provided that the Secretary was not to receive any further compensation for services until he did so refund to the treasury. That on the 10 Aug., 1863, he paid to the Secretary $433.00 on account of his salary which he then regarded as due him by virtue of the Ordinance of the Convention providing for the organization of the State of West Virginia, passed Feb. 19, 1863, and that on the 1 Oct., 1863, he paid the Secretary the further sum of $1,300 per annum and that he had not refunded the same which would be the amount he was entitled, if the Court was of the opinion that the term of office began to accrue from March, 1863, and if the salary began June 20, 1863, then the Secretary had been over paid in the sum of $68.95 and that the judgment should be against him for that amount.

The Circuit Court dismissed the petition with costs.

Thus the Circuit Court held with the Legislature, that the salary of the Secretary began June 20, 1863, the time when the sixty days expired as fixed by the proclamation of the President and provided by the act of Congress, admitting the State into the Union, the day the State was organized, and as claimed, the date of the day of its beginning its existence as a State.

But Mr. Secretary Boyer, was not satisfied yet.

He applied for an appeal and obtained it, and the case was heard by the Court of Appeals.

The Court of Appeals held, that the term of office and the salary of the Governor, Secretary of State, Auditor and Treasurer, began Mar. 4, 1863.

If the salary of the officers of the State of West Virginia began on the 4th day of March, 1863, how could it be possible that the existence of the State began June 20, 1863? There must have been such a State when that State was paying its officers their salaries from March 4, 1863. The

said State may not have been one of the States of the Union, one of the United States of America, but it must have been a State, somewhere, somehow.

The ordinance providing for the organization of the State was passed Feb. 19, 1863. It provided for the election of the State officers on Thursday next after the thirty-fifth day after the date of the President's proclamation. The proclamation was Apl 20. 1863, and the election must have been held in the last of May.

"The term of office of those elected at such election shall commence on the sixty-first day after the date of the said proclamation'—(this would make it June 20, 1863)—"but, shall continue and be computed as if the same began on Jan. 1, 1863, except that the Governor, Secretary of State, Auditor and Treasurer shall continue and be computed as if the same began on the 4 March, 1863."

One thing is certain, that either there was a State of West Virginia before the 20 June, 1863, or else there were officers paid salaries as officers of said State before there was a State, and for which salaries, they performed no services.

It does appear somewhat mixed, as to when the State of West Virginia began its existence. The people of the proposed State voted to become a new State, they held a Convention and made a Constitution, and then they voted to adopt that Constitution, they passed ordinances to organize the new State, to elect a legislature and State and county officers, they obtained the consent of the Legislature of Virginia for the new State to be organized, all this was done before June 20, 1863.

If all this was not done by the people of West Virginia, by whom was it done? If it was done by the people of Virginia, by what right had such people to do the same?

The Legislature of West Virginia, and the Governor, and the Circuit Court all deemed the proper time to pay State officers their compensation for their services to the State, from the time they began to render those services, which was June 20, 1863.

It seems that they were elected on the 28th day of May, 1863, but the Ordinance of Feb. 19, 1863, said that the term of office of State officers then elected should commence on and include the sixty-first day from the date of the President's proclamation, but shall continue and be computed as if the same had begun on the 4 March, 1863. There is no wonder that there was a difference of opinion as to what all this could or did mean!

But if the 4th of March, 1863, when the officers of the State began to draw their salaries, was not the day that the State began its existence as a State, was the 20th day of June the exact date? Congress admitted the said State into the Union, by an act, which said it should take effect sixty (60) days after the date of the President's proclamation.

The Ordinance said the term of office should commence and include the sixty-first (61) day from the date of the said proclamation.

The date of the said proclamation was April 20, 1863. This day is the 110th day of the year, if you add 61 days, then you have the 171st day of the year which is June 20, 1863, but if you add 60 days, you have June 19, 1863, as the day the State of West Virginia became one of the States of the Union.

We do not pretend to say when the State began its existence, but it is very evident that it had much vitality before June 20, 1863, and whether it was a full free born State until that date, we shall leave the subject with you, to answer the conundrum for yourself.

THE RUFFNERS.

By Dr. Wm. Henry Ruffner.

I. Peter.

The Ruffners having constituted an important element in the make-up of Kanawha county, especially in its earlier decades, their origin may be a matter of public interest.

The Ruffners of Virginia, West Virginia, and most of those who are scattered in the States farther west even to the Pacific Ocean, are all descendants from Peter Ruffner, who emigrated from the German border of Switzerland to America in 1732, whilst still a young man. He sojourned for seven years in Lancaster County, Pennsylvania. There he married Mary Steinman, the daughter of a wealthy German landholder, who assigned to him a patent obtained from King George II for a baronial estate in Virginia on the waters of the Shenandoah River, in what was then Frederick County, afterwards Shenandoah, now Page. Thither he came with

his wife, and as has been suggested, with live stock and other conveniences. He certainly brought either money or the means of making money, as was proved by his rapid accumulation of additional property. His original patent covered a belt of land beginning at the mouth of Hawkbill Creek, a mill stream which passes close by Luray, and continuing up the creek including both branches for eight miles. His lands were afterwards extended four miles farther up the two branches of the creek, which additions greatly improved the character of his estate.

Peter established his dwelling at the "Big Spring," now on the edge of Luray where he and after him his son Peter, and after him a grandson Jonas, lived, reared large families, and died. After whom came Forrer, and after him the widow Chapman whose heroic sons distinguished themselves in Mosby's command. At the time when Peter Ruffner came there was a small settlement of Germans in the neighborhood, among whom were Stover, Strickler, Roller, Heistand, Beidler, etc.

It is quite certain that Peter Ruffner came from Switzerland, yet there is an important statement made by Wm. S. Marye which brings him from the Kingdom of Hanover in Germany. Marye, one of the Fredericksburg Maryes, and an educated man, came in 1794 to the German settlement and lived for a time with a Scotchman named Mundell, who was engaged in merchandizing. In 1802 he married Mary Ruffner the daughter of Peter the second, and soon came into possession of the family records and traditions. In 1835 Marye wrote a history of the Ruffner family which contains a number of statements not found elsewhere, but which does not contradict the prevailing family tradition except on the one point in locating the paternal home of the first Peter in Hanover. Marye bore so high a reputation for probity that we may ascribe his error to inadvertence. With this remark I will quote from his narrative:

"Peter Ruffner the elder is the first of the Ruffner family of whom we have any intelligence in this country. He was a native of the Kingdom of Hanover in Germany; was of the Teutonic-German stock; was the third son of a German baron, who owned large landed estates in Hanover. He spoke the High Dutch language (Hoch-Deutsch) and was in religion a Protestant of the Martin Luther school.

"He was at an agricultural college, and before he got through his studies (with other students), he left college without the knowledge of his parents, and came to this country, having been attracted hither by the then glowing descriptions of America published in the German States. On

arriving in this country, he located in one of the interior counties of Pennsylvania (Lancaster county, I think it was), where he very soon thereafter became acquainted with and married Miss Mary Steinman, the daughter of a very wealthy German farmer there, who owned a large landed property in the Valley of Virginia. Said Steinman was a native of the Kingdom of Wurtemburg in Germany; was of the Slavonic-German stock; he spoke the Low Dutch (Platt-Deutsch) language; he emigrated some years previously to this country, with considerable means, and had made a considerable fortune by farming and grazing, and had invested much of his surplus funds in those valuable wild lands in the Valley of Virginia, along the Shenandoah River, and on both branches of the Hawksbill Creek, in Shenandoah County.

Steinman gave to Ruffner a large body of very valuable land, situated on both branches of the Hawksbill Creek, to which said Ruffner and his wife Mary removed, and settled on the plantation now owned by and on which Jonas Ruffner resides, on the Hawksbill Creek, adjoining the town of Luray, where he lived many years with his wife Mary, and by her he had the following children, viz:

1. Joseph.
2. Benjamin.
3. Reuben.
4. Peter.
5. Emmanuel.
6. Elizabeth.

The said Peter Ruffner was only about nineteen years old when he came to America. He was a tall, fine looking man, being 6 feet 3 inches, of strong mind and with great energy of character; was a man of mark and of much influence in his neighborhood and county. His wife was said to be possessed of equally good parts; and they were both well calculated to do well in the world. They were industrious, thriving and prosperous farmers for many years and acquired much additional landed property. They lived to a good old age, and died and were buried on the plantation on which they had first settled, having raised all their children, and settled them on good farms near to them, as they respectively got married.

At the time Peter Ruffner the elder migrated to and settled in Shenandoah, there was a considerable settlement there of Slavonic Germans, mostly from Pennsylvania, the stock being of that extraction of Germans, with some few foreign Germans, all who spoke the Low Dutch (Platt-Deutsch) language. Indeed at that early day, that part of

the Valley of Virginia was almost exclusively settled by this class of Germans, and it was with that class of Germans that the said Peter Ruffner became identified and inter-married afterwards."

Had Marye located the Ruffner barony in Switzerland his narrative would have harmonized with some known facts. I am creditably informed that Judge Drew of Kanawha, when a student at Heidelburg University made the acquaintance of a Baron Rufnier (also a student) from Switzerland, and that their acquaintance is still continued by correspondence. No doubt this name is but another form of Ruffner. In 1876 at the Philadelphia Exposition a Ruffner from Berne, Switzerland, exhibited chemicals. From various quarters it is reported that the name is now common and influential in the region about Berne.

But evidence is accumulating which indicates that neither Germany nor Switzerland was the original fatherland of the Ruffners; but that they originally came from Italy. A tradition to this effect exists among at least three lines of people bearing the name in America, who are not known to be related to each other, and in a book entitled "Noblesse Francaise," which I examined in the old Philadelphia library, is to be found the name of Ruffiniere. In a similar book of Italian notables occurs the name of Ruffiniar. The same name with the exception of the final "r" occurs very often among the Latin people both ancient and modern. Ruffinianus was a Roman rhetorician; Ruffinus was a son of Poppaea by her first marriage to Rufus Crispinus. In the Gallic War there was a General Ruffinus. A number of others might be mentioned. The radical name of them all was probably Rufus, red, so named from the color of the soil.

But the etymology of the name is of less consequence to us than the doings of the people of the Hawksbill. The man who brought the name certainly had enterprise and good judgment, for as heretofore said, large as was his tract of land on the Hawksbill he largely and rapidly added to it. Beautiful though partial views of his possessions may be obtained from the car windows for several miles south of Luray, looking east toward the Blue Ridge. We have no detailed information as to Peter's additions except as to the purchase from Lord Fairfax of 196 acres of land on the Hawksbill in 1761. The original deed in a somewhat mutilated condition is now on deposit in the State Museum at Charleston. The handwriting is quite legible, but parts of the document are gone including the signature. The antique style of the deed, I think, possesses interest enough

to justify the making of the following quotations from it, to-wit:

"The Right Honorable Lord Fairfax, baron of Cameron, in that part of Great Britain called Scotland, proprietor of the Northern Neck of Virginia: to all whom this present writing shall come, sends greeting.

Know ye that for good causes, for and in consideration of the composition to me paid, and for the annual rent hereinafter named, I have given, granted and confirmed, and do hereby give, grant and confirm to Peter Ruffner of Frederick County, a certain tract * * * adjoining other land of Ruffner * * * on the branches of the Hawksbill. * * * Bounded as follows * * * To have and to hold * * * Royal mines excepted * * * and a full third part of lead, copper, tinn, coals, iron mine and iron ore.

"Said Ruffner shall pay yearly and every year on the first day of St. Michael the Archangel the Free Rent of one shilling sterling money for every fifty acres.

"Given at my office * * * the fifth day of May in the first day of his Majesty George the third, 1761."

At that time the market towns of the producers of the Shenandoah County were Fredericksburg and Alexandria. Peter Ruffner continued to live and prosper where he first settled for 49 years. His death occurred in 1788 at the age of 76 years. His wife lived 10 years longer, and died at 84. They left five children, four sons and one daughter.

The Big Spring home place was inherited by Peter's fourth son and namesake, whose daughter Mary became the wife of Marye. This Peter the second had eleven children, one of whom Jonas succeeded to the ownership of the homestead. He built the brick residence occupied by the Chapman family. He donated the site of Luray, and is jestingly reported to have said "the land is poor and much of it too steep to plough—so you may have it!" I mentioned Jonas particularly because all of his fourteen children except one went to Kanawha about 1840, though the most of them passed on farther West. One of the daughters, Rebecca, married Frank Ruffner, and another, Mary Ann, married John B. Davenport. Descendents of these two families still live in Kanawha.

To return to the immediate family of the first Peter, his eldest son Joseph was the progenitor of all the Kanawha Ruffners except the few just mentioned; but I postpone the full account of him until my next number, in order that I may mention a few miscellaneous items.

The celebrated Luray cave is so much a matter of public interest that I will mention some facts concerning it. The

hill in which the cave is situated belonged in early days to the Ruffner family. So far as I can learn the first discovery of a cave in the hill was made by one of the sons of Joseph Ruffner, who went out soon afterward to Kanawha, and became one of its most prominent citizens. This cave is entered near the top of the hill, and is not the same as the one now so much visited; though there is scarcely a doubt but they are connected. It was probably in 1793 or 4 that Ruffner, then not grown, and a companion, chased a fox into a hole. Ruffner digged for him, and to his astonishment uncovered the mouth of a cave, the opening to which descended vertically into the earth a distance of perhaps 30 feet. The hole remained open, but was not explored immediately on account of the formidable look of the entrance. After a time, however, the cave was entered by a Ruffner. As to this point the testimonials are unanimous, but I have not been able to determine just which of the Ruffners it was. The best account we have of the attempt at exploration was published in the Shenandoah Herald in 1825. This account was copied in the Virginia Gazetteer, and in the Lexington, Virginia, Intelligencer the same year, and has formed the basis of most of what has been said about it. In 1880 two college-bred gentlemen visited Luray, and published what they could gather in their little book of travels under the names of "Ego" and "Alter." They were thoroughly trustworthy, and I will quote their account of the adventure, as follows:

"A Mr. Ruffner who was nearly as much celebrated for deeds of Sylvan prowess as the renowned Putnam, in passing this cave some thirty years ago, namely, in 1795, conceived the bold and hazardous design of entering it alone. He accordingly placed his rifle across the mouth to indicate, in case of accident to his friends in case they should happen to see it, that he was in the cave. He descended, but soon fell and put out his light, and as must have been expected, was soon bewildered and lost in its labyrinth of passages. It happened that some of his friends in passing the cave discovered his gun, and rightly concluding that he had gone into it, they procured lights and entered in search of him. They found and brought him out after he had been in for forty-eight hours. This brave fellow was among the pioneers who were foremost in exploring and settling our Western frontier; and was at last killed by the Indians after having performed deeds of valor which would have done honor to the character of a hero."

