



## EPOCH OF AN EMPIRE

*The woods harvest pioneer  
methods and men are gone —*

### *“Driving” Down the River*

CURT WILLIAMS

The days of the colorful river drive have almost gone. Gone, too, are the red-mackinawed, calk-shoed “river pigs” with their stag pants, their gracefully balanced carriage, and their black Stetson hats worn slightly askew.

No longer do sawmill operators scan the spring skies in hope of rain, nor lie awake nights in fear that a hung drive would bring the calamity of no raw wood material for another year.

The locomotive whistle sounds along shores which used to echo to the click clack of the peavies and the long-drawn cry of “Jam below!” Railroad and truck logging proved to be more economical and the picturesque has always receded before the cold facts and figures.

When our forefathers erected their sawmills, they took no thought of mechanical transportation for their raw material. They built their mills on a river or lake at some town convenient

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to a railroad, located a piece of timber which could be cheaply logged into a stream or one of its tributaries, and were ready to start their saws when the spring drive came down.

If there were several of them on one river, they formed a boom company, fenced off the river with piling and piers, and sorted the logs belonging to each company. These could be identified in two ways; the stamp and the bark mark. The stamp was put on with a hammer having raised surfaces in a design favored by the owner. As the logs were put on the skidway, they were pounded on each end several times. The hammer made an indentation in the wood which could be removed only by sawing off the end.

The bark mark was put on with an axe by cutting the design through the bark deep enough to go into the wood. This mark was usually chosen from letters which could be formed of straight lines, such as X L or V I V.

The logs once safely in the boom were sorted through a long lane with a board walk on each side. This walking boom was built higher at intervals of about sixteen feet to allow the logs to pass under it and into the pocket boom reserved for each individual owner.

The logs were turned as they came into the sorting gap so that they floated with their ends to the drivers who lined



the walk, each one with a gaffed pike pole in his hand.

As the logs floated along they were identified by the stamp or bark mark and pulled or shoved out of the gaps. If there were more mills down river at another town the first gap was reserved for the down-river timber.

The drivers never called the marks by their right names, but by some nick-name familiar to them. As the logs started, the first driver would call, "Down river on the Snapping Turtle!" "Down River on the Haywire!" "First gap for the Pork Chop!" "Out on the Snuff Jug!"

If the sorting works were located at the lower end of a large river the water was sometimes so slow that the logs would not float away from the gaps in an up-river wind. One spring we were working on such a boom in a driving, up-river rain trying vainly to get a few logs through the gaps. The boom company directors were having a meeting in the boom office and Black Jack Kelly, the foreman, thought it would redound to his credit to keep the men at it. He was called into the office to settle a knotty question while the weather got worse and worse.

Finally a volatile and witty French Canadian, Joe Peacore, stuck his pike pole in the walk and started for shore. "Joe's going to pull the pin," grumbled someone. "We all ought to do the same and make a monkey out of Kelly. Trying to show off, the —." Joe paused outside the bunkhouse and picked up the grindstone dripping with the cold spring rain. Walking to the office, he kicked open the door and carefully put the grindstone, frame and all, in the midst of the astonished directors.

"Take that thing out of here," roared Kelly. "Have you gone nuts?"

"It's too rough a day for the grindstone to be outside, Jack," said Peacore, calmly starting for the door.

A driver's tools were a pike pole always pronounced "pick" pole, and a peavy. A pike pole is twelve or sixteen feet long with a hickory handle and a square spike of steel in the end which slopes down to a point and which is twisted in order to grip the wood better when it is sunk in a log. Some were made with a gaff like a boat hook but were not as popular for the usual run of river work as the straight spike variety. A peavy is four or five and one-half feet long with a hickory or maple handle and has a spiked metal shank around the bottom on which the hook is hinged. The hook could be used to roll the logs and the pike on the end to shove them along when they were afloat.

A driver's clothing consisted of a wool shirt, a mackinaw jacket, a felt hat of good quality, a pair of woolen pants, and heavy woolen underwear. Calked boots completed the costume and were the article of attire on which he lavished the most care and attention. Calks were sharp steel points with a screw in one end which were driven into the boot with a calk set. In a good pair of boots the leather grips the screw firmly and the calk would stay solidly through a long drive. A river driver without a pair of calk boots was like a saddleless cow-puncher, and even the most drunken driver usually took the precaution of buying a pair before embarking on a spring spree. He remembered the sad day when sitting in the sunshine



along the sidewalk in front of a saloon, a river boss had shook his head and passed on after receiving a negative to the inquiry, "Are you shod?"

