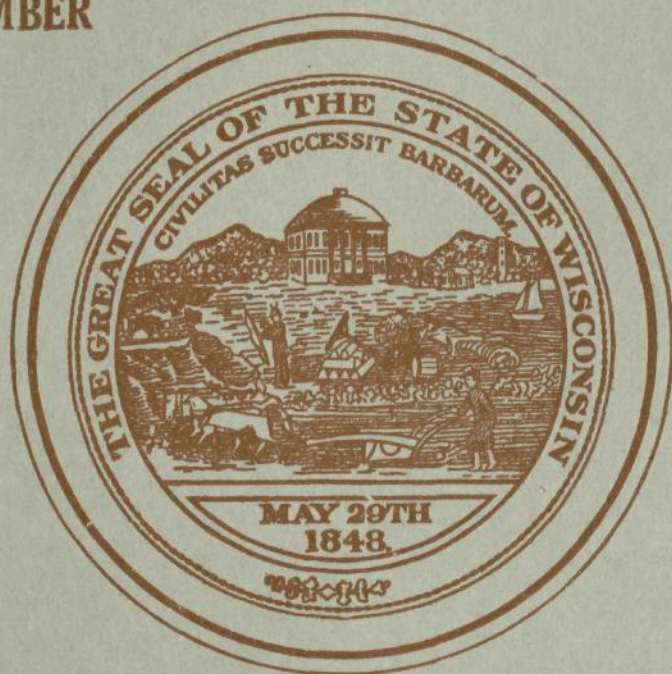


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THE STATE HISTORICAL SOCIETY OF WISCONSIN

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composed of seven cribs. A few contained six.¹¹ In this operation the serviceable grub again came into use. The grubs in the center of the crib were cut off, but those on the outer edges received two more binding planks an inch thick extending along the entire length of the string. Wedged to the grubs they gave the line of cribs adequate and flexible coupling which eliminated side-play but allowed it to bend as it slid over dams. A space of a few inches was left between the cribs to maintain flexibility.¹² The rapids piece was then ready to be fitted for navigation. Across the front and rear of the piece heavy 'head blocks' of timber were mounted and wedged in the usual way to the grubs. These blocks ranged from 5x7 to 6x12 inches. Into these blocks were inserted pins on which the huge steering oars were mounted. These oars swung directly to the front and rear, and were used only for steering. They were from 36 to 50 feet long; they apparently were lengthened with the experience of raftsmen. The blade was a carefully trimmed plank 12 to 18 feet long mounted on a heavy pole which was smoothly finished for the oarsman's grasp. It was nicely balanced on the oar-pin. The first crib was then tilted upward to minimize the piece's tendency to catch on rocks or plunge under water when passing down dam slides. This was accomplished by inserting a hemlock pole 20 feet long and 6 to 8 inches thick under each corner of the head block on the forward edge of the leading crib, passing it over a fulcrum, and then pressing it down under the weight of six

¹¹ Rogers. *Hand-Book of S. P.*, 18, indicates that five or six cribs made up the string. This increase to six or seven may be another of the small changes in rafting on the Wisconsin. Other later witnesses agree with Rogers. Lincoln, 'Experiences,' 181-182; Simon A. Sherman, 'Lumber Rafting on Wisconsin River,' *Wis. hist. soc. Proc.*, 1910, 172.

¹² Rogers; *Hand-Book of S. P.*, 13; Ladu, *Mosinee*, 27. Michael Cassidy of Stevens Point in an interview on August 20, 1986, added confirmation out of his experience as a pilot. He criticised the model of a rapids piece in the museum of the Wisconsin historical society for its rigid coupling of the cribs. Otherwise he approved it.

or eight men to be fastened to a grub on the side of the second crib. A 'spring pole' of this sort on each side tilted the first crib up firmly. The final step was to provide fittings for snubbing the raft to a halt with rope. The grubs provided the solid posts for the purpose. A hardwood block 4 or 5 inches in diameter was bored and slipped over two grubs, wedged down, and then cut down at the ends to hold the rope down and tightly against the grub.¹³ With this the piece was ready to be coupled, usually to two others similarly fitted, to make up a Wisconsin raft.¹⁴ The complete raft was then loaded with lath and shingles until it floated two inches out of water.¹⁵

