Three drafts of 'Considerations about rectifying the Iulian Kalendar' and an unrelated alchemical recipe

Author: Isaac Newton

Source: Yahuda Ms. 24a, National Library of Israel, Jerusalem, Israel

Published online: November 2009

<1r>

Considerations about rectifying the Iulian Kalendar

Times were at first recconed by returns of night & day new & full moons winter & summer. Whence the oldest years consisted of Lunar months, & where 12 months were manifestly too short, a thirteenth was added to make up the year. These months began not at the conjunction of the Luminaries but at the first appearance of the new moon which used to be between 18 & 42 hours after if the sky was clear. And because the new moon appeared at sunset the days of the Lunar months began in the evening

The just length of a summer & winter is the return of the Sun to the same Equinox, that is 365 days & six hours, wanting about $11\frac{1}{4}$ minutes. And there being something more then 12 Moons in a summer & winter, & something more then $29\frac{1}{2}$ days in a Moon; the first ages took the next round numbers of 12 months to a year & 30 days to a lunar month & so made the civil year to consist of 360 days: whence came the division of a circle into 360 degrees.

But this year being too short by five days & almost six hours, the Egyptians added 5 days to the end of it, & so made the year to consist of 12 full lunar months & 5 days or 365 days. And this year was in use in Egypt at least from the days of Amenophes the grandson of Sesostris, & seems to have been received in the Assyrian & Persian Monarchies.

At length Iulius Cæsar in lieu of the six hours added a day once in four years to the year of 365 days & by adapting this measure to the Roman year made a new year consisting of 12 months of various lengths without any good order or uniformity or agreement of the months with the stay of the sun in the 12 signs; & the Senate in honour of Augustus took a day from February & added it to August: & so Cæsar & the Senate together left us a year more irregular and intricate then the Egyptian, but better on this account that the same months keep better to the same seasons of the year.

And because this year is too long by about $11\frac{1}{4}$ minutes, that is, by a day in 128 years, Pope Greg. XIII about 118 years ago ordeined that three days be taken from it in 400 years by omitting the 29^{th} of February in the end of every hundred years excepting at the end of every four hundred. And to bring the Equinox to the 21^{th} of March on which it fell in the time of the Council of Nice he took 10 days from this year whence arose the difference of 10 days between the old & new stiles in the Century which is now expiring.

Had he taken away 4 days in every 500 years & reduced the Equinox to the 23 or 24th of March on which it fell in the age of Christ he would have made a better reformation.

And had Iulius Cæsar divided the year into four equal quarters according to the four cardinal periods of the solstices & mean equinoxes & then divided every quarter into three months as nearly equal as he could make them, which he might have done by making the months of 30 & 31 days alternately & the last month of 31 days in leap years & 30 days in ordinary years, so that in the Leap year all the odd months should have 30 days & all the eaven 31, he would have made the Roman year of a regular & convenient form & well adapted to the motion of the sun & periods of summer & winter. And had he ordeined that at the end of every 100 years the last day of the leap year should be omitted excepting at the end of every 500 years this year might have been lasting as well as regular & just.

<1v>

But such a year is not to be set on foot unless in an universal Monarchy. The question is now whether the old stile should be retained in conformity with antiquity or the new received in conformity with the nations abroad. Which ought to be done I undertake not to determin but if the new stile be resolved upon I beleive it will be best to receive it without the Gregorian Kalendar by an Act of Parliament to this purpose

