

### The Toronto Reaper and Mower Works.

Our readers will remember an article that appeared in this journal last June, referring to a Canadian enterprise known as the Toronto Reaper and Mower Company.

As disinterested parties we have watched the progress of this concern for the past year, and having satisfied ourselves that it is a fixed and reliable fact, we have taken the pains to examine into their ways of manufacturing and the implements they produce. The agricultural interests of Canada are so great, particularly in Ontario, that any new and practical invention that will assist the farmer in obtaining the best results from his land and labor are worthy of consideration.

Establishing concerns of this character in Canada is sufficient proof of the future prosperity of our country, and such enterprises cannot be too highly estimated. They furnish employment to the mechanic and laborer and put in circulation the ready money that brings about an era of prosperous times.

This new company has purchased the entire property known as the Soho Foundry and Engine Works, comprising over seven acres of ground, covered with factories, foundries, lumber and coal yards and offices, devoted exclusively to the manufacture of the new Toronto Reapers and Mowers. These shops have been abundantly furnished during the past twelve months with a large number of tools, many of which are quite expensive.

Bolt heading machines, trip hammers, thread cutters, shearing machines (that will cut into a piece of cold iron two inches thick with the ease of a knife passing through butter), innumerable lathes, planers, drills and milling tools, together with a new line of wood-working machinery, making altogether a factory of the highest standard, and one with but few equals on this continent. These works are connected by private railway and telegraph lines with the various companies of the city, and already extensive preparations have been commenced to extend and enlarge their present factories and build new ones, which, when completed next year, will be the largest agricultural implement works in Canada.

The Toronto Mower, several of which we have carefully examined, is a novel piece of mechanism, and a grand achievement in mechanical science. The idea of constructing a mowing machine with only one rotating cog-wheel! Yet this has been accomplished. A one-wheeled locomotive would not have been a greater curiosity a year ago than to see this simple and effective grass cutter noiselessly, but powerfully, working its way into public favor.

Simplicity is a crown jewel, and never more so than when applied to farm machinery. "The simpler the better" is what any farmer will say who has lost much of his grass crop by spending

the most valuable part of his time tinkering up some old machine whose greatest claim was its complication and general unfitness for the use intended.

The picture on this page plainly illustrates this new mechanical gear (which the *American Agriculturist*, the leading farmers' magazine of the United States, so highly endorses.) There are always eleven cogs in contact, instead of three, as with other machines, thus distributing the wear over a much larger surface, and proportionately reducing the pressure, friction and wear upon each. Machines which have run five seasons show no indication of wear whatever on the cogs, and, as far as we can judge, a pair of wheels could not be worn out in a life time.

There are practically but two pieces between the axle and the knife, one being a small bevel cog-wheel secured to the axle, and the other a similar wheel made to gear into the first. This second wheel—or disc—does not rotate, however, but be-

