

THE PROBLEM OF WHAT TIME IS

Distinguished French Scientist Writing to the New York Herald, Declares it to be Too Difficult for Men to Unfathom—The Several Calendars and Their Authors.

(From the European Edition of the New York Herald.)
Observatory of Javay, Jan. 1, 1910.
To the Editor of the Herald:—

We have just passed from the last day of one year to the first of the following year. This is a convention of our calendar for which there might just as well have been chosen—and with excellent reasons—a more agreeable time to celebrate this renovation. The earth turns around the sun in one year and one may cut the circle—or the ellipse—where one will. January 1 has been adopted since the year 1582, in consequence of an edict of the knight, Charles IX., then thirteen years old, and the French custom determined that of the rest of the world. Up to that time the year had been begun at the Incarnation, otherwise known as the visit of the angel Gabriel; that is to say, nine months before the birth of Jesus, or March 25, and the Christian years had for their formula "ab Incarnatione Christi."

The usage, which was very widespread in Europe, lasted until 1745 among the inhabitants of Pisa. The kings of France sometimes adopted March 25, sometimes Christmas, sometimes Easter. Others continued to follow the Roman method, which consisted in placing the beginning of the year on March 1, as in the time of Julius Caesar. These different systems of chronology are often a source of inextricable confusion in reading his torians of the middle ages.

Change of Calendar.
Charmagne, wishing to have the beginning of the year sanctified by an important festival, in spite of its date of December 25.

Under the Capetian Kings the new year was transposed to Easter, and this festival being one of the most movable, since it is set for the Sunday which follows the first full moon of the spring equinox—that is to say, after March 21, and may correspond to all the days included between March 22 and April 25—the results of one year's having two months of April almost complete. Thus, for example, the year 1347 began on April 1 and ended on April 30 of the following year, so that all the dates between April 1 and April 29 were repeated twice in the same year, during the first month and during the thirteenth. Judicial documents, public and administrative documents, and especially commercial transactions, experienced the greatest harm from this irregularity.

We saw the other day that at the pole itself, where all the longitudes terminate to come together, to cross and annual each other, is an day of the following year, so that all the dates between April 1 and April 29 were repeated twice in the same year, during the first month and during the thirteenth. Judicial documents, public and administrative documents, and especially commercial transactions, experienced the greatest harm from this irregularity.

What is time? That is a question we may ask ourselves on January 1. We think we understand it by looking at it particularly in the order of succession by dividing it into three parts—present, past and future.

The past exists no longer, the future does not exist. The present alone touches us by its actual reality.

What The Present Means.

Well, then, let us examine of what this present time really consists. If we consider one second—this interval, which is nevertheless so short between the two beats of the balance wheel of a clock—we may easily divide it in thought into ten equal parts, and that is always the custom in astronomical observations. When there is occasion to note the passage of a star behind the spider web thread of the meridian telescope, or the precise moment of the occultation of a star by the moon, or the distance from west to east between two neighboring stars, astronomers mark their observations in tenths of a second. Present time, in fact, would be more correctly represented by the idea of one-tenth of a second than by the duration of a whole second.

Now let us go a little further in the present time. A second is a very small interval, and when there is question of delicate comparisons, such as for example the measuring of the proper movements of the stars, the powers are always determined in tenths of a second. This amount is the real unit in astronomy of precision. The length of the rotation of the planets on their axis is expressed by the enumeration 24 hours, 27 minutes, 22 seconds and 66 hundredths. The best photographs of the sun, which are less than the hundredth of a second.

We may consider present time as lasting a hundredth of a second. And yet, nevertheless, we ought to remark that this appreciation depends solely on our organs, on our facilities, on our brain. While it is a hundred times shorter than the first mentioned duration, it is long in itself. It is possible that there are beings infinitely small, microbes, who live a hundredth of a second, which they are born, have grown up, have reproduced themselves, have lived, have grown old. In a hundredth of a second light travels 3,000 kilometers, the distance from Paris to the North Cape and to the Caucasus.