- 1 For avoyding the difference of recconing by the new & old stile which is troublesome in commerce between this & other nations, [The month of May – which shall be in the year of our Lord 1700 shall have but 20 days & the month of Iune shall begin upon the day next after the 20^{th} day of May] without any alteration in | it may be which follow next after the enacted that in the yeare of our Lord the 11 days of the Month of without any alteration in the days of the week or in the form of the shall immediately succeed the day of Iulian Kalendar [or days of the week [or Golden number] | excepting that the numbers for determining the new & full moons may be omitted. And this Accompt or Stile to be thence forward received used & understood in all his Majestys Dominions in all Dates & recconings of time for keeping of set Festivals, Fairs, Birthdays & all other anniversary days & for performance of all covenants duties & services & payment of interest rents salaries pensions wages Legacies & all other debts & dues whatsoever, with an abatement of interest rent salary pension or wages for & proportional unto eleven | allowance of 11 days in the first payment of any interest rent salary pension or wages which shall by vertue of any covenant grant act or deed had made or done before the said 20th day of May, become due on or after the first day of Iune above mentioned, that is to say with an abatement of the hundredth part of three years interest rent salary pension or wages.
- 2. Provided nevertheless that all debts which ought to be paid & all things which ought to be done on any of the eleven days of May which were to succeed the said 20th day & are hereby abolished shall be paid & done on the same day or days within the compass of the said eleven days which next succeed the said day of as if this Act had never been made.
- 3. For avoyding the double recconing by the civil & ecclesiastical years between the last day of December & the 25th day of March, the Ecclesiastical year shall in all his Majestys Dominions, from & after the said 20th day of May begin on the first day of Ianuary for ever & be no longer dated from the 25th day of March
- 4 And that the beginning of the year may not recede from but rather approach nearer to the winter solstice & the solstices, equinoxes & set Festivals approach nearer to the days of the year on which they fell in the age of the Apostles, it may be further enacted that the 29th of February be omitted in the end of every century of years, that is, in the years of our Lord 1800, 1900, 2000, 2100 & so on perpetually untill the year of our Lord 3000.
- 5 And because the Festival of Easter is appointed to be kept on the sunday next after the full Moon which falls upon or next after the day of the Vernal Equinox, let the one & twentieth day of March in computing the time of Easter be taken for the day of the Vernal Equinox until the year of our Lord 2000, & thenceforward

let the 22^{th} day of March in the compu <2r> {ta}tion of Easter be reputed & taken for the Vernal Equinox untill the year of our Lord 2500, & thenceforward the 23^{th} untill the year 3000

6 And whereas the Festival of Easter ought to fall on the Lords day next after the 14th day of the first Iudaic month & the Months of the Iudaic year are Lunar: for computing the time of Easter & the other moveable festivals it may be further enacted that the Lunar months used in that computation shall consist of 30 & 29 days alternately in three periods or cycles of Months perpetually to succeed one another, each of which periods shall consist of an odd number of months, the two first of 17 & the third of 15 & the first & last month of each period shall contein 30 days, so that all three periods summed up together shall make a larger period of 49 lunar months conteining 1447 days or four solar years wanting a fortnight. And the period of 15 months once in every 1000 years that is to say next ensuing the years of our Lord 2000, 3000, 4000, 5000 &c shall have eight months deducted from it, & shall consist of the seven remaining months & no more: And the first day of Ianuary which shall be in the year of our Lord 1701 shall be the day of the month of the great cycle of 49 months: and the Festival of Easter shall be kept on the Lords day next after the 14th day of that Lunar month whose 14th day falls upon or next after the day of the Vernal equinox according to the meaning of this Act.

<2v>

[Editorial Note 1]

Nam terra non prius humiditate omni privatur quam albescit et in pulverem convertitur.

Si terram – id semper separandum est.

Lullius ad extractionem animarum utitur digestionibus quandoque horarum 24 quandoque dierum duorum vel trium et in destillationibus subsequentibus quibus anima extrahitur et corpus calcinatur utitur tribus — inceratione medicinæ servatur. Præstat vero Oleum incerativum in idem Recipiens — triviale videatur

Præcedentia omnia fieri debent cum igne valde lento – commodo privantur. In calcinatione materiæ nostræ porositas ejus conservari debet – per calcinationem [non vulgarem] sed nostram – mansura est. Caveas igitur (ut supra dictum est) ne materia vitrescat neve anima ascendat sine spiritu, aut spiritus igne nimio destilletur.

Terra et aqua per putrefactionem purificantur modo terra multoties calcinetur dum est separata ab humido & humidum suum multoties destilletur et sublimetur a terra sua. Sic ambo purificantur: tamdiu enim urgendi sunt et fatigandi calcinationibus destillationibus et putrefactionibus donec tandem ad supremam puritatem et substantiæ nitorem deveniant. Faber Panchym. l 4. c. 14.

