

CROSSING THE BIG MUDDY.

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From a letter to the *New York Tribune* we condense the following account of an episode in the history of the Yellowstone Expedition:

General Custer, whom General Shanley had sent with the Seventh Cavalry and a few light loaded wagons to afford relief to the hail-pelted engineers, had arrived at this stream the day before. He had found the water too high to cross, and built a bridge in the afternoon, on which he had crossed his troops and wagons. Through a mistake of our guide and the wretched condition of the roads our heavy train did not arrive at this stream until the following day. Our mules were almost exhausted by their pulling. It was deemed inadvisable to attempt to cross that night. It was doubtful whether we could cross without building another bridge. The stream that night decided the question for us. The heavy rains swelled it considerably. Its level rose higher and higher. Somehow it seemed to take a fancy to General Custer's bridge. The bridge seemed to reciprocate it. There was a collusion and finally an elopement. I saw the water creep up closer and closer, and at last lift the bridge off its feet and carry it off on its bosom. We had no objection to the amours of this bridge; but it was unkind in it to desert us just as we needed it most. The stream had risen so high that it was impossible to bridge it again on account of its increased width. We had no timber long enough.

It is a fact known, I suppose, to the United States Quartermaster's Department that an army wagon laden with 5,000 pounds will not float in ten feet of water. It is unreasonable to expect six mules to swim with such a weight. It was with reference to this want of levity in loaded army wagons that pontoons were invented. But, notwithstanding this fact, the largest expedition since the war started off on a journey of several hundred miles across a new country without a single pontoon. The reason is that the country has a dry reputation. This year, however, it has belied its name. A few pontoons would have neutralized the falsehood. They were asked for but there was a knot in the red tape somewhere, and we did not get them. With pontoons our whole command might have crossed in two or three hours.

How should we get over the Big Muddy? It was a problem for an engineer. The problem was there, but not the engineer—I mean a member of the engineer corps. I find, however, that army officers as a general thing do not place a very high estimate on our engineer corps. "Why did not a regular army engineer accompany this expedition?" I asked of an officer. "Oh he'd be afraid of getting sunburnt. Besides, we can get along better without them. They can't work unless they have everything just so. They are good to stay in the office and make maps, and that is about all they are good for." Be this true or not, we happily have two men with us who are better than a dozen desk engineers. I refer to General Stanley and Lieutenant Ray of the Eight Infantry, our chief commissary. General Stanley is a thoroughly educated officer, and has a wide experience on the Plains. He has a natural talent for his profession, and unites excellent powers of observation with care, judgment and ability to command men. Lieut. Ray is eminently a practical man. He has seen life on the plains in all its as-

pects, and served with great credit during the war. He has passed through many trying experiences, and never but once was caught in a place that he could not get out. This happened near New York, and brought him worthily into public notice. While stationed at David's Island, he went out in a boat one stormy wintry night to rescue a party who had been caught in the ice. He reached them, but was unable to return to the fort. The floating ice carried him far out into the Sound. It was not until the next day that they were taken off, with frost bitten hand and feet. Colonel Baker, the quartermaster, and Lieutenant Dougherty, commanding the pioneers, make up the other members of our unorganized engineer corps. The first thing to do was to get forage and commissary stores over for Major Townsend. This difficulty in a stream 25 or 30 feet wide did not present the magnitude that the transit of our wagon train did. If we could get the forage on the other side, Major Townsend could send back some wagons for it.

A wagon body was dismounted. It was wrapped on its bottom and sides in a heavy "paulin" which was firmly secured by ropes. It was the work of a few minutes to make it and launch it. The heavy canvas effectually kept out water. It was safely navigated to the other side. General Stanley and Lieut. Ray were among the first to cross the rapid stream. A number of men stationed on each side, easily pulled the boat across, receiving no little aid from the current. On this little craft we could safely put 1,000 pounds of forage. It solved one element in the problem. In five or six hours we had ferried enough stores and forage to supply the company of cavalry and two companies of infantry that formed the surveyors escort.