A Thinkable Appreciation.

It is, therefore, more accurate, in fact, to estimate present time in a hundredth of a second rather than a tenth. We might even go as far as the thousandth, because it is used in physical sciences, notably in electric experiments. But let us confine ourselves to a thinkable appreciation. A tenth of a second is easy to conceive. During the duration of a second one may tap ten times with the finger nails on an object, hear the taps and perceive their succession. The tenth part of this tenth, or a hundredth, may still be imagined in thought. But that is all. The thousandth is completely unimaginable. Well, this hundredth of a second is really only in instant, a moment, a point. Such is present time. Such is that

which actually exists. The instant which precedes it no longer exists. The instant which will follow it does not exist.

From this it is not a very far step to thinking that time does not yet exist at all.

The present passes as quickly as it appears. It is an open door between the past and the future, through which the future unceasingly hurries itself into the past, falls into the abyss and vanishes.

Where is yesterday? Where is tomorrow? What remains of the events that took place in the time of Julius Caesar, of Alexander, of Darius, of the millions of men who caused themselves to be killed for the spreading of their fame?

The atoms which composed the living bodies of these millions of human beings float today in the wind, circulate in the plants, the animals and the men of today, flow in the rivers, pour in the rains, murmur in the brooks, in the forest, in the leaves, in the flight of humming insects—in all the sounds of nature. But of all the living bodies of former days, those of Aspidochelone, of Lais, and of all the queens of human beauty, what remains? Nothing, nothing, nothing!

Let us think of the things which live today will disappear like their predecessors. Let it be understood that I am not speaking of the invisible forces which group the atoms in living harmonies, of spirits and souls; I am speaking of material nature, tangible, ponderable, that everybody recognizes.

Let our thought rise to the origins of the formation of the solar system, of the formation of the earth; time did not exist.

Let it descend the ages up to the extinction of the sun and to the annihilation of life on our globe and on all the planets; time will no longer exist.

Alas! Work That of Time.
Nevertheless, time is everything. It is the stuff of which life is made; it is the great factor of every thing that is universal and implacable master. We said just now that our present exist in us and in every fashion, Julius Caesar, Augustus, Jesus Christ are acting on all humanity. The Roman Empire and Christianity have exercised their influence on the entire world, and all that now happens would not exist without the most remote anterior causes. The war of 1870 would not have taken place without Napoleon and Louis XIV. So that whatever be the event that one considers it is the work of time that one has before the eyes.

Time is the element the most mysterious and the most difficult for the human mind to conceive. Its measure has nothing absolute; it is relative to our sensations. If the movement of the earth should go on accelerating or decreasing gradually, who would perceive it? Only the astronomers. The years, the days, could happen to be twice their length, or shorter, or longer, the functions of life would follow the same progress and there would be nothing changed as to our impressions.

Is not time a metaphysical entity, unmeasurable, directing, organizing and ponderable? Does not a mysterious, invisible power lie back of all things? Camille Flammarion.

ASIA AND RUSSIA ARMING FOR FRAY

London, Jan. 28.—In the light of the report recently furnished by M. Glesmer, a member of the industrial delegation in the Russian Council of Empire, respecting the increase of Japanese armaments, a summary of the article in the Deutsche Review by Gen. von der Boeck, one of Germany's most brilliant infantry commanders, possesses great interest. Inasmuch as both authorities believe that peace between Russia and Japan cannot be preserved beyond the close of the year 1912.

It is not Gen. von der Boeck's opinion that any immediate outbreak of hostilities need be feared, but in view of the perilous preparations of both powers he is inclined to think that the Peace of Portsmouth cannot last much longer than another two years.

