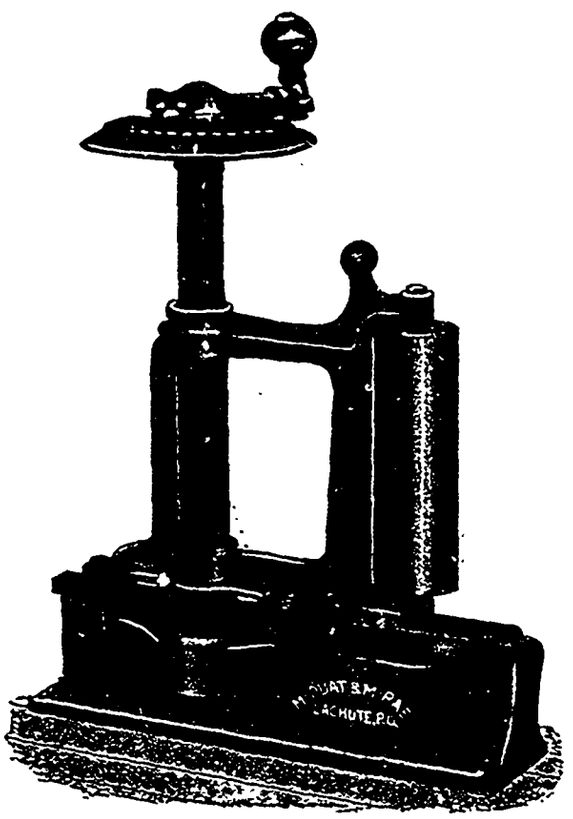
are unable apparently to make more out of one of our greatest assets than a few acres of flower garden.

Those who should be in a position to know state that the United States company has found means to arrest the proposed power development by a canal at Chippawa, and that nothing will come of the occasional activity of power company promoters on the Canadian side, at least nothing tending to the enrichment of Canadians generally.

What would be the verdict of the people upon a government which enacted a law forbidding the use of the steam engine and compelling manufacturers to resort to manual labor? What is the difference between forbidding the free use of steam in the past and forbidding the free use of electricity in southern Ontario for the next hundred years?

TIMBER GAUGE.

The Climax timber gauge, invented and placed on the market by McOuat & McRae, Lachute, Que., has been a pronounced success and has made its way steadily among Canadian lumber manufacturers. The makers prove a number of advantages for this device, which is illustrated herewith:—



The roller arm swings over the bed, and is so arranged that if the log strikes it, through accident or carelessness, it is merely knocked out of place and can be replaced instantly, without injury. This alone is of great importance to the purchaser. The standard is not stationary, but moves back with the roller bracket. It is never nearer than 11 inches to the saw, and will move back 22 inches clear of the saw. It can be moved out still further without loosening a bolt. It can be changed in half a minute from a right hand machine to a left, by changing a small stopper from one side of the standard to the other. The dial plate is divided accurately into inches and quarter inches, with distinct figures cast on, and notches cut deeply to hold index hand, so that there is no possibility of slipping or shaking out of position. The roller can be changed for different sizes of lumber, by simply pressing down on the crank, and turning the required notch and letting it go, no pin being required. To cut lumber heavier or lighter than the exact size, it is not necessary to move the machine on the saw frame, as the index hand is provided with an adjustment for that purpose. In designing it the makers took care that no place was left where sawdust could lodge and clog the machine, and they guarantee it cannot clog. If after ten days trial it is not found satisfactory, the purchaser may return it at the expense of the manufacturers.

FILTERED VS. UNFILTERED WATER.*

Through the researches of scientists it is to-day practicable to make hard water soft on a commercial scale; it is practicable to remove the matters giving rise to discoloration and disagreeable odors, and it is possible to remove almost to complete exclusion those minute forms of life which are supposed to be the source of many diseases, and which are carried and disseminated by water. In some cases natural influences effect a purification of water in certain directions; for instance, certain forms of low vegetable life in waters are destroyed by darkness; † certain other forms of microscopic life are destroyed by sunlight; ‡ certain impurities, like iron, can be removed by allowing the water to flow over a steep bed, or rapids, where it will become aerated. And a knowledge of these facts and many others, enables us to take any water that may be considered fit for a water supply to a city, and bring it to a very high standard of purity.

That pure water has been the means of saving many cities from dreadful consequences has had frequent proof. A recent very interesting case is that of the cities of Hamburg and Altona in Germany. The epidemic of cholera which broke out in Hamburg in 1892 will be remembered for its extremely "explosive" character. The history of this case is so very interesting that it will bear narration. On the river Elbe, some miles from the sea, there are two cities, adjoining and forming in appearance one city. These are Altona, a Prussian city,

Boundary line indicated by a line of dashes.
Cases of cholera by solid circles.
Cases of cholera imported from Hamburg by open circles.
Water mains in Hamburg streets by black lines.

and Hamburg, a free German city. A stranger walking through these cities would not know, unless informed, whether he was in Hamburg or in Altona. They are each supplied with water from the River Elbe, but their waterworks are independent of each other. In 1892 Altona took its water from the Elbe several miles below where the Hamburg sewers emptied into it. Hamburg took its water from above the city. At this point of the river the tidal influence is still felt, and at times the sewage from Hamburg is carried on a flood tide up the river occasionally as far as

*Abstracted from Some of the Important Water Supplies of Europe Considered Mainly from a Sanitary Standpoint, a paper by James H. Fuertes, Mem. Am. Soc. C.E., reprinted from the *Journal* of the Association of Civil Engineers of Cornell University.

†"Some Observations on the Relation of Light to the Growth of Diatoms." Geo. C. Whipple in a paper at the Ann. Conv. of the N. England W. Wks. Association, June 10, 1896.

‡"Water Supply," Professor Mason, 1896, p. 66.