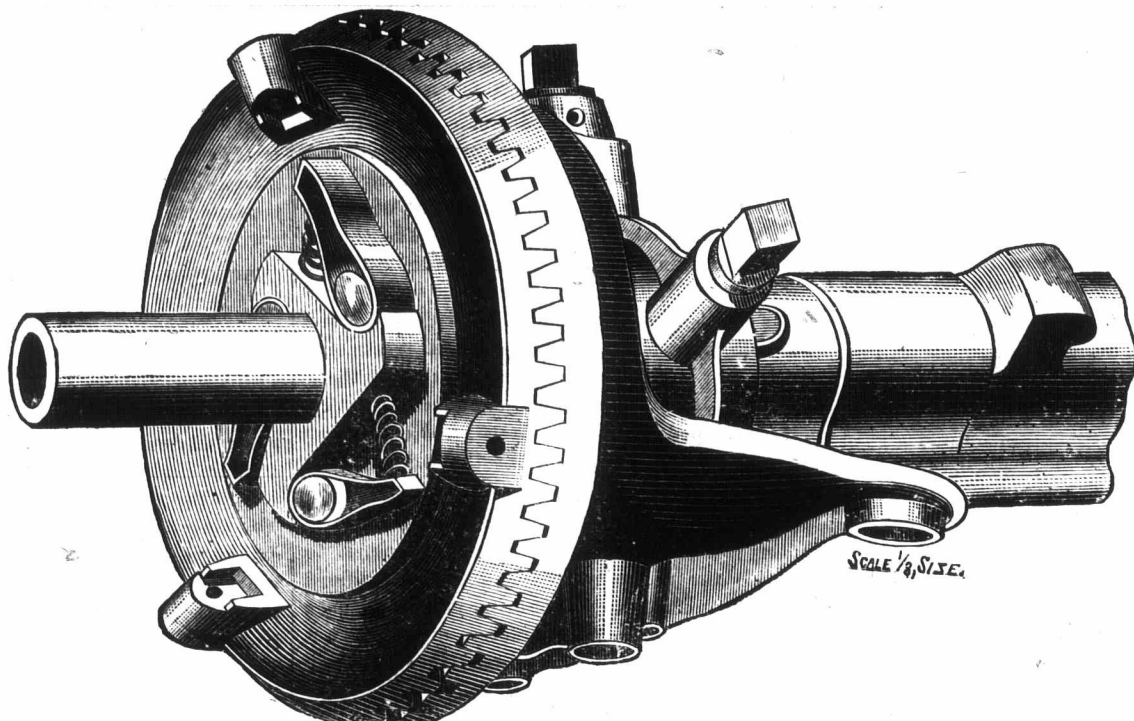
heavy hill-sides, through gullies, over ridges, in swampy marsh, and over bog; in the shortest and down grass, whether lying to or from the machine, and in the tallest crop to be cut. The machine can be instantly adjusted while in operation to cut low, to take up lodged and very short grass, or to cut over rough ground and where it is desirable to cut the crop high; and both ends of the cutting apparatus may be carried entirely above the ground, at any distance, from an inch to one foot. Either end of the cutting apparatus may be lifted at pleasure, at any angle or position when cutting, to pass over cut grass or obstructions. The bar may be lifted to an upright position to pass a tree, remove any lodgement, or to free the guards. The machine can be instantly thrown out of gear, and the bar quickly folded for transportation, without stopping. The machine can be put into working order in a moment's time, and without the operator leaving his seat or stopping the team.

There is no pitman to come in contact with

stumps and stones.

The wheels are wide apart, to stride the swath and leave the grass unmolested.—

The steady, uniform and powerful movement of the knife is the crowning feature of success, and the admiration of all who have ever seen this machine in operation. There are but two small cog-wheels in the machine, and they are each about the size of a dinner plate. There is no gearing in the drive-wheels. The gearing is enclosed by one small disc or rim, perfectly protecting it from dirt. All quick running gearing heretofore used on mowing machines



**New Mechanical Gear.**

(Showing 11 cogs in mesh at one time.)

ing hung on what is called a gimbol joint, like a ship's compass, it begins, on starting the machine, a succession of rapid serpentine vibrations around the face of the other wheel, much as a dinner plate or coin will act when rung down upon a table; and an arm extended from this vibrating disc down to the knife, gives it the required reciprocating motion.

There is only one rotating bearing besides the axle on the machine, and that is not a part of the movement proper, but belongs to a small fly-wheel, which only assists in giving the required perfect regularity and steadiness of motion; hence there are no boxes or bearings to wear out, or bolts—for securing them—to get loose or lost; there being none of the usual bearings and cog-wheels to cause friction, almost the entire power exerted by the horses is applied directly to actuating the knife; hence, while it is the lightest draft, it is the strongest cutting machine in use, as has been repeatedly proven in the mowing of swamp lands which had never before been mowed.

The draft is light; the machinery in operation is noiseless, and its adaptation to various kinds of work most extraordinary. The operator has the most perfect control of the machine when at work. The knife will run at any angle and in any position in which it is placed. The machine will work with equal facility over stones, stumps, among trees, on

is entirely dispensed with. One of the great features of this machine is discarding the old style of quick running gearing, and consequently dispensing with any frame work, such as was heretofore employed to carry the gearing.

Several hundred of these machines were built by this Company last season, and scattered throughout Canada, from Lake Huron to the Atlantic Coast. Their success was an emphatic one from their first introduction. The machines operated are guaranteed, and judging from the numerous letters shown us by the manufacturers from parties who had used them, they give satisfaction.

The manufacturers also assure us that their new Toronto Single Reaper, which will be brought out for the harvest of 1878, will prove as remarkable an invention as their mower, and besides, they will build a combined machine of the same pattern. We request our readers to give this new machine their careful attention, and examine its peculiar construction. A visit to these works will amply repay any farmer or mechanic.

There are numerous kinds of mowers made in Canada. Of course every agent of every kind made claims to have the best. See the Toronto Mower and compare it with others, if you have an opportunity. If not, send to Toronto and get a catalogue.