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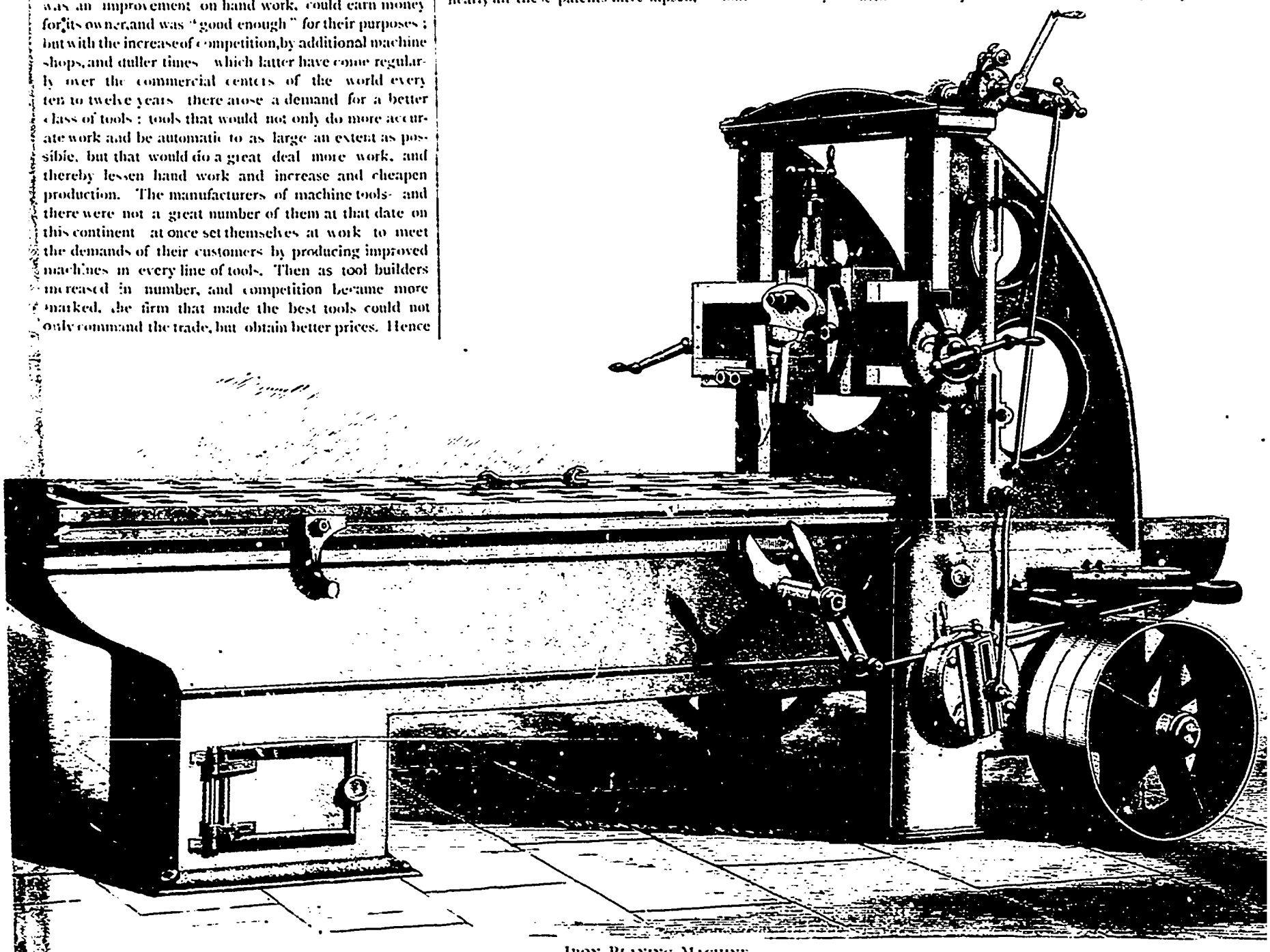
IRON PLANING MACHINE,