On a small river or brook the crew was strung out along the stream to keep the logs moving. On the larger streams the men were divided into the rear crew and the jam crew.

The rear crew followed along the banks and rolled in the logs left stranded by the higher water, or standing on rafts and in bateau, pulled into the current the floating logs which clung to the shore; because of eddies, bushes, snags, or dead water.

The jam crew was sent ahead to watch the bridges and rapids where a jam was likely to form. If they were unable to keep the logs running clear, a bateau load of men went down to help them. Sometimes conditions made it impossible to break the jam and when the rear arrived at the tail end the whole crew joined forces against it.

It is generally believed that all a driver has to do in order to break a jam is to find the key log, give it a turn with his peavy, and make for shore amid the plaudits of his companions. Nothing could be farther from the truth. If a jam would haul out by exerting pressure on one log it was about ready to go anyway and without human assistance; it would mean plenty of water and few jams form on high water.

A jam on a rapids was usually formed because the water was too low for the logs to float over an obstruction without lodging. The logs began to pile up. Finally the river was completely blocked and the front of the

jam began to rise, pushed bodily out of water by the hundreds of thousands of pounds of pressure exerted from behind. It sloped from there to its end where the logs floated flat on the river. When the crew arrived, the boss wasted no time looking for a key log, but studied the pattern in which the logs were piled in. "All right, boys," he'd say, "We'll take a slug out of her here." The front of any large log jam was like a tangled mass of giant jack straws. The men would roll and push and drag the logs out until a V was formed with its apex upstream. This eventually gave the jam room to move. Sometimes the logs were so tangled that dynamite had to be used to loosen them.

Dynamite is not the dangerous substance of popular concept. Handled with ordinary care it will stand almost any kind of a jar and will burn up without exploding. The fulminate of mercury caps are a thousand times more dangerous than the powder itself and must be handled carefully. The universal practice on the river was to clinch the cap on the fuse with the teeth and almost all drivers clinched them that way. Dynamite was always tied on a long pole, the fuse placed in the cap, and soaped with ordinary laundry soap to prevent the water from reaching the mercury. The fuse was then lighted and the pole placed in a hole between the logs so that the charge was well covered with water. Otherwise its lifting power would be wasted in the air.

Pulling a dry jam was terribly hard work. All day long the drivers tugged and pushed and lifted with all their strength to get the logs afloat and with-



out the advantage of level footing. After three or four days on a hard jam even the best of crews slowed up considerably. The one thing which inspired them was the hope that this time they'd "get a haul out of her."

When it did "haul" everyone made for shore and once safely there most of them yelled encouragement while the logs pitched and tossed and pounded each other as they squeezed by. The roar of a jam "hauling out" was indeed a sweet sound to anyone who had been working on it for many weary hours and sometimes days.

There was something gripping and inspiring in the breaking of a high piled jam. Slowly at first but surely and majestically it began to move and then accelerated to the full tempo of the current. Glacier like, it brushed aside the obstacles in its path. If it had spread high and wide enough, trees which had stood beside the stream for a century went over with a ripping, tearing crash to the deeper accompaniment of the grumbling, grinding roar of the moving jam. Logs upended and fell back on their fellows and here and there one shot straight up, propelled by some freak pressure from below. The jam disintegrated and fell apart as it reached deeper water until the river was covered with an even moving pattern of brown logs spread out upon its surface.

The jam crew rode down stream to their work praying that the logs would run free for a while. The click clack of the rear crew's peavies as they rolled the high, stranded logs, which a jam always leaves, into the current showed they were back at their usual

job again. The big excitement was over until the river plugged again.

Wing jams were jams which did not go way across the river but were piled up on one side or the other. A driver who had a rapids to watch made good use of wing jams in order to wall up the current so that the logs coming through were carried swiftly down. He welcomed a wing jam which covered a bad rock or ledge and kept the current in its proper place and the logs going around it.