This cave was long known as "Ruffner's Cave," and was so put down on the old maps. I have a map now with the cave thus marked. One feature of the tradition is not men-

tioned by "Ego" and "Alter," namely, that Ruffner dropped a pine sapling into the vertical mouth of the cave, and used it as a ladder.

With regard to the Ruffner who is above mentioned as the first who entered the cave—it could not be Daniel, for he was not an Indian fighter, and was not killed by the Indians. The early Ruffners were Mennonites, an anti-war sect, and could not be expected to furnish many fighters; but Schuricht in his history of the Germans in Virginia names a number of noted Indian fighters among the early settlers, and among them "George Ruffner." But I have no other knowledge of him. In fact the first three generations of Ruffners were so prolific that there is no record in existence of all their names.

So far as my information goes, I should incline to assign the early fighters to the family of Emmanuel, the youngest son of the first Peter. He had a large family and was himself a giant in size and strength. His arm is reported to have been as large as the leg of a common sized man. In 1805 he removed to Fairfield County, Ohio. Concerning his family history I have almost no accurate knowledge; but I always suspected that it was one of his sons who performed a remarkable feat, which was reported in the newspapers many, many years ago under the caption of "Ruffner against Crockett." In order that the story may not be wholly forgotten I will tell it here as I remember it.

Ruffner, who lived on the bank of the Ohio, was roused from sleep one winter night by the violent barking of his dogs which were driving some animal into the River. Ruffner dashed down the bank, thinking the animal was probably a deer, and when he found that the dogs and their game had taken water, he plunged in after them. Ice was running freely in the river, but on he went, and when he reached the other side he found his dogs in fierce conflict with a large black wolf. But the wolf slashed the dogs so savagely as to clear the space around him, and there he stood ready to fight the master. Ruffner was in his night-clothes and without any sort of weapon, but he set the dogs on him again, and whilst they were scuffling in the edge of the water, he seized the wolf by the hind legs and tried to drown him, but failing in this he swung him high in the air, and brought his head down upon a rock, crushing his skull. Such a man as this would consider the exploring of a cave an easy venture.

Peter Ruffner the elder had one son and a daughter who were content with their Hawksbill farms, and never went West; but he had another son who possessed the adventurous

spirit of the early Ruffners, and went off with his family to Kentucky.

Peter Ruffner's posterity now considerably exceed one thousand in number, a goodly increase in one hundred and sixty-five years.

Lexington, Va., April 10, 1901.

INTERESTING INCIDENTS IN THE EXPERIENCES OF AN OLD KANAWHA CITIZEN DURING THE CIVIL WAR.

Editor Historical Magazine:

I have read with interest your first issue, and look forward with pleasure to succeeding numbers. If on the same high plane, they must prove of service and pleasure to all, but epsecially to "old timers" who can recall many of the persons and incidents; or who were themselves witnesses and actors.

In Kanawha historical parlance, "speaking of gunflints reminds me of shooting sqirrels." The article by our recently deceased friend and old-time comrade, Levi Welch, on the little known but rather remarkable battle of Scary Creek, relates the capture of four Federal colonels: Woodruff, De-Villiers, Norton, and Neff. And this recalls an incident connected with the latter named, which was related to me in person by William Chauncey Brooks, whom all the older citizens of Charleston and Kanawha county will remember; and which goes to prove the truth of the old saws "We travel around in a circle," and "This is a small world after all."

Mr. Brooks had been serving for some months as a volunteer aide on General R. E. Lee's staff, and had reached the conclusion that the South was too much exhausted to continue the struggle much longer east of the Mississippi River. Hearing General Lee say that he wished to send dispatches to General E. Kirby Smith, who was in command of the trans-Mississippi department, he offered his services, which were accepted. He also applied for leave to remain with General Smith, believing that if the Confederacy was crushed east of the Mississippi, it would continue the struggle

west of it. Leave was given him to stay: partly no doubt because of the difficulty and danger of getting through and back, as the river was closely blocked by the Union forces.

Mr. Brooks dressed in civilians' clothes, and with the dispatches concealed on his person, took the train from Richmond, intending to go as far as possible by rail, and then by horse. Early the Sunday morning following, the train ran into Huntsville, Ala., and into a raiding party of Federal troops, which had just captured the town. The train was at once surrounded and the passengers ordered off. They were placed in one end of a hollow square of soldiers, across which a line of guards were stationed, and they proceeded to parole the prisoners, turning them one by one, when paroled, into the other end of the square. This placed Mr. Brooks in an extremely awkward position. If he gave parole it ended his mission, and important dispatches could not be delivered. If he refused he would be carried away captive, with only the faint hope of escape. He was forced to think and act quickly; and decided to appeal to the commanding officer for release, on the ground of being in citizens' dress and on a peaceful mission. This officer was sitting on his horse, in the dividing line between the two ends of the square, and as Mr. Brooks went up to him, to his great surprise he saw that it was Colonel Neff, whom he had known before the war, and from whom he had bought many stocks of goods, and who was captured at Scary and exchanged. He spoke to him and the Colonel, after looking at him a moment, exclaimed, "Why Brooks, what on earth are you doing here?" Mr. Brooks explained that he had been on the captured train, and was trying to make his way south out of the way of the armies. They fell into talk of old times and present troubles, and while thus engaged the Colonel's bridle rein became twisted around the shank of the bit, and as he leaned over to try to straighten it, Mr. Brooks said, "Allow me to fix it Colonel," and stepped around the horse's head to do so. This put him in the same end of the square as the paroled prisoners; and after some further conversation he walked off quietly among them and so escaped parole.

When the prisoners were turned loose, Mr. Brooks started through the town to try to get out as quickly as possible. He feared that if Colonel Neff should look over the list of paroled prisoners, and not see his name, he would have him again arrested. All his clothing was on the train, but he dared not go back for it, as they might ask him to show his parole. So he went out to the limits of the town, intending to walk out into the country, buy a horse and so go on. For-

tunately his money and the dispatches were on his person. But he found every exit closely guarded, and he was turned back at every point. Passing along a quiet street he saw a large, old fashioned, typical Southern house, well back in a large yard and in despair of devising any method of escape himself, he determined to apply to the inmates of this house, believing they must be true Southerners. His instinct led him aright. The owner was an aged "gentleman of the old school," who cordially invited him in, listened to his story, and at once entered into plans for his escape. They attended a funeral that afternoon, and after the burial the gentleman led Mr. Brooks to the far side of the cemetery, pointed out a path through the woods, told him to follow it for a few hundred yards, and he would come out on the main road where he would find a colored boy with two horses who would pilot him to a friend about twenty miles away, to whom he gave Mr. Brooks a letter, asking this friend to help Mr. Brooks to get on. He pressed both money and clothing on Mr. Brooks, who declined the favor but took a change of underwear, and after thanking the gentleman warmly left him, found the boy and horses, and after much hard riding, and many delays and narrow escapes, reached General Smith and gave him General Lee's dispatches.

Mr. Brooks remained with General Smith until the surrender, taking part in the campaign in which General Dick Taylor so completely defeated General Banks on Red River. This is the last I have ever heard of Colonel Neff. Perhaps some one of your readers can throw further light on his life; or death. Colonels Woodruff and DeVilliers became brigade commanders under Sherman, and the writer saw and met them a number of times in Louisville, Ky., during the last two years of the war. Colonel DeVilliers at one time "requisitioned" his house, cook, eatables, etc., and some fifteen officers of his brigade took their meals there. Although this was of course very disagreeable and trying, to strong Southerners, and although these officers knew perfectly well their sentiments, I do them the justice to say, that they protected us from depredation by their troops, who were camped all around our house; paid for everything they used, and generally acted as gentlemen, leaving a pleasant memory instead of bitterness.

W. B. BROOKS.

PERSONEL OF THE SEVERAL STATE ADMINISTRATIONS SINCE THE FORMATION OF THE STATE.

GOVERNORS.

Arthur I. Boreman, Parkersburg, June 20, 1863, February 26, 1869.

Dan D. T. Farnsworth, Buckhannon, February 27, 1869, March 3, 1869.

William Erskin Stevenson, Parkersburg, March 4, 1869, March 3, 1871.

John J. Jacob, Romney,, March 4, 1871, March 3, 1877.

Henry Mason Mathews, Lewisburg, March 4, 1877, March 3, 1881.

Jacob Beeson Jackson, Parkersburg, March 4, 1881, March 3, 1885.

E. Willis Wilson, Charleston, March 4, 1885, February 6, 1890, March 4, 1889, pending Goff-Fleming contest.

Contest in 1899 by A. Brooks Fleming, Democratic candidate, against Nathan Goff, Republican, who claimed election on face of returns by 110 majority.

A. B. Fleming, Marion, February 6, 1890, March 3, 1893.

William A. MacCorkle, Charleston, March 4, 1893, March 3, 1897.

Geo. W. Atkinson, Ohio, March 4, 1897, March 3, 1901.

A. B. White, Parkersburg, March 4, 1901.

SECRETARIES OF STATE.

J. Edgar Boyers, Tyler, June 20, 1863, March 3, 1865.

Granville D. Hall, Harrison, March 4, 1865, March 3, 1867.

John S. Witcher, Cabell, March 4, 1867, February 24, 1869.

James M. Phelps, Marshall, February 25, 1869, March 3, 1871.

John M. Phelps, Mason, March 4, 1871, March 3, 1873.

Charles Hedrick, Kanawha, March 4, 1873, March 8, 1877.

Sobieski Brady, Ohio, March 9, 1877, March 3, 1881.

Randolph Stalnaker, Jr., Greenbrier, March 4, 1881, March 3, 1885.

Henry S. Walker, Kanawha, March 4, 1885, April 20, 1890.

William A. Ohley, Marion, April 21, 1890, March 22, 1893.

William E. Chilton, Kanawha, March 23, 1893, March 3, 1897.

William M. O. Dawson, Preston, March 4, 1897, March 3, 1901.

William M. O. Dawson, Preston, March 4, 1901.

ATTORNEY GENERALS.

Aquilla Bolton Caldwell, Ohio County, June 20, 1863, December 31, 1864.

Ephriam B. Hall, Marion, January 1, 1865, December 31, 1865.

Edwin Maxwell, Harrison, January 1, 1866, December 31, 1866.

Thayer, Melvin, Ohio, January 1, 1867, January 1, 1869.

Aquilla Bolton Caldwell, Ohio, July 1, 1869, December 31, 1870.

Henry Mason Mathews, Greenbrier, January 1, 1873, March 3, 1877.

Robert White, Hampshire, March 4, 1877, March 3, 1881.

Cornelius C. Watts, Kanawha, March 4, 1881, March 3, 1885.

Alfred Caldwell, Ohio, March 4, 1885, March 3, 1893.

Thomas S. Riley, Ohio, March 4, 1893, March 3, 1897.

Edgar P. Rucker, McDowell, March 4, 1897, March 3, 1901.

Romeo H. Freer, Ritchie, March 4, 1901.

STATE AUDITORS.

Samuel Crane, Randolph, June 20, 1863, March 3, 1865.

Joseph Marcellus McWhorter, Roane, March 4, 1865, March 3, 1869.

Thomas Boggess, Roane, March 4, 1869, March 3, 1871.

Edward A. Bennett, Marion, Mar. 4, 1871, Mar. 3, 1877.

Joseph S. Miller, Cabell, March 4, 1877, March 3, 1885.

Patrick Fee Duffy, Webster, March 4, 1885, March 3, 1893

Isaac V. Johnson, Barbour, March 4, 1893, March 3, 1897.

L. M. LaFollette, Taylor, March 4, 1897, March 3, 1901.

A. C. Sherr, Mineral, March 4, 1901.

STATE TREASURER.

Campbell Tarr, Brooke, June 20, 1863, March 3, 1867.
Jacob H. Bristor, Berkeley, March 4, 1867, March 3, 1869.
James A. Macauley, Ohio, March 4, 1869, March 3, 1871.
John S. Burdett, Taylor, March 4, 1871, January 30, 1876.
Sobriski Brady, Ohio, January 31, 1876, March 3, 1877.
Thomas J. West, Harrison, March 4, 1877, March 3, 1881.
Thomas O'Brien, Ohio, March 4, 1881, March 3, 1885.
W. T. Thompson, Cabell, March 4, 1885, March 3, 1893.
James M. Rowan, Monroe, March 4, 1893, March 3, 1897.
M. A. Kendall, Wood, March 4, 1897, March 3, 1901.
Peter Silman, Kanawha, March 4, 1901.

SUPERINTENDENTS OF FREE SCHOOLS.

William R. White, Marion, June 20, 1863, March 3, 1869.
H. A. G. Ziegler, Barbour, March 4, 1869, February 17, 1870.
Alvin D. Williams, Taylor, February 19, 1870, March 3, 1871.
Charles S. Lewis, Harrison, March 4, 1871, December 31, 1872.
William K. Pendleton, Brooke, January 1, 1873, March 3, 1873.
Benjamin W. Byrne, Clay, March 4, 1873, March 3, 1877.
William K. Pendleton, Brooke, March 4, 1877, March 3, 1881.
Bernard L. Butcher, Randolph, March 4, 1881, March 3, 1885.
Benjamin S. Morgan, Monongalia, March 4, 1885, March 3, 1893.
Virgil A. Lewis, Mason, March 4, 1893, March 3, 1897.
J. Russell Trotter, Upshur, March 4, 1897, March 3, 1901.
Thomas C. Miller, Monongalia, March 4, 1901.