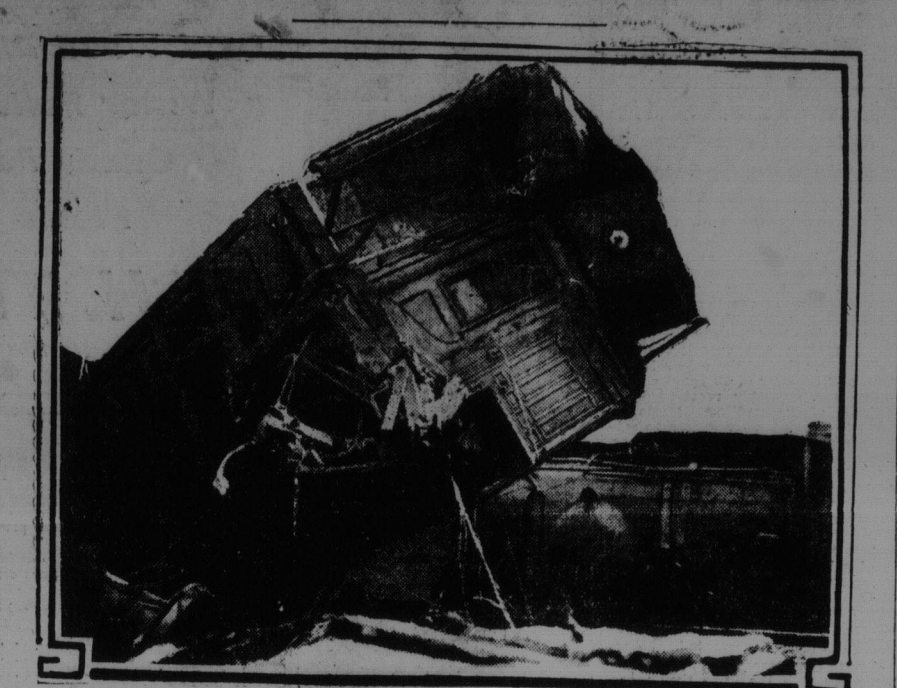
The troops which Russia possessed at the close of the war, he says, have been largely strengthened, so that at the present time they cannot be short of a peace footing of 200,000 men, a footing which if war should break out could easily be raised to 300,000 without drawing a single soldier from European Russia.

Japan, freed from the present from maritime cares, is similarly engaged in strengthening her position on land. The thirteen divisions of her army when war broke out have been raised to nineteen, so that at the present moment her army on a war footing would consist of 550,000 men and 120,000 horses. And as there is no lack of men in the Mikado's empire General von der Boeck believes that were war now declared a million Japanese soldiers could take the field within a few weeks.

Gen. von der Boeck is inclined to believe from the reports of German officers who have recently visited China that in 1912 the Chinese will possess a well equipped army of half a million men, the greater part armed with modern weapons and with a discipline and organization infinitely superior to anything which China has hitherto produced. Gen. von der Boeck thinks that Japan's policy as Asia for the Asiatics, with Japan at the head of the coalition of the yellow races, will then be within measurable distance of realization.

He regards the situation as extremely serious and asserts that M. Stolypin, the Russian Premier, and Gen. Suchomiroff, the Minister of War, view it in a most pessimistic light.

This Upturned Coach Was Filled, But Not A Person Was Killed



REMARKABLE PHOTOGRAPH OF BIG FOUR TRAIN WRECK NEAR CINCINNATI.

This is a striking news photograph showing, as if from life, the perils of modern railroading. Near Cincinnati the other day a Chicago limited train on the Big Four was going at the rate of 50 miles an hour through a blizzard when the huge locomotive leaped in the air, plowed up several rods of track and fell in a mangled heap beneath several coaches and Pullmans. The lives of the fireman, and conductor were crushed out. Although the coach shown in the photograph was filled with passengers, none was killed. The Cincinnati wreck edging so soon upon the Sudbury disaster has awakened as never before public interest to the perils of railroading.

IN THE WORLD OF LETTERS

A Tolstoy Legend.