A center jam was one hung on an obstruction in the middle of the river with open water on each side. To break one of these, the drivers had to make a getaway in a boat, which necessitated quick work on fast water. Sometimes a driver could ride it out if there was clear water below.

Bill Hagan used to tell of a Swede, who as he expressed it, "was so oxy he couldn't ride a street car." He was strong and willing so Bill kept him on to help roll the rear logs off the shore. One day Swede chose to ride a big crotched log which could not roll and which is the only kind a greenhorn could stay on. What he didn't know was that around a bend or two was Crooked Falls, an almost straight drop with a turn at the bottom. His peavy stuck in the log, Ole rode down the river with a contented smile on his round Scandinavian face. As he reached the middle of the stream and the current began to push his log with added speed, someone suddenly thought of the falls a couple of bends below. "Bank, Ole, you're going over the Falls!" one yelled. "Pull that peavy out and paddle, you roundhead!" bel-lowed another, but Ole swept around



the first bend out of sight, waving triumphantly. He thought he was being kidded again.

"He'll never go over that drop and come back to tell the story," said someone, and they all started running through the woods to the falls. Almost there they met Ole, wet and hatless, but still grinning. "Soon of a goon of hill down har," he said.

The wanigan where the crew lived, was a long scow with a tar paper shanty almost the full length of it. It had a stove in one corner and upper and lower bunks built on both sides of a narrow alley. Each wanigan had a tender and sometimes two, whose duty it was to steer it down the river by means of sweep oars. In the evening a camping place was selected for the night as close to the rear crew as possible and a large campfire built with racks by it to hang wet socks on.

The cook had a wanigan to himself with a long narrow table running down one side. On this the food was spread and as the drivers filed by they helped themselves cafeteria style and then went up by the fire to eat. The food was coarse, good, and plentiful. Ham, bacon, eggs, beans, and potatoes were the main staples; there was no fresh meat but sometimes fish on the menu after a jam was dynamited.

Drivers worked from daylight to dark and in most sections that meant about fourteen hours per day. They got up at the crack of dawn and after a large breakfast worked until ninthirty when first lunch was served. If it was the rear crew, the wanigan kept abreast of the rear and the men ate it from the wanigan. At two thirty it

was time for second lunch, and supper when darkness came. If the men were lunching out, each carried on his back a small canvas sack, called a nose bag, filled with ham sandwiches, hard-boiled eggs, doughnuts, cookies, and a small sack of tea. No driver thought of eating lunch without boiling tea in an empty tomato can with a haywire bail, carried strung on a suspender button behind.

The best drivers were those who as boys in a sawmill town had a chance to play on the logs and get that natural balance which becomes almost a sixth sense. Most tournament log rollers started riding when barefoot kids. After reaching maturity log riding is very hard to learn. The log rollers who enlivened the Fourth of July celebrations in sawmill towns by rolling an opponent off a peeled log were the experts of the craft. As one driver expressed it in talking about a champion, "he's so catty he could throw a handful of sawdust in the river and ride the bubbles over the falls."

Strangely enough such gentry were not at a premium with the river bosses. River driving is ninety per cent hard work and consists for the most part in rolling logs off the bank and lifting all day long on a dry jam. The champion log roller was more likely to be seen carelessly riding a long around the next bend showing off rather than lifting all day long with his shoulder under a peavy.

One evening on a Northern Minnesota river a driver came down the bank on the other side from the wanigans, selected a log, gave it a couple of birls to get the proper feel of it, and paddled it across the river



with a stick he held in his hand. He sat down at the campfire and began talking.

"I suppose you highbankers think this ditch is fast water, eh?" he queried, and receiving no answer continued, "It looks like a canal to me. One time I drove down in Quebec on a stream that was so fast the cook had to let the water set for three weeks before he even dared to make a biscuit with it or it would have torn the guts right out of a man. They was no nose bags there. All one of those Canucks needed was a hole bored in his peavy handle with a cork in the end. In the morning the cook filled it with pea soup. It was quite a sight to see one of them whitewater boys riding down river on a log, sucking his lunch out of the end of a peavy."

The next morning he worked just two hours, and then remarking loudly that he was going to find a river where a good driver could work on logs like a man instead of making a skidding horse out of himself, he left us.

