

'international,' that they do not even represent the United Kingdom, nor yet the whole of England, but chiefly its metropolis—as may be shown by analyzing the membership statistics at the opening of 1886 (the latest ones on which I can now put my hand): The two largest 'divisions,' which include the city of London, claimed 6,962 men, or more than a third of all belonging to the entire 37 'divisions' of the C.T.C. The foreign contingent amounted to only 1,600, whereof the United States supplied 669 and all other countries 931."

Wheelman Centres.

WOODSTOCK COMES TO LIFE AGAIN.

Judging from the long silence which has characterized Woodstock, in so far as the columns of THE WHEELMAN are concerned, our brother bicycle riders in other towns might come to the conclusion that we were either dead or sleeping here. And those who may have noticed the remarks in your columns of a spasmodically active correspondent, who some little time ago took it upon himself to lecture the wheelmen of Canada in general on their laziness in the matter of writing up events in their various localities, might mentally recommend that gentleman to rub a little of his salve on himself. However, we are neither dead nor sleeping here, fellow-wheelmen.

The Bicycle Club organized as per report forwarded to you last month, and as soon as the cranky clerk of the weather reports fit weather, will come out with renewed energy, and make this season an active one. The old riders are enthusiastic; there are a number of new ones, who are sure to feel that way, and some new racing men promise to make things lively on the track. We shall, of course, greatly miss our old invincible Clarke, but hope to see him out again in the latter part of the season.

At present all is activity and bustle among the W.A.A.A. pushers, preparing for the 24th of May celebration. They are determined to keep this year's sports up to the old standard. Let every wheelman who intends to spend a jolly holiday on that day—and what wheelman does not?—make up his mind to come to Woodstock, receive an old-time welcome from the W.A.A.A. and the bicycle club, and see the best day's sport of the season. And let every club captain rub his eyes carefully, put on double magnifiers, and read in the Programme that a \$75 bicycle cup—the handsomest ever imported into Canada—is being offered to the club having the largest number of wheels in the parade on that day. Then let him take off his coat, and with blood in one eye and that big cup in the other, go to work like a big (little) man, and work up a team to bring here that will ensure the ownership of that cup to his club.

In another column will be found a full programme of the events of the day. Look it over, boys; and you who race, get out your wheel, clean it up, oil it, strip yourselves, and, setting your mind on the biggest and best prize on the list, go to work and train for it, and win it, and let all who ride, whether in a club or singly, come and enjoy yourselves, and have the last breath of the winter's sluggishness taken out of your veins.

Lacrosse is to be a leading card here this year, and a first-class team has been got together, who have also done wisely and well by going into the new league.

Well, I guess that's about all the news this time, but before I close I must again urge all wheelmen and athletes to come here and have a big time on the 24th.—Fraternally, CRANK.

The *American Wheelman*, of St. Louis, started a subscription list for the purpose of assisting the L.A.W. out of its financial embarrassment, but the "willing worker" has been snubbed by the Secretary-Editor, who says that the League is not yet a mendicant.

ELECTRIC TIMING.

Mr. S. M. Baylis, of the Montreal Amateur Athletic Association, has an interesting article on electric timing in the April *Outing*, from which we make some extracts:

"It may be said that if time can be noted with even such comparative accuracy as this by watches, that we have reached a point satisfactory enough for all practical purposes; but, as we said before, 'the world moves,' and if an arrangement can be devised to register automatically on paper each second of time so that the result can be arrived at accurately by measurement to the hundredth part of a second, it is surely an improvement on the old method (which is entirely dependent upon quickness of the eye and hand, and consequently liable to error), and is destined to replace it altogether in properly-conducted athletic meetings. That such an arrangement has been devised, tested, and proved thoroughly reliable at more than one public meeting, we shall proceed to show, giving at the same time a description of the apparatus and mode of working.

"Granted that the idea of electric timing is not new, and that efforts have been made to bring it into practical use; so far as known, however, these have hitherto proved futile, or where partially successful have been made on the lines laid down three years ago by those to whom the honor of discovering and adapting a combination of well-known principles and instruments to the purposes of athletic sports and placing in use the first practical electric timing apparatus, should be ascribed.

"The Montreal Amateur Athletic Association is probably one of the largest associations of the kind in the world, its peculiar construction rendering its position in the field of sports almost unique. Its history is that of 'sport' in Canada, and its marvellous growth and the business-like conduct of its internal affairs and public contests by its level-headed young members are matters of public notoriety in its native city. Among its 2000 members are found some of the best authorities on sporting matters, present and former champions in every field of sport, besides the best representative professional and business men of the metropolis of Canada.