The latest story of Leo Tolstoy deals with a legend entitled "The Work of God" he is accustomed to tell the companions of his walks in the neighborhood of Jasna Poljana. The legend as Tolstoy relates it is as follows:

In a far land there lived a king whose soul was filled with care as old age approached. "I have," he said, "during my life enjoyed everything and seen everything possible for the human eye to see; but there is one thing which in my life I have never seen; and that is God. Him I will see!" And turning to his counselors and dignitaries and priests he commanded them on pain of being thrown into jail and heavily punished to show him God before three days.

The courtiers sadly waited the expiration of the period and at the end

THE BANNER.

Who dreams that in the proud van of the years His winged helmets glisten, let him Ere he pluck down this banner crying "It bears An old device," for though it seems the old, It is the new! No rent shroud of the past, But its transfused spirit that still shines Triumphant before the foremost lines Even from the first prophesying the last.

And whose dreams to pluck it down shall stand Bewildered while the great host thunders by; And he shall show the rent shroud in his hand, And "Lo, I lead the van!" he still shall cry.

While, leagues away, the spirit-banner sails, Sweeping in triumph before the foremost lines.

—Alfred Noyes.



ROBT. W. CHAMBERS.

As a novelist of society life in the United States, Robt. W. Chambers has promised never to do it again. By that he means making of his heroine a young woman with a love for drinking gallons of alcoholic perfumery. Neither will he have another heroine addicted to tobacco, chewing gum, opium or any other ruinous habit. He says so himself.

The public is watching Mr. Chambers now, because he is at work on a new story of society life which will not muckrake. Some of his admirers are ready to hail it as the great American novel. He lives his winters, as he would say, at one of his heroes, in the Adirondacks, and gets inspiration from the cold, just like Dr. Cook did.

It was he who was the king. They continued to keep silence and the king was about to order them to pray when a poor shepherd at that moment approached and addressed the king.

"Sire," he prayed, "grant me a wish."

"It is well," replied the king, "but remember, your life is at stake." And the shepherd told the king to a place, pointed to the blazing sun, and said, "Look up!" The king raised his head and tried to look at the shining mass, but the sun's rays dazzled him and he lowered his head and closed his eyes.

"What mean you?" he asked. "Would you have me blinded?" Thereupon said the shepherd: "Sire, that is one of the creations of God, a single ray of His glory, a small corner of His brightly burning throne. How can you expect to see God with your weak and weeping eyes? You must endeavor to see God with other eyes."

The king was pleased and said: "I honor your intelligence and the understanding of your soul. Answer me therefore the following question: What was before God?" The shepherd thought for a while, then spoke: "I pray you, sire, not to be angry, but—count."

The king began: "One, two, three—'No, no,'" interrupted the shepherd. "You don't count right; you don't begin to count before one." "How is that possible," objected the king. "There is nothing before one." "A wise word, sire," said the shepherd.

herd: "neither was there anything before God."

The king still more pleased with the shepherd's wisdom, continued: "I will richly reward you, but answer me one more question—what does God do?"

"Good," replied the shepherd boy. "I will reply, but first change garments with me."

And the king took off his royal robes and put them on the shepherd, and the shepherd ascended the throne, took the sceptre in his hand, and pointed to the king standing at the foot of the throne said: "That is what God does. One he raises to the throne, another he drives away from the throne, and he resumed his shepherd's clothing."

The king stood for a while deep in thought. At last he raised his head and exclaimed in tones of joy, "Yes, now I see God!"

Shakespeare's English.

The fascinations of dialect study we discussed the other day by Mr. Daniel Jones, M. A., who lecturing before the Elizabethan Society in London, explained that pronunciation changes so greatly with the passage of years that the "teen" sound of our works today, would not be able to understand the words spoken.

Illustrating how he has managed to trace the pronunciation of words back to distant times—Mr. Jones is a new story of society life which will not muckrake. Some of his admirers are ready to hail it as the great American novel. He lives his winters, as he would say, at one of his heroes, in the Adirondacks, and gets inspiration from the cold, just like Dr. Cook did.

