

NEGATIVE DISCUSSION

INTEREST OF THE ACCOUNTANT IN CALENDAR REFORM¹

The subject of calendar reform is one to which considerable attention is being given at the present time. It has apparently reached the somewhat dangerous stage when articles of the type appearing in the Sunday magazines are being written regarding it, for the purpose of creating public sentiment in favor of some change which, merely by virtue of its departure from established custom, can be heralded as a reform irrespective of its nature or consequences.

The present calendar, however, is so closely interwoven with a multitude of the details of our modern civilization that no change should be contemplated without serious consideration of its every aspect. It is a matter concerning which accountants should have a very definite opinion, and the expression of that opinion should make itself heard in the council chambers where the question of calendar reform is being discussed.

It is significant that the Babson organization regards the adoption of the thirteen-month year as practically the inevitable outcome of the present deliberations. Accountants should, therefore, be prepared to discuss the necessary implications of this plan and to indicate to their clients what results may be expected to accrue to them individually from its adoption. They should also express and give reasons for their preference for any

¹ From article by Herbert C. Freeman. *Journal of Accountancy*. 43: 161-70. March, 1927.

other measure of reform appearing to them to be more desirable. Literature upon the subject is readily accessible. Unfortunately it relates almost exclusively, as far as constructive thought is concerned, to the thirteen-month-year plan.

The imminence of action of some kind in the direction of calendar reform may be inferred from the fact that the League of Nations has appointed a calendar committee of inquiry and that as recently as January, 1923, the Chamber of Commerce of the State of New York passed a resolution endorsing a bill then in Congress authorizing the President to call an international conference to improve the Gregorian calendar.

It is not intended in this article to present a summary of historical details embracing the period in the development of the human race from the adoption of the moon-month in prehistoric times to the year 1582 when the present Gregorian calendar was made standard for all the countries of Europe owing allegiance to the Roman church, and 1752 when it was adopted by England and her colonies. The historical background is interesting, but its application in the discussion is merely as cumulative evidence that there is nothing sacrosanct in our present calendar, which developed in an arbitrary, indeed capricious, manner. The year alone has astronomical authority to sustain it. The month is totally inexact from the viewpoint of astronomy. The week never claimed any other than Biblical sanction, as distinguished from astronomical justification. For its observance as a measure of time in Europe we are indebted to Constantine the Great.

The so-called Swiss plan makes no attempt to adjust the month to fit the seven-day week, or to make the dates of the days of the week uniform. It aims solely to bring the four quarters of the year into absolute uniformity and to equalize the twelve months as far as possible. Each quarter would consist of three months of 30, 30 and 31 days respectively. The first day of each quarter would

be Monday and the last day would be Sunday. The quarterly calendar would be uniformly as follows:

| | 1st month | | | | | 2nd month | | | | 3rd month | | | | |
|-------------|-----------|----|----|----|----|-----------|----|----|----|-----------|----|----|----|----|
| Mon. | 1 | 8 | 15 | 22 | 29 | 6 | 13 | 20 | 27 | 4 | 11 | 18 | 25 | |
| Tues. | 2 | 9 | 16 | 23 | 30 | 7 | 14 | 21 | 28 | 5 | 12 | 19 | 26 | |
| Wed. | 3 | 10 | 17 | 24 | | 1 | 8 | 15 | 22 | 29 | 6 | 13 | 20 | 27 |
| Thurs. | 4 | 11 | 18 | 25 | | 2 | 9 | 16 | 23 | 30 | 7 | 14 | 21 | 28 |
| Fri. | 5 | 12 | 19 | 26 | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 |
| Sat. | 6 | 13 | 20 | 27 | | 4 | 11 | 18 | 25 | 2 | 9 | 16 | 23 | 30 |
| Sun. | 7 | 14 | 21 | 28 | | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 |

New Year's Day would be an extra-calendar day, as also would the additional day in leap year.

It will be observed that the third month of each quarter, which contains 31 days, is the month which includes five Sundays, so that the number of working days in the month is uniformly twenty-six. It should be noted, however, that the third month also includes five Saturdays which throws it somewhat out of comparison with the other two months for certain purposes. Each month is identically comparable with the corresponding month of any other year, however.

According to each of these plans it is proposed that the date of Easter should be fixed.

Parenthetically, the fact must not, of course, go unnoticed that the treatment of a day as an extra-calendar day does not obviate the disturbance of statistics. A vast amount of activity affecting volume of sales and expenses of business of every kind goes on every day, whether work day or day of rest, so-called. The activities of these extra-calendar days must find themselves reflected in one month or another of the year, which will thus be rendered non-comparable with other months.

Other plans put forward, upwards of one hundred and thirty in all, appear to fall under the category of variations of two methods or else call for the adoption of more or less fantastic features, such as a year consisting of nineteen months of nineteen days each, a year of sixty weeks of six days each, and others of like character. It appears

logical to assume, therefore, that if the calendar is simplified it will be in the form either of the Cotsworth plan or the Swiss plan, with possibly minor variations.

Let it be granted for present purposes that from the point of view of the accountant and the statistician our present calendar, with its absurd month of February, is rather indefensible. One may be inclined to brush aside other objections to the established order of things. Their importance can easily be exaggerated. It is true we have seven months of thirty-one days and four of thirty days. It is equally true that the thirty-one-day months may escape five Sundays and that the thirty-day months may include them. The disturbance caused by five Saturdays in a month also cannot be disregarded in certain industries.

The inequality in the number of working days in the month is somewhat minimized in this country by the fact that four out of the six holidays most generally recognized fall in thirty-one-day months (New Year's Day in January, Decoration Day in May, Independence Day in July, and Christmas Day in December), against two such holidays in thirty-day months (Labor Day in September, and Thanksgiving in November). On the other hand, where Lincoln's and Washington's birthdays are observed, February becomes even more absurd statistically. If Columbus Day in October and Election Day in November are considered (the latter being very widely observed as a complete holiday), the balance remains the same. If Armistice Day in November is observed, the disparity between November and either of the months falling next to it is magnified.

For statistical purposes it is perhaps not entirely equitable to criticize the calendar for the effects of holidays, the dates of which are somewhat fortuitous and which even in an ideal calendar from the statistical point of view might create differences between successive months as great as at present.

It may be interesting to study the actual variations in the months for the cycle of years from 1901 to 1928

inclusive. This period comprises three regular years and one leap year commencing on each of the days of the week, so that it is fully representative. Only the six major holidays referred to above have been considered.

The 336 months in this period can be summarized as follows:

| No. of working days per month | Excluding February | | | | February | | Total |
|--------------------------------------|--------------------|-----|-----|----|----------|----|-------|
| | 24 | 25 | 26 | 27 | 24 | 25 | |
| No. of months with 4 Saturdays | 8 | 56 | 92 | 36 | 22 | 5 | 219 |
| No. of months with 5 Saturdays | 8 | 48 | 48 | 12 | .. | 1 | 117 |
| Total | 16 | 104 | 140 | 48 | 22 | 6 | 336 |

If the variation between a four-Saturday and a five-Saturday month be disregarded, 191 out of the 336 months, or about 57 per cent, can be compared on an even basis with the corresponding months of the previous year, the difference in the remaining 43 per cent never exceeding one day or, say, 4 per cent. If the five-Saturday variation is a ponderable factor, only 112 out of the 336 months or exactly one-third can be compared on an even basis with the corresponding months of the previous year.

The discrepancy between the individual months and the same months of other years is actually more serious than that between consecutive months or between any two months of a consecutive series of months. Nature and the habits of men imposed by Nature and long established tradition create seasonal differences in the various months to such an extent that the trend alone has any real significance in studying the individual months of the year one with another. This is almost as true of vital statistics as it is of production of automobiles. January and July are not fully comparable in railroad statistics even when reduced to a daily basis, any more than November and December are comparable in chain-store statistics on a daily basis. The monthly trend, one year with another,

however, is important, and in determining this an adjustment must and can readily be made to eliminate variations due to the calendar. Volume, after all, is the one important factor from a statistical point of view affected by the unequal length of otherwise comparable months, and an adjustment in this factor is a simple matter.

One of the strongest arguments advanced by the advocates of the Cotsworth plan for the thirteen-month year in favor of that plan is that it reduces each month to an exact and invariable multiple of a week. It may be well, therefore, to examine into the real importance of this argument.