When two or more companies drove one brook or river, they sometimes joined together and took a clean rear. If they couldn't get together, there was usually rivalry between the crews. On one such drive I was with the upper crew and we kept piling our logs down on to the crew in front, without sending men down ahead to help run the jam, thus making them do most of our work.

Their foreman, infuriated at these tactics, "bushed" our drive. This was done by falling trees into the stream back of his rear in order to hold the logs coming from behind and made a very dirty mess. We retaliated by

working night and day to run more logs down into his rear. The feeling ran high but after the drive was down the only fighting was between the rival bosses. Their foreman challenged ours almost before he had time to down his first drink. He whipped our boss and after kicking his prostrate form a couple of times remarked, "Next time that son of —— wants to take a pleasure trip, he'll go in a canoe, not with a wanigan!"

How the old time river man could drink once the drive was down. A favorite story on the river was about a homesteader's daughter who upon hearing the expression "river pig" for the first time asked, "Do river pigs eat hay, Mother?" "Yes, my dear, if you pour a little whiskey on it," replied that wise woman.

There are still drives left in the United States but they are few and far between. Some paper mills continue to get their supply of pulpwood that way and more rarely a sawmill. The river driver of the present day is comparable to the tame cowpuncher of the modern west. Railroad and truck logging meant the end for one and wire fences for the other.

Pulpwood drives were always regarded with contempt by the simon pure old time "river hog." "That stuff's just toothpicks," he complained.

No longer does one hear of big jams like the pile up at Taylor's Falls on the St. Croix in the nineties, which was reputed to contain one hundred twenty million feet of logs destined for the sawmills at Stillwater, Minnesota. They didn't get it broken the first season and the Stillwater saws went hungry that summer. Its face



was sixty feet high and it stretched for miles up the river. All fall and winter the lumber companies had a crew with teams and a donkey engine skidding out a hole in its front to give the jam room to move when the spring freshets came. It did — and old timers still talk about that mighty sight.

No longer are the kids playing on the boomed logs and growing up to be river drivers. An old river boss told me the other day that if he had to take out a drive now he wouldn't know where to get a crew. "The jacks now-a-days couldn't stay on a raft."

They are gone — that reckless, care-free, hard-drinking, hard-working, and hard-fighting crew — pushed out by a more efficient machine age. They were not all giants as fiction would have us believe but they were more than out of the ordinary. While the dangers of driving have been over-rated, there was risk and that together with long hours of hard wet work weeded out the weak, the lazy, and the unfit.

We shall miss them more and more as time goes on and as the machine makes robots of us all.

### A LETTER AND A REPORT

Minnesota is an American state the water resources of which have been investigated in great length by the Geological Survey. Owing to its steady and reliable winters it should not be looked upon by the Washington Office as a vacation area for those born south of the "Mason and Dixon" line. During ten months of the year coal is a luxury — in fact little appreciated by those who for the same length of time long for a shower bath.

Minnesota has no mountains but is badly infested with lakes, swamps, and rivers. Said lakes are so numerous that farmers west and north of Duluth fence in their farms with fish nets. Said swamps exist where there are no lakes and have given rise to the State Drainage Commission to whom we are indebted. Said rivers wander around with a slow rate of flow — they freeze up annually for nine months and during the remainder of the year develop chronic cases of shifting channels or else choke up with weeds making the collection of daily water levels a fascinating study.

Minnesota as stated before, is an American state but Swedish by nature. Ninety-nine percent of the gage readers are Swedish by birth; Americans by compulsion, and gage readers by persuasion — the remaining one per cent are Dutch. By the aid of an interpreter gages are now read in Scandinavian and instructions given in the same language. This causes a slight duplication in work, but allows greater freedom of words.

Minnesota besides having some water horsepower now going to waste, is Progressive Republican and produces more wheat, iron ore, and light-haired blue-eyed maidens than any other state in the nation.

Minnesota has produced Ignatious Donnelly, Marty O'Toole, Adam Bede, Knute Nelson, James J. Hill, Archbishop Ireland, Mike Gibbons, and John A. Johnson. Minnesota mourns the latter's death sincerely, but has 100,000 more Johnson in training and will yet produce a President by that name.

This was written in 1910 by W. G. Hoyt, Minnesota Dist. Engineer, U.S. Geological Survey, to the Washington geological office.