ADJUTANTS-GENERAL AND EX-OFFICIO STATE LIBRARIANS.

T. E. Pierpoint, Marion, June 29, 1863, September 10, 1866.
Thomas Hornbrook, Ohio, September 10, 1866, November 1, 1866.

George W. Brown, Taylor, November 1, 1866, March 3, 1867.

Isaac Hardin Duval, Brooke, March 4, 1867, March 3, 1869.

Thomas M. Harris, Ritchie, March 4, 1869, December 31, 1870.

James M. Ewing, Jr., Ohio, January 1, 1871, March 3, 1871.

Charles S. Lewis, Harrison, March 4, 1871, December 31, 1872.

Benjamin W. Byrne, Clay, March 4, 1873, March 3, 1877.

John L. Cole, Kanawha, March 4, 1873, September 1, 1875.

E. L. Wood, Kanawha, September 1, 1875, March 1, 1881.

W. F. Butler, Jr., Ohio, November 1, 1881, March 3, 1885.

E. L. Wood, Kanawha, March 4, 1885, February 28, 1890.

Benjamin H. Oxley, Kanawha, February 28, 1890, March 7, 1893.

James A. Holley, Lincoln, March 7, 1893, March 3, 1897.

J. W. M. Appleton, Monroe, March 4, 1897, March 3, 1901.

S. B. Baker, Wood, March 4, 1901.

LIBRARIANS.

Charles L. Hagan, Marion, April 1, 1891, July 31, 1893.

E. L. Wood, Kanawha, August 1, 1893, March 4, 1897.

Guy T. Scott, Ohio, March 5, 1897, July 14, 1898.

Pleasant S. Shirkey, Kanawha, July 15, 1898, March 3, 1901.

Samuel W. Starks (colored), Kanawha, March 4, 1901.

CHIEF MINE INSPECTORS.

James W. Paul, Tucker, April 20, 1897, May 14, 1901.

James W. Paul, Tucker, May 15, 1901.

JANITORS.

William B. Carter, Kanawha, March 4, 1885, February 26, 1890.

Alex. H. Wilson, Kanawha, February 27, 1890, March 3, 1893.

Alex. H. Wilson, Kanawha, March 4, 1893, March 4, 1897.

Charles N. Smith, Kanawha, March 5, 1897, March 3, 1898.

A. J. Spaulding, Kanawha, March 4, 1898, March 3, 1901.

J. W. Griffiths, Mason, March 4, 1901.

MAJOR JAMES GRANT LAIDLEY.

From advance sheets of "Annals of Wood County, A Century's Progress, from Pine-knots to Electric Lights,"

By Alvaro F. Gibbens, A. M.

"The original spelling of this honorable name was in Scotland, "Laidla," and "Laidlaw." Such changes in family history were common in colonial and later era, mainly springing out of a division in fealty toward the mother country among members of the same name and parentage. Three brothers came to America in early day, prior to the war of the Revolution. James who located on the Isle of Jamaica, John in the territory of Louisiana, and Thomas in New York. The last mentioned took sides with the Colonies in the Revolution, and fitted out and equipped a gunboat on the Delaware River. Scottish patriotism, under the skies of the new world, never measured duty by prospective profit.

For a short period after the Revolutionary War terminated, Thomas resided at Philadelphia and then drifted, with the spirit of adventure, to the wilderness west of the Alleghenies, planting his pioneer cabin in Virginia at Morgan's Town, and associated his interests with Hon. Albert Gallatin, who then owned lands along the Monongahela river. He also possessed the first store or mercantile establishment there, in 1783, in Monongalia section, and among the articles in stock was a constant supply of bear skin and reindeer coats, the outfit characteristic of a pioneer in the Indian era. Then extra gold, and furs and skins were sent to Richmond, by pack-horse over the heights and often swollen streams, to purchase land warrants. Warrants from the Virginia land office were generally the evidence, among traders, of a surplus or accumulated wealth, and used to liquidate indebtedness of large amounts.

He was a member of the Virginia House of Delegates in 1797-8 and 1800-1, and was a Federalist. He died in 1838, at the residence of his son John O., in Cabell county. He was father of eight children, the eldest being James G., partly initialed from his friend Gallatin, who was born in Philadelphia in 1780.

He was educated at Petersburg, Va., and there studied law with Chancellor Wythe. On admission to the Bar, he removed, in 1802, to Newport, the new and attractive village on the Ohio river, near the mouth of the Little Kanawha river, now historic as Parkersburg, and casting his lot in with the pioneers of the recently formed county, soon rose

to influence and distinction. He was genial, patriotic, fond of militia duty and honors, and very popular with his associates.

He interested himself, at the March, 1803, term of the Justices' Court, in the issue of naturalization papers, which made the Irish barrister, Herman Blannerhassett, an American citizen. Thereafter he became so ardent a friend of his that when he was summoned as a juror, during the famous Aaron Burr trial in Richmond, he was challenged, and set aside as one having formed and expressed an opinion touching the case. His neighbors then well understood that he, without reserve, exculpated his artless friend, and condemned unequivocally the deceiver, the wily and ambitious head of a mysterious and daring movement.

He was, at the September court in 1803, selected as treasurer of the county, and in May, 1804, commissioned escheator of lands. At the September term, on 3d, 1805, he was chosen by the Justices as Commonwealth's Attorney, which officer, then more than now, was expected to shape the conduct of local officials, and blaze out a course to be pursued in essential affairs. He was elected as delegate to represent Wood county in the West Virginia Assembly, and served several successive years between 1803 and 1810. He became interested, like many of the pioneers, in land warrants, hatchet claims, and town building, and was a factor in the strife between contending Justices over the location of the county seat.

In 1806 he wedded Harriet B., daughter of Alexander Quarrier. To them were born three children, Cordelia D.—dying in 1816,—and Alexander T., both born April 14th, 1807, and James Madison, born Jan 9th, 1809. The sons, years afterwards, with their mother, located in Charleston, and there were not only respected but influential, but made impression upon the laws and destiny of that section. They both resided in pleasant and hospitable homes, one clerical and literary in his tastes, and the other political and legal in attainments. The widowed mother died April 5th, 1875, among a host of relatives and earnest friends.

The county records show that in October, 1809, he was recommended to the Governor of Virginia and Council to be captain of a rifle company, then formed, and to take place in the 113th Regiment of Militia. He was commissioned and qualified on the 7th of November as officer in command. Through his efforts the company had enlisted and entered the army of volunteers in the Northwest Territory, and served with them during the war of 1812, under General Wm. H. Harrison. For his valor and daring in one of the

engagements with the Indian allies of Britain, he was brevited major.

Owing to the excellent discipline of her militia, and the valor and patriotism of her citizens, nearly all sons of Revolutionary sires, no section of the Mother State, in proportion to population, did more active service in the second war with Britain than those of Wood County from the borders of the Ohio. From Norfolk to the Northwest, they were brave and stalwart in fighting the English invaders and Indian allies.

The following tender of service of Rifle and Cavalry companies, was made by letter from Parkersburg, dated May 23rd, 1812:

To the Governor of the Commonwealth of Virginia:

We are requested to communicate to you by Thirty-six of the Cavalry, including Lieutenants and Cornet; by forty-six of the Rifle Company, including Lieutenants—the former armed with swords and pistols each, the latter with rifles all in good order and attached to the 113 Regiment—that they, with us, are prepared to move, at moments' warning, whenever called, by the constituted authorities of our country.

In making this tender, we are proud to say that the men under our respective commands, are not common militia who have not had the advantage of the use of public arms. We feel, sir, that the State has done much for us—forty swords, an equal number of pistols, and fifty rifles have been presented to us. We wish to use them in defence of the violated rights of our beloved country. Though we might feel safe from British outrages—though we may not fear the depredations of the savages—from our peculiar local situation, yet we are members of the great Union, and our lives shall be devoted to the security of the whole.

In addressing you, sir, on the subject we cannot pass over your circular letter to the Colonels of the Regiments. We discover patriotism, zeal, and energy for the rights of an injured abused country. Accept sir, our wishes for a continuance in an office that will be productive of much good to our State, and honor to yourself, and accept of our wishes for your individual prosperity and happiness.

We are very respectfully, your obedient servants,

NIMROD SAUNDERS,
Captain of Cavalry.
JAS. G. LAIDLEY,
Captain of Rifle Company.

In confirmation of the above statement of experience in the use of fire-arms, the minutes of the County Court, October 2nd, 1809, show the formation of the Rifle Company in these words:

It appearing from the 4th Section of the Act of Assembly passed January 20th, 1807, that the Company of Light Infantry in the 1st Battalion of the 113 Regiment hath abated, ordered that James G. Laidley be recommended to Governor and his Council as Captain, Timothy Darling, Lieutenant, and Tunis Dils, Ensign, of a Rifle Company in lieu thereof, they having been chosen by the Company.

It is related of him—not of his father as another biographer states it—that when in the thickest of a close engagement with the Indians, observing some of his men hesitating with fear of their cruel foes, he promptly seized a rifle and shot down one of the painted band, who falling in their sight, so encouraged and enspired their failing courage, that with restored confidence and daring they won the battle. For this conspicuous valor, and want of fear, he was officially complimented by his superior and brevitted in promotion.

Upon return from active service he resumed his law practice, but still performed duty as an officer in the Militia of Wood County. He resided upon and owned a tract of land along Pond run, not many miles from the junction of rivers, as in February, 1810, he was granted permit to erect a dam therein for a water grist-mill. When Prosecuting Attorney, on the 4th of June, 1810, he took the oath to enforce the legislative edict to "suppress dueling in the county." That pledge was a healthy restraint upon the otherwise hot blood of an impetuous and too sensitive generation, and transferred for a while the theatre of personal warfare and aggrieved honor across the Ohio, into the almost unexplored Nortwest plain of Belpre.

He was the friend and intimate associate of the forensic orator Philip Doddridge, and the statesman, General Lewis Cass, then a resident of Marietta, possessing many mutual endowments and capabilities attractive to each other. Both these afterwards renowned associates of Laidley, were practitioners at the Bar of Wood County, Cass having married a daughter of pioneer D. Joseph Spencer, of Vienna, on this side of the river.

He died in Parkersburg, about the epidemic era, Sept. 5th, 1812, and was there buried in the old Cook graveyard, now titled Riverview Cemetery. The memorial stone is plain sandrock, with the inscription legible, but fast disappearing from attrition of rain and winter storms. His widow with her sons, each ardently attached to the other, dwelt many happy years in the Great Kanawha Valley. She was a Presbyterian in faith, loved by many and attained the age of eighty-eight years. No direct descendants, it is believed, now resides within the county of Wood.

HISTORY OF THE GREAT KANAWHA RIVER SLACK WATER IMPROVEMENT.

PREFACED BY A SHORT SKETCH OF THE EARLY NAVIGATION, BEFORE THE LOCK AND DAM IMPROVEMENT.

BY J. P. HALE.

Before the advent of the white man the only water crafts that had ever floated on the bosom of this beautiful stream were the bark canoes and more substantial dug-outs of the aboriginal tribes. The first record of its navigation by whites was in 1774, when Gen. Andrew Lewis, on his way with his army to Point Pleasant, had some canoes constructed at the mouth of Elk river, on the present site of the city of Charleston, in which he transported at least a part of his army supplies and ammunition, which had been brought thus far on pack horses, which were much jaded and worn by the hardships of the rough journey through the wilderness.

In 1788, when Clendenen's fort, or Fort Lee, at this point was apprehensive of an attack by Indians, Fleming Cobb, an expert waterman and woodsman, was despatched to Fort Randolf, at Point Pleasant, by canoe, single-handed, for a supply of powder, lead and gun-flints (all fire arms at that day had flint locks.) He made the trip successfully, though at great risk and by a narrow escape from the Indians, by whom he was pursued.

During the same year the inmates of Fort Tacket, at the mouth of Coal river, being out of salt, sent a canoe up to the salt spring at the mouth of Campbell's Creek, filled it with salt water, floated it back to their fort, where they dipped it out and boiled it down in their kettles and pots, saving the residual salt. Not long after this, Fort Tacket was attacked by the Indians, and nearly all the inmates killed or captured; but John Young made his escape under cover of darkness, by carrying his young wife and a one-day-old babe in his arms to a canoe at the river bank (probably the same one that had brought down the salt water) and poled his way up to the Clendennin fort during the night and through storm and rain.

When salt began to be made here in quantities greater than the neighborhood demanded, it was shipped to the new

settlements down the river by canoes. The first shipment on a more pretentious scale was in 1808, when a log raft was formed by fastening the logs together by hickory poles, when a lot of salt was packed in empty bacon hogsheads and barrels and placed on it and floated down to the new setlements.

When the Indian troubles and dangers were somewhat quieted, and settlements were being made, first in Northern Kentucky and later in Southern Ohio and Indiana, there was a large emigration through this valley to those new and wild western homes. They embarked from the mouths of Hughes and Kelleys' Creeks, where there were boat-yards, and family moving boats were constructed for their accommodation.

The salt interest as it grew in extent and importance adopted this method of transportation, increasing the size and capacity of the boats until they got up to over 300 tons burden, carrying 2,000 to 2,200 barrels of salt. This class of boats were not suited to up-stream navigation, and were usually sold below for what they would fetch.

The early up-stream freighting of family supplies, &c., was by ribbed-keel bottomed boats, called batteaux. These goods came to this valley in the early days from the new towns of Cincinnati, Pittsburgh and Limestone, now Maysville.

The first steam boat to attempt the navigation of this river, in the early days of steam boating on the western waters, was the Robert Thompson, in 1819. She ascended as far as Red House Shoals, but lacking power to stem the swift current at that place, abandoned the effort and returned.

In December, 1820, the Andrew Donnally, built for Messrs. Andrew Donnally and Isaac Noyes, salt manufacturers of this neighborhood, made the first successful run to Charleston, and others soon followed, thus inaugurating the era of steam navigation on this river.