The purpose of accounting is to determine the results of transactions over a complete cycle of operations. In the vast majority of cases such a cycle is represented by a period of one year—not necessarily a calendar year, but a fiscal year covering 365 days. In some instances a cycle may not be completed within the year, but these are relatively few. In some cases new cycles are started within the year, and if the number started largely exceeds those terminating (e.g., a rapidly growing chain-store business), an end of the year is rather a convenient stopping point for an accounting than the close of a true cycle. The number of industries, or even of individual businesses, in which a period shorter than a year represents a complete cycle is almost negligible. From an abattoir to a zoological garden the variations caused by seasonal fluctuations of activity render any period shorter than a year not fully representative.

Nevertheless, the proper management of a business requires that figures more or less comprehensive in character be made available at frequent intervals. In some businesses the week represents a minor business cycle. Disregarding seasonal variations, the week comprises the shortest unit which is complete in any real sense. This is especially true of retail business, and in certain other industries, such as the packing industry, the use of the

week as a definite unit for interim accounting is entirely practicable. The preparation of weekly operating accounts on an approximately accurate basis is desirable in such cases.

In nearly every industry and business, weekly figures afford an important aid to management. Weekly orders, weekly sales, weekly payroll and various other figures of an accounting or statistical nature are studied and form the basis for executive action. In the great majority of businesses, however, the preparation of weekly accounts would serve no useful purpose even if it were practicable. In most businesses monthly accounts in reasonably complete form, based almost invariably on book inventories, are sufficiently frequent to serve all the purposes of management. Factors controllable from day to day and week to week are watched through the medium of the daily and weekly statistical figures. Policies depending for their shaping upon more complete accounts are not subject to such rapid change that monthly accounts will not serve as the necessary index, supplementing the weekly figures.

Neither is it necessary in any sense that the monthly figures represent the summation of any given number of weekly statistical figures or accounting details. To use a crude metaphor, the weekly figures as used by management need not be regarded as so many companies, a certain number of which form a monthly battalion of figures. The weekly figures are rather the scouts, the outposts, the intelligence-department men. They are included in the whole but the whole need not be an exact multiple of them. The accounting procedure in the preparation of monthly accounts is very little simplified if the months are exact multiples of the week. Except for the accrual of portions of weekly payrolls, the inconvenience caused by a monthly closing in, rather than at the end of a week is hardly felt except by some retail businesses (generally of the chain-store type) where receipts from sales and

certain branch expenses may be reported only on a weekly basis.

The twelve monthly closings in themselves are simply convenient stopping points throughout the year which enable a comprehensive survey to be made of the current trend and justify certain estimates or assumptions regarding the probable results for the year. The months all differ substantially one from the other in nearly every business and yet no one month represents a completed cycle in itself which can be regarded as standing alone. Each month may be treated as a new step forward in a moving annual total or as forming one of a cumulative number of constituent parts (not equal fractions) of the current year.

From this point of view it is doubtful whether anything would be gained by a closing at more frequent intervals throughout the year. No appreciable gain in the implements of management would result from thirteen closings rather than twelve.

On the other hand, accounting expenses in every business of any magnitude would be substantially increased. Only in cases in which the size of the business was sufficient to keep fully occupied the several individuals engaged in handling the various classes of work into which the accounting detail of a business naturally breaks up, would this additional closing be absorbed without extra expense. In every well organized office the force is adjusted as closely as possible to cope with the daily detail and to handle with it the added volume of work, which is spread over a longer or shorter period at the beginning of each month, arising out of the monthly closing. The better managed the office, the less likelihood is there of the additional eight and one-third per cent of monthly work being absorbed without increased force and resultant payroll.

This inevitable expense becomes very much heavier if semi-annual and quarterly statements are required. It

is a very common thing for complete accounts to be prepared half-yearly and in many instances physical inventories are taken for this purpose. In the case of accounts kept on the basis of book inventories it is quite customary for quarterly statements to be rendered. The New York stock exchange is now requiring that quarterly accounts be furnished to it wherever this is permitted by the nature of the business of a company whose securities are listed on the exchange.

In every case where half-yearly accounts were required, fourteen closings would have to be made during the year, and in case quarterly statements were required sixteen closings would be necessary. The closings at the quarterly periods would come within a week of the regular monthly closing—an almost impossible situation to handle in a business of any size.

In using the word "closing" in relation to monthly accounts it is not the intention to signify a physical closing of the general books. There is involved, however, the closing of all subsidiary records, with the attendant ledger postings, the computation of costs for the determination of cost of sales and the work incidental to the preparation of accounts whether carried on to the books for permanent record or made only on working papers.

It is rather inconsistent on the part of those advocating the thirteen-month year to brush aside this objection to their method as of no consequence. It is a factor which every accountant will recognize as one of considerable importance. In strange contrast is the estimate made of a yearly saving of \$30,000,000 in the United States alone resulting from the thirteen-month-year plan by avoiding the time and money wasted in searching for and referring to calendars and in drafting, advertising, printing and law costs of such phrases as "Tuesday after the 1st Monday," etc.

A number of other inconsistencies appear in the arguments in favor of this plan, but perhaps one more

example will suffice to show that the rather extravagant claims made for it will bear investigation. In *The Nation's Business* for April, 1922, Mr. Cotsworth is quoted as saying, "Five Saturdays each were in January, April, July, October and December, 1921, when housekeepers were forced to buy a fifth week's provisions out of equal monthly incomes. Many thus trend to get behind in the payment of their bills. It has been figured out that 13 per cent of retail losses in bad debts are due to the differences in the number of Saturdays in the month." What percentage of such retail losses arise from the fact that vast numbers of people are paid weekly and yet are required to pay rent monthly, does not appear!

Another argument of doubtful validity urged by the sponsors of this plan is that the settlement of accounts every four weeks instead of monthly as at present will lead to a quicker turnover of capital and thus release vast sums for other more productive purposes. It does not seem to be regarded by them as an offset that the capital released in the hands of one party to the transaction calls for additional capital to be provided by the other party. The gain would appear to lie almost entirely in the earlier withdrawal of currency from the pockets of weekly wage earners in liquidation of monthly debts—surely a rather inconsiderable factor.

It is submitted that the case for the thirteen-month-year plan is not sufficiently convincing to appeal to accountants.

If any simplification of the calendar is necessary—and the shortcomings of the present system would almost justify such a conclusion—the Swiss plan appears to afford substantially all the benefits of actual importance to be derived from a change, and it is not subject to the objections here raised against the thirteen-month-year plan. In the opinion of the writer, the Swiss plan, if any, is the one to which accountants should give their support.

One may be permitted to suspect that if the wandering date of Easter could be arrested, even if only to the

extent of confining it to the space of seven days from say the eighth to the fourteenth of April under our present calendar, a great part of the demand for calendar reform would cease. (A fixed date could, of course, be set for Easter under the Swiss plan equally as well as under the Cotsworth plan.) On the other hand accountants in this country can hardly be expected to rest until something is done to increase the interval between December 31st and March 15th.

CALENDAR REFORM

It must have come as a surprise, possibly a shock, to many to learn that we may shortly be asked to suffer all the inconvenience and confusion of a catastrophic alteration in the calendar on grounds which seem altogether trivial. In the first place, the calendar months now in use have by long association become enshrined in literature as the very impersonation of definite stages in the seasonal progression and retrogression of natural phenomena, and it would be sheer vandalism to break this association, and renounce our literary heritage, without far graver practical cause than can possibly be shown.

In the second place, every calendar system must be framed with reference to the four natural landmarks of the year, namely, the solstices and equinoxes, and it is eminently desirable that the two solstices, and the two equinoxes, which stand opposite one another in the natural year, should not be assigned dates which are unsymmetrically disposed to one another. In the proposed system of thirteen months, the solstices would stand $6\frac{1}{2}$ months or time-units apart, instead of a whole number as in the present system, and no month would be located diametrically opposite another as at present, viz. December to June, March to September, and so on, along the

² From article by L. C. W. Bonacina, Hampstead. *Nature*. 111:289-90. March 3, 1923.

earth's orbit round the sun. This arrangement would offend the artistic sense of any one with a vivid appreciation of the fact that our fundamental division of time, the year, is not an arbitrary unit but one based on a grand cycle of Nature.

