

hour faster, and that in Manitoba an hour slower than Ontario time. The centre belt practically extends from Quebec to Sarnia, and the following alterations may be interesting as showing the difference between the local and standard time at some of the principal points, and how they will have to alter it in order to make it correspond :

	Minutes.
Quebec puts the clock back about	15
Montreal " " "	6
Ottawa " " forward	3
Kingston " " "	7
Toronto " " "	17½
Hamilton " " "	19
London " " "	24

As this new time has already been adopted by all the principal places we would advise our friends in the jewelry trade everywhere to conform to it as quickly as possible. If not they will find their local time about the "meanest" time possible, especially if they ever have to do any travelling. By all means get the new standard time and keep to it.

Selected Matter.

THE QUEEN'S PRESENT TO CAPTAIN SHAW, OF THE LONDON FIRE BRIGADE.

Her Majesty the Queen has recently presented Captain Shaw with a bracket, or table clock. The case is of black marble, about fourteen inches high, square-sided in shape, standing upon four golden balls, and having a Corinthian pillar upon each side of the dial, which latter is black with gold figures. The surmounting of the case is very appropriate, and tells its own story. There is a helmet of gold resting within the line, formed by a beautiful-executed bronze imitation of the fireman's belt and hatchet. This may be called the crowning of the design, and most harmoniously in keeping with the character of the gift it appears. The movement is that of a French pendule clock, striking the hours and half-hours upon a spiral gong wire. Underneath is the following inscription upon a golden plate: "Presented to Captain Eyre M. Shaw, C.B., Superintendent of the Metropolitan Fire Brigade, by Victoria R.I."

The R. I. signifies REGINA IMPERATRIX; that is, Queen and Empress. A large number of ladies and gentlemen have, by the courteous permission of Captain Shaw, inspected the handsome present, and given utterance to their admiration in very gratifying terms. It is rather

difficult to say who has the right to be the best pleased at the incident, Her Majesty, or Captain Shaw. The first-named on account of the kindly expressions and loyal feelings which it has called forth towards herself; or the latter at the distinguished, social honour and heir-loom which has been conferred upon him. I will slightly paraphrase a line of Byron about Moore, the poet, and fitly apply it to the happy recipient here:—

"He won it well, and may he wear it long."

"C. STUART, in the
"Jeweler and Silversmith."

THE SIDEREAL DAY.

ASTRONOMICAL AND SOLAR TIME—WHY THE STANDARD IS ADOPTED.

The following memorandum, which will at this juncture interest some of our readers, has been furnished by Mr. S. E. Roberts:—

"Time is a measured portion of infinite duration." A measured portion between the immeasurable past and future. For measuring this portion we may adopt any standard we please. It has been found most convenient to use the time of the rotation of the earth on its axis as the standard of reference in all cases. Let a telescope be pointed to a star, and then clamped in position, and the time noted when the star crosses a wire in the centre of the field; the interval occupied by the earth rotating upon its axis, before the same star again crosses the wire, is called a sidereal day, and is divided into twenty-four hours. This is the astronomical standard. For civil purposes it is more convenient to use solar time. But the sun is not a fixed point in the heavens; he travels round the entire circle of 360 degrees in 365 days, or very nearly one degree in every day, and as one degree is equal to four months, it will take the earth four minutes to overtake the sun after it has passed the star in sidereal time. This is known as apparent solar time. But, from causes which I must not now stop to explain, the motion of the sun is not uniform. The elements of the irregularity have been grouped together, and tables prepared which are known as "the equation of time." The time given by these tables is sometimes added to and sometimes taken from apparent solar time, and we then get the "mean solar time," by which one day is regulated. A meridian

may be defined as an imaginary line passing through both celestial poles, the zenith and the nadir; the plane of this great circle must therefore pass through the observer's place and the earth's centre. From this it is manifest that every place on the earth must have its own meridian, and it is noon by apparent solar time when the sun crosses the medium of that place. The earth rotates from west to east, and consequently the meridian of Montreal will pass beneath the sun about half an hour earlier than the meridian of Toronto, while places west of Toronto will be later in the same proportion. Hence we have been accustomed to speak of "Montreal time," "Toronto" and "Chicago time."

THE NEW STANDARD TIME

simply proposes to adopt the mean solar time of the 75th meridian for general use in all places lying between 67½ degrees and 82½ degrees of west longitude, and thus avoid the confusion arising from the use of the meridian lines of different places. The central meridian of this district, i.e., the 75th, crosses the St. Lawrence a few miles west of Cornwall, and passes northward east of Ottawa. On this line the new standard will make no change; to the east of this line noon will be given a little earlier, and west of the line later than the general local time.

It will make almost no sensible difference to our social life, while it will greatly facilitate our movements in travelling and in many other ways.

AN ELECTRIC WATCH.

The St. Petersburg correspondent of the *Jewish Chronicle* writes:—A Jewish young man, nineteen years old, named Salomon Schisgal, and coming from Berditschew, a Jewish centre in Southern Russia, has for some time been the hero of the day in this city. In commercial circles and in journals of every shade of opinion, the current topic is the genius of Herr Schisgal, who in outward appearance is a mere youth, and no words are sufficient to praise his invention, for which he has already received a patent from Government, and which he is carrying into execution in association with one of the most influential of Russian wealthy aristocrats. This invention is a watch which goes by electricity, and with scarcely any movement; it is therefore simple in construction, and easy to handle; it is cheap,