Previous to 1820 there had been no formal or organized effort made to improve the navigation of the river. A few rocks and sunken logs had been removed from the natural channel, and projecting trees and pendant timber cut off by the early flat boatmen who steered out the primitive salt boats and moving plunder boats of the early western emigrants; but the failure of the Thompson and the success of the Donnally were so significant and suggestive, and were considered of so much importance by the Legislature of Virginia that at their session of 1820-'21 they passed an order directing the "James River and Kanawha Company."—in which the State held large stock—to so improve the naviga-

tion of the Kanawha river as to secure not less than three feet depth of water for navigation all the year round, from the mouth to the Falls, about 96 miles. Little did they then appreciate the magnitude of the problem they had attempted to solve.

The execution of this order was delayed, awaiting preliminary examinations and surveys, until 1825, when a system of sluices and wingdams was commenced and prosecuted for some years. Messrs. Moore and Briggs were the contractors. They cut the old chute through the rock at Red House, the chute between the islands and through the tow head of Tyler Creek; cut the chute and built the wing-dams at Debby, Eighteen, Knob, Tacket, Johnson, &c., so well remembered by the old salt flat-boatmen of thirty to fifty years ago.

In 1838 the "James River and Kanawha Company" ordered a thorough survey of the river with a view to securing three and one-half feet of navigable water at all seasons. This survey was made by Mr. Edward H. Gill, engineer, under Colonel Charles Ellett, Jr., chief of engineer the company; but no further steps were taken at the time. About 1855-'6 there were commenced large shipments of cannel coal from Cannelton and from Elk river; Splint coal from Field's Creek from about Paint Creek and Armstrong's Creek; also large shipments of cannel coal oil, manufactured at Cannelton, on Field's Creek, Paint Creek and Elk river. This was before the days of oil wells, and as both the coal and oil shipments were then expected to increase to a very large extent, and as salt was then very largely manufactured here, a better navigation was urgenty demanded.

"The James River and Kanawha Company," acting with and through a sub-board of directors here, undertook to provide such facilities for navigation as the then wants of the country required.

A new survey of the river was made in 1855 by Engineer John A. Byers, under Colonel Charles B. Fisk, chief engineer of the company. Two systems of river improvement were pretty thoroughly examined and described by the board; the sluice and wing-dam and the reservoir plan; the latter was proposed and advocated by the late eminent chief engineer, Colonel Charles Ellett, Jr., in a report to the James River and Kanawha Company in 1858. This interesting report was pub lished and quite extensively read and commented on at the time by engineers and those interested in the river. Colonel Fisk advocated an extensive system of graded sluices, and subsequently, Mr. E. Lorraine then chief engineer, proposed

a combination of Fisk's and Ellett's plans, i. e., the graded sluices assisted in low-water stages by reservoirs. This plan contemplated large lake-like reservoirs near the heads of the streams—chiefly on Gauley river—the water to be let out as required to keep up a navigable stage of water in the Kanawha below, and received very favorable consideration; but, though plausible in theory, it was an untried experiment, and the conservative boards decided to enlarge, improve and extend the old sluice and wing-dam system, and about 1860 put the work under contract of Messrs. Barton and Robinson, and it was in progress when suspended by the civil war.

After the separation of the State in 1863 West Virginia took charge of the Kanawha river, and created a Kanawha board to carry on this improvement, collect tolls, &c., as the James River and Kanawha Company had been doing.

Notwithstanding the fact that the navigation had been greatly improved within the past few years, it was manifestly inadequate to the wants of the rapidly increasing population and business of the valley.

Having admittedly one of the finest coal fields on the continent, it was, practically, almost valueless for want of safe, reliable and economical transportation to markets.

As there was no local financial ability equal to the task of constructing such an improvement as would fully develop this great interest and effectually serve it and the other rapidly growing interests of the valley, it was determined to apply to the general government for aid in the matter.

In 1871-'2 a lively interest was gotten up throughout the west in relation to the improvement of the navigation of the internal waterways by the general government.

A commission was appointed by the several States bordering on the Ohio river and tributaries to gather facts and statistics in regard to the trade, the capacities and the wants of the improvable rivers.

In the line of their duties the commission went to Washington and submitted to the Senate Committee on Transportation facts, figures and arguments in relation to the improvement of the several rivers, the Great Kanawha included; they also had a conference with President Grant, who was favorable to and encouraged this class of public improvements.

About this time there was a revival of the old Washingtonian idea of connecting the Ohio river and tidewater through the James and the Kanawha rivers, and the extension of the James River and Kanawha Canal. At the sugges-

tion of the commission, supported by the representatives of the States above mentioned, Congress appointed a Senatorial committee composed of Senators Windom, Conklin, Sherman, Bayard, Beck and Henry G. Davis, accompanied by the able government engineers, Colonel Q. A. Gilmore, Colonel Godfrey Weitzel and Colonel W. E. Merrell, to go over the ground, investigate generally and fully and report as to the importance, practicability and cost of the contemplated work.

They published a voluminous and thoroughly favorable report, and the government decided to at least improve the Great Kanawha river, which was needed as a local work and could be used as a part of the through line if that should ever be constructed.

IMPROVEMENT OF THE GREAT KANAWHA RIVER BY THE UNITED STATES GOVERNMENT.

In 1873-'4 Congress made two small appropriations of $25,000 each, and in June, 1873, work was commenced on the river under charge of Colonel W. E. Merrell, of the United States Engineer Corps, and Mr. Addison M. Scott, C. E., as Resident Engineer. The first work was to extend on a larger scale, what the Kanawha board was doing in a smaller way—that is, dredging out the sluices and building wing-dams to accommodate the immediate and current needs of navigation; but it was considered that nothing short of slack water, by locks and dams, would give a reliable, safe and permanent navigation.

In 1874 the work was placed under charge of Colonel William P. Craighill, of the United States Engineer Corps. That fall (1874) a survey for a slack-water improvement was made by the Resident Engineer, A. M. Scott, assisted by Civil Engineers C. K. McDermott and J. S. Hogue, and preliminary location for locks and dams made from Loup Creek to the mouth of the river, and under date of January 29, 1875, Mr. Scott submitted a report, with estimates of cost, to Colonel Craighill on three different systems of improvement, viz:

First—For a lock and dam improvement from the Falls to foot of Paint Creek, and for sluice navigation in the remainder of the river, assisted by a reservoir on Meadow river.

(The combination of Fisks and Ellet's plans recommended by Mr. Lorraine.)

Second—For a lock and dam improvement, by fixed dams, throughout.

Third—For fixed dams in the upper and movable dams in the lower part of the river.

In this report (published in the Report of the Chief of Engineers for 1877) Mr. Scott decidedly recommended a lock and dam improvement in stead of the old reservoir and sluice plan.

In March following Congress appropriated $300,000 with which to commence the permanent improvement of the river. Soon after a board of engineers, consisting of General H. G. Wright, Colonel William P. Craighill and General O. M. Poe, recommended the adoption of the lock and dam slack water improvement, with the use of permanent dams at and above Paint Creek and movable or adjustable dams below that point. The recommendation was approved and adopted by the authorities at Washington, and in the fall of 1875 locks Nos. 4 and 5 were put under contract.

It was at first contemplated to have twelve locks and dams from the falls to the mouth of the river. There were to have been three fixed or permanent dams and nine movable dams. The estimated cost of whole complete was $4,071,216. No. 1, which was to have been a fixed dam and located at the foot of Loup Creek Shoal, was considered of less urgent necessity than the others, and has not been constructed.

In the progress of the work it was found, by careful measurements and engineering calculations, that one of the nine movable locks and dams could be dispensed with by dividing the lift between the others, which was done, thus reducing the whole number in the series to ten instead of eleven or twelve.

The following table furnished by the resident engineer, from the records of the U. S. Engineer Office in Charleston, gives the location of the several locks and dams, the dates of completion, size of locks, lifts, etc.:

No. of Lock and Dam.	Location of Locks and Dams.	Distance from mouth of River.	Style of Dam.	Height of Upper Pool above sea level.	Maximum lift.	Length of Dam.				Lock Dimensions.		Remarks.
						Navigation Pass.	Center Pier (width).	Weir.	Total.	Clear width.	Length between Quoins.	
		Miles		Feet	Feet	Feet	Feet	Feet	Feet	Feet	Feet	
2	1 Mile below Montgomery....	84½	Fixed	597.75	10.53	.....	....	.....	524.0	50	308	Finished in 1887
3	1 " " Dego.....	79½	"	587.42	13.67	.....	....	.....	564.5	50	312	" " 1882
4	1½ " " Coalburg.....	73¼	Movable	573.75	7.25	248.0	10.0	210.0	468.0	50	300	" " 1880
5	9¼ " above Charleston.....	67¼	"	566.50	7.50	250.0	13.5	265.5	529.0	50	300	" " 1880
6	4 " below Charleston.....	54	"	559.00	8.50	248.0	10.0	310.0	568.0	55	342	" " 1886
7	1¼ " " St. Albans.....	44	"	550.50	8.25	248.0	10.0	316.0	574.0	55	342	" " 1893
8	2½ " " Raymond City.....	36	"	542.25	8.00	248.0	10.0	292.0	550.0	55	342	" " 1893
9	3¾ " above Buffalo.....	25¼	"	534.25	6.25	248.0	10.0	284.0	542.0	55	342	" " 1898
10	2½ " below Buffalo.....	19	"	528.00	7.00	248.0	10.0	284.0	542.0	55	342	" " 1898
11	Foot Three Mile Bar.....	1¾	"	521.00	11.20	304.0	10.0	364.0	678.0	55	342	" " 1898

Low water in Ohio River at mouth of Great Kanawha River, 509.80

As shown by the table, the chambers of all the locks below Charleston are 5 feet wider and 42 feet longer than those above. This enlargement is of great value to navigation, particularly to the coal shipping interests, and was decided on after the first locks were built. It, of course, increased quite materially, the cost of these locks over the first estimates.

In constructing locks and dams Nos. 4 and 5, numerous modifications of detail, both in the foundation and movable parts, were suggested. These changes were adopted in building lock and dam No. 6 and proved to be valuable. Still further modifications and improvements were made in the works below lock No. 6. Lock and dam No. 6, however, (located four miles below Charleston) is in its important feature typical of the locks and dams below Charleston and a full description of its construction and operation will answer for the series.

Mr. A. M. Scott, resident engineer, has obligingly furnished me with the following lucid and detailed account of the construction and method of operating this lock and dam. His description here follows:

LOCK AND DAM NO. 6.

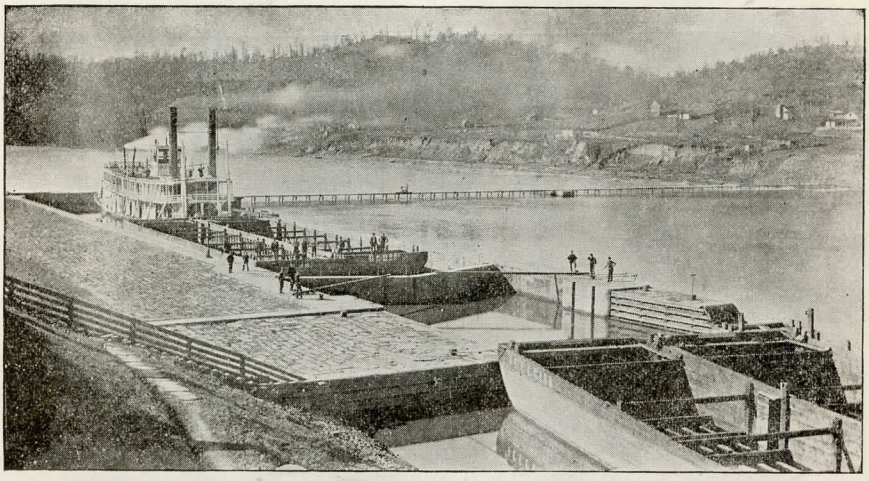
The Lock.—The extreme length of the lock is 410½ feet. It is 342 feet between quoines and 55 feet wide, in the chamber at the top of the miter sill.

It is all of cement mortered masonry, faced with cut and smooth-pointed stone, built on the solid rock. The rock was found here at depths of eleven to twenty-two feet below low-water mark.

The top coping is 21 feet 9 inches above the miter sills. The foundations extend from 5½ to 16½ feet below the sills, making the walls from about 27 to 38 feet in height from the rock. The walls are from 15 to 19 feet thick at the bottom and from 5 to 17 feet at the top. The lock gates are of white oak, strongly bolted and ironed. These gates were built on the bank near by; they are 22 feet high, 32 feet 8 inches long and 2 feet thick, each leaf weighing, with valves and other irons attached, about 38 tons. The gates were lowered from the bank to the river on inclines, towed to their recipes and raised and hung by hand crabs and steam hoisters; they rest and turn on steel pivots and are suspended at the top by iron, steel and bronze fastenings, attached to heavy wrought anchors built in the masonry. The upper fastenings are all be-

low level of coping, and are covered with movable castiron plates.

The lock chamber has a clear working space of 312 feet in length by 55 in width, sufficient to admit one of our largest tow boats with three of the large sized coal barges, or four of the largest coal barges without a steamboat, at once. The lift of the lock is 8 feet 3 inches when Dam No. 7 is up. (Before No. 7 was built the maximum lift at No. 6 was 10 feet 5 inches.) The emptying and filling valves are in the gates, 5 valves, each 2'-0"x4'-3", in each leaf. The lock is either filled or emptied at full lift in less than 4 minutes.