Thirdly, it is said that meteorologists and astronomers would welcome months with equal numbers of days, and no doubt they would, one and all, if they could order everything to perfection. But apart from the labour that would be involved in preserving the continuity of the climatological record, involving the translation of one calendar into the other, think of the confusion that would arise in making comparisons between two systems which both have the same names of months! We should be perpetually having to think and specify whether it is the old *January* or the new *January* we are considering, and so forth. It would be just as though, when the new barometer unit the *millibar* was instituted to replace the *inch*, the name "inch" had been retained for the new division. Far better would it be to have an entirely new set of calendar names so that the old names would retain their habitual meanings. It is always open to astronomers and meteorologists to invent a system for any special technical purpose for which it may be required; but probably not many of them would take the narrow view and wish to disorganise the world on that account.

MEMORANDUM AGAINST RECOMMENDATIONS *

The urgency towards a change in the Gregorian calendar comes to the Chamber out of a reference by the International Chamber of Commerce, following the interest of the sponsoring committee of the League of Nations. It is one of those propositions which, apparently

* Minority report by Henry D. Sharpe and Stanley H. Bullard. *Chamber of Commerce of the United States. Committee on Calendar Reform. Calendar Reform.* p. 18-19. Washington, D. C. 1929.

in no way taxing any one nation at the expense of another, and having no political character which might offend, has had an easy launching. It excites the enthusiasm of individuals with minds given to logical expression, and once launched readily embraces the cordial support of well-meaning people who unthinkingly commit themselves to the perpetration of a nuisance. Most questions passed upon in this body relate to questions of fact, but this is peculiarly one in which its advocates are willing to pronounce themselves, offhand, without, we believe, duly calculating the implications.

Generally speaking, the civilized world does now possess, or is rapidly coming to possess, a calendar enjoying substantial uniformity. The infliction of a new calendar having radical departures from the present, or attempting to improve it, would mean annoyance to millions of people, would bring great discomfiture to great sects which view the present calendar with religious loyalty, and would offer nothing of substantial value to any single business which that business cannot enjoy now, if it will.

The daily use of the calendar vitally concerns the intimate habits and views of vast millions of people in this country. The proposal to agitate a reform in the calendar as presented has no popular backing worth mentioning. It comes to this Chamber with the studied support of but few people. A large group has been circularized, and as often happens with catchy ideas, a great many people, many of them of business prominence, are giving this proposal their endorsement, without deep thinking. We have not learned that these people are giving else but lip service towards the furtherance of the idea, though apparently a considerable sum of money is being spent to launch it.

With this in mind, we are opposed to the recommendations of the Committee which, we believe, should not at the present time have the encouragement of the

Chamber. Furthermore, we are opposed to the last recommendation which would seek to encourage our government taking part in a conference on a subject in which the great body of this country not only have a vital concern, but have, as yet, evinced no deep seated interest. When the people themselves, through their accredited representatives, have been led to take an interest in this matter, it may be time for the Chamber to bestow its consideration. Popular interest will be our warrant. Certainly there is no great business need for it. We do not believe the subject is a timely one.

However enthusiastic the proponents of the proposed change may seem to be, general business has little interest. Those who wish to use a system of accounting other than that based upon present months are now doing so. Business, as such, should be careful not to intrude upon matters peculiarly of private concern as well as being interwoven with custom of long standing, unless a change is of a transcending importance to business itself. The Chamber of Commerce can well avoid taking any step to commit itself in this matter.

REFORM OF THE CALENDAR⁴

The only way of making a really satisfactory reform of the calendar, and one to which I think indeed many people have aspired in the past without much success, is to accelerate the sun and retard the moon. If one could only make the year 360 days and the lunar month 30 days, the consideration of an ideal calendar would be a very simple proceeding. The question of the calendar might be regarded as primarily an astronomical one or an ecclesiastical one, but nobody who has had to do with meteorological statistics can be indifferent to any

⁴ From discussion by Colonel E. Gold, D. S. O., F. R. S., Assistant Director of the Meteorological Office, at a meeting of the Society on February 21, 1923. *Royal Meteorological Society. Quarterly Journal.* 49: 147-8. July, 1923.

prospect of an improvement which would remove the difficulties which are due to the incongruity between the week, the month and the year:—February with its 28 days—a week in one place in one year and in another place in another year—all make the compilation of statistics very difficult. In the *Weekly Weather Report* of the Meteorological Office in its old form there is a table giving summaries for periods of four weeks. These summaries are not comparable with the monthly summaries and involve separate compilations.

What conditions must the calendar satisfy if it is to be as far as possible ideal from the meteorological point of view? First, we must be able to have a period shorter than the month. We must have something of the nature of a weekly period. It is very desirable that this short period should come in the same position in the course of the year from year to year and not change about, and in the same position each month, so that monthly values can be directly computed from weekly values. It may sound difficult to achieve if you think of the year as it is, but it would be desirable from the point of view of meteorology and would simplify all computations. On this criterion the existing week stands condemned. It is, in fact, a statistical tragedy to continue it in the Meteorological Office publications and in the returns of the Registrar-General. It is also desirable that the week should preserve the same length throughout the year, but this is not absolutely essential. Naturally also it is desirable to have the months as nearly as possible equal. The present system of months cannot be considered on the whole a bad one if February received back the day that Augustus stole from it to make his month as long as the month of Julius Cæsar, and the advantage of having twelve months in the year is one that is not to be lightly set aside. The number twelve enables one to get a quarter, a half and a third without difficulty.

Dr. Marvin has been moved to issue a short circular indicating what he thinks ought to be done by meteorologists to get a calendar to suit their purpose. His proposal is briefly that we should make all the months, months of four weeks; weeks of seven days. That satisfies one of the criteria for an ideal system. It makes the monthly statistics easy to derive from the weekly statistics. He achieves this by having thirteen months in the year, and one day which can be placed, as he suggests, at the end of the year, or, if we preferred it, in any other place; one day out of the ordinary reckoning, in leap year two days. Each 14th day of the month in his scheme would always be a Saturday. That naturally is a very great advantage. One of the greatest disadvantages of this system is the thirteen months. The months do not fall into quarters, and thirteen is an extraordinarily inconvenient number. You could almost carry in your head the necessary sines and cosines for the twelve months or the twenty-four hours, but to carry in your head sines and cosines for harmonic analysis with thirteen months would tax most of us. Dr. Marvin says:

The quarters by the new calendar would contain exactly thirteen weeks, that is, one week more than just three months. However, each such quarter would embrace exactly 78 working days, and present other advantages in business and financial affairs which quite offset the seeming inconvenience of the fractional months.

No doubt we could get over the difficulty, but it seems to be almost a fatal objection to Dr. Marvin's proposal that his months do not fall into quarters. The French Revolutionary calendar was drawn up by Monge and Lagrange; it lasted for twelve years and then had to be given up. This indicates the difficulty of reforming the calendar except by international agreement.

All schemes put forward hitherto go on the hypothesis that you must have a seven-day week. There is another possible length of the week, and that is six days. If you have a six-day week, Sunday to Friday, and a

five-week month, you still retain twelve months in the year. Weekly statistics would go into monthly statistics quite simply. You have five days to dispose of; a possible way of allocating these would be to have a Saturday every quarter, and two Saturdays in the last quarter. This will not introduce any great variations into the weekly statistics, and it leaves the monthly statistics directly computable from the five sets of weekly statistics. I commend this as a thorough-going reform which would make all computations much simpler and give the other advantages claimed for the reform put forward by Dr. Marvin without any of its disadvantages.

OBJECTIONS TO CALENDAR REFORM⁵

Mr. Speaker, there are approximately 120,000,000 people in the United States and I sincerely doubt whether there are so many as a thousand who earnestly desire the change of the calendar under which civilization has been working for several centuries.

A well-known editor of one of our daily newspapers has expressed this idea humorously but to the point:

The average citizen does not hesitate to croak and complain about the things with which he is dissatisfied. He is not inclined to suffer any grievance, real or imaginary, in silence, but how often do you find anybody complaining about the calendar. We hear complaints about practically everything else—the weather, taxes, the high cost of living, inefficient government, the local baseball team, street paving, and the low quality of peanuts sold, but when do you ever hear the enraged taxpayer stand up on his hind legs and complain because April has not as many days as July.