Pronunciation.
The poet Chaucer (1370) . . . Teen
In Shakespeare's day . . . Tame
Present day . . . Time
Cockney pronunciation . . . Toime

"Gradually, during these five hundred years, the people's tongues, in forming this word, have receded farther and farther away from the roots of their mouths," explained Mr. Jones. The silhouettes of the three heads used by Mr. Jones as illustrations, show how the position of the tongue has altered during the centuries in pronouncing the word "time."

In No. 1 the top of the tongue nearly touches the roof of the mouth. This produces the "teen" sound of Chaucer's time. In the second the top of the tongue is seen to be farther away from the roof of the mouth. This turns the "teen" to the "tame" sound of Shakespeare's day. Nowadays our tongues, as shown in the third silhouette, are lower still in our mouths, producing the "toime" sound of the word with which we are familiar.

If the top of the tongue drops a little lower still, and the tongue curls a trifle farther back, the sound produced is the unmistakable Cockney "toime," added Mr. Jones. "This Cockney pronunciation is really the

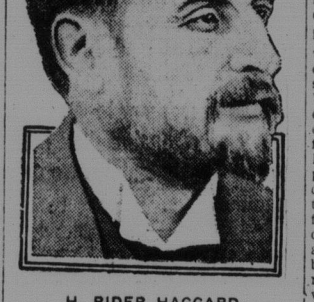
absolutely natural development of pronunciation. It is the pronunciation of uncultured people, who do not care how they form their words, and are therefore perfectly natural. Cultured people, on the other hand, who say 'time,' resist any tendency for the top of the tongue to drop lower in their mouths.

But its transference in phonetics not combating the Cockney pro one hundred years hence it would be far more prevalent than it is today."

A Reprint.

On the list of reprints is to be noted Mrs. W. K. Clifford's "Love Letters of a Worldly Woman." This was one of the first works to popularize the method of telling a heart story in a succession of letters. As one reader, a bachelor, said recently: "They belong to the very young."

H. RIDER HAGGARD.



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Rider Haggard will publish in the spring "Morning Star," the story of a queen of the Nile. He will also bring out a little later another story entitled "Queen Sheba's Kingdom." He is said to be hard at work upon two books in which he is describing more of the thrilling experiences of Allen Quatermain.

These stories, for it is true that the young man generally falls in love with an older woman, that the emotion is believed at the time to represent his entire future existence and that it usually lasts—the emotion—about six months."

"What Is Wrong."

Mr. Gilbert K. Chesterton, whose recent novel, "The Cross and the Switchblade," is delighting the epicures of literary unexpected flavors, promises a new volume to be published under the title "What Is Wrong." The Ball of the new novel is the dome of St. Paul's, the Cross, the religious emblem which surmounts the two leading characters, a monk and a Lucifer, arrive in an atypical, and the old monk, fresh from his hermitage in the society of wild animals, is left clinging to the cross to find his way down the hall to look on at this wicked world and its various absurdities and conventions.

The New Journalism.

Mr. Clement Shorter describes the difference between the new journalism "with its fine flow of adjectives, its wild inaccuracies, its recklessness in the spill of ink," and the old journalism, which while the "new" journalism never achieves anything that is not forgotten in a fortnight, the old journalism achieved many things that will have a permanent place in history and in literature.

To Be Republished.

J. M. Barrie's essay on "West Meredith" contributed to the "Westminster Gazette" in the spring is to be republished in book form. Since his divorce Barrie is said to have been living very quietly.

For Egypt.
Miss Carolyn Wells sailed for Egypt last week, where she expects to spend the rest of the winter.

TELEPHONING THE SUNDAY MAILS

A New Scheme Under Trial in London --- Messages Mailed in the Country Saturday Night Telephoned at 8.30 Sunday Morning—Officials Pleased, But Thunderer Growls.

