WATER MOTORS.

Their Great Advantage to Manufacturers --A Practical Illustration.

The success of our water supply is leading to the introduction of water motors in the place of steam power. The motors are cheaper, in the first place, and much more economical to operate. A water motor, when substituted for a steam engine, dispenses with the services of a skilled engineer; it saves fuel by doing away with it entirely for power purposes; it does away with the dangers of explosion, and lessens the cost of insurance. It reduces the expense of repairs, because there is so much less machinery to get out of repair.

The water motor has other advantages that are important. It is always ready. It is not necessary to wait to "fire up;" it always has "steam up;" the power is always there at any minute in the hour and any hour in the twenty-four. By a "simple twist of the wrist" the power is turned on or cut off, by a man, woman or child. There is no peril, no expense for skilled supervision and the power is always at your service regardless of weather, human whims or anything else.

Quite a number of the motors are in use in Burlington and as our citizens become more familiar with their advantages and economy the demand increases. We saw yesterday a motor that has just been put in for Charles I. Barker, in his printing office on Valley street. As we were passing Mr. Barker called us in to see the motor. We followed him to the basement where a big press was rumbling. The steam boiler had been removed. There did not appear to be much of anything else in the room but presses.

"Where do you get your power?"

"There it is," said Mr. Barker, pointing to a small object in the corner, plain enough in sight provided you narrowed your vision down to the proper focus to see small objects.

"Where? Do you mean that little thing?" said we pointing to a little brass and iron fixture on a small plank near the floor, and about the size of a hat crown.

He did. That was it. And to show its power he turned on the pulley of another press. It at once started off, but the added work made no perceptible impression on the industrious water motor. It buzzed as merrily and with as much power as ever.

"Does it run steadily?" we asked.

"Yes, steadier than steam power."

"Is it cheaper?"

"Yes, a great deal cheaper. The water does not cost me as much as I used to pay for coal for my steam boiler."

Mr. Barker is delighted with his new power. And well he may be. It is economy, safety, convenience, reliability, all concentrated in one little Turk water-wheel, occupying scarcely two feet square of space. This is just what Burlington needs to build up its manufacturing interests. For the same system that affords us perfect fire protection, and an abundant supply of water for every purpose for which water is used, also affords us the power to drive our machinery. It is the handmaid of industry. It is the precursor of thousands of minor manufactures, as well as the more extensive interests. Here the man of small means can open his little factory, put in a water motor of one or two or three or more horse power, up to any desired force, and can begin the work of manufacturing his products at the lowest possible limit of cost. He gets his power for less expense than those using steam, notwithstanding the remarkable cheapness of fuel at Burlington. He can locate his water engine in any story of a building from basement to attic; wherever he goes the faithful water pipes follow him and yield up their stored power at his bidding. He can locate in the center of the city or out in the suburbs. There are already seventeen miles of water mains and more being put down every year. The manufacturers will not be limited to any narrow locality. They can buy or lease where land is the cheapest, or they can locate in the very centre of business, and by using the upper floors of business blocks still have the advantage of low rents.

Burlington offers manufacturers not only the best distributing point, by rail and river, in the west, but it also offers the cheapest power. It is cheaper even than natural water power for many lines of manufacture, because it does not compel the manufacturer to locate by the side of a water race where land is dear and he must pay high or the privilege. In Burlington the water race is everywhere in its streets; wherever the water mains are there is its water power, and it will climb to the tops of the tallest buildings and there turn the turbine wheels that with the natural water power can only be located in close proximity to the water reservoir. These are advantages of no small importance to manufacturers. They involve questions of economy of operation, cheapness of production, and proximity to business centers and shipping conveniences. This is an important item to cities that contemplate putting in water works; the Holly system gives Burlington a constant pressure of not less than *eighty pounds* on the low grounds, and it is the only system we would recommend for these mechanical purposes. In every aspect of the case, Burlington now enjoys advantages that are unquestionably destined to build up a varied and extensive manufacturing interest here.