Because of the general impression that religious groups have presented the most serious objections to the proposed calendar reform, I wish to bring these objections to your attention in the fairest possible way. We

⁵ From speech of Hon. Sol Bloom, Representative from New York, July 11, 1929. *Congressional Record*. 71:(current) 3174-90. June 18, 1929.

must respect every religious denomination in our country and we must not feel that a minority group deserves less consideration than a large denomination, at the hands of those who are attempting "to bring about the advancement of business or science!" Too much is spoken about tolerance and too little about true respect for other religions. I would like my colleagues of the House to understand the objections of some of the religious groups and to realize the very important fact that when all of the details of this calendar reform are understood by leaders in every denomination, there will be a hue and outcry from sources unexpected. To-day the opponents of the bill may seem to be religious minorities, but to-morrow they will be joined spontaneously by almost every group and sect of religion in America.

We have during the past few months been in consultation or correspondence with some of the leading bishops and dignitaries of various Christian denominations, and I know whereof I speak when I declare that practically all Christian denominations will stand in opposition to any new calendar which does not provide for Christian worship on the Lord's Day—the first day of the week as it is now observed.

In almost every instance these ecclesiastics have at first favored the 13-month 28-day calendar, but when they studied the question more thoroughly and realized that it is impossible to change the present calendar without moving the day of worship to a different day of the week every year, they voiced their objections and stated that they will be ready to speak out publicly in accordance with their changed belief. This question is not yet understood generally and therefore many favor it until they comprehend just what the change will mean to their own religion.

I say this, because I wish you gentlemen to realize that the protests are not limited to a few small denominations. I sincerely feel that Congress will hear the thanks

of millions of citizens in this country when it is realized that we have not permitted the trampling under foot for commercial purposes of that which is considered sacred by so many citizens of our country.

You may be aware of the fact that when this proposal was being discussed before the Foreign Affairs Committee, I suggested that in truth we had no right to be considering the question at all. I sincerely believe that I was correct in my statement at that time, and I wish to reiterate my constitutional objection to the whole proposition.

The following are the four points of order which I presented against this House Resolution 334:

(1) There is no rule of the House of Representatives authorizing the Committee on Foreign Affairs, or any other committee of the House or of the Senate, to report or even consider legislation affecting a change in the calendar.

(2) There is no provision of the Constitution authorizing Congress to legislate on the subject of changing the calendar.

NOTE—Article X of the Constitution.

(3) Congress is positively forbidden by the Constitution from making any law respecting any establishment of religion or any law that would prohibit the free exercise of religion. Legislation changing the date of the Sabbath surely affects the religion of hundreds of millions of people, and would positively interfere with the free exercise thereof.

(4) There is no power given to Congress by the Constitution to pass any law that will alter or nullify the laws of any state of the Union.

In taking up these four points in the reverse order I wish to emphasize the fact that the Federal government is not empowered to prescribe changes in the calendar for the states. It could only make its law effective in the District of Columbia, the territories, and territorial

possessions of the United States. A situation strictly analogous to this is the one in which people speak of national legal holidays, yet realizing well that there are, strictly speaking, no national legal holidays in the United States; not even the Fourth of July.

The Federal government has no constitutional power to prescribe legal holidays in the various states. It can make holidays legal only in the District of Columbia and in the territories. Even the presidential proclamation designating a day of thanksgiving each year does not make that day a national legal holiday. For commercial purposes the Federal government, by various acts of Congress, has recognized Labor Day, Christmas, New Year's Day, Washington's Birthday, Memorial Day and the Fourth of July as public holidays. That is as far as the Federal government can go. There is no general statute on the subject. Sometimes the term national legal holiday is loosely applied to holidays such as some of those mentioned above, which have been made legal holidays in every state and in the District of Columbia and all the territories, and which are therefore, in one sense, both national and legal.

By analogy the same reasoning will apply to proposed changes in the calendar. Even if the Federal government should pass the act legalizing the 13-month calendar, not a single state would be under obligation to make the change.

The same situation would apply to any attempt of the Federal government to reverse the calendar. At the present time each state has the privilege of regulating time in its own way. As a matter of fact the states have in general delegated this privilege to the various municipalities. It is, for instance, a well known fact to all of you that any city can decide whether it shall utilize daylight saving time or not. By the same token each city could call what is generally known as noon "3 o'clock" or "6 o'clock" or any other time. In other words, the regulation of time

is entirely within the jurisdiction of bodies outside of the Federal government and the latter can do nothing to alter or nullify the laws of any state of the Union.

Some state legislatures have already exercised their power in this calendar question and introduced bills providing for the thirteen-month calendar. This, however, is folly, because, if these states should adopt the new calendar, the worst kind of confusion would result. Different dates, different days of the week and even different months would prevail at the same time.

How would it be, for example, if in New York it would be Tuesday, May 2, and in New Jersey, across the river, the calendar would read Friday, April 27?

On January 18, 1929, a bill was introduced into the Assembly of the State of New York entitled:

An act amending section 50 of the general construction law as to time, use of standard, making 364 days in one year divided in 13 calendar months of 28 days each.

In the state of Oregon a resolution pertaining to this subject was introduced on January 21, 1929.

Can you imagine the confusion that would prevail if one of these bills or any bill similar to them were approved by Congress and an attempt was made to have them put into effect?

I call this to your attention particularly because I wish to emphasize two important facts. On the one hand, it indicates the absolute correctness of my point of order that there is no power given to Congress by the Constitution to pass any law that will alter or nullify the laws of any state of the Union; and also because, if calendar changes were attempted according to the correct method and regulations of state procedure, indescribable confusion would result.

The claim that "the present calendar does not register true days of the week" and that the changes made in the calendar by Julius Caesar and by Pope Gregory XIII "stand in the same light as the so-called zero day contemplated in the Eastman calendar" are clearly

unfounded. All historic and astronomical facts bear proof that none of the changes made at any time in the calendar by Ptolemy, Julius Cæsar or Pope Gregory XIII affected the days of the weekly cycle but only the days of the months and the days of the yearly cycle. As reliable an authority as the Encyclopedia Britannica states (page 664 in article called "Calendar," under "Week") :

The week is a period of seven days, having no reference whatever to the celestial motions—a circumstance to which it owes its unalterable uniformity. Although it did not enter into the calendar of the Greeks, and was not introduced at Rome till after the reign of Theodosius, it has been employed from time immemorial in almost all eastern countries—and those who reject the mosaic recital will be at a loss, as Delambre remarks, to assign to it an origin having much semblance of probability.

The days of the weekly cycle have never been disturbed in any calendar changes which have been made. The Jewish race which has been strict in its observance of the seventh day Sabbath as long as history can recall, has never altered its observance of the Sabbath day on the seventh day of the week.

The proposed blank day plan in the Eastman calendar, as submitted in the resolution I am now discussing, is the first plan that ever suggested a change in the weekly cycle. This plan would make the Sabbath day as well as Sunday a migratory day through the weekly cycle each year, and would in reality make the holy days, which are now definitely fixed, merely fictitious days, robbed of their original religious significance.

This is not a notion limited to Jewish acceptance. The New Testament states that Jesus rose "upon the first day of the week," and that the day preceding His resurrection was "the Sabbath day according to the commandment." If the day before "the first day of the week" was "the Sabbath day according to the commandment" which God anciently delivered to His people and which the Jewish race has continuously observed, we have positive proof that the present seventh day of the week is the same

seventh day of the week it was at the time of Jesus, and as it was at the time the fourth commandment was included in the decalogue at Mount Sinai.

Now, the question may have arisen as to just what differences it will make whether the religious Sabbath is observed on one day of the week or another. In my opinion the measuring of time is not important in itself, but, because of what it involves in our lives.

To have any value a calendar must possess, above all things, the virtue of continuity.

The calendar which omits an occasional day or two, obviously, is worthless for the primary purpose for which a calendar was devised—a means of reckoning time accurately.

True, the omitted day is not literally lost. The sun rises and sets. The hours pass. We live that period.

Yet, if the calendar disregards it, it is a lost day in so far as that calendar is concerned. The very fact that such a day has passed and that we have failed to count it, throws all our chronological calculations, past and future, into confusion.