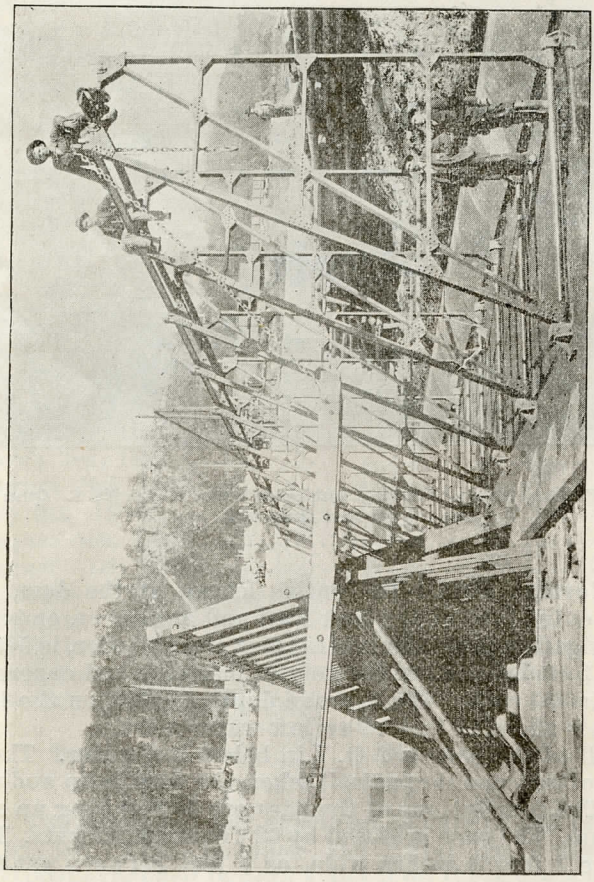


Movable Dams on Kanawha River: A towboat with empty barges in Lock No. 6. Other empty barges at the head of the lock.

The Movable Dam.—The entire length of the dam, between the outer face of the lock wall and abutment, embracing the navigation pass, the central pier and the wier, is 568½ feet. The foundations are entirely of masonry and concrete, resting on solid rock. The average depth of rock on the line of the dam is about 12 feet below low-water mark.

The sill of the pass is 2 ft. 7 in below low-water. There is 12½ feet of water on the pass sill when the dam is up and the pool full. The foundations of the pass are 50 feet long up and down stream. The pass is closed by 62 Chanoine wickets. The wickets are 3 feet 8 inches wide, or 4 feet between centers (there being a 4-inch space between each) and 13 feet 5½ inches

long. The pass bridge is composed of 30 wrought iron trestles. The trestles are nearly 12 feet wide on the bottom, 4 feet 1 inch on top and 16 feet 8 inches high. They are connected, when standing, by 4 inch "I" beams, which form the track for the manouvering winch, and light wrought iron aprons, which make the floor to walk on. The pass is separated from the wier by the central pier. This is of cut stone masonry 34½ feet long and 10 feet wide. It is built on bed rock and is about 26 feet high, the top of it being level with the top of the service bridge. The bridge when lowered falls toward the pier, and there is a deep recess in the pier into which the nearest trestle lies when the dam is down.



Movable Dams on Kanawha River: View inside of one of the cofferdams at Lock No. 9 during construction. Showing part of the foundations completed and several wickets and trestles in place, standing. One wicket "on swing."

The weir is 310 feet 6 inches long. It is closed by 69 Chanoine wickets, each 7 feet 8 inches high and 4 feet 3 inches wide. The wier bridge is like that for the pass, in construction, but the trestles are not as high. It is connected, when standing, with rails and aprons, like the pass, and with those of the latter form a continuous track for the traveling winch and a foot walk the whole length of the dam from the abutment to the lock. The foundations of the weir are built entirely of masonry, concrete and iron. A peculiar feature of this weir is the castiron sills. The wooden sills, &c., at dams 4 and 5 of this improvement were found to decay rapidly, and iron was accordingly used at No. 6, and on all the dams subsequently built.

The iron sills, trestles, wicket boxes, &c., are bolted to the cut stone coping, making the upper surface of this part of the dam practically indestructible. As before mentioned, the foundations of the dam throughout are of masonry or concrete. In dams 4 and 5 (both finished in 1880) a great deal of oak timber was used in the foundations of both navigation pass and wier. This timber was framed and bolted together and filled with concrete. It was found generally more expensive than masonry and was abandoned as far as practicable in the construction of No. 6. The stone work was found not only better and cheaper than timber, but could be placed faster and saved valuable time in construction. The foundations of the dam were constructed within coffer dams built in sections across the river, from which the water was kept exhausted by large steam pumps.

The pool formed by this work (lock and dam No. 6) is nearly 14 miles long. At lock No. 5, the head of the pool, it raises the water 3 feet 9 inches above low water mark, making 7 feet depth on the lower miter sill there. It makes good 6½ feet for navigation everywhere in the pool at extreme low water. It raises the water at Charleston 4 feet 8 inches above low water mark, and makes good 7½ feet depth for tows at that old "sticking place"—the foot of Elk Shoal.

It makes miles of splendid holding ground for loaded coal barges, affording good water for the purpose almost everywhere in the pool. Pool No. 6 is no doubt destined to be one of the largest and most important coal harbors in the world.

The total cost of lock and dam No. 6, including grounds, buildings and outfit complete, was a little under $337,000.

THE ADVANTAGES OF MOVABLE DAMS.

The experience with movable dams on this river has been

very satisfactory. They are easily and rapidly maneuvered, the expense of operation and maintenance is but little, more than with fixed dams, and they prove highly satisfactory to the river interests.

The movable dams are kept up whenever there is not water enough in the river for coal-boat navigation and down at other times.

The advantages over the ordinary fixed dams for a commerce and river like the Great Kanawha are decided, furnishing the benefits of the usual slack water without its most serious drawbacks. With fixed dams everything must pass through the locks; with them navigation is entirely suspended, too, when the river is near or above the top of the lock walls. With movable dams the locks are only used when the discharge of the river is so small as to make them necessary. At all other times they are down, practically on the river bottom, out of the way, affording unobstructed, open navigation. This is of great advantage to all classes of commerce, and is particularly so with coal, transported, as it is, and empty barges returned, in large fleets. More barges can, of course, be taken by a tow boat, and much better time made by all kinds of crafts in open river, when there is water enough for such navigation, than when the stage of water compels the use of the locks. The moveable dams being down in high water, there is comparatively little difficulty in protecting the banks about the works from scour. In this respect, too, they have considerable advantage over the fixed dams.

The great advantages of movable dams have long been recognized in Europe. In 1878 there were 124 movable dams in operation in France alone. The Great Kanawha had the honor of possessing the first movable dams in America. Dams Nos. 4 and 5 (the latter located at Brownstown, nine miles above Charleston, and the other at Cabin Creek, six miles farther up) were completed in July, 1880, and have been in successful operation ever since. Dams 4 and 5 are both of the Chanoine type. The Davis' Island dam, on the Ohio, below Pittsburg, completed in 1885 and the other dams now building on the upper Ohio, are of the same general type. The Ohio dams, however, have no service bridges, the wickets being raised and lowered by means of boats.

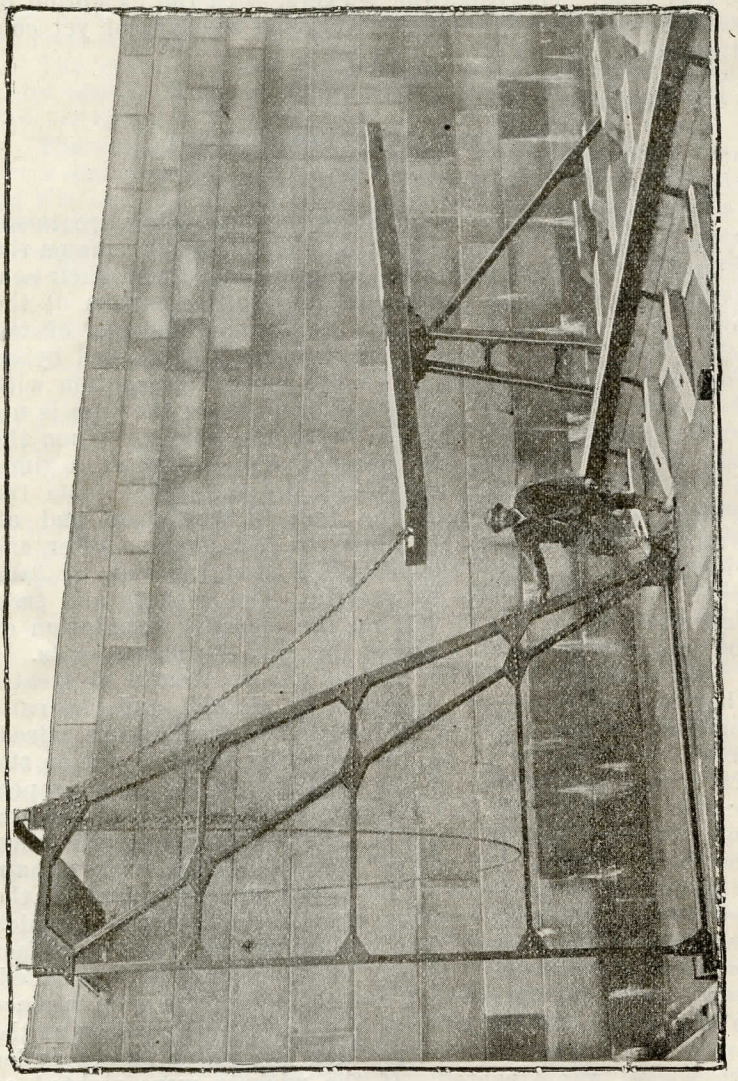
Although at Dam No. 6 a great many improvements have been made in construction and details the general principles of all the Kanawha movable dams are about the same. They are practically the same, too, as regards width of navigation, pass and dimensions of the pass wickets. The pass wickets at No. 6, as above stated, are 13 feet 5¾ inches long; those be-

low Dam No. 6 are 14 feet long; the Davis' Island wickets are 13 feet long. The Kanawha wickets, with the exception of one dam in France, are believed to be the largest yet constructed.

OPERATION OF MOVABLE DAMS.

The wickets, when erected form the dam. They are raised by men from the bridge, operating a winch which runs on the bridge track. The wickets are hung or hinged near their center to an iron frame called the horse. The bottom of the horse is attached, by journals, to the foundations of the dam. The wicket, when erect, is mainly supported by an iron bar called the prop, which has journal connection with the horse. The lower end of the prop, when the dam is up, rests against a cast iron piece called the hurter. When the dam is to be lowered the wickets, one wicket at a time, is pulled a few inches up stream (by the winch from the bridge) which disengages the foot of the prop and allows the wicket, with its horse to fall down. After the wickets are all down, the bridge is next lowered, It falls *across* the river, trestle by trestle. The wickets and trestles, when down, all lie flat on the masonry foundation of the dam, behind the sills, out of the way of passing boats.

In raising, the bridge is first put up trestle by trestle (they are all connected together by chains), and the rails forming the track placed as fast as the trestles are raised. When the bridge is all up, the traveling winch is put on the track, and the raising of the wickets, or the dam proper, begins. Each wicket has a strong chain fast to the bottom end, the other end of which is fastened to the trestle when the dam is down. In raising the wickets the wicket chain is made fast to the drum of the winch, and wound up till the lower end of the prop comes in place in the hurter seat, which holds the wickets erect. The wickets are not righted as fast as drawn up, however, but left "on the swing" as it is called, that is, with the horse erect, and the end of the prop in place in the hurter, but the wickets in a horizontal position at the top of the horse. In this position the water passes under the wicket unobstructed. If the wickets were righted as raised, the head of water would become so great, before all were up, that the last wickets could not be safely handled. For this reason they are all first put on the swing, as described, and then righted, one after the other, as rapidly as possible."



Movable Dams on Kanawha River: View inside of one of the cofferdams during construction of Lock and Dam No. 7. Showing one service bridge trestle standing and one wicket "on swing."

In addition to furnishing the above description, Mr. Scott has had the kindness to grant me access to several annual reports and office records, from which, together with his lucid personal explanations, I have gathered the data which are embodied in the remaining portion of this paper.

There are four men regularly employed about each lock and dam. During the summer season 5 men are employed regularly at each movable dam. The Government has provided comfortable houses at each lock and dam for these employees, and each is furnished sufficient ground for a good garden.

The average time taken to raise one of these dams, by 4 or 5 men, is about nine hours. It is lowered with the same force in about 2 hours. The cost of maintaining and operating each lock and dam is from $2,400 to $3,000 per year. Lock and dam No. 3 was built by hired labor under superintendence, all the others have been built by contract. The average cost of the locks with moveable dams—except No. 11—was about $340,000. No. 11, for reasons given below, cost about $650,000.

The depts to foundations was the most serious condition at No. 11. The works were built on hard-pan 18 to 24 feet below low water. In the preliminary drilling in this part of the river, this hard-pan was mistaken for rock. The examinations, borings, test pits, etc., afterwards showed its character, and the fact that the bedrock was about 20 feet deeper, or 40 feet below low water mark. The hard-pan is a dry, compact, indurated clay, and entirely sufficient. it is thought, for foundations. The piers of the high railroad bridge over the Ohio just above the mouth of the Kanawha rest on hard-pan, and those of the bridge over the Kanawha, about a mile below the lock site, without much doubt, do also, though the engineers of the latter were of the opinion that the caisons were down to rock. The foundations of both these bridges are at about the same depth as the top of the hard-pan at No. 11, i. e., 18 feet below low-water reference.

The depth and character of the bottom called for material changes in plans for foundations, particularly in the dam, both on the score of stability and economy over those at the other works. The river widens considerably near the mouth, and the dam at No. 11 is from 112 to 218 feet longer than the other dams on the river.

The office of the resident engineer is in the city of Charleston. The Government has a telephone line from the falls of Kanawha to Lock and Dam No. 11, and the force at each lock and dam is all the time in communication with each other lock and dam and the office in the city. Gauge reports

are received at the Charleston office by telephone or mail, at least daily, from Kanawha Falls, and from Hinton and Radford on the upper New River. In time of a rise, the telegraph is used to report the gauge from the last two places. This is all necessary for the safe operation of the movable dams and the regulation of the pools.

The force keeps a small tow-boat to transport supplies, material and labor from one point on the improvement to another, and to tow their dredges, crane boats, dump scows, etc., also to remove obstructions—snags, trees, wrecks, etc.,—left in the channel by high water.

A light-draught steam launch is used by the engineers for trips of inspection and to carry light articles from one point to another.

The total cost of the administration of the work, including the superintendence and office force, the maintenance and operation of locks and dams, current repairs, telephone line, dredging, snagging, etc., is about $40,000 per year.

