



No. 20.—IRRIGATION.

RICE requires a very wet soil, and as this is not everywhere to be found, irrigation is one of the most important farming operations. Water is almost always plentiful, and the most various devices are employed to utilise it. Sometimes the land is drenched merely by means of buckets, drawn by hand. Or, as in Egypt, the bucket is attached to a long pole, nearly poised on an upright by means of a weight. Or, again, a bucket is attached to the middle of a rope, held at the two ends by men, who, by in turn loosening and tightening the rope, dip the

bucket into a creek and jerk the water over the bank. But the most effective means is a chain pump, worked either by the feet, as on a treadmill, or, as is represented above, by a large cogged horizontal wheel moved by a buffalo, and working into a cogged axis over which the chain passes. There is yet another plan frequently adopted, namely an upright wheel with floats, *worked by the current*, and having hollow bamboos fixed to the circumference at such an angle that at the moment of descent they pour their contained water into a trough.