The variableness of Easter has long been recognized as an inconvenience, not only from the standpoint of the Christian churches, but as a commercial proposition as well.

What, then, shall we say of a "Wandering Sabbath," or a "Floating Lord's Day," not once a twelve-month, as in the case of Easter, but weekly throughout the year?

To be sure, the calendar "reformers" aim at the "stabilization" of a new Sunday, under their plan.

To create a real "day of worship," however, requires more than a law. We may set it down as a foregone conclusion that no mere act of Congress—or even an international convention—setting up an artificial Sunday, will be acceptable to literal-minded religionists.

Probably it would be acceptable enough to a considerable element of people who—without implying any

reflection upon them—are not so strict in their interpretation of rules of orthodoxy. These doubtless would feel that one day of rest and of worship in seven is satisfactory, without insisting upon any particular day in the week for its observance.

Just how public sentiment would be divided in so peculiar a situation is purely a matter of surmise. At any rate, it is a safe prediction that the number of dissenters from any system calling for a changeable Sabbath would be formidable. It might be a majority. It might be only a large minority, but even a minority would frustrate the so-called "reform."

General acquiescence to the plan is essential to its success—Christian acquiescence at least. The Jews never have abandoned Saturday as their holy day. The Seventh-day Adventists and the Seventh-day Baptists never have abandoned theirs. Friday has continued to be the Mohammedan day of worship throughout the centuries.

Under the new system, day succeeds day in normal sequence up to and including the 364th, but the 365th is a cipher—no day at all in the record of the "reformed" calendar. This 365th day, in its place at the end of the initial "reformed year," is, in fact, Sunday. We may safely assume that all strictly orthodox Christians would observe it accordingly. To these orthodox folk the following day would be Monday, but Sunday to those who have accepted the reformed method as their new rule. Yet they can hardly expect their fellow Christians, who have observed the preceding day, to observe a second Sabbath with them. The same confusion would prevail throughout the year. During the ensuing year the official Saturday would be Sunday to the orthodox; the next year Friday; the next Thursday, and so on, with additional complications resulting from the quadrennial mid-year "skip day."

The reformers contend that their plan's uniformity would be of untold commercial advantage. The business

statistician would be able to compare his figures for any desired month with the figures for any other month in any other year in the full certainty that the pair of months are identical in every respect.

This theory might be sound if the statistician could enforce the adoption of his reformed calendar upon those who, as a matter of religious conviction, may prefer to adhere to the holy day of their fathers—which, of course, he cannot do, no matter how effective he may make it in civil law. His records can scarcely be simplified by the addition to his problem of one or two or three weekly "floating Sundays."

Aside from the religious difficulty, it is an open question as to how well the public would be satisfied with the complete dislocation of the world chronology of all historic events—with the confusion of all dates, anniversaries, Independence Days and other occasions, past and future, beyond the power of anyone but an expert mathematician ever to determine exactly again.

A congressional resolution—already pending—requesting the President to take action toward an international conference! The conference itself, under the League of Nations' direction! The adoption of a definite plan and of a date for putting it into effect!

Such is the "reformers'" program.

And then, as expressed in a booklet, "Do We Need Calendar Reform?" nothing would remain but "the ratifying legislation in the various countries."

The pamphlet adds:

Such legislation, which would be of a very simple nature, would take care of the changes in the dates of holidays, the maturity dates of contracts, and other legal matters.

It does not look so simple to the League of Nations.

According to a report of the League's special committee of enquiry into the reform of the calendar:

No reform can be effected without the consent of all, or almost all, the important bodies interested, and these cover a wide range—religious, administrative, economic and scientific,

for example. It rests with public opinion to judge of the merits and the practicability of each of these groups of systems. The committee does not believe that it is as yet possible to obtain sufficiently definite statements of the final views of those interested.

Also "legal matters" are matters for the individual forty-eight states. It is exceedingly doubtful whether or not the Federal government has the power to commit them to such a revision of their own laws as would be necessitated by "calendar reform" along the lines proposed.

In short, the issue clearly becomes constitutional.

It is highly improbable that a mere congressional ratification of a "calendar reform" program, requiring so radical a readjustment as the one we are now being urged to adopt, would stand the Supreme Court test.

A constitutional amendment would seem imperative.

All kinds of arguments have been offered in favor of the 13-month calendar, running from the ridiculous to the sublime. We, who oppose the innovation and who claim that there is no great public demand for so serious and radical a transformation, could point out scores of reasons why the 13-month calendar would work to the disadvantage and harm of many individuals and many large groups.

I wonder whether the proponents of the 13-month plan realize that under their scheme public utility corporations would be compelled to have meters read and bills rendered 13 times a year instead of 12. This is no small matter for it would add 8 per cent to the cost of this single item and every business man knows that 8 per cent is a margin not to be disregarded! Do they realize the mounting cost of printing magazines and the additional costs of advertisements which would inevitably result because of the necessity of publishing monthly magazines 13 times a year instead of 12? This one item alone would mean millions of dollars of added expense to the general public, and yet the defenders of the 13-month

plan claim the 13-month calendar would bring economy into business.

Rent payers would note the disadvantage of the new plan very quickly, for they would have to pay the cost of their homes or apartments thirteen times a year. Of course, the proponents of the plan claim salaries would be adjusted accordingly, but I know very well that salaries are slow to follow when the cost of living mounts. Here too, there will be the added cost of making 13 rent collections instead of 12.

Has it been brought to the attention of those who favor the change of our calendar that if their plan were accepted it would become necessary to change every text-book, every encyclopedia, every record, and all histories? The cost would run to hundreds of millions of dollars. Where, I ask, is the corresponding economy that the advocates of this plan boast about?

We must also bear in mind the question of long-term leases and contracts that are in existence at the present time. You will agree with me, if you consider this matter from a legal standpoint, that it taxes the imagination to conceive how tremendous the amount of litigation will be when these leases and contracts are challenged because of the change of calendar dates.

Real estate leases would be invalidated on a wholesale scale. Throughout the country generally a form of lease known as "ground lease," or "99-year lease," is very prevalent. In practically all of these instruments, the rental is reserved on a monthly payment basis, and the entire amount due for the full period of the lease lumped under a direct promise of the lessee to pay that amount, but in monthly installments.

The courts would indeed be confronted with a herculean task in construing these leases. If the courts hold that the leases were executed while the old calendar was in force and with it in mind, the new calendar will be entirely disregarded so far as the terms of the lease are concerned.

Under this construction the parties to the lease and their successors will be required to keep alive for nearly a hundred years an anniversary date of the old calendar so as to make payments in accordance therewith. The practical effect, therefore, is to nullify the new calendar as a working basis for time computation.

On the other hand, if the courts should hold that these leases must be made to conform to the legislative enactment establishing the new calendar, then a patent ambiguity will arise upon the faces of the leases for the total amount of rent so calculated on a 12-month-to-the-year basis, and the addition of an extra month will make two clauses of the lease utterly irreconcilable.

If it is held that the provision requiring a definite amount to be paid each month prevails over the total amount stated in the lease, then it must follow that the law creating the new calendar is unconstitutional for it violates the obligation of contract and imposes upon the lessee a higher rental than he had agreed to pay.

Employment contracts, and in fact all contracts under which compensation or payment is now fixed on a monthly basis, would be seriously jeopardized by the new calendar and their validity brought into serious question.

The proponents of the Eastman calendar argue that it has economic value through the stabilization of monthly payments. But this so-called advantage is theoretical rather than actual. Suppose February is a short month and March a long one. Do not the two equalize each other?

Then, too, there are the trusts and investments and foundations which have been tied up legally with stipulated dates and length of terms that would become too involved for unraveling. I could speak to you for hours about the legal complications and the possible litigation which would follow, were the 13-month calendar adopted.

If the employer must pay the same wage for 28 days in February that he does for 31 days in March, then it is

equally true that he may lease his land for the same amount for the short month as for the long one. Throughout the year the inequality in the months' length equalizes itself, and no one is the loser.

On the other hand, very serious economic consequences would result from adoption of the new calendar. Employers would be quick to cut wages of persons employed on a monthly basis, arguing that the new wage should be not more than twelve-thirteenths of the old, but landlords would be very slow to make a similar reduction in rent, and the monthly wage earner would be indeed between two millstones, with a lessened income and an increased living expense. Other and far-reaching economic upheavals would result.