The test of this formidably constructed raft came immediately upon starting its journey to the Mississippi market towns. The rapids, dams, and eddies of the upper Wisconsin could tear apart rafts that almost nothing else could shake. River craft approached these rafts at their peril. Log rafts were torn apart like paper in collisions with these tightly-bound masses of lumber.¹⁶ Even the rafts of other rivers did not trifle with the Wisconsin raft. On the Yellow river, a tributary which fed the Wisconsin below the rapids, rafts were lightly constructed. On the St. Croix and Chippewa the cribs were made 32 feet long with a corresponding loss of flexibility and tenacity.¹⁷ The less turbulent waters of these rivers permitted lighter construction.

¹³ Rogers; Lincoln, 'Experiences,' 181-182; *Hand-Book of S. P.*, 13-14; Ladu, *Mosinee*, 28.

¹⁴ Rogers. This depended on the available channels. Ladu (p. 29) says two pieces made the raft. It is true that only two could pass the Dells together; after that three abreast was the rule.

¹⁵ Lincoln, 'Experiences,' 181-182; *Pinery*, May 5, 1855; Rogers; Cassidy. In early years boats, sometimes 100 feet long, carried most of the shingles. *Hand-Book of S. P.*, 33; *Pinery*, May 4, 1860, April 21, 1864. Later rafts carried all. Rogers knew of one boat shipment of shingles.

¹⁶ Rogers; Cassidy put it that log rafts 'were afraid of' lumber rafts. Rogers still laughs over the wreck of a Mississippi log raft which blew against a fleet of his tied up to the bank. His fleet suffered no damage.

¹⁷ Cassidy; Boyd, 'Up and Down Chippewa,' 247-248; E. E. Russell, *A-Rafting on the Mississippi* (New York, 1928), 81.

The rafts were run during the flood seasons. A heavy flow of water was needed to carry rafts over both the rapids of the upper Wisconsin and the shifting sand bars of the lower river. The depth of the cribs and date of starting their fabrication was always a subject of anxious consideration. Sometimes 'rafting in' began on the ice in January and it continued as long as there was hope that an autumnal flood might carry a fleet to market. Immediate rafting was justified on the ground that the lumber would get wet anyway, although the practice added the hazard of a freezing river before the rafts were away, necessitating laborious pulling of cribs from the water. Rafts made on the ice were occasionally lost in catastrophic breakups.¹⁸ But no one wished to miss an early flood.

When the ice was out, the river was anxiously watched for signs that it was approaching a good stage for running. Rafting activities redoubled. On small rivers like the Plover, cribs were floated to the Wisconsin where they were coupled to form rapids pieces.¹⁹ 'The streets are full of cable, augers, axes, grubs, blankets, old stoves and camp kettles and moving towards the river.'²⁰ '. . . both shores as far as the eye can reach are occupied with rafts . . . and a continuous stream of them passing down. . . .'²¹ It was a joyful day when it could be reported that the freshet was at 'best running' and the river covered with saw logs, rafts, red shirts and floodwood: '. . . all is rafts, boards, and shingles; the banks are lined for miles at every eddy. . . .' The constant creaking of the oars was music to lumber owners.²² Some-

¹⁸ *Pinery*, March 19, 1858, January 20, March 18, April 1, 1859, March 1, 1861, March 22, 1866, *et al.*; *S. P. Jour.*, March 1, 1876; *Lumberman*, March 30, 1864; *Cent. Wis.*, October 10, 1871; Anderson.

¹⁹ Cassidy; Rogers.

²⁰ *Lumberman*, March 30, 1864.

²¹ *Pinery*, April 29, 1853.