"Among them is one to whom, in connection with the subject in hand, its members are deeply indebted. Prof. C. H. McLeod, a young man himself, while holding an important chair in the applied science department of McGill University, and director of its observatory, has always taken a keen interest in the manly sports of his students and his fellow-members of the M.A.A.A. As a result of this interest, they are put in possession of a perfect system for registering time by electricity, which he declined to patent, but placed his ideas and services in the hands of the directors of the M.A.A.A., who expended considerable sums in the construction of the apparatus, which is available to the athletic world, and which we shall now proceed to describe.

Briefly, the arrangement consists of a battery, a wire for the electric circuit connecting all starting and finishing points (where 'circuit-breakers' are attached to break or close the current) with the chronograph or registering apparatus and the clock whose beat causes the seconds to be marked on the paper-covered cylinder; these, with the pistol and its attachment for inserting in the starting switch, completes the arrangement. 'All very simple!' your scientific reader exclaims. 'Why, these things are in use every day in astronomical work, and might have been adopted long ago'—the egg trick over again. Posts are set up at each starting-point and the finish; the switches, where the pistol attachment is inserted when starting, fastened to them, and a wire strung so as to form a complete circuit, which passes through the clock and the chronograph. The battery is of the ordinary kind used in telegraphic work, and needs no description. The clock requires to be a good one, with a pendulum swinging exactly once in a second, and at each oscillation touching a point connected with the current, thus causing a corresponding motion to the armature of the chronograph holding the pencil. Where

portability is demanded, a break-circuit chronometer may of course be substituted for the clock. The chronograph consists of a revolving cylinder, over which is suspended a stylographic pen held by the armature referred to, and the beautiful machinery of the apparatus receives its motive power from weights suspended by pulleys under the table on which it rests. Attachments are connected to regulate the speed, which for convenience of counting to scale used we set at one revolution in 40 seconds, each second marking a space of half an inch on the paper, which may be removed as often as desired; the machine may also be stopped at will on touching an arrangement for that purpose.

"We will suppose everything set up in its place, the circuit complete, the clock carefully set to run correctly and the chronograph revolving at the proper rate, when the pen will be found marking on the revolving cylinder a continuously interrupted line, each space being one second, the divisions being caused by the motion imparted to the pen as each beat of the clock is transmitted over the wire. Should no interruption occur in the circuit, this would continue until the paper was full or the machine stopped, but if the circuit be opened only for an instant, an additional mark will appear on the score, as in the start and finish of a race, which are arranged thus. The starter's pistol has an arrangement on the barrel terminating in a wire, which, on being attached to the switch, still completes the circuit, but when the pistol is fired the points at the mouth of the barrel are opened by the flash, and *this moment*, which timers always have such difficulty in getting just right, is registered instantly on the chronograph score. At the finish, a thread is stretched across the track and attached to a circuit-breaker so as to be sufficiently 'taut' without opening the current, which is done when the winner pulls the thread in crossing the line and closed by the breaking of the thread allowing the points to come together again, all done in a flash and again registered on the chronograph. The paper is then removed, the seconds measured or counted, and the fractions scaled to the hundredth part of a second.

"It may be objected that this will only give the time of the first man; but as his time only is of importance, less attention is paid to second men, often none at all. It could, however, be arranged, if desired, to have each man come in in a particular place and have separate threads for each. In bicycling, this difficulty is obviated by having the thread a little stronger and placed close to the ground, so that the pressure of the wheel will be sufficient to open the circuit, which is closed again when the bicycle passes over.

"This mode of timing was first used by Prof. McLeod at the championship games of the M.A.A.A. in the fall of '83, and again at the McGill University sports in the fall of '84, the break-circuit chronometer and the chronograph employed on these occasions having been temporarily taken from the McGill College Observatory; but in 1886 Prof. McLeod kindly offered to superintend the construction of an apparatus specially for the M.A.A.A., which was first used at the championship meeting of the Canadian Wheelmen's Association on July 1st, and again at the fall games of the M.A.A.A. on September 18th, on both occasions proving an unqualified success and compelling admission from the most skeptical that means had at last been found of placing 'time-keeping' on a scientific basis and insuring accuracy beyond question. The advantage of having 'records' in black and white filed away for reference should they ever be questioned, is patent to the least experienced in these matters."

Messrs. Ross & Simpson, two live members of the Hamilton B. C., have opened up a cycling agency in the Arcade, Hamilton. They will handle the Rudge wheels for Messrs. Chas. Robinson & Co., and will keep a supply of sundries in stock, which will be a boon to the wheelmen of the Ambitious City

E. M. Aaron has resigned his membership in the L. A. W.