H. P. OF ENGINES.

TORONTO, July 23, 1891.

Editor ELECTRICAL NEWS.

In your July number C. W. Ross is again in print concerning horse power. From his statement that he is writing for the young engineer in the first of his letter, it is reasonable to expect he would make his case plain, but the whole letter is so mixed up that I would rather take my chances with formula and get my knowledge from them than from the muddle he has got the matter into. The young engineer knows that 33,000 lbs. raised 1 ft. high or moved through 1 ft. of distance in one minute is equal to or the equivalent of 1 horse power. This rule he applies to all forms of calculation of power; it does not matter to him what the immortal Watt concluded a horse actually did accomplish. It is not even necessary that he should know by what means the rule was established. His natural ideas of the application of power to work will show him that he can accomplish the same amount of work by making the load lighter and moving it farther per minute. The statement Mr. Ross makes, and which is printed in italics, says that a h. p. is a power that can raise 33,000 lbs. 1 ft. in one minute travelling at the rate of 220 feet per minute. Now, what travels 220 feet per minute. Why, the horse, of course. Still, he is only moving the load at the rate of 1 foot per minute; this don't fit some way. The load moves as fast as the horse does, no matter what its weight is or what the speed he travels at. Still Mr. Ross tells us to use both 1 ft. per minute and 220 feet per minute in connection with his 33,000 lbs. If I tell my boy that Jim Johnson's horse is going 220 feet per minute and that he is pulling a load after him of 150 lbs.; that horse is exerting one h. p., because 220 feet × 150 lbs. = 33,000 foot pounds, which = 1 h. p. This would establish in the boy's mind what a foot pound is, and he would know that if the horse was very strong and a good puller and could draw 33,000 lbs. along one foot per minute, he would also exert just 1 h. p. A racehorse to go a mile in 2½ minutes travels at the rate of 2,100 feet per minute, and if he pulls a load of 16 lbs. after him, he is exerting a power to 1 h. p., *i. e.*, 33,000 lbs. 1 ft. in 1 minute. Our friend Ross will do far more to enlighten the young engineer if he drops the 220 foot business, and lets the speed that a *horse can work at* go to the dogs. Accept the formula as it is to-day used 33,000 lbs. × 1 ft. × 1 minute = 1 h. p. Let matters of experiment by Leslie or any other expert who was trying to find out what a horse could do go with the rest. The young engineer is not interested in knowing whether a horse can do more or less; all he needs to know is that formula, 33,000 lbs. × 1 ft. × 1 minute, is the standard of measurement for a h. p. as used to-day. When a man gets to know so much that he is splitting hairs over things that have no real bearing on the h. p. of a steam engine, he is not useful to the young engineer, or the old one either for that matter.

N. GINERE.

THE OTHER SIDE OF THE SUBJECT.

Editor ELECTRICAL NEWS.

DEAR SIR,—I am a good deal surprised, and I may say, pained, to observe the bigotry and intolerance manifested by your correspondents "Safety" and "S" in their letters in your last issue. Presumably, from the tenor of their remarks, they are of the elect. They only know how it should be done—no one outside of the charmed circle knows anything about it. Now I would like the president of the Canadian Association of Stationary Engineers to say honestly whether any single engineer has been refused admission because he did not know enough. As everybody who applied has been admitted, how comes it that members alone possess the concentrated skill and smartness of the country and no one else possesses any? If your correspondent "Safety" had been at all acquainted with the circumstances of the explosion on Dufferin street he would not have been quite so ready to make an exhibition of himself in condemning a man who probably knows more about an engine than he does with all his assumed virtue. I happened to be present at the little occurrence spoken of, and can give a complete and unqualified denial to the aspersions of "Safety." The boiler in question was in a wood enbuilding surrounded by large quantities of inflammable material in the shape of cut and split wood, slabs, etc. Everything was in perfect order, and the employees were preparing to leave for the night, when the roof was discovered to be on fire. Before word could be sent to the fire hall, the whole building and contents were in flames. The boiler being of the locomotive type and not covered by brickwork, soon began to feel the effects of the heat, and made steam rapidly. The safety valve was blowing furiously, and probably no harm would have been done, when suddenly the heavy beams of the roof fell down across the lever of the safety valve. There could only be one result, the boiler had to go, and it went; but to say the engineer was to blame, and go into a fine frenzy about incompetence, and so forth, either shows that "Safety" has been writing about something he was ignorant of, or was venting his spleen against an independent man who chooses to "hoe his own row" rather than equalize himself with the "good, bad and indifferent" components of the ring.

With regard to the letter of "S," I and others who have spoken to me about it, regard it as neither more nor less than brutal. It is well that "S" shelters himself under the wing of an initial, or it is probable the men whom he libels would take it out of his hide.

Both the writers I refer to (I say both out of courtesy, because it is evident they are one and the same person), prate about civic interference, and develop a wonderful tenderness for the public. Gentlemen (?), your philanthropy is misplaced; there is no soft civic snap for you. This town is governed quite enough already It is taxed and inspected almost to death. Mind your own business, and don't interfere with better men than yourselves, because they don't see fit to join your blackmailing Mafia, or you may find yourselves strung up to the lamp post of public opinion, and your boasted certificates hung up with you.

Mr. Editor, I must apologize for taking up so much of your space, but the gross misrepresentations and animus of the two letters was too evident to pass over in silence.

Yours etc.,

R.

TORONTO BRANCH NO. 1, C. A. S. E.

Editor ELECTRICAL NEWS.

DEAR SIR,—At the last meeting of Toronto Branch No. 1, C. A. S. E., held in Shaftesbury Hall, on Friday, July 10th, the officers elect for the ensuing year were installed by Bro. past president A. M. Wickens, the only change in the list being that owing to the retirement of Bro. W. Reverley, who has removed to Mimico, Bro. Edward Phillips was appointed to succeed him as financial secretary, and Bro. Butter was appointed to succeed Bro. J. Queen as conductor.

After the two newly elected officers had been installed, they were called on to say a few words, which they did, thanking the members of the Association for the honor done them in placing them in positions of trust, and promising to endeavor to fill the positions they had been elected to with credit to themselves and to the best interests of the Association, and to do their utmost to increase the membership and place the Toronto society in a position second to none on this continent.

Bro. A. M. Wickens then called on President A. E. Edkins for a few remarks on entering his second term of office.

Mr. Edkins thanked the members for the honor bestowed upon him, in thus for the second time electing him to fill the highest office in the gift of the Association, and said that when about a year ago he was elected to the office he was conscious of very serious misgivings as to his ability to properly fill the position. He was, however, glad to know that during his year of office he had succeeded in filling the position so satisfactorily. After paying a deserved tribute to the Financial Secretary, he stated that during the past year there had been admitted over twenty new and very desirable members, and particularly requested each member to make an effort during the coming year to materially increase the membership, which was not as large as it should be in a city such as Toronto. If each member would bring in one new member, what a grand showing it would be at the end of the year.

He was glad to know that although at times some of the members got a little heated in the discussions at the meetings, yet they soon cooled down and everybody again became good friends. This was as it should be; for it could not be expected that all would be of the same opinion. When anything came up concerning the good of the Association as a body, the members could always be depended upon to stand shoulder to shoulder.