²² *Ibid.*, May 31, 1855, April 14, 1856.

times fleets would get away before the end of March, but late April and (less certainly) June were chiefly counted on to provide the water. A good rise in the fall to take out newly-sawed lumber made the season perfect.²³

The greatest difficulty was passing rapids and dams. It was the business of the hero of these occasions, the pilot, to know the proper stage of water and the correct approach to each obstacle. When the fleet of twenty to forty rapids pieces under the direction of a pilot²⁴ neared rough water, it was tied to the bank. The pilot with the help of two to eight hands took a rapids piece through the rapids or over the dam. If all went well, others of the crew followed. They then tied up the piece in quiet waters below and 'gigged back' on foot at a trot for another. When all of the pieces were over, the fleet was coupled into the Wisconsin raft of three pieces to proceed to the next troubled water.²⁵

Dams were a serious danger. They were provided with slides usually about 50 feet wide to help the rafts pass. These slides were cut deeply into the faces of those dams which were built to aid rafting—as much as 6 feet in a dam 12 feet high—to permit a strong flow of water. In power dams the slide was built from the gunwale. Peeled logs of great length were chained to the dam at intervals of 4 to 6 feet and secured by rock-filled cribs. These were called 'fingers.' The entrance to the slide was marked by heavy piers which continued along the sides and furnished gunwales to it. The expectation of the pilot was to find water running strongly enough on the upper part of the slide to carry the raft over but falling quickly between the logs, which inclined from

²³ *Ibid.*, June 17, July 27, 1853, March 26, 1858.

²⁴ *Hand-Book of S. P.*, 14; *S. P. Jour.*, April 30, 1881, April 29, 1882, April 28, 1883; Lincoln, 'Experiences,' 181-182.

²⁵ *Hand-Book of S. P.*, 10, 14; Rogers; Cassidy.

fifteen to thirty degrees, to leave bare timber which would check the rapidly-begun descent of the raft.²⁶

The hazards of passing over these slides are plainly realized in retrospect. The least of them was the possibility of sticking on the slide when the flow was too slight to give the piece a good start.²⁷ But, when two feet of water was roaring over the dam, the slightest miscalculation could fatally misdirect the piece in spite of frantic efforts of the oarsmen to head it straight between the piers. Michael Cassidy, the former pilot, related that he once missed the Shaur-ette dam a mile above Stevens Point. The pilot of this fleet, Jack Finch, one of the best-remembered of river pilots, insisted on trying to run the dam in spite of a strong wind and a heavy flow over the dam. They saddlebagged the pier at the opening of the slide but jumped to it and were rescued by boat—a daring feat which was routine to raftsmen. The fate of the raft was, of course, pretty complete destruction. Many were smashed in this way, some were actually carried over the dam itself, and in a few instances they were completely somersaulted. Striking the gunwale at the side of the slide was extremely damaging also. A good deal of the lumber was recovered although the lower Wisconsin was strewn with the remains of rafts for years after rafting ceased.²⁸ On occasion a badly built or a damaged slide would destroy a half of the rafts passing over it. Whole fleets sometimes had to be re-rafterd.²⁹

Even normal passage over slides had its thrills. Many watched, but few wanted to ride the rafts. Cassidy took a show company over Grand Rapids once, and the *Pinery*

²⁶ Rogers; Cassidy; *Hand-Book of S. P.*, 11, 81; Lincoln, 'Experiences,' 188-184; *Pinery*, February 29, 1886; *S. P. Jour.*, March 1, 1876.

²⁷ *Pinery*, September 21, 1861.

²⁸ Cassidy; Lincoln, 'Experiences,' 188-184; *Lumberman*, April 20, 1864; *Pinery*, September 21, 1861; R. G. Thwaites, *Down Historic Waterways*. . . (Chicago, 1907), 244.

²⁹ *Pinery*, April 28, May 5, 12, 1865.

once boasted that the young ladies of Stevens Point rode over Shaurette dam for sport. But running the slides was generally regarded as a spectator sport.³⁰ Of course, everyone gathered to hear the first creaking of the oars and watch the first raft over. They often had their thrill:

The moment the bow entered the slide it was literally jerked down, and disappeared beneath the wild waters. His [Jack Hawn, pilot] men were lifted off their feet, thrown back upon the raft. Hawn for a moment was overboard, but was caught and pulled aboard—all came out right, the men thoroughly soaked, yet saved the raft. Later in the same day Hawn and Jas. Mowe saved by their daring and skillful handling of a skiff the life of a poor fellow clinging to one of the new piers.³¹

The pieces plunged under water on leaving the slide. When the raft nosed into the slide, the oars were swung up and made fast with rope halters and the crew threw themselves flat and grabbed for the 'sucker line'—a rope strung down the center of the piece. Instances were reported of rafts missing the slide but plunging safely over the dam—further proof of the strength of the rapids piece.³²