Furthermore, suppose that some or all the European countries do not adopt the new calendar. Picture the confusion which would result in attempting to reconcile June 17 under the old calendar abroad with June 28 in the United States, bearing in mind that there would be no definite number of days between the two dates but that they would vary for every month in the year and for every day in every month.

Again, let me ask why the calendar must needs receive this drastic overhauling at this time? If some reform is needed, why not direct the attention of the Congress to our obsolete method of weights and measures, which could be replaced by the metric system, now in almost universal use abroad, and which would greatly aid our manufacturers in supplying products to countries where that system is in vogue? There would be a change fraught with no sentimental disadvantages and which would result in great economic good. In any event it seems certain that the calendar which has stood in its present form for over one hundred and fifty years and in substantially its present form for nearly five hundred years should not be torn apart to achieve some doubtful advantage.

I mentioned before that the proposed calendar would cause great confusion and involve much unhappiness by

eliminating sacred and personal anniversaries. The birthday anniversary of at least 10,328,060 American citizens would be entirely lost. This figure is derived by assuming the population of the United States to be 130,000,000, of which number approximately 356,140 have their birthday anniversaries on each day of the calendar year. To lop off 29 of these calendar days—that is, the 29th to the 31st of every month—would deprive more than 10,000,000 Americans of their birthday anniversaries.

A corresponding number of our citizens would lose other treasured days, such as wedding anniversaries and the anniversaries of the death of loved ones.

Every other important date, including all our holidays, would be rendered inaccurate, because, for example, June 28 on the new calendar is not an anniversary of June 28 on the old calendar, but the anniversary of a date some 10 or 11 days earlier.

The above reasons, which may be generally classed as sentimental, are, nevertheless, of tremendous importance when it is remembered how powerful an influence sentiment is in the lives of our people. To tear away from these millions the influence which they have cherished and observed through many generations would be a highly dangerous test of the strength of our social fabric.

How interesting is the fact that when the committee sent thousands of inquiries to persons and organizations throughout the world, the replies showed that although there was some interest in the calendar reform, nevertheless, public opinion was not prepared for a serious change. In fact, many letters were received which displayed little knowledge of the different changes proposed or of universal application. It has been noticed that up to now most of the propaganda has been by organizations interested in a particular scheme to the exclusion of all others. Just as the Eastman organization is backing the

13-month plan of 28 days each, so another powerful group is backing the 12-month plan of alternating 30 and 31 day months. I call your attention to the fact that both of these leading plans for calendar reform include provision for a blank day.

The Jewish calendar during the second commonwealth up to the fourth century is that of the New Testament. The festival of Passover which Jesus celebrated and the Pentecost for whose celebration Paul went to Jerusalem, were according to this calendar. The early Christians, in the first three centuries of the present era, kept the festivals according to the same calendar. Passover was observed after the vernal equinox on the full moon, and Pentecost, on the fiftieth day after Passover.

The early Christians, who accepted Sunday as the day of rest instead of Saturday, did not change the order of the days of the week. They merely changed the Sabbath from the seventh day to the first day of the week, or Sunday. Thus Justin Martyr: "On the first day of the week God made the world, and Jesus Christ, our Saviour, on the same day rose from the dead." In the Apostolic Age some Christians observed both the Jewish Sabbath and Sunday, but the order of the week was kept intact by the Jews as well as by the Christians from time immemorial.

I believe I have given sufficient evidence to prove that never before in calendar changes has there been any interruption in the succession of the days of the week. Perhaps I have gone into too great detail on that angle, but I am under the impression that most people are erroneously informed in this regard.

At the hearings of the Committee on Foreign Affairs the gentlemen who advocated the adoption of the new calendar were very much annoyed by our opposition and claimed that they could not understand our attitude on the question of a blank day. They seemed to feel that there was nothing unusual about skipping days and they

assumed an attitude that we were narrow in our views when we opposed the zero day. There were two arguments in particular which they stressed in trying to tear down our defense of the uninterrupted succession of seven days of the week.

1. The Sabbath cannot be kept and has never been kept at the proper time because we live on a round world.

2. Why should you oppose the institution of a blank day when that is just what Moses did in order to adjust the calendar of his time?

Mr. Speaker, it was unusual to hear learned scientists speaking before the committee of losing or gaining a day in travel around the world. They set forth the contention in varied form, and at some length, that the Sabbath commandment cannot really be kept under the present calendar, if a person crosses the date line.

One savant portrayed the situation that would confront two ministers who might journey in opposite directions around the world to attend a church conference at Manila. He pictured the dilemma that he believed would confront them in adjusting their reckoning of days. Another read a long paper entitled "The Wandering Sabbath," in which he brought out the argument that the Sabbath could not be kept at the same identical moment of time in different parts of the world, and therefore why insist so rigorously on maintaining its identity?

A third scientist summed up the case in a nutshell when he declared: "I would like to throw out this thought with regard to the blank day. Why not leave it a blank day and forget it? Everybody that crosses the international date line either adds or loses a day."

Because this "round-world" argument was employed by the calendar proponents at the hearings and because this argument, if allowed to remain unanswered, apparently nullifies the whole protest over the seventh day, we believe it should be examined in some detail.

We may fittingly introduce our examination of the question with an inquiry as to what the commandment

says is the day of the Sabbath. We read that "the seventh day is the Sabbath." The "seventh day" of what? Of the year? Of the month? No; the seventh day of the week. This point is as obvious as when the Sunday observer says, "I keep the first day," meaning the first day of the week. Of course, we are aware that some may possibly quibble over this understanding of the commandment. But the Biblical and historical value of the phrases "first day" and "seventh day," as signifying the first and seventh days of the week, is so overwhelming that we may properly ignore any captious objections. In other words, the man who wishes to obey most literally the Sabbath injunction needs only to make certain which is the seventh day of the week.

With this basic proposition in mind, let us consider now the admissions of the scientists themselves. They testified that they had no knowledge of any changes in calendars throughout the centuries that had in any way affected the reckoning of the days of the week. From this we conclude that right here in Washington, D.C., we can know with confidence the order of the days. In other words, we can know when the seventh day of the week arrives.

But is this true only of Washington? No. Have they kept the true cycle of the weeks out in San Francisco? Most certainly. And if we should travel far across the Pacific and over the Trans-Siberian Railway into Europe, would we find the people there keeping the true cycle of the week unbroken through the centuries? Most assuredly. In short, no matter where we might go, we would find that the people know the weekly cycle, and therefore know when the seventh day of the week comes.

We can travel to any continent, without knowledge of astronomy or meridians and when we reach our destination, we simply inquire of the inhabitants of that place, and they can tell us what day of the week it is.

The fact therefore is clearly established, that the order of the days of the week is known in different parts

of the world, and that therefore the seventh day can be known and kept on every part of the globe. The apparent contradiction between this proven fact and the phenomenon of losing or gaining a day in travel, grows out of a double definition of words. Obviously, the difficulty in this particular case revolves around the word "day." We agree with the definition of the scientists that a day is the period of time that elapses during one revolution of the earth upon its axis. The Bible writers describe the day as the period from evening to evening, that is, from sunset to sunset. And what causes the sun to rise and set?—The rotation of the earth. There is complete agreement in definition of terms. In fact, the day is one of the most rigidly fixed units of time.

When we speak of losing or gaining a day in travel, we are really giving a new definition of the word. We are defining days, not in terms of the journey of the earth on its axis, but rather in terms of the journey of human beings around the earth, which is quite a different thing. The trouble, of course, grows out of the fact that the traveler moves from the given point at which he began to measure the day. If days be defined in terms of man's journey around the earth, without making allowance for his changing point of measurement, then the most unbelievable possibilities arise.

I believe I have answered the question which Doctor Marvin and his associates put before me at the meetings of the Foreign Affairs Committee. "Can the Sabbath be kept at the proper time on this round world?" I am convinced that it can and I feel that it has been properly observed and I do not propose to do anything which will interfere with the proper observance of either the seventh day Sabbath or the Lord's day Sabbath, according to the wishes of the individual.

