

The term horse-power is a unit of force originally introduced by James Watt, to enable him to determine what size of engine to send his customers, who were about to exchange horses for the new power of steam. It is based upon the assumption (which is evidently erroneous) that horses in general perform a certain constant amount of work in a specified time. Taking one foot as the unit of *distance*, and one pound as a unit of *weight*; if one pound be raised through one foot, the work done is called one foot-pound, which is taken as the unit of *work done*; thus, if five pounds be raised six feet the work done is thirty foot-pounds.

Eminent engineers have differed considerably in measuring the work of a horse by this unit. Watt, basing his calculations upon the work of the heaviest London dray-horses, working eight hours a day, estimated it at 33,000 foot-pounds per minute. Others have variously estimated 16,440, 44,000; 22,000, and 27,500 foot-pounds as the work represented by one horse-power; but 17,400 is now thought to be near the truth.

It matters little, however, what number is assumed provided the same is always used; accordingly the estimate of Watt is still counted a horse-power, that is, the power required to raise 33,000 pounds one foot high in one minute. Hence a 100 H.P. engine will do nearly as much work as two hundred horses. In calculating the power of a steam engine in terms of this unit, the general rule is to "multiply together, the pressure in pounds on a square inch of the piston, the area of the piston in inches, the length of the stroke in feet, and the number of strokes per minute; the result divided by 33,000 will give the horse-power." But it is necessary to deduct about one-tenth of the whole for friction.

Here is a query for the wise ones:

"Four men purchase a grindstone four feet in diameter, and each is to wear away an equal portion of the stone in turn. What will be diameter of the stone when the last man gets it; no allowance being made for axle?"

QUIRIST.

PERSONAL MENTION.

Herbert Baker has been promoted to the position vacated by Henry Watson in Collection Department.

Mr. John Clark, of the Grinding room, who was so severely injured last month, we are glad to say has recovered and is again on duty.

Mr. Wm. Black, of the Bar and Knife Department, has sustained a heavy loss by the total destruction by fire of his house, situated on Henderson Avenue, Parkdale. We extend our sympathies to him.

We are glad to report to the many friends of Mrs. John Callan that she has quite recovered from the long and dangerous attack of fever from which she has been suffering.

Mr. Geo. Austin, who has so long been engaged in the Blacksmith Shop, has recently moved on to a farm in the vicinity of Port Hope. As a recognition of the kindly feeling existing between Mr. Austin and his fellow-employees before his departure, they presented him with an elegant cruet stand. We wish him prosperity in his new vocation.

Mr. H. E. Arnold, who has for the past ten years acted as General Agent for the Company west of London, has through ill health had to resign his position, and his medical advisers have ordered him to Manitoba for the summer months. Such Local Agents as have been under his jurisdiction will regret to learn that such is the case.

We compliment Wm. Logan, of the Moulding Shop, in being successful against other competitors, by being promoted to the post of Lance Corporal in his Artillery regiment. Mr. Logan is a young man of about 18 years, and great credit is due him.

Mr. Henry Watson who was mentioned in our last as having resigned his situation with a view of entering a professional career, has decided to leave his studies till the fall, and has accepted a position in the Montreal Branch House, where he has charge of the office and warehouse.

We regret to say that Mr. Algeo, of the Binder Canvas Room, is not likely to recover from his recent sickness, he has been removed to his friends at Bradford.

Mr. T. J. McBride, of the Winnipeg Branch House, was in the city last week, looking, as usual, hearty and well. He reported prospects for a good crop in Manitoba, and the growth of grain and grass some two weeks in advance of this Province.

We sympathize greatly with Messrs. Jno. Elliot & Sons, of London, whose extensive factory and storehouses, together with manufactured machines, were almost totally destroyed by fire last week. Our sympathies are also with the employees who have been so suddenly thrown out of employment.

Harry, son of Mr. Wm. Stephenson, of the Stephenson House, has recently been engaged on the office staff, having resigned his former position with Messrs. Risley & Kerrigan with that end in view.

Mr. Benj. Finney of the Paint Mixing Rooms is rapidly recovering from his attack of Inward Kalsomining; he promises to be more careful in the future.

HORSE RACING.—Mr. Wootten, of the Paint Shop, who owns "Sleepy Nell," has arranged to trot her against Mr. Nixon's "Jumbo," at the Woodbine, on 17th inst., for \$50 a side.

BUSINESS CORNER.

ALL EMPLOYEES LEAVING

the works during the summer months may have their TRIP HAMMER mailed to them free of charge by giving us their address, provided the address be outside the City of Toronto. The postal laws are such that we have to pay for all papers mailed for city delivery, so that those who remain in the city will kindly leave us the small amount requisite for postal fees.