A series of rapids kept raftsmen from getting too soft between the dams. Of these the most noted were Big Bull Falls at Wausau, Little Bull at Mosinee, Conant's at Stevens Point, and Grand Rapids at the city now called 'Wisconsin Rapids.' There are conflicting claims as to which was the most dangerous. Grand Rapids was a mile long, and the eight-man raft crew shot through the roaring water in about eight minutes.³³ Cassidy said simply that it was 'very bad.' Wausau people claimed that Big Bull Falls was the most destructive to lumber. Even the best pilots landed many pieces—not gently, in a cataract running an estimated

³⁰ Cassidy; *Cent. Wis.*, May 28, 1872, April 30, 1873; *Pinery*, April 21, 1864, April 25, 1868.

³¹ *Pinery*, April 14, 1865.

³² Rogers; *Pinery*, May 31, 1855; *Hand-Book of S. P.*, 14.

³³ *Hand-Book of S. P.*, 32.

ten to twenty miles per hour—on a rock near the foot of the channel appropriately called 'Lumberyard Rock.'³⁴ But the palm probably should go to Little Bull Falls. There the river plunged over a 16-foot ledge and rushed through a narrow gorge a quarter of a mile long. A few hundred feet above the gorge lay a huge exposed rock, and in the channel below a submerged rock around which swirled tremendous currents. At the end was a bottomless eddy. This maelstrom caught huge timbers and held them upright for days and uncoupled and ripped apart cribs of lumber in its grip. The loss of life in running this fearful torrent was appalling.³⁵ It was news in some seasons when a week of running at Little Bull brought no accidents.³⁶

Many attempts were made to lessen the hazards at Little Bull Falls. A dam was built to cover the eddy, but itself proved dangerous.³⁷ Life preservers were used by some. 'Snubbing over' with rope lines to help clear the dangerous spots was attempted.³⁸ Most pilots, however, accepted the safest procedure, which was to hire an expert 'standing' pilot who did nothing but run Little Bull. There were 'standing' pilots—they did not 'run the river'—at Grand Rapids also. The most famous of these at Little Bull was William Cuer. He rode a horse back from his trips through the gorge and used two crews. His fee was \$1.00 per trip, and he could make about thirty trips between dawn and dark.³⁹ Some pilots, Cassidy among them, did their own running through Little Bull, but nearly all ran only when Cuer ruled that the water was neither too high nor too low.⁴⁰

³⁴ *Ibid.*, 10; *Cent. Wis.*, April 26, 1870; *Pinery*, May 20, 1859.

³⁵ Rogers; Ladu, *Mosinee*, 12-13; *Pinery*, May 14, 1857; *Hand-Book of S. P.*, 29.

³⁶ *Cent. Wis.*, May 17, 1870, April 23, 1872, May 6, 1874.

³⁷ Ladu, *Mosinee*, 94-97.

³⁸ *Ibid.*, 100; *S. P. Jour.*, April 25, 1874.

³⁹ Ladu, *Mosinee*, 81-85.

⁴⁰ *Ibid.*, 81; Rogers; Cassidy.

In spite of all precautions these rapids took their toll. An eyewitness at Little Bull Falls—the Mosinee people crowded the bridge over the gorge when the running was on—described the possibilities: ‘I have seen a raft with ten men on . . . every man of them all out of sight under the water at the same time, not a particle of the raft or men could be seen for a few seconds, but several hats were seen floating on the billows around.’⁴¹ When a raft saddlebagged the rock in the channel above the falls, men were often left stranded on it for days before a raft drifted close enough to be boarded or someone chanced the rapids in a boat. The effect of the eddies in these turbulent waters was to uncouple the leading and sometimes the stern cribs, leaving the piece without oars.⁴² Pilot Rogers relates an anecdote about a young Polish immigrant who thought to pick up some money running these falls. He made the first trip and left without even taking his breakfast. It is entirely understandable.