I come now to the second of the very significant questions which Doctor Marvin asked of me, when he tried to break down our case in defense of the preservation of the

seven-day week, as we have it now. Doctor Marvin asked: "Why should you oppose the institution of a blank day when that is just what Moses did in order to adjust the calendar in his own time?"

Mr. Speaker, this question, too, would have seemed to me amazing and unusual, coming from a man of science, but I was familiar with the idea which he expressed because I had already studied that angle in my investigation of the whole calendar problem. When I heard these scientists speak of "Moses and his extra Sabbath" I knew that they referred to what was rather fully explained in the complete pamphlet entitled, *Moses, the Greatest of Calendar Reformers*, written by my questioner and critic in conjunction with Moses B. Cotsworth, of whom I spoke before. The booklet was published by the International Fixed Calendar League, which states its object in these words:

It is the purpose of this pamphlet, first, to show how easily and completely the perpetual Mosaic calendar of the exodus can be reconstructed; and second, to show how very small and unimportant are the differences between it and the proposed 13-month calendar. * * *

As soon as these great truths of modern research become known and understood, conscientious believers in Moses and the Scriptures need not oppose on any grounds, religious or otherwise, the suggested reform of the present unscientific, inconvenient, and unscriptural modern calendars. Rather should the restoration of what is best in the fundamental Scriptural calendar declared through Moses, be welcomed by all (p. 5).

Had that Mosaic calendar been retained, all generations of Jews, Christians, and Mohammedans could have perpetually observed in unity all the commands of Jehovah, in complete yearly rounds of exact anniversary commemorations for all the great religious events, during their ancient united and later separate histories. * * *

Therefore all nations of the world are to be invited by international conference to join in universal observance of the same six days of work, and especially of the same seventh day of rest on fixed yearly dates, as Moses prescribed (pp. 2, 3).

The questions are fundamental to the case, and I must bring to your attention what I believe is the actual explanation of the Mosaic calendar.

I shall not contest the explanation in this pamphlet concerning the fact that Moses, at the time of the exodus, established a solar calendar of 365 days. While this question is debatable, the results are not vital to the defense of my side. Neither shall I delay my argument by replying to the statement that "the Sabbath was not the seventh day of the week as we understand it to-day, but simply the seventh day after six days of labor," because the pamphlet brings no proof to bear on this point and it is simply a shot in the air.

The claim put forth in the pamphlet of Marvin and Cotsworth is that the fifth day of the third Hebrew month, Sivan, while reckoned as a day of the month, was not counted as a day of the week. This was the day of Pentecost. It was an "extra Sabbath," similar to the "blank day" of the present proposed calendar, according to their theory. In other words, although the 4th of Sivan was Sabbath, the 5th was not "Sunday," but simply a continuation of the Sabbath of the fourth—a blank day as far as the reckoning of the days of the week is concerned. Now 365 days equal 52 weeks plus 1 day. But this extra day being eliminated from the count of the weeks made the year really consist of an exact number of weeks. This caused the next year always to begin on the same day of the week as the year before. And, as a result the days of the week always bore the same relationship to the days of the month. Marvin and Cotsworth insist that Moses originated this blank-day principle, and they are simply striving to restore it by proposing that the last Saturday in December be followed by a blank day.

The first point that the authors attempted to make is that the Mosaic calendar was solar, which proves nothing at all.

They claim it proves that it possesses perpetual qualities on that account, but we can point to our present calendar, which is also solar, and show the opposite.

However, through the wording of the pamphlet, the reader is led to believe that since the Mosaic calendar was really solar he must be ready to accept everything else stated in the pamphlet! Not only are the arguments of the authors misleading, but even the evidence of outside witnesses is presented to give the impression that they are supporting all the arguments of the pamphlet, whereas some of the authorities quoted back only certain elements.

For instance, Dr. Julian Morgenstern, president of Hebrew Union College, and Prof. W. L. Heidel, famous Semitic scholar, are quoted in support of the solar nature of the ancient Jewish calendar, but they are mentioned together with other writers who support the "blank-day principle instituted by Moses" theory. I am very happy to bring to your notice some correspondence of my friend Mr. F. D. Nichol, of Takoma Park, D. C., with these authorities on the Hebrew calendar. Mr. Nichol wrote in inquiry:

The writers of this pamphlet quote you as one of the authorities in support of the major premise of their thesis, because of your contribution on the calendar of ancient Israel. Your name and the quotations from your work, placed as they are in this pamphlet under the general head, "Some Authorities We Quote," lead the general reader to the impression that your researches warrant the ultimate conclusions to which the writers of the pamphlet come. I wish to inquire whether I would be correct in obtaining this impression. In other words, have your researches led you to believe, as do the writers of this pamphlet, that Moses devised a perpetual calendar that placed the Sabbath in a fixed relationship to the month, necessitating the existence each year of an extra Sabbath?

The reply of Doctor Heidel contained one sentence which you will agree summarizes his whole attitude:

"Messrs. Marvin and Cotsworth have quite absolutely misrepresented my views."

Doctor Morgenstern's reply goes into the whole question quite thoroughly and I therefore bring it to your attention in toto:

THE HEBREW UNION COLLEGE,
OFFICE OF THE PRESIDENT,
Cincinnati, Ohio, January 30, 1920.

MY DEAR MR. NICHOL: Replying to yours of the 24th instant, I am very happy to be able to assure you that Messrs. Marvin and Cotsworth have used my name in their propaganda for the new calendar entirely without my authorization and knowledge, and that the quotations from my article on The Three Calendars of Ancient Israel apparently altogether misrepresent the facts with regard to the history of the calendar of ancient Israel which I have been able to establish. * * *

Certainly I did not advance the thesis "that the ancient Jews lived under a fixed or perpetual calendar devised by Moses," which caused the Sabbath always to recur on the same days of the month each year, instead of being an institution related only to the week, as we have it! On the contrary I showed in this article that, at various times in the history of ancient Israel, different calendar systems were employed, that up to approximately 621 B. C. the old Canaanitish calendar, a purely solar calendar, taking cognizance of the days of the solar equinoxes, was employed in ancient Israel. Then about from about 621 to a time somewhat later than 400 B. C. another calendar, apparently a lunisolar calendar, was employed, based apparently largely upon some Babylonian model. It apparently took no cognizance whatever of the Sabbath, which continued a weekly institution, falling upon any date in the month, regardless of any considerations other than that the Sabbath came every seventh day. At some time after 400 B. C. the calendar at present employed by the Jewish Church, also based upon Babylonian antecedents, was instituted. This also makes no effort to coordinate the Sabbath with any particular days or dates in the month.

I showed likewise that at some time, probably in the third century B. C., an attempt was made to introduce into ancient Israel a calendar similar to that which Mr. Cotsworth is championing, with the year divided into 13 months of 28 days, and with particular attention given to the coincidence of the Sabbath with a particular date in each month, probably the seventh, fourteenth, twenty-first, and twenty-eighth days. This calendar is employed as the basis of reckoning in the books of Jubilees and Enoch, two pseudepigraphical writings which were never regarded as authoritative. This calendar, however, was never recognized as official by Judaism and never came into actual use. Furthermore, Moses himself had no connection whatsoever with any of these calendars. It is clear therefore, that the above-named gentlemen have either not troubled to read my article carefully, or, if they did, have not understood it or have not wanted to understand it. Certainly, the facts which

they state and the conclusions which they drew from them are altogether unwarranted by my article.

I trust that this gives you the information which you desire.

Very sincerely yours,

JULIAN MORGENSTERN, *President.*

Need I say more, Mr. Speaker, about the authorities upon which Marvin and Cotsworth rested their case? It seems to me that we have here sufficient evidence to convince anyone that there is absolutely no basis to the theory propounded. I can say to you most emphatically that whatever adjustments, changes and variations have occurred in the Jewish calendar from the earliest period down, the one central feature always was to maintain the week of seven days without any interruption whatsoever. Moses was not the author of the blank day principle, and much as I believe that Moses was a great prophet and a wise man, I am not convinced that he could foresee what some scientific authorities of the nineteenth and twentieth centuries might invent, namely, a "zero day"!