The original estimate of the cost of the work was $4,071,216; the whole amount appropriated to date is $4,208,200, as follows:

March 3rd, 1873	$25,000
June 23rd, 1874	25,000
March 3rd, 1875	300,000
August 14, 1876	270,000
June 18th, 1878	222,000
March 3rd, 1879	150,000
June 14th, 1880	200,000
March 3rd, 1881	200,000
August 2nd, 1882	200,000
July 5th, 1884	200,000
August 5th, 1886	187,500
August 11th, 1888	350,000
September 19th, 1890	300,000
July 13th, 1892	225,000
March 3rd, 1893	500,000
March 2nd, 1895	580,700
June 4th, 1897	273,000
Total	$4,208,200

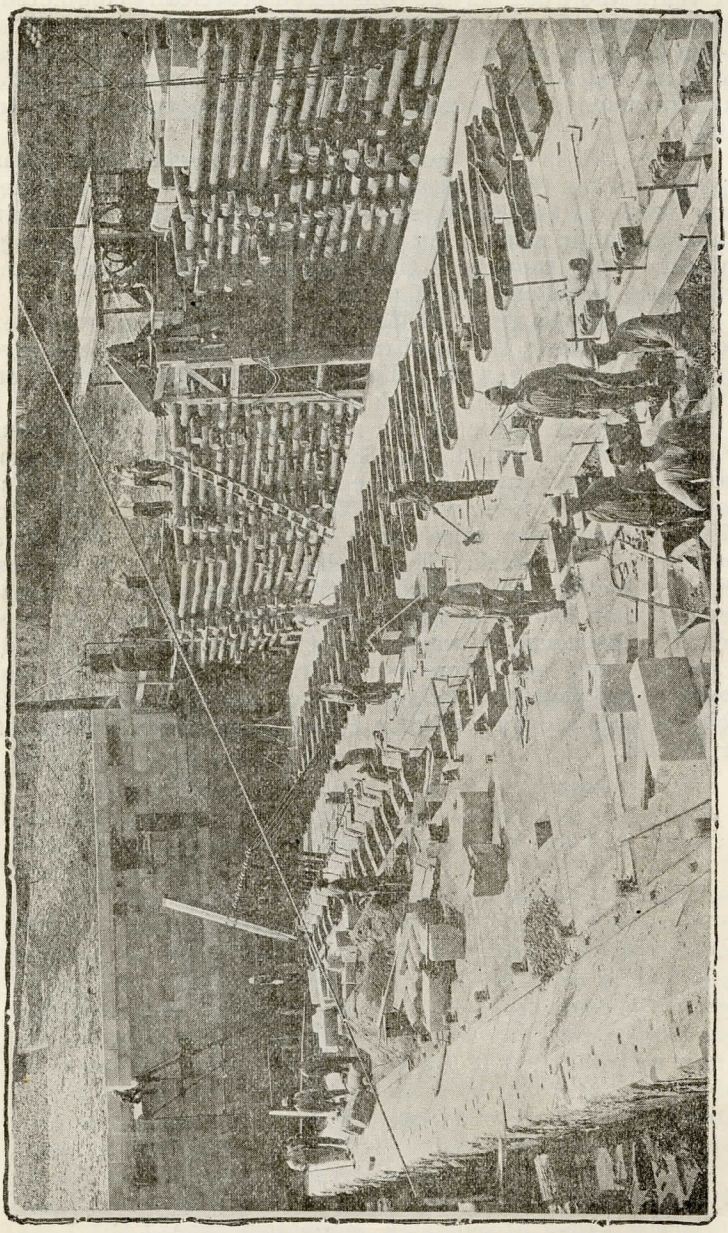
The whole amount expended to date (April 14th, 1901), is $4,023,580. This includes the first two appropriations ($50,000) expended in 1873-4 and 5 on the sluce and wing-dam improvement, as before described.

While the work may be considered practically completed, there remains some dredging to be done, mainly at the head of the pools to straighten and deepen the towing channels and bring the water to full miter sill depth, some old chute walls to remove and some additional employees' houses to build.

When all is fully completed, as projected, the total expenditure for the slack water improvement will fall somewhat inside of $4,000,000, showing the quite unusual result of a large public work being constructed at less than the original estimates, though in this case, as before noted, there were some modifications of plans.

The Kanawha river, at its mouth, is 510 feet above tide; and at Loup creek, the head of the upper pool, 596 feet, giving a fall of 86 feet in that distance, in the natural river, or an aggregate lift of that much by the several dams.

The flow of water in the river has several times been measured and estimated. In 1881, when the water was lower than at any time since 1838 (the lowest ever known) the discharge below Elk river was 1,183.5 cubic feet per second. In 1878, measurements were made when there was 34½ feet above low water mark. The discharge below Elk river was 188,347 cubic feet per second; of this it was shown by measurement that Elk river furnished 32,950 cubic feet per second. The discharge between these two wide extremes would, of course, vary according to the stage of water. The discharge at a 6 foot (natural, open river) stage is about 10,000 cubic feet per second; and at a 7 foot stage about 13,500 feet per second.



Movable Dams on Kanawha River: View inside of one of the cofferdams during construction of Lock and Dam No. 7: building the apron or foundations for the movable parts of the Dam.

CHEAP TRANSPORTATION

The manner of shipping coal on the Great Kanawha and Ohio rivers is generally understood and need not be particularly described. It makes remarkably cheap transportation, probably the lowest inland freight rates known.

The coal barges themselves, considering their capacity and service, are cheap carriers; they cost now from $1,400 to $1,800 each and last about ten years. The barges are generally 130 feet long by 25 wide and 7½ deep. A barge carries from 10,000 to 15,000 bushels, or from 400 to 600 tons, 520 tons, or 13,000 bushels per barge, is a fair average, equal to a train of 26 cars of 20 tons each.

A small tow of 4 barges, easily handled by a small tug or tow boat, and passes through the locks when the dams are up, at one lockage will have nearly or quite 50,000 bushels or 2,000 tons, enough to fill 100 freight cars of 20 tons each. In open navigation a tow boat handles from 4 to 14 loaded barges in the Kanawha, depending on the stage of the river and the size of the tow boat.

In the Ohio river from Point Pleasant down, the Kanawha tow boats take from 14 to 34 barges, a fleet of 30 barges has about 375,000 bushels, or 15,000 tons, this amount of coal loaded on 20 ton cars would make 30 trains of 25 cars each, or a continuous line of cars nearly 7 miles long.

The Kanawha tow boat "Andrews" went out recently with a tow of 28 barges, each containing about 15,000 bushels or 420,000 bushels in the tow, equal to 16,800 tons. This loaded into 20 ton cars would fill 840 cars and would make about 34 trains of 25 cars each. These 34 trains, running as close together as practicable, would require nearly or quite 8 miles of track.

RATE OF TOWING COAL.

The general rate for towing from Charleston pool to Cincinnati is one cent per bushel, or 25 cents per ton. Operators who hire barges pay half a cent per bushel barge rent, making the cost to Cincinnati, to operators who hire both barges and towing, 1½ cent per bushel or 37½ cents per ton. This includes the return of the empty barge to the mine.

This rate to Cincinnati (distance 263 miles) is 1.42 mills, or about 1-7 of a cent per ton per mile. For longer distances, or to points on the Ohio and Mississippi, below Cincinnati, the rates per mile are much less. The usual rate

from Cincinnati to Louisville amounts to about 10½ cents per ton, making the cost from Charleston pool to Louisville, including towing, rent and return of barge, 48 cents per ton. The distance from Charleston to Louisville being 394 miles, makes the rate 1.21 mills per ton per mile.

The above rates, it will be seen, are both for comparatively short distances. A considerable quantity of Kanawha coal is towed to different points on the lower Mississippi, as far down as New Orleans. The rate for these long distances is exceedingly low. Take it to New Orleans, for instance: the cost to the Kanawha operator who hires both barge and towing, is 5 cents per bushel, or $1.25 per ton. The distance from Charleston to New Orleans, 1,776 miles, 0.7 mill, or about one-fourteenth of a cent per ton per mile.

As low as these rates are, very much coal is shipped from this river at still cheaper rates.

Probably the next lowest inland freight in the country are those of the great lakes, where enormous quantities of heavy freight, such as iron ore, lumber, grain, and coal, are carried, mainly by a system of towing in large barges. The average rate on the lakes, from official records kept at St. Mary's Falls in 1899, was 1.05 mills per ton per mile, for an average length or route of 827.2 miles.

The average rate on all coal handled by the Chesapeake and Ohio Ry. in 1899 was 2.74 mills per ton per mile; a very low rate, considerably lower it is understood than on any other railroad in the United States.

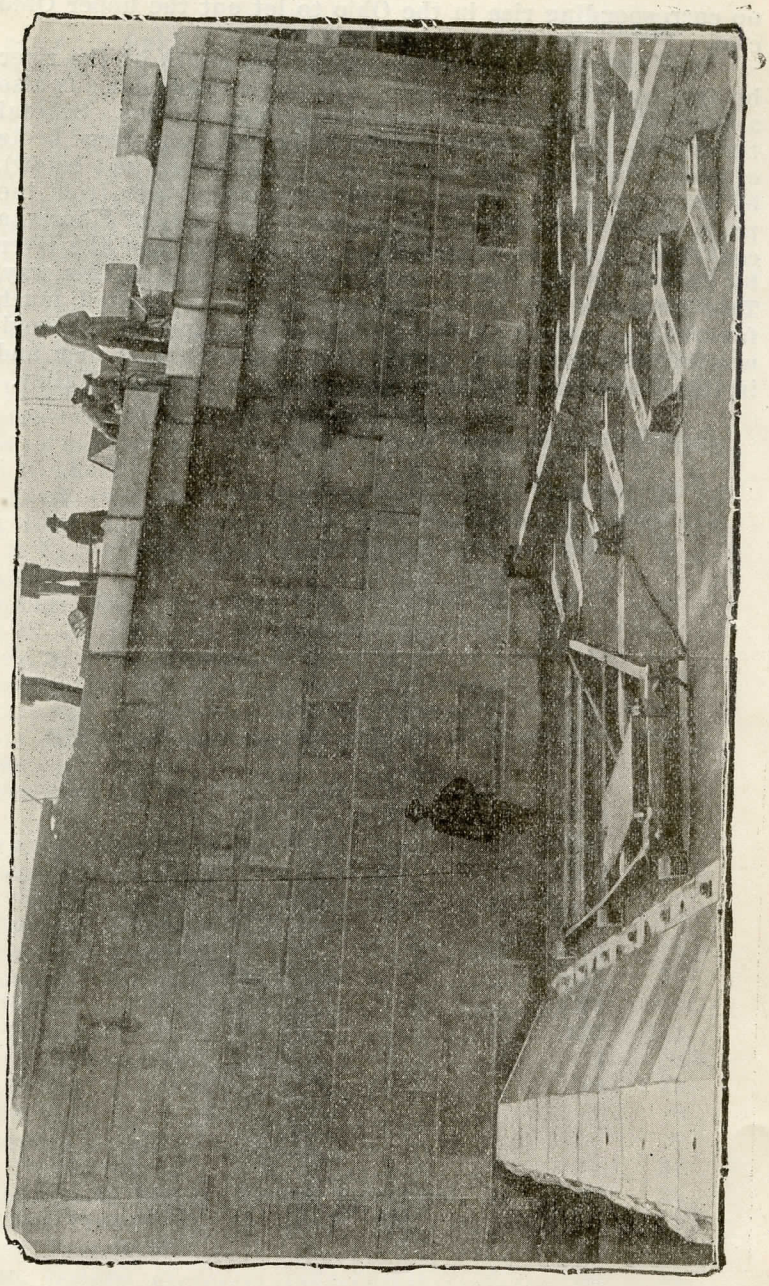
ADVANTAGES OF SLACK WATER.

This slack water improvement not only greatly lessens the expense and risk of shipments, but nearly doubles the time when coal can be shipped.

From U. S. gauge records kept for a series of years at Charleston and Point Pleasant (the mouth of the Kanawha) *before the locks and dams were built below Charleston*, it was shown that there were, on the average, only 136 days per year when 6 foot draft boats could be shipped from Charleston down, and that the same draft boats could be shipped on the Ohio from Point Pleasant down on an average of 250 days per year. Now with the locks and dams completed, there are 6 feet and over in the Kanawha practically all the year, so that coal can be shipped to market from this river whenever there is water in the Ohio from Point Pleasant. It often happens too that there is barge water from Point Pleasant down, from rises in the Kanawha, when there is

no corresponding rise in the Ohio to let out the upper Ohio coal.

The "flooding out" of coal from the mouth of the river by drawing water from the pools of the movable dams is also a novel and important feature of the improvement. Several times since the completion of the locks and dams, large fleets of coal have been sent to market (to Cincinnati and below), by augmenting small rises in the Ohio with water from the pools. In the fall of 1899 over 4,000,000 bushels of Kanawha coal (that had been passed down to the mouth of the river by the use of the locks), were sent to market in this way. This unlooked for feature of the work has excited much favorable comment on the movable dams, and on the engineering management of them, from coal and river men and in the Cincinnati and other newspapers in the Ohio Valley.



Movable Dams on Kanawha River: View inside of one of the cofferdams during construction. Showing one wicket and one trestle lying down on the apron or foundation.

The completion of this great work, after a quarter of a century spent in construction, giving safer, cheaper, quicker and more continuous navigation, marks an improvement era in the history of this valley, and the general coal consuming markets of the Mississippi and Ohio Valleys and the Great Lakes. The increased facilities and economies of navigation will, doubtless, stimulate a very largely increased production of coal, which will add to the value of every acre of coal land and promote the general interests of the valley, while the increased supplies, greater competition and superior quality of Kanawha coals will advantage the consumers in the great markets named. And it is not impossible or improbable that, when the Nicarauga Canal shall have been constructed, Kanawha coals may find their way through the Gulf of Mexico to the far away Pacific Coast.

In 1887, beacon lights were established on the Ohio river, and soon after on the Kanawha, which add greatly to the facility and safety of navigating the river by night.