Once a fleet had passed the dams and rapids above Point Bas, the great dangers and excitement of the trip were ended. The jams of rafts at the falls, where 60 or 100 often passed in a day,⁴³ gradually disappeared on the quiet waters of the lower river, and a monotonous routine of steering was only occasionally dispelled by new hazards. At Point Bas three rapids pieces were coupled to make the Wisconsin raft. Two men managed the raft, employing the oars of the center pieces only. The pilot directed the first raft in the procession of seven to fourteen under his leadership. The bowsman of each raft carefully followed the

⁴¹ Ladu, *Mosinee*, 84-85.

⁴² *Ibid.*, 89-93; *Cent. Wis.*, April 30, 1873.

⁴³ *Pinery*, May 31, 1855, May 12, 1856, May 5, 1864; *Lumberman*, July 14, 1865.

pilot's course. Only the tailsman could idly ply his oar under the direction of others.⁴⁴

Plying the oar, however, was never too easy, just as piloting the slow lower river was never a light responsibility. The huge oars had to be swung above the head and surged around with powerful steps. The first experience was torture. The tenderfoot was likely to be unable to raise his hands to feed himself by the time Prairie du Chien was reached.⁴⁵ The pilot having gotten through the 'Hog Holes, Bean Pots . . . Devil's Elbows . . . Spinning Wheels . . . Grand Chutes . . . Lockers . . .'⁴⁶ of the upper river, might find himself discredited by the loss of his fleet in a slough which he mistook for the channel. A fleet stranded in falling water was hardly worth the expense of 'breaking up and hauling out.'⁴⁷ Running on a sand bar was not uncommon, for the channel shifted constantly. The crews tied up, leaped into the water, and pried the raft off the bar with handspikes. The rafts were snubbed to a halt at dark and resumed their floating with the current at dawn.⁴⁸ The river bank furnished trees for the snubbing and acceptable camping ground, although the river towns set out 'good snubbing posts' to attract the raftsmen's occasional patronage.⁴⁹

If the freshet subsided before the rafts got to the Mississippi, they might be tied up for weeks. This appears to have occurred seldom.⁵⁰ The hazards remaining in the Wisconsin

⁴⁴ Rogers; Cassidy; Lincoln, 'Experiences,' 186.

⁴⁵ Lincoln, 'Experiences,' 182; Rogers; Boyd, 'Up and Down Chippewa,' 250-251; Ingram, *Letters*, 13-14.

⁴⁶ *Pinery*, June 10, 1858.

⁴⁷ *Hand-Book of S. P.*, 14.

⁴⁸ Sherman, 'Lumber Rafting,' 178; Rogers. It has been stated by Boyd that the raft proceeded faster than the current by virtue of its own weight. This seems doubtful in view of the fact that the raft, of course, weighed less than the water; there is certainly no possible explanation by theoretical physics of an unpowered raft slipping through the water.

⁴⁹ *Pinery*, May 1, 1873.

⁵⁰ *Ibid.*, May 31, 1855; *Lumberman*, May 4, June 1, 1864.

were the Dells at Kilbourn City and the railroad bridges below that point. The Dells were not comparable to Little Bull Falls or Grand Rapids in danger. The current was swift; a locomotive engineer rode a raft through and estimated its speed at ten miles per hour except in the narrowest portion, where he judged it to be fifteen.⁵¹ Leroy Gates advertised his services as a 'standing' pilot. He declared that only an experienced pilot should attempt the run at the higher stages of water. His fee was \$2.00, or \$10 if he warranted the raft.⁵² Occasionally rafts were smashed in the Dells. A direct hit on a rock might cause a raft to double up and sink. As time went on, the terrors fell away. Cassidy once struck a rock, but only the stern of the raft went down; it arose and they went on. Eddies tended to push the raft away from the rocks. It was the practice in later years merely to uncouple and tie up one rapids piece since three together were too wide, run the other two together with only the ordinary crew of two men who then 'gigged back' for the uncoupled piece. Such casualness was not practiced in really dangerous spots.⁵³

There was a flare-up over a dam at the Dells in 1859 and 1860. Much lumber was smashed and a number of lives lost at the dam, and the raftsmen and sawyers were totally unsympathetic toward these down-river millers. They threatened to remove it and actually started to do so. They persuaded the legislature to repeal the dam charter, but the owners cut the slide 3 feet into the dam and shortened it, and then lowered it some more when the threats continued. It made useless the upper part of the dam so they cut that off, too. This left a fall of only 4 feet and ended the danger

⁵¹ *Pinery*, May 28, 1857, quoting *Kilbourn City Mirror*.

