

a substance much resembling gum-tragacanth, which, when added to the jelly, makes it harden. This milk-jelly is easily digested, its taste is perfect, and it may be preserved, even in the air, for ten days. The inhabitants of the north of Sweden preserve the precious microbe, caring for it as the savages care for their fire. They put it in all the milk they wish to preserve, as such milk is better and more easily obtained, in every case, than the condensed milk of the factories of Cham and Montreux. Alcoholic fermentation is produced in milk when sown with koumiss, or with the fungus of kéfir, a favorite Russian drink. This curious ferment is a combination of two distinct ferments, — a yeast analogous to that of wine, and a microbe, *Dispora caucasia*. These two organisms live together in perfect harmony, and for a common end, — the production of a gaseous, piquant, agreeable, and, above all, healthful beverage. The kéfir is especially valuable as a food for infants and invalids. Several physicians of Geneva intend to make trials of it, and we are in hope of being soon enriched by the addition of a new and valuable hygienic food.

THE MERIDIAN CONFERENCE.¹

At Tuesday's meeting, Oct. 14, the resolution to reckon longitudes east and west from Greenwich to plus and minus 180° was advocated by Professor Adams, Capt. Evans, and Gen. Strachey, of Great Britain, and by Mr. Rutherford; the very strong point being urged in its favor, that the jump in longitude from + 180° to - 180° occurs in the Pacific Ocean, where the local time now jumps twenty-four hours, — and it must do this somewhere, — and hence it will cause no change from the present practice among navigators, or in the date of the present local time of any part of the earth; and the relation between the local date and hour of any place, and the universal time of the Greenwich meridian, will always be correctly given by the simple formula, $L.T. = U.T. + \lambda$, λ being the longitude expressed as above. After a short recess for informal discussion, the resolution was adopted by a small majority.

A resolution was then introduced, that the conference propose the adoption of a universal day for all purposes for which it may be found convenient, and which shall not interfere with the use of local time where desirable.

The delegate from Italy offered as a substitute the resolution of the geodetic conference at Rome, which proposed a universal day of twenty-four hours, beginning at Greenwich, mean noon; i.e., the present astronomical day, twelve hours later than the civil.

Mr. Allen here read a paper upon the needs and conveniences of the railroads and telegraphs, advocating local times differing whole hours from each other, and introduced a resolution that local time be held to mean that of the nearest meridian situated some whole number of hours from Greenwich; but, after some discussion as to the competence of the conference to go so far into details, he withdrew it.

The resolution to adopt the recommendation of the

Roman conference was lost, and the original resolution was adopted by a large majority.

It was then proposed that the universal day be a mean solar day, to begin for all the world at the moment of midnight of the initial meridian, coinciding with the beginning of the civil day and date of that meridian, and to be counted from zero up to twenty-four hours.

To give time for informally considering this, and for the secretaries to revise and publish in English and French the two-days' proceedings, the conference adjourned till Monday, the 20th.

At the meeting on Monday, the delegate from Spain proposed the adoption of a universal day corresponding to the local day of Rome, 'on account of classic historical associations,' and apparently with the idea that somehow the epoch of the Gregorian calendar would be changed by adopting the Greenwich day.

Professor Adams and Commander Sampson pointed out the confusion that would arise from reckoning time from one meridian, and longitude from another; and, after further discussion, all the amendments were voted down, and the original resolution, recommending a universal day beginning at midnight of the prime meridian, and counted from zero to twenty-four hours, was adopted by a considerable majority. Another resolution was passed by a large majority, expressing the hope of the conference that the astronomical and nautical days may soon be arranged everywhere to begin at midnight.

Mr. Janssen introduced a resolution expressing the hope of the conference that all nations will make a study of the advantages of dividing the day and circular measure, wherever used, into four quadrants, with decimal division of quadrant. After considerable discussion, this was adopted with a slight modification in the phraseology.

Gen. Strachey offered a resolution recommending that all local times differ, by some multiple of ten minutes, from that of the prime meridian. Without acting on this, the conference adjourned till Wednesday.

COTTERILL'S APPLIED MECHANICS.

Applied mechanics: an elementary general introduction to the theory of structures and machines. By JAMES H. COTTERILL. London, Macmillan, 1884. 20 + 584 p. 8°.

THE appearance of a new book by the distinguished lecturer on applied mechanics at the Royal naval college, the organization of which he has done so much to forward, and the prosperity and success of which are ascribed so largely to Professor Cotterill, is an event likely to interest all who are engaged in similar lines of work. The opportunity is not open to the writer upon the subject of applied mechanics to produce as completely novel a work as was the earlier book by the same author, — 'The steam-engine considered as a heat-engine.'

¹ Continued from p. 378.