The annexed table shows the shipments of coal by river from 1875 to 1900 inclusive: a striking record of the remarkable increase of shipments from year to year:

The effect of better times and the completion of the Great Kanawha slack-water are both plainly seen in the marked increase in the shipment for 1900.

The table showing (both in bushels and tons) the amount of coal shipped by river from Great Kanawha for the several years named:

Year.	Bushels.	Tons.
1875	4,048,300	161,932
1876	5,024,050	200,962
1877	5,183,650	207,346
1894	25,821,000	1,032,840
1878	No record	
1879	No record	
1880	No record	
1881	9,628,696	385,147
1882	No record	
1883	15,370,458	614,818
1884	18,421,084	736,343
1885	17,812,323	712,493
1886	17,861,613	714,465
1887	23,233,374	929,335
1888	20,100,625	804,025
1889	26,921,789	1,076,872
1890	24,161,554	966,462

1891	25,761,346	1,030,454
1892	26,787,788	1,071,511
1893	22,983,000	919,320
1894	25,821,000	1,032,840
1895	21,982,600	879,304
1896	23,050,000	922,000
1897	21,215,000	848,600
1898	27,229,000	1,089,160
1899	23,570,000	942,800
1900	31,017,000	1,240,680

The prospect is promising for a continued increasing business by river. A large number of new barges, some of them belonging to coal dealers new to the Kanawha have been brought into the river lately. Some important additions have also been made within the last few months, and others will soon be made, to the fleet of tow boats. This, with new tipples building and several of the old operators preparing to increase their river output, makes the prospect good for 1901.

The table following shows the entire tonnage of the Kanawha river for the calendar year ending December 31st, 1900:

Tonnage of the Kanawha river for the calendar year ending December 31, 1900.

Articles.	Quantity.	Tonnage.
Coal ..... bushels	31,017,000	1,240,680
Timber ..... feet B. M.	29,460,000	49,100
Staves, oak ..... number	851,000	6,382
Bark and wood for tanning ..... cords	3,947	7,696
Hoop poles ..... number	612,600	1,530
Lath ..... do..	2,153,900	430
Railroad ties, oak ..... do..	786,700	110,303
Shingles ..... do..	1,233,000	185
Brick ..... do..	288,000	720
Salt ..... barrels	8,300	1,162
Merchandise and produce in steamboats ..... tons	.....	57,742
Total	.....	1,475,930

U. S. Engineer's Office, Charleston, Kanawha, W. Va., April, 1901.

The Engineer Department has many large photographic pictures illustrating this great river improvement, in its progress and operation; a few, reduced to a size suitable to these pages, will give the reader an idea of the work.

THE PERSONEL OF THE ENGINEER FORCE.

The engineer officers who have had charge of the work since the beginning, taken in the order of their service, were: Col. Wm. E. Merrill, Gen. W. P. Craighill, Col. P. C. Hains, Maj. Jas. F. Gregory, Maj. W. H. Heuer, Maj. W. H. Bixby, and Captain Wm. H. Hodges. General Craighill had much the largest service, having charge from 1874 to 1897, when he was made Chief of Engineers, U. S. A., and his district turned over to Col. Hains. Captains Thomas Turtle and E. H. Ruffner were resident engineers about four and two years respectively, between 1876 and 1882. Lieut. Black was an assistant on the work about one year, in 1880-81, and Mr. W. H. Hutton, C. E., of Baltimore, was employed as consulting engineer in 1875-6. Mr. Addison M. Scott has been either the resident or principal assistant engineer from the beginning of operations by the U. S. Government in 1873 up to the present time.

The assistant civil engineers employed on the work at various times, were Mr. Thos. E. Jeffries, Mr. Albert M. Campbell, Mr. Charles K. McDermott, Mr. Theodore Schoonmaker, Mr. M. S. Baily, Mr. Charles Humphreys, Mr. John S. Hogue and Mr. Wm. S. Summers.

Mr. Jeffries has been continuously employed since 1882, mainly as civil engineer and inspector on construction of locks and dams Nos. 6, 7 and 11; and Mr. A. M. Campbell has been employed in the same capacity from 1892 until 1898, mainly on locks and dams Nos. 8 and 10. The inspectors of masonry, etc., most prominent on construction were Mr. John H. Minnick, Mr. E. H. Kirlin, Mr. John R. Myers, Mr. S. G. Campbell, and Mr. R. S. Stephens. Mr. J. S. Williams as master carpenter, has had charge of the building and hanging of most of the lock gates.

It is pleasant to record what is quite a remarkable fact in connection with the construction of this great work, that in that in the more than a quarter of century it has been under way, there has been no serious accident, disaster, loss or damage to the works by high water, low water, ice or storm; no strikes among laborers, no quarrels or misunderstandings with contractors and others, no friction with the public: everything has progressed quietly, smoothly, and

pleasantly from beginning to end. If there are any exceptions at all, they are too triveal to be worth mentioning.

All this argues the great capacity and fittedness of those in charge of the work in hand, their conservatism, fairness and courtesy to all with whom they have had to do, as also great watchfulness and care, pervision and provision against the accidents and mishaps that so often occur on such works.

The whole history of the work is a credit to all concerned.

The following communication in reference to the Gt. Kanawha River Improvement from General Wm. P. Craighill, retired, lately Chief of Engineers, U. S. A., appeared in the Engineering Record of June 17, 1899. It may be noted in this connection that General Craighill is a native of and still a resident of Jefferson County in this State, a fact in which West Virginians take a just pride.

"I have been much interested in reading the excellent illustrated article which has recently appeared in the columns of your enterprising journal on the subject of the improvement of the Great Kanawha River in West Virginia. This interest seems natural and proper for several reasons, one of which, as stated by you, is that my term of service in charge of that work lasted from 1874 to 1895, twenty-one years, from the beginning of the improvement by the use of locks and movable dams to the making of the contracts for the last locks and dams of the series near the mouth of the river. While the fact of the existence of movable dams of several types in different countries of Europe was well known to engineers in the United States prior to 1874, the application of that method of improvement was almost unknown here. From the beginning of the charge of the Kanawha River by the United States Engineer office, the adaptability of movable dams to the Kanawha was remarked and the improvement was begun with the approval of the higher authorities in Washington.

"The plans for the Kanawha were based mainly on those of the French engineers, especially those of the River Seine. Many changes were made, however, both in the details of the plan and in the manoeuvers, and these changes have always been found to be in the line of betterment and economy. With the preparation of the original plans for the Great Kanawha, Mr. William R. Hutton, Past Vice-President Am. Soc. C. E., had very much to do, and I mention his name particularly because it is not found among those given in your article.

"I desire also to call attention in the most emphatic way to the name of another member of the American Society of

Civil Engineers, who has for more than twenty-five years been connected with this important improvement, which has been most successful from a commercial as well as an engineering standpoint. I refer to Mr. A. M. Scott, who was principal engineer on this work when I took charge of it for the United States in 1874; he has remained on it up to the present time, when it is completed. The conduct of the work has been most economical, wise and excellent in every way. Mr. Scott has exhibited an unusual degree of skill as a designing and constructing engineer, in the management of the improvement, and in dealing with the many perplexing problems which has presented themselves for solution in its progress. To him is due more than to any other person the success of this work. I say what I know, and it gives me sincere pleasure thus to bear record to the merit of a most faithful and deserving man."

THE WEST VIRGINIA HISTORICAL AND ANTIQUARIAN SOCIETY.

This society, with a view to more effectually carry out the objects and purposes of its organization, has decided to publish a Historical Magazine, to be called "The West Virginia Historical Magazine, Quarterly."

The Society solicits, for this magazine, contributions from time to time, from its members, from citizens of the State, and from others who may have the will, of trustworthy accounts concisely written, of past and current events, local, State and general, of historical interests pertaining to the State.

There is still floating in the memory of the people, but never in print, many interesting traditions of early historical events relating to early frontier explorations and settlements, border Indian wars, the part taken by Western Virginia, now West Virginia, in the wars of the revolution and of 1812, the Mexican and Civil wars, and the Spanish, Philippine and Chinese wars. Selections from these, well attested, we desire to gather up and preserve, before they are forever lost; and so with interesting facts relating to the growth and development of the State, settlements of neighborhoods, growth of towns, public improvements, manufac-

turing and other enterprises. A record of such events, seemingly unimportant now, while occurring under our eyes, will have great interest and value in the future.

It is the purpose of the Historical Magazine to gather and record selections from such facts, and also short biographical sketches of persons who have taken a prominent and useful part in the affairs of the State.

Members and friends of the Historical Society and the public are invited to subscribe to the Magazine.

Price, per annum, $1.00; single copies, 25 cents.

Our Historical Society, when organized, started a museum, on a small scale, with a basketful of Indian and Mound Builders' relics, and a few other curios. Now, our collection has increased to many thousands of specimens of great variety and many of unusual interest. It is largely visited by the public, with interest and pleasure. We have also, on exhibition, specimens of the coals, timber, and other products of the State, which are of interest and value to outsiders coming to investigate such products, so largely abounding in our State.

Our library was begun but a few years ago, by the donation of a few books, pamphlets, etc., by members of the Society. It has now, with the aid of the State, increased to about six thousand volumes of books, several thousand pamphlets, maps, papers, autographs of distinguished people, pictures, etc.

We keep, on our reading tables, most of the prominent newspapers of the State, which are kindly sent us gratuitously by the publishers; these are kept to be bound in volumes for permanent preservation, and will make a valuable record of the current history of the State.

We subscribe for twelve to fifteen of the leading popular magazines for the entertainment of our visitors. These, too, we bind and preserve.

Our library contains a large proportion of Government books, Acts of Congress, departmental, Smithsonian, Geological, and other reports, besides a valuable collection of miscellaneous books on history and general subjects; altogether, it is now, a very valuable library of reference, and is being largely used as such.

We have published a few pamphlets and sent them out to other Historical Societies and libraries, and have received many valuable publications in exchange. We propose, in like manner, to send our Historical Magazine to other Societies and libraries, and hope to receive valuable exchanges.

Although occupying the largest room in the Capitol building, we are very much cramped for room; but we shall

soon be in our new quarters in the elegant Capitol Annex building, now being erected, and in which the State has assigned us one entire floor of about ten thousand square feet or floor space, where we can arrange what we have to much better advantage, and have room for expansion.

The Historical Society has transferred to the State all its right, title and interest in and to its library, museum, and whatever else it has. With the full title and ownership of the Society's collection in the State, we trust it will be the pleasure of future Legislatures to grant the Society such liberal encouragement and support as it deserves and needs to continue, increase and perpetuate it as one of the valuable and permanent educational institutions of the State.

We bespeak the good offices of the press of the State in calling the attention of the public, from time to time, to the aims and efforts of the Society in behalf of the interests of the State, and aid in getting from every part of the State interesting historical sketches for our Historical Magazine, thus encouraging a knowledge of and interest in the objects of the society, and fostering a loyal patriotism and love for the State.

To the citizens of every county and part of the State, we appeal for contributions of all sorts suitable as exhibits in our museum.

We want fine specimens of the woods and coals of the State, mineral ores, fire and brick clays, marbles, building stones, manufacturing products, old books, maps, manuscripts, autographs, aboriginal relics, coins, curios, medals, pictures, etc. Such an aggregation of individual contributions will greatly enhance the interest and value of our museum, not only to our own citizens, but to the thousands of those beyond our borders who come to the Capitol of our State and visit our rooms.

Persons or families who have valuable records, curios, or heirlooms which they are not willing to donate to the Society, are solicited to loan us sucharticles for exhibition; they will are solicited to loan us such articles for exhibition; they will be safely preserved under glass and lock and key in a fireproof building, safe from the numerous accidents, by fire and otherwise, which befall private residences.

The Society issues receipts for such loaned articles with a clause allowing the owners to reclaim them at their pleasure.

We solicit those in sympathy with the objects of this Society, to become members, and co-operate with us in the work in hand. The initiation fee is $3.00, no after charges.

J. P. HALE, President.

MINUTES OF THE ELEVENTH ANNUAL MEETING OF THE WEST VIRGINIA HISTORICAL AND ANTIQUARIAN SOCIETY.

Jan. 15, 1901.

The eleventh annual meeting of the West Virginia Historical and Antiquarian Society met this evening at 8 o'clock in the Governor's reception room at the Capitol.

It was called to order by the President, Dr. J. P. Hale. A quorum being present, the minutes of the last meeting were read and approved.

The President made no formal address, but stated that he had hoped to present the first issue of the Society's Magazine, which has been delayed by the printer.

The Treasurer was absent and no report was presented by him.

The Secretary read his report, which, on motion, was ordered to be published in the next issue of the Magazine.

The Hon. Nelson E. Whittaker and the Hon. Frank M. Reynolds were elected members of the Society.

The election of officers, by ballot, resulted as folows:

President—Dr. J. P. Hale.
Vice President—Hon. N. E. Whittaker, First District.
Vice President—Hon. F. M. Reynolds, Second District.
Vice President—Charles Ward, Esq., Third District.
Vice President—A. F. Gibbens, Esq., Fourth District.
Treasurer—Hon. G. W. Patton.
General Secretary—Rev. Robt. Douglass Roller, D. D.

Executive Board—

First Ballot—Judge H. C. McWhorter, Dr. J. P. Hale, Joseph Ruffner, Esq., Gov. G. W. Atkinson, Hon. J. W. Paul, W. S. Laidley, Esq., Maj. Thos. L. Broun.
Second Ballot—Hon. J. B. Floyd.
Third Ballot—Hon. J. R. Trotter.

On motion the Society adjourned.

ROBT. DOUGLAS ROLLER, Secy.

J. P. HALE, President.

SECRETARY'S REPORT.

Charleston, W. Va., Jan. 15, 1901.

To the President and Members of the West Virginia Historical and Antiquarian Society.

Gentlemen—Your Secretary begs leave to submit the following brief report:

Nothing extraordinary has been done during the year just closing for the reason that we are in a state of exxpectation. We are looking forward to the time when we shall occupy our new abode. Our work is preparatory to the removal to the new building whenever that may be ready for occupancy.