⁵² *Ibid.*, March 19, 1857.

⁵³ *Ibid.*, May 31, 1855; Sherman, 'Lumber Rafting,' 172; Rogers; Cassidy.

and the raftsmen's threats.⁵⁴ Several railroad bridges farther down the river proved to be impassable barriers but when the pilots went to work to clear the river for navigation, the railroad companies gracefully made the necessary adjustments.⁵⁵ Little trouble of this sort appeared in later years. The pilots' quickness in action backed by the brawn of their crews apparently intimidated those tempted to interfere with navigation.

When the Mississippi was reached, the entire fleet was coupled together, bunk and cook shacks were erected on the great rafts, and the men settled down to the day-and-night journey to St. Louis or other river port where the raft might be sold. They tied up only for a heavy side wind or when a bridge might be passed at night. The ponderous raft was not easy to stop once it had headway. Trees used for snubbing posts were sometimes torn up by the roots. Pilots saw a thousand feet of rope ineffectually groan its way around the cleats, on which pails of water were poured to prevent fire. Old rope broke and new inch-and-a-half rope 'rendered' down to less than an inch. To be driven into an island might mean no more than the acquisition of a few cubic yards of dirt but it might also occasion the destruction of much lumber. Side winds were scrupulously avoided.⁵⁶ Except for this danger the Mississippi had few hazards. Floods could, of course, cause loss of lumber, and the rafts sometimes stuck on the rapids at Keokuk in low water. Railroad bridges were a nuisance and an annoyance but appear to have caught the

⁵⁴ *Pinery*, March 5, 1858, April 4, May 6, 1859, January 13, March 2, 23, May 5, 1860 (quoting *Milwaukee Sentinel*). The complaints were revived for a brief time in 1864.

⁵⁵ *Ibid.*, May 7, 14, 28, June 25, July 23, 1857.

⁵⁶ Rogers; Russell, *A-Rafting*, 88-93; Sherman, 'Lumber Rafting,' 176; Ingram, *Letters*, 12-13; Lincoln, 'Experiences,' 186-187. The latter says that three Wisconsin rafts abreast and three deep was the rule; each forward and aft crib mounted oars, giving eighteen in all. Size depended upon the number of pieces assembled to go under one pilot, and this varied.

Wisconsin raftsmen seldom.⁵⁷ At St. Louis, where most of the rafts ended their journey,⁵⁸ there were in later years adequate facilities for bringing in the rafts. A snubbing works with windlasses and two-inch cable, notified by messenger sent on from Alton, halted and moored the rafts, which sometimes covered the river to mid-channel. If a raft missed the snubbers, or broke loose, a passing steamboat could pick up a towing job on its skipper's own terms.⁵⁹ In earlier years the absence of mooring facilities and police protection at St. Louis gave the hardened raftsmen every opportunity to demonstrate their alertness and ingenuity.⁶⁰

The trip to St. Louis took from three weeks to a whole summer. Or a summer of very low water might not suffice to get a fleet out of the Wisconsin. A good trip from Wausau to St. Louis took about twenty-four days; from Wausau to the Mississippi river twelve to twenty days. A typical good run took a fleet in three or four days to Point Bas, five from there to the mouth of the Wisconsin, and six to eight days to St. Louis.⁶¹ The return trip in the pre-railroad days might take as long. At first, walking from Galena was common practice. River boats carried many up the Mississippi and Wisconsin to Portage, from whence they walked or rode the stage. The Milwaukee to La Crosse railroad later brought many as far as New Lisbon. Still later the trains brought the raftsmen to Berlin or Oshkosh where boat and stage lines took them to Stevens Point, Wausau,

⁵⁷ *Pinery*, July 30, 1858; Ingram, *Letters*, 27-28; Russell, *A-Rafting*, 100-101.

⁵⁸ L. A. Anderson, who was with the John Week Company for many years, said that rafts went as far as Helena, Arkansas, in search of markets if necessary.

