

employ bromide-of-silver gelatine emulsion prepared according to any well-known formula . . .

My improved process consists in coating the plates from the lower side by means of suitable apparatus hereinafter described. The apparatus may be varied in construction, but in any case the operation remains the same, the plate being drawn over a device which covers its surface with a uniform supply of the emulsion, and being then immediately reversed and placed upon a level support to set . . .

It is unnecessary to remark that the

operation of coating the plates must be performed in a sufficiently non-actinic light. In preparing very sensitive plates, which require a very subdued light, the advantages of my improved apparatus will be most appreciated, as the operation of coating the plates as herein described can be performed with rapidity and certainty in almost entire darkness . . .

Emulsions made with any other colloid soluble in water may be used in place of gelatine in my improved apparatus for coating plates . . .

Science News Letter, March 26, 1932

CALENDAR REFORM

League of Nations Acting To Abolish March Easters

MARCH EASTERS may soon be things of the past.

The State Department, with the aid of other interested offices of the government and individuals, is framing a reply to a circular letter from the Council of the League of Nations dealing with the stabilization of the date for Easter.

This reply, which is to be made before May 1, will not commit the United States to any action, but will merely indicate whether or not the government approves the "Easter act" which declares that "the common good calls for the stabilization of movable feasts." The letter has gone to all governments, whether members of the League or not, which have not already endorsed the act.

Varies 35 Days

Under the present method for fixing the date of Easter, this feast may occur any time during a 35-day period from March 22 to April 26. This year the Sunday following the "first full moon after the vernal equinox" comes on March 27. Next year it will not arrive until April 17—three weeks later.

The proposed plan is to fix the date of Easter as the Sunday coming within the seven-day period from April 9 to April 15. This arrangement would make Easter fall on April 9 in the event that the fixed calendar of thirteen 28-day months were adopted.

It is thought that religious bodies will, in general, have no objection to the plan, because, in addition to the advantage of providing for Easter and the various church days dependent upon Easter to come regularly at the same time

each year, the new plan will bring the celebration of this great holy day nearer to the anniversary of the first Easter.

April 9 is the date generally accepted by church historians as the date of the resurrection of Christ, and this date has recently been verified by exhaustive researches by a German scientist, Prof. D. Oswald Gerhardt.

Two statements in the Bible gave Prof. Gerhardt clues to the date of the original Easter. One is in the Gospel according to St. Luke to the effect that the baptism of Jesus occurred in the "fifteenth year of the reign of Tiberius Caesar." The other is in the Gospel according to St. John which places the visit of Jesus to the temple as being made when the temple was 46 years from its foundation.

These two statements indicate that the year of the resurrection came somewhere between 29 and 33 A. D. Gospel accounts also state that the crucifixion took place on the eve of the Sabbath of the Passover, on the fifteenth day of the month Nisan. The remaining problem for Prof. Gerhardt was then to determine by astronomical calculations just when this day fell on a Friday. He determined the date as April 7 in the year 30 A. D. Thus the first Easter was on April 9 of that year.

There has been so little opposition in this country to the stabilization of Easter that it is generally expected that the State Department will make a favorable reply. Of course, the matter of making the change is one for the Christian churches to take action on.

Science News Letter, March 26, 1932

ANTHROPOLOGY

Woman's Face More "Toothy" Than Man's

A WOMAN'S face is more "toothy" than a man's. This discovery was reported before the American Association of Physical Anthropologists by Dr. Milo Hellman of the American Museum of Natural History. Dr. Hellman termed his discovery "a curious fact."

In all the races that he has studied, Dr. Hellman said, the faces of females give relatively more space to teeth.

The role played by the teeth as a portion of the face has not been sufficiently recognized, the speaker declared.

As the face of a child grows, a good deal of the increase in size is really due to acquisition of teeth. At birth, the height of the face includes no teeth. At about three years, the two jaws which were in contact at birth, have been separated by a set of teeth taking up 5.5 per cent. of the height of the face. At about twenty years, when the permanent teeth are all present, teeth occupy about eight per cent. of the entire height of the face.

Teeth also influence the dimensions of the face from front to back, Dr. Hellman pointed out. As the child grows and his teeth increase in number, the jaws and face continue to project more forward.

Racial as well as sex differences were described by Dr. Hellman, who compared the faces of East African Negroes, European whites, and Buriats from Central Mongolia. In the Negro faces, teeth take up relatively more space than in the faces of the whites, he has found. The Asiatics measured had higher faces than the whites, but the relative height of their teeth was much less, showing that the height of their faces was due to larger bones than were found in the whites.

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ENTOMOLOGY

Fierce Caterpillar Monkey-Faced in Sleep

THE HABITS of a ferocious caterpillar that lives as a little beast of prey, and marks its back with the face of a monkey twisted into a mocking grin when it becomes a chrysalis for its winter sleep, have been studied by Austin H. Clark of the U. S. National Museum.

The species is known scientifically as *Feniseca tarquinius*. The caterpillars certainly are fierce little creatures, feeding exclusively on the flesh of insects, in-