London, Jan. 27.—The new system of a Sunday delivery of messages by telephone to subscribers within the metropolitan area of London was begun on Sunday, Jan. 9, and the postal authorities regard it as a good start. The scheme provides that great messages mailed in the country in time to catch the London mail on Saturday can be telephoned to the addressee on Sunday morning for a fee of threepence per thirty words in addition to the ordinary postage fee. The message with the name and address of the addressee, is addressed to the central telephone office, London, and in addition to being marked with a broad perpendicular line on each side, the envelope must be marked: "For telephone delivery on Sunday." One envelope may contain a message for several telephone subscribers, provided the fee enclosed covers the ordinary rate of threepence per thirty words.

Forty-two messages from all parts of the British Isles were dealt with at the general post office on the Sunday morning of Jan. 9, and, unless the envelope contained instructions to the contrary, all the messages were telephoned at 8.30. The messages, which on the average, were of about sixty words, were addressed to subscribers well within the London area, the extreme delivery being at Wainstead. The officials at St. Martin's-le-Grand are quoted as "having every faith in the ultimate popularity of the new scheme, which, to commercial and shipping houses particularly, will be of considerable help."

The London Times.

But the London Times, growing softly, isn't so sanguine. In a leading editorial (which violates old Times traditions by running over into another paper, the Standard, for a whole sheet) the Times thus muses: "Whether London demands or would appreciate a delivery of letters we do

not know. It certainly seems on the face of it exceedingly strange and anomalous that the greatest aggregate of human beings in the civilized world should be content to forego for twenty-four hours in every week the postal facilities which are enjoyed by their fellow countrymen in nearly all parts of the kingdom. It is indeed, almost as great an anomaly that in nearly all parts of the kingdom the telegraphic system should go to sleep for twelve hours out of every twenty-four and for a still longer period between Saturday evening and Monday morning, with only a few fitful and uncertain intervals of wakefulness. The telephone system has redressed this latter anomaly to some extent, for, except in some few cases under the control of the postoffice, it never goes to sleep at all.

In this respect, perhaps, the telephone system has of late years served to some extent to mask the diurnal and hebdomadal comolence of the telegraph system. From the first it has afforded to subscribers facilities at night and on Sunday which the post office has never seen its way to provide, and the fact that it has done so on terms not too onerous to its subscribers nor too unprofitable to its promoters would seem to show that the obstacles to a further extension of postal and telegraphic facilities cannot be exclusively financial. Probably the telegraph system had been inaugurated by the post office and not by private enterprise its procedure would have been assimilated to that of the telegraph system, and it would have gone to sleep for 12 hours out of the 24 and for the greater part of Sunday. As it is, however, the greater wakefulness of the telephone system has now enabled the postmaster general to provide London at least with some faint and tentative semblance of a Sunday delivery. The new scheme was inaugurated last Sunday and the post office officials appear to be very well satisfied with it.

HOW LEARNING A MISTAKEN BY HEART AIDS NOTION THIS

No Better Way to Fatten an Inpooverished Vocabulary Than That of Memorizing Poetic Masterpieces.

Witness on Stand not Bound to Answer Yes, or No to Questioner—Gain by Sharp Retorts.

There is no better way, probably, to fatten an impoverished vocabulary, to strengthen memory, and to give it facility and finish to speech than is to be obtained by a knowledge of poetic masterpieces. The late Oscar C. McCulloch said that, notwithstanding his busy life, his days being filled with employment, he scarcely let a day pass without learning by heart some poem of merit. General Lew Wallace, speaking of his boyhood, said that he had a picture of the winter evening fireside at the home of his father, Governor David Wallace, when he, his brother William, afterward postmaster of Indianapolis, and others of the children were required to recite "pieces" either of poetry or famous orations, such as the speeches of Patrick Henry, John Adams, Clay and Webster. There was no selfish burying one's nose in a newspaper or reading one'sself. When a novel was read, such as one of Scott's, it was read aloud and enjoyed together by the entire household. Very little of this kind of study, which instruction prevails in the family today. The "six best sellers" are not read aloud. The evening paper is divided up among the members of the family. Each in turn reads a part, and then it apart, and then the pieces are exchanged.