⁵⁹ Rogers; Lincoln, 'Experiences,' 188; *S. P. Jour.*, June 27, July 4, 1874.

⁶⁰ *Pinery*, July 24, 1853; Ingram, *Letters*, 16-17.

⁶¹ Rogers; Cassidy; *Hand-Book of S. P.*, 11; *Pinery*, October 30, 1856; *Cent. Wis.*, February 14, 1871.

and the other mill towns.⁶² The railroad was eventually to solve the whole transportation problem even to eliminating this passenger trade from St. Louis. Altogether the round trip was expected to take from four to six weeks, and a week to sober up. It was a good year when the first rafts left the pinery the middle of April and the raftsmen were returning from their second trips by the middle of June.⁶³

Of the men who performed this arduous and perilous work the most interesting were the pilots. A pilot's responsibilities have already been made clear. He paid for mistakes very dearly, even with his own life. Pilots as a class were distinguished by their vigor, intelligence, and integrity. It is not surprising to discover that they were frequently entrusted with the sale of the fleet and the handling of the proceeds for their employers.⁶⁴ In the early years some of them became contractors, delivering lumber at a stipulated fee per thousand feet. Apparently the risks were too great for any individual, for the practice is not known by later raftsmen.⁶⁵ The earnings of pilots were commensurate with their responsibilities. In the 1850's they were paid \$5.00 to \$15 a day; in good seasons their earnings might total \$1,000. During the last few years of rafting they were paid \$250 per trip. Some might get as much as \$400. They made five trips a year at best. Like other raftsmen they spent freely, although a few were able to save and go into business. If they had the benefit of education, they stood in the path of success.⁶⁶

⁶² Rogers; H. E. Cole, *Stagecoach and Tavern Tales of the Old Northwest* (Cleveland, 1890), 132, 141, 168, 168, 185, 335, 352; *Pinery*, April 27, 1854, May 5, August 7, 1856, February 19, 1858, May 8, 1878.

⁶³ Rogers; Cassidy; *Pinery*, June 27, 1854, May 15, 1878; *Lumberman*, August 11, 1865; *Cent. Wis.*, April 11, May 9, June 18, 1871.

⁶⁴ Cassidy once brought \$15,000 back from Hannibal for Callahan, a mill owner. Rogers; *Hand-Book of S. P.*, 10-11.

⁶⁵ *Ibid.*, 10; Lincoln, 'Experiences,' 182; *Pinery*, May 8, 1855; Russell, *A-Rafting*, 109-113.

⁶⁶ Rogers; Cassidy; *Pinery*, May 20, 1858, July 23, 1857; *S. P. Jour.*, August 26, 1876; *Hand-Book of S. P.*, 10.

A part of the pilot's reward was a very high social recognition. A good pilot was an acceptable dinner guest as well as a business partner. It seems doubtful whether the Wisconsin pilot ever consistently relied on pugilistic ability to maintain discipline. His prestige was sufficient. It is doubtful also whether any great part of the laborers under him were the river-rat type. Courage and discipline were inevitable among the hazards of the Wisconsin.⁶⁷

The conditions of work in rafting were, of course, a guarantee against priggish virtue among raftsmen. Little needs to be added to demonstrate that the life was a rough one. Most of the recruits to the ranks were satisfied by their maiden trip.⁶⁸ Running the rapids and 'gigging back' involved as much as fifty to seventy miles of travel a day. On the Wisconsin eighteen hours was the day's work. The men slept on the bank or in tiny bunkhouses erected on the cribs and furnished with such comforts as hay and a double blanket. If one had not drunk up all his previous wages, he bought mosquito netting. Meals were brought by the skiffman from the cook's shanty except the supper at which the men gathered. The river furnished plenty of water for drinking.⁶⁹

When interviewed, Rogers and Cassidy were both sturdily reluctant to admit that this was a hard life. But they agreed that only the strongest were capable of enduring it. Sickness was frequent, and friendship and the ease with which money could be borrowed were the chief supports of the unfortunate. Very expensive insurance was offered to raftsmen, and in 1881 a plan of hospitalization for \$3.00 a year was talked of. Such a hospital for lumber workers

⁶⁷ Rogers; Cassidy. Boyd, 'Up and Down Chippewa,' 248-251, says that this was true on the Chippewa also.