Ignis in principio destillationis debet esse lenis in medio temperatus in fine vero fortissimus ut igneæ illæ et aereæ exhalationes quæ in visceribus terræ nostræ continentur penitus exhauriantur et foras exeant a corpore suo & transeant in spatium amplum recipientis ibique cum reliqua aqua jam transacta fiant aqua. – Spiritu et anima sic abstractis remanet corpus durum et forte et valde siccum in fundo vasis destillatorij: quod quidem accipiendum est et terendum ut in pulverem tenuem reducatur et novo vasi vitreo destillatorio includendum et iterum fortissima destillatione urgendum et exagitandum est ut ultimos exhalet spiritus et per viginti quatuor horas urgendum est continuo et fortissimo igne quo poteris. lavendum tamen ne materia adeo fortissimo agitetur et urgeatur igne ut vitrescat: periret enim et destrueretur hæc materia nec amplius suos spiritus et animas exhalatas ebibere posset: quod tamen est conservandum in hac materia scilicet desiderium et fames ebibendi et comedendi suos spiritus et animas fugaces: quod fit modo ne materia vitrescat. Calcinanda solum est et valde desiccanda ut spiritus intimi qui intime adhærent corpori suo forti illa calcinatione exhalent et in vas recipiens transeant. – Hanc corporis nostri calcinationem et desiccationem multoties esse repetendam censent omnes Philosophi per hæc verba multis in locis repetita Tere, tere, tere &c. – Calcinatio autem nostra non fit solo igne ut calcinatio vulgaris sed etiam cum aqua nostra quæ ignis dicitur. Cum eo potissimum igne calcinatur corpus nostrum et in pulverem albissimum redigitur, quod tunc temporis censetur calcinatum et non antea. – Nam calcinatio nostra non tantum est desiccatio fortis et arida sed est spirituosæ et volatilis

substantiæ corporis nostri exhalatio et fixæ ejusdem substantiæ corporis nostri desiccatio cum conservatione humiditatis radicalis fixæ et permanentis quæ exhalari non debet sed permanere et stare in rigore et vigore ipsius ignis. Et hanc corporis nostri siccitatem igneam calcinatione nostra quærimus et efflagitamus puram et nitidam quia hæc sola tingit et maturat et perficit. Ad hanc sicitatem <2r> puram et nitidam pervenimus nostra sola calcinatione et solutione. Non una tantum operatione sed ambabus simul quia non possumus calcinare nisi solvamus nec solvere nisi calcinamus – Corpus autem nostrum in aqua sua lignatum et fusum perquam optimè conjungi cum aqua sua non potest ut perfectissimè attenuentur et aqua fiat nisi inhumatione et putrefacti Chymica [seu leni digestione] id fiat. Hanc autem operationem excogitarunt Chymici Philosophi ut vapores et exhalationes et fumi ignei et aerei qui in destillatione terræ nostræ ex terra nostra exierunt & foras perruperunt quique meatibus et poris aquæ nostræ adhuc vigiles sunt et nondum aqua facti, levi ista digestione conclusa fiant tandem aqua et penetrent una cum aqua poros omnes terræ nostræ, et sic pedetentim fiat solutio nostra Chymica quæ sine putrefactione et inhumatione Chymica commode fieri non potest – Hæc enim inhumatio cum corporis nostri corruptione et alteratione non subitò fit, non unica corporis nostri solutione in aqua peragitur sed multis multoties repetitis tum inhumationibus tum solutionibus et simul desiccationibus et calcinationibus multoties repetitis absolvitur ita ut pedetentim insensibili quadam via corpus nostrum vere inhumetur solvatur calcinetur et putrefiat atque corrumpatur donec ultimò moriatur et ultimos efflet spiritus, quod, dum corpus nigerrimum ex ignis violentia egreditur, testatum est et significatur. - Hinc dicitur hæc operatio etiam Ablutio quasi esset opus illud mulierum. Nam quemadmodum mulieres lavant et abstergunt maculas a pannis sic nos materiam abluimus a maculis suis igne et aqua. Aqua tamen nostra non est vulgaris sed ignea, ex visceribus ipsius materiæ ortum et scaturiginem habens. Hac aqua utimur ad ablutionem nostram faciendam et dum inhumamus et putrefacimus etiam abluimus, quia dum materiam nostram post calcinationem suam & fortem destillationem aqua nostra dissolvimus, excrementa quæ non sapiunt essentiam et naturam materiæ nostræ non solvuntur sed fundum vasis petunt & hypostasi facta glomerantur in unum quod facili via per inclinationem aut filtrum separari potest et sic materia nostra abluitur igne et aqua Abstergit siquidem et mundificat aqua nostra imo et calcinat et urit magis quam ignis At aqua ipsa qua utimur ad ablutionem nostram peragendam mundissima esse debet et septies aut pluries destillata ut a nigredine sua privetur. et sic candida et albissima fiat. Cum mundis enim mundamur et cum fœtidis et excrementosis deturpamur. Et nisi recte et perquam optime abluas, nihil in Chemia utile habebis. Faber Panchym. l. 4. c 47, 48, 49, 50.



