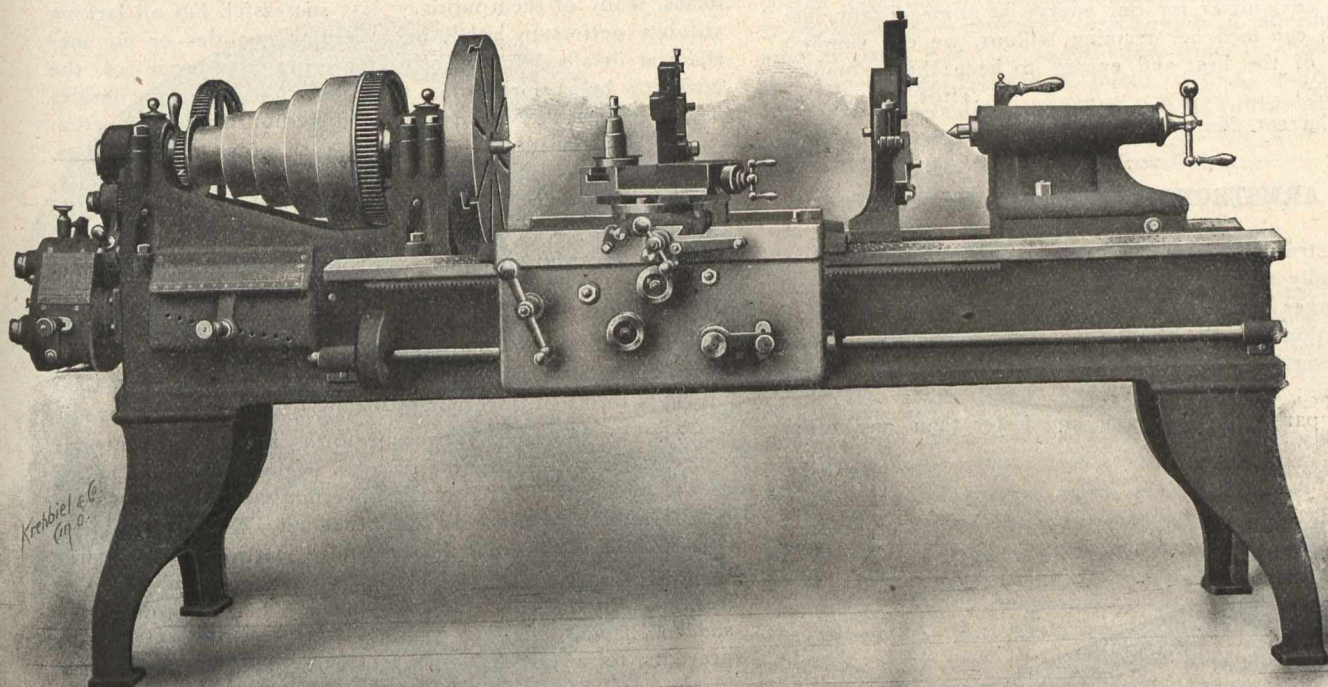


"THE AMERICAN" LATHE.

The American Tool Works Co., Cincinnati, Ohio, is placing on this market, through its Canadian agents, the Fairbanks Co., of Montreal, an 18-in. lathe, known as the "American." It has a range of forty-four changes of thread and of forty-four changes of feed instantly obtainable without removal of a gear, and it is said the entire series of threads or feeds can be obtained, each change complete, and ready to work, in thirty seconds. The headstock is massive, and the cone has five steps for wide belt. In connection with the back gears, ten changes of speed are available, arranged in geometrical progression. Spindle is of a high carbon, special steel, accurately ground, with large hole running through it. Spindle bearings are of the best quality of anti-friction metal, and are provided with automatic ring oilers. Tailstock is of the offset type, which permits the compound rest to be set in a plane parallel to the bed. Set-over screws and a graduated scale are provided for turning tapers. The bearing on the bed is long. The spindle is of large diameter and has liberal movement.

Carriage is substantial; is provided with liberal T slots, and is gibbed to bed its entire length. Bearings on the V's

be true to them, the Government and Legislature are bound to take a wider view, and act for the good of the whole people—future as well as present. I think that to give municipal enterprise a free hand with Niagara is right; but let the provincial power (and cash), be reserved for a grand development of the latent possibilities of our grand country. To make my meaning plain to the untravelled reader, I premise that two great plateaux occupy the centre of Eastern North America. The more southerly, lower, and smaller is now partially filled with water, and forms the basin of the St. Lawrence and the Great Lakes, with their fertile banks and arable plains. This is 230 feet above tide level at Kingston, and nearly 600 feet in Lake Superior, which latter figure gives the maximum power derivable from that basin and its tributary waters. Of this amount, Niagara river concentrates one-half in about forty miles, and the available portion, 163 feet, in one grand cataract, whose power equals that of a million of Mazeppa's fiery steed. But it is very costly to harness, and its very size precludes the hope that it can ever be made wholly available. The centre of the peninsula portion of Ontario has no lakes, and its elevation is not enough to give its streams much power. What there is has been fairly well utilized and is very valuable.



are not recessed but have a scraped contact the entire length. The lead screw is located on the inside of the bed, and imparts motion to the carriage directly under the cutting tool. This construction obviates all that tendency to twist or lift the carriage off its seat. The screw-cutting feature has many points of excellence. All gears are cut from the solid and all shafts are made from high carbon steel, accurately ground. The four-speed box is mounted on the head end of the bed, and by means of clutch members, operated by suitable knobs conveniently located, four changes are instantly obtainable. This in connection with a cone of eleven gears, mounted on the inside of bed, any one of which can be engaged instantly by means of a sliding tumbler gear, makes forty-four changes obtainable, as stated.

ELECTRIC POWER FROM ONTARIO WATERS.

As the ownership and use of Niagara are likely to be live questions during the present session, it may be well for your readers and the public generally to take stock in our hydrodynamic assets at large. In Western Ontario (the peninsular portion), we are apt to think that our only supply must come from Niagara and the Grand river, with a little from the Thames and smaller streams. But while this may

The second plateau is a granite ridge, widening in many portions to more than a hundred miles, and is in shape nearly like an Esquimaux snowshoe—the heel entering Ontario at Gananoque, and extending and widening to Lake Simcoe, and flattening at North Bay to allow the Ottawa Ship Canal a ready passage. It again expands going north-westward, and once more contracts a little at Rat Portage, where our interest in it ends. It is crossed back of Kingston by the Toronto line of the C.P.R. and Kingston and Pembroke railways, where a specimen section can be examined. Its base is Laurentian rock in irregular hills and pinnacles, with the intervals filled with lakes, peat bogs, or clay flats—all retentive of water. Its whole length is about 1,050 miles, and its average width nearly 100, giving an approximate area of 84,000 square miles, all well adapted as a grand reservoir for the rains of summer and snows of winter. And it discharges uniformly round its whole vast circumference of about the length of the main line of the C.P.R. in cascades toward the Great Lakes by a short, steep incline, and towards James' Bay by an abrupt escapement of about 1,200 feet, and then gentle plains toward the sea. Imagine, if you can, the Moose waters as a fan, 300 miles from east to west along the rim falling over cliffs of lime and sandstone, 1,200 feet in a few miles, then converging,