⁶⁸ *Pinery*, May 20, 1853.

⁶⁹ Rogers; Cassidy; *Hand-Book of S. P.*, 14-15.

was established in Stevens Point in 1882.⁷⁰ This experiment in a tidy sort of security appears to have been successful, but the pride, humanity, and recklessness of raftsmen are the strongest impressions left by their record.

There was need for both security schemes and the superman virtues. Crippling and fatal accidents were very frequent. It is impossible to construct statistics at this time, but a few figures suggest the appalling toll. Rogers declares that at Clint's dam at Grand Rapids twenty-seven men were drowned in a single season. The *Central Wisconsin* of Wausau reported that forty men had drowned during the season of 1872. The following year the same paper noted that forty men had drowned at Clint's dam since its erection. Still more such reports in the same issue caused the editor to cry, 'Is there no alternative?'⁷¹

Drowning was the most frequent type of accident. Not only were men thrown into the water by rafts smashing, but oars catching on obstacles would swing about suddenly and hurl the oarsman into the water. Frequent drownings resulted from attempts to jump or swim from a raft to another raft or to the shore. Legs were crushed between rafts, or between rafts and piers. The snubbing ropes caught and mangled many legs, sometimes pulling the injured men under water as well.⁷²

Until the close of the Civil war, wages reflected the highly unstable conditions of the Wisconsin lumber trade and the absence of a surplus of labor in this frontier region. In the 1850's the mill owners paid their raftsmen from \$1.00 to \$2.00 per day and appear to have tried by pooling their

⁷⁰ *Pinery*, April 19, 1867; *S. P. Jour.*, December 10, 1881, October 14, 21, November 11, 25, 1882, April 14, 1883, April 12, 1884.

⁷¹ Rogers; *Cent. Wis.*, August 13, 1872, April 30, 1873.

⁷² The files of the newspapers cited overflow with this sort of information.

efforts to standardize the rates.⁷³ But they could not standardize the river. Low water in 1855 tied up the fleets from Jenny Bull Falls at Merrill to Point Bas, and the capital of the pinery lay in them. The wage rates abruptly doubled when the water rose again and through the following year stayed at from \$2.50 to \$3.00 per day.⁷⁴ The war shortage of labor and the depreciation of currency also drove wages up. In 1863 a low water spell joined the war factors to send the rate up to from \$2.00 to \$3.00 for common hands and from \$4.00 to \$5.00 for the experienced. The advertised rate in 1864 was from \$1.50 to \$3.00, but the log drivers were getting \$4.00 or \$5.00.⁷⁵

After 1864 the raftsmen were forced to assume the risk of low water and a long tie-up on the river. The owners, clearly acting in common, stopped paying by the day and substituted a lump sum payment for a completed trip. The *Wisconsin Lumberman* announced in 1865: 'We are authorized to state the wages of rivermen from the Upper Wisconsin River Pineries, this spring, as follows: Bowsmen, \$200 to \$250; tailsmen, \$100 to \$150. As the time occupied in running averages from about 30 to 50 days . . . no better wages can be realized. . . .'⁷⁶ Who 'authorized' the *Lumberman* to make the statement may easily be guessed.⁷⁷ These wage rates dropped after the war. C. C. Lincoln remem-

⁷³ Cf. advertisements in *Pinery*, March 18 to May 6, 1853, March 9 to October 24, 1854, March 29, 1855, March 5, 1857, March 12, 1858, and March 11, 1859. From 1857 through 1859 company after company added their names to the announcement asking for 2,000 men. They included the biggest operators of the times: Joseph Dessert, McIndoe and Taylor, Farrington and Blizard, B. F. Cooper, Thomas Hinton, Alexander Stewart, W. C. Wells, Crosby and Rennie, and the Wisconsin Lumbering Company.

⁷⁴ *Ibid.*, July 12, 1855, October 30, 1856.

⁷⁵ *Ibid.*, May 25, 1861, August 19, 1863, March 4, 1864; *Lumberman*, April 23, 1864.

⁷⁶ *Lumberman*, March 17, 1865.

⁷⁷ Advertisement in *ibid.*, March 2, 1864, for 5,000 men, signed by forty-two firm names.