Considerations about rectifying the Iulian Kalendar

Times were at first recconed by returns of day & night, new & full moon, summer & winter. Whence the oldest years consisted of Lunar months, & where 12 months were found too short a thirteenth was added to make up the year. These months began not at the conjunction of the Luminaries but at the first appearance of the new moon which used to be between 18 & 42 hours after the conjunction if the sky were clear. And because the new moon appeard at sun-set the days of the lunar months began in the evening.

The just length of a summer & winter is the return of the sun to the same equinox, that is 365 days & six hours wanting about $11\frac{1}{5}$ minutes. And there being something more then 12 Moons in a summer & winter & something more then 29 days & half in a Moon, the first ages took the next round numbers of 30 days to a month & 12 months to a year & so made the civil year to consist of 360 days: whence came the division of a circle into 360 degrees.

But this year being too short by five days & almost six hours the Egyptians added five days to the end of it & so made the year to consist of 12 Lunar months & five days. And this year was in use in Egypt at least from the days of Amenophes the grandson of Sesostris, & seems to have been received in the Assyrian & Persian Monarchies.

The Greeks used lunar months first of 30 days & then of 29 & 30 alternately, & contrived several ways to adapt those months to the year, the principal of which was, in every 19 years to intercale 7 months, whence came the golden number.

At length Iulius Cæsar in lieu of the six hours added a day once in four years to the year of 365 days & by adapting this measure to the old Roman year made a new year to consist of 12 months of various lengths

without any good order or uniformity or agreement of the months with the stay of the Sun in the twelve signes. And the Senate in honour of Augustus took a day from February & added it to August. And so Cæsar & the Senate together left us a year more irregular and intricate then the Egyptian but better on this account that the same months keep better to the same seasons of the year. In the Calendar of this year the Lunar years were supplied by setting the golden number to the days of the new Moons for 19 years together.

And because the Iulian solar year proved too long by about $11\frac{1}{4}$ minutes that is by a day in 128 or 129 years, Pope Gregory XIII about <3v> 118 years ago ordeined that three days be taken from it in 400 years by omitting the 29^{th} of February in the end of every hundred years excepting at the end of every 400. And to bring the vernal Equinox to the 21^{th} of March on which it fell in the time of the Council of Nice he took 10 days from this year whence arose the difference of 10 days between the old & new stiles in the century which is now expiring. And because the rule for finding the new moons by the Golden number erred about an hour & an half in 19 years & a day in 312 years he corrected that rule every 300 years or thereabouts by the alteration of a day.

Had Iulius Cæsar divided the year into four equal quarters according to the four cardinal periods of the solstices & mean equinoxes & then divided every quarter into three months as nearly equal as he could make them, which he might have done by making the months of 30 & 31 days alternately & the last month of 31 days in leap years & 30 days in ordinary years so that in the Leap year all the odd months should have 30 days & all the eaven 31, he would have made the Roman year of a regular & convenient form & well adapted to the motion of the Sun & periods of summer & winter. And the Popes correction $\sim \sim \sim \sim$ would have made this year as well just & lasting as regular & convenient.

To alter the number of days in the months I do not think advisable without the consent of a good part of Europe. The question is now whether the old stile should be reteined in conformity with antiquity or the new received in conformity with the nations abroad. I press neither opinion but whenever the latter shall be resolved on I beleive the best way may be to receive the new stile without the Gregorian Calendar by an Act of Parliament to some such purpose as that which follows.

For avoyding the difference of recconing by the old & new stiles which is troublesome in commerce between this & other nations it may be enacted that in the year of our Lord 1700 the first eleven days of the month of $_{\rm December}$ | $^{\rm Iuly}$ shall be rejected omitted & abolished out of that year & the twelft day of the said month shall immediately succeed the month of $_{\rm November}$ | $^{\rm Iune}$ without any alteration in the days of the week or in the form of the Iulian Calendar, excepting that the golden number & epact may be omitted. And this accompt or stile shall be thenceforward received used or understood in all his Majestys Dominions in all Dates & recconings of time for keeping of set Festivals, Fairs Birthdays & all other anniversary days & for performance of all covenants duties & services & payment of interest, rents, salaries, pensions, wages, & all other debts & dues whatsoever with an abatement of interest rent salary pension or wages for & proportional unto eleven days in the first payment of any interest rent salary pension or wages which shall by virtue of any covenant grant act or deed had made or done before the day of become due on or after the $12^{\rm t}$ day of $_{\rm December}$ | $_{\rm Iuly}$ - above mentioned, that is to say with an abatement of the hundredth part of three years interest rent salary pension or wages.