The strongest link in their attempt at proving that Moses skipped a day in order to make the Pentecost come on the Sabbath Day is a text which they quote from our Bible. Leviticus xxiii: 15, 16, 21:

Ye shall count unto you from the morrow after the [Pass-over] Sabbath [the fifteenth of the first month, Abib], from the day that ye brought the sheaf of the wave offering; seven Sabbaths shall there be complete: even unto the morrow after the seventh Sabbath shall ye number fifty days.

Ye shall make proclamation on the selfsame day [that is, on the fiftieth day, Pentecost]; there shall be a holy convocation unto you; ye shall do no servile work.

The calendar authors understand the term "Sabbath" in this passage to refer always to Sabbath days. Thus they claim that they are placing two Sabbath days together, because "the morrow after the Sabbath" was to be a Sabbath also—Pentecost—an entirely impossible theory.

If you desire to see the Jewish normal interpretation of these verses based on the authorities in past ages and

our own time, I refer you to the translation of the Bible issued by the Jewish Publication Society of America :

And ye shall count unto you from the morrow after the day of rest [Sabbath, in Hebrew] from the day that you brought the sheaf of the waving seven weeks shall there be complete; even unto the morrow after the seventh week shall ye number fifty days; and ye shall present a new meal of offering unto the Lord.

This represents a very old controversy. According to the Jewish tradition, the Biblical commandment to offer the omer (measure of barley) "on the morrow after the Sabbath" was interpreted by the rabbis to refer to Passover, so that it meant that the seven weeks should begin to be counted from the first day after the beginning of Passover. There was an early interpretation that it should begin on the first day after the first Sabbath during the Passover, which would make Pentecost always fall on Sunday. This sectarian view has completely disappeared.

But what I would point out to you is that even this sectarian view in no way favors the idea of a wandering Sabbath. It rather emphasizes the word "Sabbath" so that it could not be used even for another holiday.

Every scholar of the Bible that I know of has corroborated this statement and I feel certain that it destroys entirely the false claim that Moses skipped a day and changed the regular succession of seven days of the week.

One bit of evidence on this double-Sabbath argument remains to be answered. After declaring that in ancient times the Jews kept such a double Sabbath, the authors add this persuasive claim!

The significant fact remains, that through traditional usage the Jews generally continue to observe two consecutive days at the feast of Pentecost.

In reply we inquire: If at the present time a devout Jew can observe two days at Pentecost without breaking the cycle of the week, why could he not have done so in ancient days?

The facts are that when the Jews were dispersed from Palestine, they began the custom of keeping two days in connection with each annual Sabbath (festival), expecting Atonement Day, for fear that in their reckoning of time they might have made an error of a day in determining the beginning of a month. (The explanation for the failure to observe the two days in connection with Atonement Day is that it would have necessitated 48 hours of complete fast.) By the time a calendar had been agreed upon by the "Dispersed Jews" throughout the world, during the fourth century A. D.—the custom of celebrating two days for each feast had become so firmly established that it was retained by most Jews. This second day that is kept in connection with each of the annual feasts is described in Hebrew by a phrase which, translated literally, means: "The second day of the holiday observed in lands of exile." The custom has never been followed by the Jews in Palestine, for the simple reason that they had no cause to be uncertain over the reckoning—they were not in exile.

Therefore, for the purposes the authors intended, "the significant fact" of the double Sabbath now kept by Jews in various lands, has no significance. Instead it has a significance on our side of the argument. The very fact that the reckoning of months presented such difficulties when the Jews moved from Palestine, reveals that absolute confusion into which the Sabbath institution would have been thrown, if it had been related to the months, as this unwarranted theory contends. Only by being wholly free of any calendar could the Sabbath be kept in various lands.

We discover, therefore, from an examination of Jewish history and from a study of the different senses in which the word "Sabbath" may properly be understood, that the arguments built upon Leviticus xxiii 15, 16, 21, have no foundation.

I believe I have disposed of every possible argument which our opponents brought up before the hearings of

the Foreign Affairs Committee of Congress. I have even taken up matters which the proponents of the 13-month plan have written about in material not submitted to our committee. My case is complete and I find that there are just a few loose threads that I need gather together to have placed the whole proposition before you from a historic, scientific and economic viewpoint, not to mention the all-important religious sentiment involved.

There was one interesting point brought out at our hearings before the Foreign Affairs Committee which I do not believe has been properly emphasized. We heard many representatives of leading business firms in the country expounding the advantages of the 13-month plan. They spoke from experience, for some of them had been using this scheme for 10, 15 or 20 years. We were given to understand that business efficiency was increased tremendously and that for their particular concern the adoption of the 13-month plan meant a great step forward. In almost every case I questioned the witnesses about the practicability of this 13-month plan in conjunction with the present calendar, and I was pleased to learn that after a short period of adjustment all employees were able to conduct their affairs efficiently, although they had a different calendar for the management of the business.

In other words, I learned—and I believe that my colleagues in the committee were also convinced—that it is entirely possible to reap the advantages of this 13-month calendar without upsetting the whole world. My claim therefore is that those firms which see real benefits in the adoption of this scheme should do so. No one will interfere with them.

I sincerely believe that every business man can utilize the 13-month plan without making it necessary to have Congress or state legislatures or the League of Nations foist this new scheme on an unwilling and unprepared world.

Touching on the fact that the resolution before our committee was introduced to ratify the action of our delegates at the Habana conference, may I quote one of the ranking members of our committee in a statement he made to our committee on Friday, December 21, 1928. I quote my colleague, HAMILTON FISH, of New York, verbatim:

I have heard it stated here both by the introducer and by Mr. Eastman, that one of the main bases of this resolution was the fact that it had been endorsed by the Pan American Conference. I had the pleasure last night to dine at the same time with Mr. Hughes and had the opportunity to talk with him after dinner. Mr. Hughes told me that Mr. Eastman's representatives came to him at the Pan American Conference and wanted him to introduce this resolution. Mr. Hughes told me that he told them that he had other troubles and matters to discuss and he did not even know that the Pan American Conference had passed this resolution.

I mention this because of the claim by some advocates of the plan that it is the duty of Congress to ratify the action of the Pan American Conference. There is no such "duty" for us. We are free to consider this on its merits.

PERPETUAL CALENDAR *

The proposed plan seems to me to have two very serious disadvantages.

In the first place it differs so radically from the present calendar that it is very doubtful whether a sufficiently large number of the important nations of the world could be induced to consent to its adoption.

In the second place, in this proposed calendar the unit, the year, is divided into a prime number (13) of parts. To my mind this is a fatal defect. I know of no table of weights or measures now in use in which this is done.

Every mathematician knows that twelve would be a

* From article by A. L. Candy, University of Nebraska. *Science*. 61: 286-7. March 13, 1925.

much better number for the radix of our system of natural numbers than ten. This is because twelve is divisible by 2, 3, 4 and 6, whereas ten is divisible by only 2 and 5. A system using thirteen for a radix would be an abomination for very obvious reasons. For the same reasons it seems to me that whenever and however the calendar is revised, twelve should be retained as the number of months in the year.

A large number of business obligations are made to run for three, six and nine months. Interest on long time notes and bonds as well as dividends on most stocks are made payable either quarterly or semi-annually. A few companies pay dividends as often as six times a year. For simple convenience in conducting this enormous line of business, it is vastly more desirable to have the number of months divisible by 2, 4 and 6, rather than to have a prime number.

Furthermore, it is not necessary to make any radical change in the calendar now in use in order to secure a perpetual calendar. The simple plan herewith suggested involves only slight changes. One day is taken from August, and added to February; one day is taken from May and added to April; and the last day of December is set apart for "New Year's day" the same as in the plan referred to above. Likewise the "Midsummer Holiday." This makes the year consist of four equal parts with three months or 91 days in each quarter. The first month in each of these four quarters, *viz.*, January, April, July and October, has 31 days, and the first day of each of these months will always fall on Monday; the second month of each quarter has 30 days with the first always on Thursday; and the third month in each quarter has 30 days with the first on Saturday. Thus the first day of a month would never fall on Sunday. Also an obligation running for any multiple of three months would always fall due on the same day of the week as that on which it was made.

Such a calendar as this could be put into effect some year when the first day of January falls on Monday without causing any appreciable disturbance in the larger affairs of the world. No important anniversaries in this country would be changed. A comparatively small number of birthdays would be dislocated, but this would not be serious.