IN no branch of mechanical industry has more marked and radical alterations and improvements been introduced and developed to a high degree of perfection of late years, than in the manufacture of machine tools; and in no single machine, perhaps, has so important alterations been made as in the Iron Planer. Twenty-five years ago, when machine shops were few, and work plenty, and prices good, any iron surfacing machine that was an improvement on hand work, could earn money for its owner, and was "good enough" for their purposes; but with the increase of competition, by additional machine shops, and duller times which latter have come regularly over the commercial centers of the world every ten to twelve years there arose a demand for a better class of tools: tools that would not only do more accurate work and be automatic to as large an extent as possible, but that would do a great deal more work, and thereby lessen hand work and increase and cheapen production. The manufacturers of machine tools and there were not a great number of them at that date on this continent at once set themselves at work to meet the demands of their customers by producing improved machines in every line of tools. Then as tool builders increased in number, and competition became more marked, the firm that made the best tools could not only command the trade, but obtain better prices. Hence both necessity and competition have contributed to an almost continuous development and improvement, until to-day almost every important mechanical construction in machine tools has been brought to about as high a degree of perfection as skill and brains can bring it. In the earlier years of improvements in tools some important points were covered by patents, and this gave the owners a material advantage for quite a period of years over their competitors, but within the last few years nearly all these patents have lapsed, so that now nearly all the important elements of machine construction are common property, and the man or firm that is clever enough to combine all the important improvements in any machine is certain to have a first-class one.

The London Machine Tool Co., several of whose improved machines have been illustrated in the DOMINION MECHANICAL AND MILLING NEWS, have been endeavoring to do this for the Canadian market, and we think have very fairly succeeded. The generous trade with which they have been favored during the past year,



IRON PLANING MACHINE.

would seem to indicate that Canadian Mechanics appreciate their tools and the efforts they have put forth to produce high-grade iron-working machinery. We illustrate herewith one of their Iron Planers. This machine combines within itself very fully all the late and important improvements in machines for planing iron. It is very strongly proportioned in all its parts, substantial and rigid, and strong up to the full measure of its capacity. All shafts and pinions are steel. The rack and all gears are machine cut. All feeds are automatic, with a large range of speed, and in addition to the automatic cross, down and angular feeds in the head, there is a universal feed over-head which feeds down the whole cross-head automatically. The machine is driven with two belts, and the shifting apparatus is so designed that the one belt is off the driving pulley before the other is on, thus preventing the screeching noise occasioned by one belt pulling against the other, so common on old style planers, and the planer is so powerfully geared that a 2 inch belt will with ease enable an ordinary planer tool to take a cut in cast iron $\frac{1}{8} \times \frac{1}{8}$ at a cutting speed of 15 ft. per minute.

This description, with the illustration, and coupled with the fact that a 26 inch planer of this design weighs 2800 lbs., will be sufficient for any ordinary mechanic to judge of the merits of the tool.

We examined one of these machines for this description at the Soho Works, Toronto, and the proprietor, Mr. A. R. Williams, who, in connection with Mr. L. A. Morrison, the general agent of the Company, handles the entire production of the Company, will with pleasure explain the merits of these tools to visitors, whether they are intending purchasers or not.

THE AUTOMATIC EXTINCTION OF FIRES.

At a meeting of the Society of Arts, London, Captain Douglas Galton in the chair, Professor Silvanus P. Thompson read a paper on "Apparatus for the Automatic Extinction of Fires." In a single season, he said, England had to pay £2,000,000 as her fire bill, and she had paid it complacently year by year, with all unreckoned and incidental losses, and congratulated herself that the majority of the losses were covered by insurance, as if that made the slightest difference in the long run to the community at large, who practically had to pay for the loss. Our fire brigades were none the less efficient than of yore, our engines no less powerful nor prompt, our firemen no less heroic. The delay by a few minutes which elapsed before the fire brigade arrived was the critical moment, and was the fatal flaw in our system.