<4r>

Provided nevertheless that all debts which ought to be paid & all things which ought to be done on any of the said eleven days of $_{December}$ | Iuly – which are hereby abolished shall be paid & done on the same day or days on which they should have been done if this Act had never been made.

And for avoyding the double recconing by the civil & ecclesiastical years between the last day of December & the 25^t day of March the ecclesiastical year shall in all his Majestys Dominions from & after the year of our Lord 1700 begin on the first day of Ianuary for ever & be no longer dated from the 25th day of March

And that the year may be of a just length & the months remain constant to the seasons of summer & winter, it may be further enacted that the 29th day of February shall be omitted in the last year of every Century excepting the last year of every fift Century & that in the last year of every fiftieth century a day shall be added to the end of February, that is to say the month of February in the years 1800, 1900, 2100 &c shall have 28 days, & in the years 2000, 2500, 3000 &c it shall have 29 days & in the years 5000 10000, 15000 &c it shall have 30 days.

And because the moveable festivalls & lawdays depend upon the course of the Moon & the rule for determining that course is grown faulty & needs frequent correction, it may be further enacted that the Lunar months shall be recconed to consist of 30 & 29 days alternately in three periods or cycles of months perpetually to succeed one another, each of which periods shall consist of an odd number of months, the two first of 17 & the third of 15, & the first & last month of each period shall contein 30 days, so that all three periods summed up together shall make a larger period of 49 lunar months conteining 1447 days or four solar years wanting a fortnight. And the first day of Ianuary which shall be in the year of our Lord 1701 shall be the day of the month of the larger period of 49 months. And from thence forward the festival of Easter shall be kept on the Lords day next after the 14th day of that Lunar month which shall begin next after the seventh day of March.

This rule for determining the course of the moon is much more simple & exact then that of the Golden number used by Pope Gregory. For that rule errs an hour & an half in $19\frac{1}{2}$ years & a day in 312 years & so needs frequent correction, this errs only a day in 4000 years. And if in the end of every 250 years the cicle of 15 months have two months of 29 & 30 days added to it so that all the three cycles do once consist of 17 months the rule will be much exacter.

<5r>

Considerations about rectifying the Iulian Kalendar

Times were at first recconed by returns of day & night, new & full moon summer & winter. Whence the oldest years consisted of Lunar months & where twelve months were found too short a thirteenth was added to make up the year. These months began not at the conjunction of the Luminaries but at the first appearance of the new moon, which used to be between 18 & 42 hours after the conjunction if the sky was clear. And because the new moon appeared at sun-set the days of the Lunar months began in the evening.

The just length of a summer & winter is the return of the Sun to the same equinox, that is 365 days & six hours wanting about 11 minutes & 3 or 4 seconds. And there being something more then 12 moons in a summer & winter & something more then 29 days & an half in a Moon, the first ages took the next round numbers of 30 days to a Month & 12 months to a year & so made the civil year to consist of 360 days, whence came the division of a circle into 360 degrees.

But this year being too short by five days & almost six hours the Egyptians added five days to the end of it & so made the year to consist of 12 lunar months & five days. And this year was in use in Egypt at least from the days of Amenophes the grandson of Sesostris & seems to have been received in the Assyrian & Persian Monarchies

The Greeks used lunar months first of 30 days & then of 29 & 30 alternately, & contrived several ways to adapt those months to the year, the principal of which was in every 19 years to intercale 7 months, whence came the golden number.

At length Iulius Cæsar in lieu of the six hours added a day once in four years to the year of 365 days & by adapting this measure to the old Roman year made a new year to consist of 12 months of various lengths without any good order or uniformity or agreement of the months with the stay of the sun in the twelve signes. And the Senate in honour of Augustus took a day from February & added it to August. And so Cæsar & the Senate together left us a year more irregular and intricate then the Egyptian, but better on this account that the same months keep better to the same seasons of the year. In the Kalendar of this year the Lunar years were supplied by setting the golden number to the days of the new Moons for 19 years together.