Some of the pamphlets and magazines have been bound and are in a condition to be placed on the shelves. A good start has been made towards a catalogue, which will be a matter of necessity.

The Secretary sent copies of the report of our last annual meeting to all of the Historical Societies whose addrsses could be secured, with the request that we be put on their exchange lists. The result has been gratifying, as we have received seventy-five publications of Historical Societies this year, as against seventeen for the year ending January, 1900.

If we can offer some publication of our own each year, the other societies will respond in kind, and we may hope to keep in touch with historical research all over the country.

If the new Magazine can be sustained it will be most valuable, not only for its contents, but as the means of securing publications worth to us more than the cost of the Magazine.

There is a more pressing need now for a generous appropriation than ever before in our history. The completion of the catalogue, the binding of pamphlets, and other documents, and the renovation of old and rare books, are things which it would be criminal to neglect. Besides, there are many valuable historical books which can be had now, but are becoming scarcer every day. These purchased and preserved in our archives will establish our standing among the truly valuable Historical Societies.

The Librarian's report is so full that it is not necessary for me to do more than present it in order to show our gains for the year.

It cannot be denied that our Society is growing year by year. Respectfully submitted,

ROBT. DOUGLAS ROLLER, Secretary.

OFFICIAL DIRECTORY FOR 1901.

OFFICERS.

President—Dr. J. P. Hale.

Vice Presidents—
Hon. N. E. Whittaker, First District.
Hon. F. M. Reynolds, Second District.
Charles Ward, Esq., Third District.
A. F. Gibbens, Esq., Fourth District.

General Secretary—Rev. Robt. Douglas Roller, D. D.

Treasurer—Col F. W. Patton.

EXECUTIVE BOARD.

Dr. J. P. Hale, Judge H. C. McWhorter, Gov. G. W. Atkinson, Mr. Joseph Ruffner, Hon. J. B. Floyd, Hon, J. R. Trotter, Maj. T. L. Broun, Hon. W. S. Laidley, Hon. J. W. Paul.

ORGANIZATION OF THE BOARD.

Mr. Joseph Ruffner, Chairman.
Hon. J. W. Paul, Secretary.

COMMITTEES.

Library—
Hon. G. W. Atkinson.
Hon. W. S. Laidley.
Maj. T. L. Broun.

Museum and Relics—
Dr. J. P. Hale.
Hon. J. W. Paul.
Hon. J. R. Trotter.

Portraits and Art—
Hon. H. C. McWhorter.
Hon. J. B. Floyd.
Dr. J. P. Hale.

REPORT OF THE LIBRARIAN.

To the Executive Board:

From January, 1900, to January, 1901.

Government Books Received.

Annual Report of Secretary of Treasury, 2 volumes.
Annual Report of Secretary of War, 1 volume.
Annual Report of Attorney General of United States, 1 volume.
Annual Report of Smithsonian Institute, 3 volumes.
Annual Report Civil Service Commission, 1 volume.
Annual Report Commissioner Labor, 3 volumes.
Annual Report Commercial Relations of U. S., 3 volumes.
Annual Report Bureau of Ethnology, 4 volumes.
Annual Report U. S. Coast Survey, 5 volumes.
Annual Report Secretary of Navy, 1 volume.
Annual Report Secretary Interior, 2 volumes.
Annual Report Commissioner Patents, 3 volumes.
Annual Report U. S. Geological Survey, 7 volumes.
Annual Report Agricultural Department, 1 volume.
Annual Report Bureal Animal Industry, 2 volumes.
American Historical Association, 1 volume.
Bureau Navigation, 2 volumes.
Bulletins U. S. Geological Survey, 4 volumes.
Bureau American Republic, 9 volumes.
Comptroller Currency, 1 volume.
Chief of Engineers, U. S. Army, 4 volumes.
Chief of Ordinance, U. S. Army, 1 volume.
Commerce and Navigation, 4 volumes.
Commissioner Education, 3 volumes.
Congressionar Records, 18 volumes.
Comptroller Treasury, 2 volumes.
Consular Reports, specials, 1 volume.
Director of the Mint, 2 volumes.
House Executive, 3 volumes.
House Journal, 1 volume.
House Reports, 87 volumes.
Inter-State Commerce Commission, 2 volumes.
Monographs U. S. Geological Survey, 11 volumes.
Miscellaneous Agricultural, 1 volume.
Memorial Addresses, 3 volumes.
Miscellaneous U. S. Books contributed, 15 volumes.

Naval War Records, 4 volumes.
National Academy Science, 1 volume.
Records War Rebellion, 10 volumes.
Report Secretary Interior, miscellaneous, 2 volumes.
Specifications and Drawing Patents, 16 volumes.
Smithsonian, miscellaneous, 1 volume.
Senate Reports, 50 volumes.
Senate Journal, 1 volume.
Statutes United States, 1 volumes.
Tests of Metals, 3 volumes.
Treasury Department, 6 volumes.
War Department, miscellaneous, 7 volumes.
Interior Department, 1 volume.
Total, 318 volumes.

United States Pamphlets.

Bulletin, Farmers', 14 volumes.
Bulletin, Experiment Station, 13 volumes.
Bureal Animal Industry, 7 volumes.
Division Agrostology, 9 volumes.
Division Botany, 13 volumes.
Division Chemistry, 4 volumes.
Division Entomology, 9 volumes.
Division Forestry, 3 volumes.
Division Soils, 4 volumes.
Division Statistics, 3 volumes.
Division Vegetable Physiology and Palæontology, 5 volmes.
Division Publications, 3 volumes.
Division Biological Survey, 8 volumes.
Department of State, 1 volume.
Office Experiment Station, 12 volumes.
Office of Register of Copyrights, 5 volumes.
Section Foreign Markets (Bulletins), 6 volumes.
Superintendent of Documents, 1 volume.
U. S. Department Agriculture, miscellaneous, 3 volumes.
U. S. Pamphlets, miscellaneous, 16 volumes.
Weather Bureau, 4 volumes.
War Department, 42 volumes.
Interior Department, 7 volumes.
Navy Department, 10 volumes.
Treasury Department, 14 volumes.
Total, 216 volumes.

West Virginia Books, 6 volumes.
Miscellaneous Books, 3 volumes.
Publications Historical Societies, 75 volumes.

Miscellaneous Pamphlets, 21 volumes.
State Books and Reports, 215 volumes.
State Pamphlets, 142 volumes.
Foreign Publications, 2 volumes.
Atlas Folios, 12 volumes.
Magazines, 1.

Pictures.

Public hanging of John F. Morgan at Ripley, W. Va., Dec. 16th, 1897, presented by D. S. Guthrie.

Picture of Robert E. Lee and his war horse, presented by Major T. L. Brown.

Grand Canyon of Colorado, picture of Charleston, John E. Kenna, Weston Asylum and State Board of Health, by Dr. W. P. Ewing.

Photograph of the house of Henry Clark, Mercer County, West Virginia, around which was fought a severe engagement on May 1st, 1862, between some Confederate troops under Major Nicholas Fitzhugh, of Kanawha, and a portion of Federal forces commanded by General Jacob D. Cox, of Ohio, presented by Judge Johnson.

Number of pictures, 8.

Newspapers added to Exchange List.

The Desert Semi-Weekly News, Clay County Star—2.

Books Purchased.

Memoirs of General Sherman, Vols. I and II.

Personal Memoirs of P. H. Sheridan, Vols. I and II.

Prehistoric Implements, a reference book, by Warren K. Morehead.

Southern Historical Society Papers, 26 volumes, edited by R. A. Brock.

The Youth of the Old Dominion, Samuel Hopkins.

Encyclopaedia of Contemporary Biography of West Virginia.

The Cradle of the Republic: Jamestown and James River,, Lyon Gardiner Tyler.

The Mississippi Valley in the Civil War, Fiske.

The End of an Era; John Fiske.

The South, Constitution and Resulting Union, J. L. M. Curry.

The Anglo-Saxon Superiority: To What it is Due, Edmond Demolins.

Books Purchased, 37.

Contribution to Library Books.

The Alumni Bulletin of the University of Virginia, presented by Major T. L. Brown.

The Book of Mormons, presented by Joseph Hubbard.

Doctrines and Covenants, presented by Joseph Hubbard.

Pearls of Great Price, presented by Joseph Hubbard.

Articles of Faith, by Talmege, presented by Joseuh Hubbard.

Blue Book, Wisconsin, 1899.

History of Ninth Massechusetts Volunteers, 1861-1864, Daniel George Macnamara.

Report of the Eleventh Bar Association of Virginia, August, 1899.

Massachusetts Soldiers and Sailors of Revolutionary War, Vol. VI.

Atlas of Two Wars, containing large scale maps of Philippine Islands and South Africa, presented by Dr. W. P. Ewing.

The International Competition for Phoebe Hearst Architectural Plan for University of California.

A Catalogue of Authors, presented by Houghton, Mifflin & Co.

Twentieth Annual Report of State Board of Health of South Carolina, 1899, presented by Dr. W. P. Ewing.

History of the Allerton Family in U. S., 1585 to 1885, and Genealogy of the descendants of Isaac Allenton, presented by Samuel Waters Allerton.

Report of the Health Officers of District of Columbia, presented by Dr. W. P. Ewing.

The Commentaries of Julius Caesar, of his Wars in Gallia and the Civil Wars betwixt him and Pompey, presented by Samuel Strauss ttrough Gov. G. W. Atkinson.

Table of Post-Offices in United States, arranged by states and counties, 1830, presented by Mrs. J. H. Miller.

Massachusetts Soldiers and Sailors of Revolutionary War, Vol. VII.

Shaksper not Shakespeare, presented by the author, William H. Edwards.

Memorial of the Quisenberry Family in Germany, England and America, presented by A. C. Quesinberry.

Decennial Register of the Pennsylvania Society of Sons of the Revolution, 1898, presented by Ethan Allen Weaver.

Biennial Report of Department of Health of Chicago, 1897-1898, presented by Dr. W. P. Ewing.

Books presented, 22.

Pamphlets.

Second Annual Report of United Charities Society, 1898. Third Annual Report of United Charities Society, 1899. Fourth Annual Report of United Charities Society, 1900. The three presented by Rev. Horance Edwin Hayden.

Geological and Natural History Survey of Canada.

Comparative Vocabularies of Indian Tribes of British Columbia.

Notes on the Shuswap People of British Columbia.

Descriptive Notes on Certain Implements, Weapons, Etc., from Graham Island, Queen Charlotte Island. The three presented by George M. Dawson.

Pamphlets presented, 7.

Museum.

Piece of slate found in Winifrede Coal Mine, presented by R. D. Cotton.

Owl, Murganser, Curlew, Muffle-headed Greebe, Dunlin, Spurmifold or ground squirrel, Hawk's foot, rattlesnake, Wool made of Cinder in South Africa, Salt from South Africa, and shells, loaned by Mrs. C. T. Wood.

Pigeon, Piece of Petrified Snake, Pair of Tongues over 100 years old, Old-time Clock made in 1795, Fox, Texas Robins, loaned by Mrs. C. T. Wood.

Lot of Old Postal Cards, loaned by Edward Burdett.

Cannon Ball, from Battle of Gauley Bridge, loaned by Master Frank Butts.

Confederate Uniform Coat, loaned by Mrs. Levi Welch, one of Kanawha Riflemen.

Old Snuff-box, made of horn, 100 years old, loaned by Miss Annie Marie Bryans.

Two-headed Calf, loaned by Dr. J. E. Miller.

Piano made in Germany about 70 years ago; belonged to Mrs. Judge Brown when a girl, loaned by W. S. Lovell.

Duck, loaned by Mrs. C. T. Wood.

Loaned, 24.

Plaster Cast of Col. William Crawford, burned at the stake by Indians in 1788, presented by J. W. Gardlon.

Petrified Cat, presented by F. A. Hively.

Dinner Pail from Red Ash Mine disaster, found in the hand of one of the victims, presented by John Quinn.

Spanish Penny, 1870, presented by Wm. Gould.

Whiskey Still captpred in Nicholas County, in ——, presented by D. W. Cunningham and Mr. Potterfield.

Growth from one of the poles in a coal mine, presented by J. E. Toney, Boone County.

Two one-pound shells found on the Spanish gunboat

Cuba, after the fight in Manila Bay, May 1st, 1898, presented by Robert E. Cox to his friend Col. G. W. Patton, who presents it to the Society.

Watchmaker's nippers, made by William Mathews, in Virginia, in 1758, descended to Thomas Mathews who came to Kanawha in 1801, presented by Thomas A. Mathews to Society through Dr. Hale.

Instrument for cutting loaf sugar, presented by J. H. Rogers through Dr. J. P. Hale.

Richmond Enquire, March 25, 1861, with an account of Virginia State Convention and speech of G. W. Summers, presented by Mrs. Ryan.

Richmond Paper with an account of convention which made Virginia Constitutions, Rosters of 1829, 1850, 1861 and 1867, presented by A. E. Summers, M. D.

Bird's nest woven from bark of milk weed, presented by Fred a Kendall.

Spanish Commission captured by Captain Howard Atkinson from Lieutenant-General Gironimo of Agrinaldo's army, P. I., November 2, 1900, presented by Governor G. W. Atkinson.

Chinese flag. This flag was captured by Second Lieutenant W. H. Waldron, of the 9th Regiment, United States Infantry, in a Government Arsenal in the city of Pekin, and was brought to the United States by him personally, and was, through Governor Atkinson, presented to the West Virginia Historical and Antiquarian Society on December 20, 1900.

Presented, 15.

	1900	1901
Government Books	254	318
Government Pamphlets	162	216
West Virginia Books	3	6
Miscellaneous Books	3	3
Miscellaneous Pamphlets	44	75
Publications, Historical Societies	17	75
State Books and Reports	75	215
State Pamphlets	122	142
Foreign Publications	3	2
Atlas Folios	10	12
Pictures	1	8
Newspapers		2
Books Purchased	82	37
Contribution to Library Books, presented	24	22
Pamphlets Presented		7
Museum, Presented	39	15
Museum, Loaned	23	24

PEARL MARTIN, Librarian.