This method, so different from that of a generation ago, says day Indianapolis News, has seriously impaired the genial art of conversation and is doing much to destroy the accuracy of memory. If my knowledge of a boy or girl what he or she has read, the answer brings the inference that the reader has brought away only the bare bones of the subject without any of the breath of life in it.

Same Criticism.

The same criticism will justly apply to the playmaker of the time, perhaps this is of less serious moment, as the best that can be said of the most of the plays is that little of them is remembered even by those who have paid \$1 to see them.

It has been said of many of the great actors of a former generation who played more robust plays than are current today that they inspired even the boys in the gallery with a noble zeal to become real actors, and that the gallery gods of that day knew more of Shakespeare (and could spout long speeches from "Richard III.," "Hamlet," "Macbeth," and "The Merchant of Venice" than can the well-bred people of today who sit in the high-priced seats. True in that day, as in this, there were many plays of epochal quality, but the educational quality was kept to the front more than now.

To know one poem well may advance one to a considerable way toward an appreciation of good literature. Neither in the little country schoolhouse were the noble lines of Goldsmith neglected—Auburn, loveliest village of the plain with the simple life of its villagers. True, there is now, at least in the cities, much encouragement given to a study of Tennyson, Wordsworth and other English poets and to Longfellow, Bryant, Whittier, Lowell and other American poets, but we could wish for further encouragement in this direction and more "learning pieces by heart" and speaking them on occasion.

"It is a mistaken notion that a witness is bound to answer yes or no. It is surprising that such should have been the received belief," says a writer in the Green Bag. "The theory as to a categorical reply was completely exploded by the gentleman who propounded the question 'When are you going to stop beating your wife?' and demanded a categorical answer."

If the lawyer attempts to tell you that you must answer yes or no you have the right to say that the question is not susceptible of a categorical answer. This should floor counsel for the moment.

"Like Stevenson's child, as a rule the witness should speak only when he is spoken to. He should not volunteer anything, except that when he is asked a question which with apparent innocence could readily be answered yes or no he has a right to qualify a plan yes or no."

In Case of Experts.

"This of course happens most often in the case of experts. The Yes, but I will explain and 'No, but I will explain' of one of the distinguished expert witnesses for the Commonwealth in the case of Commonwealth vs. Quay, which was tried before Judge Liddle in the Court of Quarter Sessions of Philadelphia county several years ago, still linger in the writer's memory."

"Occasionally a witness comes to the stand who insists upon qualifying every answer by some phrase as 'As far as my knowledge goes' or 'To the best of my knowledge.' I once heard a Judge say that he was of the opinion that a witness that did not habitually and constantly was throwing a sop to his conscience and was unworthy of implicit belief. While this may have been an extreme expression, fairly applicable even in the case of cases, still a witness by using this form of expression may affect the weight of his testimony."

An Effective Case.

"I remember very effective use being made of the slip of a witness, an employee of the defendant, who referred to the defendant's attorney as 'my lawyer.' If his story was believed there should have been a verdict for the plaintiff. It was argued to the jury that he had so completely identified himself with the defendant's case that he was of necessity somewhat biased."

"Do not repeat the question as it is asked you by counsel. If you do not understand the words of the question ask to have it repeated. Some witnesses have an annoying habit of repeating every question. 'My answer is that the defendant's behavior on the stand was of the opinion that a witness that did not habitually and constantly was throwing a sop to his conscience and was unworthy of implicit belief. While this may have been an extreme expression, fairly applicable even in the case of cases, still a witness by using this form of expression may affect the weight of his testimony.'"