And because the Iulian solar year proved too long by about $11'\frac{1}{15}$, that is by a day in 130 years, Pope Gregory XIII about 118 years ago ordeined that three days be taken from it in four hundred years by omitting the 29^{th} day of February in the end of every 100 years excepting at the end of every 400. And to bring the vernal <5v> equinox to the 21^{th} of March on which it fell in the time of the Council of Nice he took 10 days from this year: whence arose the difference of 10 days between the old & new stiles in the century which is now expiring. And because the rule for finding the new moons by the Golden number erred about an hour & an half in 19 years & a day in 312 years he corrected that rule every 300 years or thereabouts by the alteration of a day.

Had Iulius Cæsar divided the year into four equal quarters according to the four cardinal periods of the solstices & mean equinoxes and then divided every quarter into three months as nearly equal as he could make them which he might have done by making the months of 30 & 31 days alternately & the last month of 31 days in leap years & 30 days in ordinary years so that in the leap year all the odd months should have 30 days & all the eaven 31, he would have made the Roman year of a regular & convenient form & well adapted to the motion of the sun & periods of summer & winter. And the Popes correction would have made it lasting.

But without the consent of a good part of Europe I do not think it advisable to alter the number of the days in the months. The question is now whether the old stile should be reteined in conformity with antiquity or the new received in conformity with the nations abroad. I press neither opinion but whenever the latter shall be resolved on I beleive the best way may be to receive the new stile without the Gregorian Kalendar by an Act of Parliament to some such purpose as that which follows.

For avoyding the difference of recconing by the old & new Stiles which is troublesome in commerce between this & other nations, it may be enacted that in the year of our Lord 1700 the first eleven days of December shall be omitted rejected & abolished out of that year & the twelft day of that month shall immediately succeed the month of November without any alteration in the days of the week or in the form of the Iulian Kalendar, excepting that the Golden number & epact may be omitted. And this accompt or stile shall thenceforward in all his Majestys Dominions be received used & understood in all Dates & recconings of time for keeping of set Festivals Fairs Birthdays & all other anniversary days & for performance of all covenants duties & services & payment of interest, rents, salaries, pensions, wages & all other debts & dues whatsoever with an abatement of interest rent salary pension or wages for & proportional unto eleven days in the first payment of any interest rent salary pension or wages which shall by vertue of any covenant grant act or deed had made or done before the day of become due on or after the twelft day of December above mentioned, that is to say with an abatement of the hundredth part of three years interest rent salary pension or wages

Provided nevertheless that all debts which ought to be paid & all things which ought to be done on any of the said eleven days of December which are hereby abolished, shall be paid & done on the same <6r> day or days on which they should have been paid or done if this Act had never been made.

And for avoyding the double recconing by the civil & ecclesiastical years between the last day of December & the 25th day of March the ecclesiastical year shall in all his Majestys Dominions from & after the month of December which shall be in the year of our Lord 1700 begin on the first day of Ianuary for ever & be no longer dated from the 25th day of March.

And that the year may be of a just length & the months remain constant to the seasons of summer & winter, it may be further enacted that the 29th day of February shall be omitted in the last year of every Century excepting the last year of every fift century & that in the last year of every fiftieth century a day shall be added to the end of February, that is to say the month of February in the years 1800, 1900, 2100 &c shall have 28 days & in the years 2000, 2500, 3000 &c it shall have 29 days & in the years 5000 10000 &c (if the Kalendar should extend so far) it shall have 30 days.

And because the moveable festivals & law-days depend upon the course of the Moon & the vulgar rule for determining that course needs frequent correction & is now grown very faulty, it may be further enacted that the lunar months shall be recconed to consist of 30 & 29 days alternately in three periods or cycles of months perpetually to succeed one another, each of which periods shall consist of an odd number of months, the two

first of 17 & the third of 15 & the first & last month of each period shall contein 30 days so that all three periods summed up together shall make a larger period of 49 lunar months conteining 1447 days or four solar years wanting a fortnight. And the first day of Ianuary which shall be in the year of our Lord 1701 shall be the day of the month of the larger period of 49 months. And from thence forward the festival of Easter shall be kept on the Lords day next after the 14th day of that Lunar month which shall begin next after the seventh day of March. And at the end of every four thousand years a day shall be added to the last lunar month of nine & twenty days.

[Editorial Note 1] Apart from the page number, all the text on this page is upside down; it continues, still upside down, on f. 2r where it becomes interlineated with the foregoing.