

The upper river, or that portion of it above Celilo, is divided into stretches of smooth water, where the current flows with moderate velocity, and stretches of rapids with a current of great velocity. Small steamboats, of fine model and great comparative power, now navigate this portion of the river at all seasons, when not prevented by ice. These boats have engines of sufficient capacity to drive them through the water at the rate of sixteen miles an hour, and do not hesitate at the worst rapids. They require pilots of great skill and daring, and carry large crews. Such boats can not furnish transportation at minimum rates. The boat of the future that is destined to liberate the producers of the interior from the bondage of exorbitant freights, must have a carrying capacity at least double that of the largest member of the present fleet, while drawing no more water and having but very little more power. Such boats will make their way very slowly up stream, and can not pass the rapids by the use of their paddle wheels alone. To enable them to reach the grain-producing regions I would firmly anchor, above the head of each rapid, a steel cable of sufficient length to reach the foot of the rapid, where the end would be supported by a buoy. The cable occupying a position in the center of the channel, a steamer approaching from below would touch the buoy, and being supplied with a steam winlass, suitable for the purpose, would pick up the cable and warp over the swift water. Such boats will carry produce at very much lower rates than would be possible under the present system.

In proposing a solution of the problem of cheap transportation to the seaboard of the products of the interior, I have considered time as an important factor—just how important it is may be judged from the assertion made by the engineer in charge of the Cascade locks, that each year's delay in opening the river to free navigation involves a loss to the people on its banks almost equal to the approximate cost of the works. I believe the scheme herein proposed can be realized at less expense, and in one quarter the time demanded for the other schemes which have been proposed. This matter of time is of such consequence that it would pay, from a business standpoint, to build the inclines mentioned by Major Jones, for the Dalles, as temporary devices, for use pending the completion of more elaborate works.

EUGENE SEMPLE.

FOR staining bricks red, melt one ounce of glue in one gallon of water; add a piece of alum the size of an egg, then one-half pound of Venetian red and one pound of Spanish brown. Try the color on the bricks before using, and change light or dark with the red or brown, using a yellow mineral for buff. For coloring black, heat asphaltum to a fluid state, and moderately heat the surface of the bricks and dip them. Or make a hot mixture of linseed oil and asphalt; heat the bricks and dip them. Tar and asphalt are also used for the same purpose. It is important that the bricks be sufficiently hot, and be held in the mixture to absorb the color to the depth of one-sixteenth of an inch.

#### FLATHEAD LAKE AND VALLEY.

The fine country around Flathead lake, in Missoula county, Montana, is rapidly filling up with settlers, and at present many fine ranches with comfortable homes are located, where ten years ago there was scarce a habitation. This applies to the section that lies outside of the Flathead Indian reservation, which encloses half the lake and a large tract of country to the east, west and south. North of the lake the fine, large valley, watered by the Flathead river and tributaries, offers great inducements to the farmer and stock grower, and of late years people have flocked to this section to avail themselves of its advantages. It is now estimated that there are over two hundred people living in the valley, and as the tide of immigration is constantly flowing it will not be long until it is thoroughly populated.

This valley is one of the most attractive spots in Montana. Bounded on the south by the beautiful sheet of water whence it takes its name, an immense basin of rolling prairie stretches northward for fifty miles, covered for the most part with luxurious grass and dotted in places along the water courses and at the base of the mountains with heavy belts of timber. On the east and west sides ranges of mountains stretch along its entire length, those on the east being remarkable for their rugged and lofty grandeur. To the north another lofty chain of mountains looms up to the eye of the observer, and as the casual visitor gazes at their snow-tipped summits he is astonished by the information that he is looking at the lofty peaks which guard the famed Kicking Horse pass, through which the Canadian Pacific railroad wends its tortuous way toward the Pacific ocean. Yet such is the case. The boundary line, the Rubicon of defaulting bank cashiers is close at hand, and Her Majesty's dominions are only a matter of seventy miles to the north. This valley is accessible either by a so-called wagon road that stretches from the foot of Flathead lake northward on the west side of that body of water, or by steambot from the same point across the lake and up the Flathead river. Nearly all the settlers have their own teams and wagons, and when they go to the railroad or Missoula they usually travel overland by their own conveyance. The road, however, is a miserable affair and very hard to travel, and lately the settlers have agitated the question of building a good road on the east side of the lake. This question took definite shape in a meeting held at Egan's ferry, when sufficient funds and labor were subscribed to nearly complete the road. This route is shorter and better in every way than the old one, and the citizens expect, with the help of the county in building the necessary bridges, to soon make it yield them an easy and practicable wagon road.

The country is full of lakes. I climbed a mountain the other day, and in the magnificent landscape unfolded to view from its lofty summit, I counted no less than thirteen. Some of them are mere ponds, but the majority are deserving of the more general term of lakes.—*Correspondent of Helena Herald.*