The next question was, how could we get over our heavy teams and trains? The commissary, Lieutenant Ray, once more solved the problem. He offered to build a bridge and cross the command. But how could he build a bridge without timber, pontoons, or lumber? We have in this expedition over 100 water kegs. Nearly all of them are reformed whiskey kegs. When they contained whiskey the bung always leaked. They finally leaked dry and became hopefully converted. These temperance kegs have been heretofore carried on the wagons. Lieutenant Ray now proposed to carry the wagons on kegs.

Ninety-six empty kegs were accordingly ordered to report at the stream. Four wagon beds were dismembered of their covers and wheels. Twenty five or thirty men were then set to work to bung and plug the kegs; only those thoroughly coopered were accepted; the dry and unserviceable ones were rejected and their places supplied by others. Each of the wagon beds just held twenty four kegs placed on their ends side by side in three rows. Some timber was, meanwhile, cut into poles, and one pole placed lengthwise over each row of kegs to keep them in place. Ropes and chains were passed over the poles and completely around the wagon beds, so that the booms and kegs were firmly secured. The wagon bodies were then drawn down the bank and launched in the water bottom side up—that is, with the kegs down. Each wagon bed was then floating upside down, upheld by twenty four air tight kegs. Those extemporized floats were then moored lengthwise in the stream. The next trouble was to lash them securely side by side. This was no easy matter; but Mr. Ray met it as he did every other difficulty in the construction with a ready brain and a ready hand. He had one man on the

first float with him, and with his coat off and sleeves rolled up, lashed them together with his own hands. The shores were lined with officers and men watching the experiment. Very little confidence was expressed in the structure by the wagon masters and teamsters.

By means of some wagon reaches and a plenty of picket rope, the floats were finally fastened together. If we had had some plank now to place across the inverted wagon beds, one bridge would have been complete. If we had only brought one plank to each wagon in our train we should have had ten times as much as we could use. But we had not a single available plank or board. We were compelled to fall back on our extra wagon tongues and reaches. These were placed side by side across the wagon beds; they did not make a very even floor, but it was the best we could do. The bank had been previously cut away to form a gradual descent. It was easy to connect the Goat with the shore.

The bridge was done. I imagine that Lieutenant Ray watched with considerable interest the crossing of the first wagon. To secure greater safety the mules were detached and led down the bank and over the bridge. The wagon wheels were locked and the wagon gently let down to the bridge. A detail of men on the other side then took the rope and pulled the heavy laden vehicle across the float and up the opposite bank. Under the great weight the bridge sunk to the water's edge, but no further. The wagon crossed in safety. The success was repeated 250 times. When finally all our men and teams were safely landed on the other side without a single accident, without losing a pound of forage, or a single piece of hardware, the bridge had published its own triumph and the doubters were silent. Such a bridge was not a new undertaking or achievement for General Stanley. In his twenty years of army life, all of which have been spent in active service, he has become familiar with every known device for managing a train. I doubt if there is an officer in the service better qualified for the difficult work of conducting a train through almost impassable places. There are few who have such resources of judgment and experience. On this trip he is fortunate in being seconded by a competent staff. The mechanical success of the work was due to the perseverance and ingenuity of its chief commissary, who constructed it mainly with his own hands. Our little bridge will never attain the fame of the Victoria; but it shows what may be accomplished by putting this and that together, brain wise and otherwise.

Prince Arthur went out bathing, unattended, at Trouville, on the 20th ult. After swimming off some distance he was seen to disappear under a heavy wave. A waterman at once raised a cry for help and rushed into the sea followed by one of the Prince Arthur aides de camps. They reached Prince Arthur just as he was losing his senses and brought him ashore. Some attendants from a neighboring hotel assisted to rub his body till breath and circulation returned, and his Royal Highness then walked to the hotel where, two hours afterwards he breakfasted heartily. The waterman was well rewarded by the Prince.

The *London Times* says that owing to strikes the United States are successfully competing with England for the control of the iron traffic.