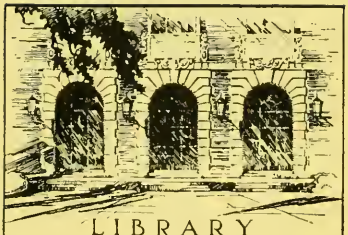
BROWN ALUMNI MONTHLY

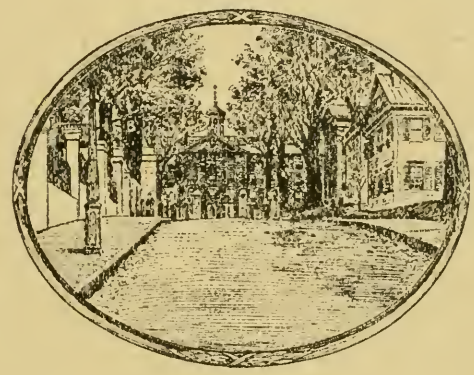
1923 - 1924



VOL. XXIV FEBRUARY, 1924 NO. 7

# BROWN

# ALUMNI MONTHLY





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# GENERAL ELECTRIC

BROWN ALUMNI MONTHLY

VOL. XXIV PROVIDENCE, FEBRUARY, 1924 No. 7

# On The Hill

THE University will publish the new 1924 Historical Catalogue this year. Two editors, Mr. Jerome L. Fisher '23, for the Men's College, and Miss Ruth Crawford Coombs '19, for the Women's College, have been busily engaged for several months in the extremely detailed task which this publication involves. Already over two thousand copies of the new Historical Catalogue have been sold on advance sales, a record for any University publication.

The University had a very real problem on its hands this year. The last Historical Catalogue was published in 1914. Traditionally, these are published every ten years. Since 1914, however, the cost of paper, composition, printing and binding has at least doubled. In the same period the number of alumni has greatly increased. If the 1924 Historical Catalogue simply followed the example of previous editions, the result would be a book of such tremendous size as to be almost useless; even at cost, the price of such a book would be practically prohibitive and would certainly be much more than the publication was actually worth to any one man. Quite obviously, a limited edition of what would in size and price be nothing short of an "Encyclopedia Brunonia," in the hands of a few hundred rich or imprudent Brown men, would not be what was wanted. Again, the University found that Brown men were quite generally modest. Most of them did not care for the meticulous listing of each man's industrial, professional or educational adventurings; most of them were frankly not interested in any account of the publication of miscellaneous pamphlets, monographs and articles, in many cases known to the author and his professional group, but unknown to everyone else; and, finally, most of them did not care to list their membership in professional or learned societies (any Brown man who is a "joiner" can marshal a dozen on short notice). Of course there are some exceptions to this opinion. And they will be disappointed in the simplicity of the new Catalogue.

* * *

YET another possibility for economy was explored and finally accepted. In the 1914 Historical Catalogue each alumna of the Women's College was asked to buy a book which contained, perhaps, a thousand names of her classmates and fellow alumnae, in most of whom she was interested, but also contained the records of some six thousand men in most of whom she was not. In short, she bought the record of seven thousand graduates and non-graduates to get the record of a thousand. In the same way the alumnus of the Men's College had to buy seven thousand names to get six thousand. Nearly every purchaser of the book got a more complicated and more compendious book than he or she actually required. The 1924 Historical Catalogue is to be published in two volumes, one for the Men's College and one for the Women's College. Each will be a complete unit, separately indexed and bound. For those who wish the combined edition, a certain number of the two "separata" will be bound together. This innovation has met with the complete approval of a committee of officers and alumnae representing the Women's College. All in all, the changes which increased costs have made imperative will result, we believe, in a better and more useful publication. Both volumes of the Historical Catalogue will be less subdivided;

the information will be more readily accessible.

* * *

THE volume for the Men's College will contain the usual lists of officers and members of the Corporation and Faculty. Graduates and non-graduates and specials will be thrown together by classes in Class Lists, the graduates and non-graduates alphabetically together, and the special students in a separate list following the class with which they entered. The only distinction between graduates and non-graduates will be the degree shown after the names of graduates. It is believed that this emphasis on the class as a social unit will increase the use of the book and bring a welcome recognition to non-graduates and special students. The first class listed will be 1852, the oldest class with a living Brown man; the name, degree, fraternity, occupation and address will be given. In the case of alumni who have died, the name, degree and dates of birth and death only will be shown. Graduate students, special graduates and honorary degree (both men and women) recipients will be listed, as usual, in separate sections. The index will contain the name, the class and the page reference for all persons receiving instruction from the University since its establishment.

The Historical Catalogue of the Women's College will follow practically the same plan. The list of Officers and Faculty will include all those who have served in either capacity at the Women's College, whether full or part time. The Class Lists, beginning here with the first class, will contain both graduates and non-graduates. In each case the full maiden name, the degree, if any, the fraternity (Phi Beta Kappa or Sigma Xi), the occupation (or married name) and address will be given. Special students will be listed separately. The index will contain the full maiden name, (the married name if married), the class and page reference.

All three editions, the Historical Catalogue of the Men's College, the Historical Catalogue of the Women's College, and the combined Historical Catalogues, will be printed on high quality paper and bound in brown cloth, lettered in gold. The Men's Catalogue will sell for not more than $2.50, the Women's for not more than $1.50, and the combined catalogues for not more than $3.50. Orders should be addressed to the Editor, Historical Catalogue; John Hay Library, Brown University.

In compiling the Historical Catalogues, an enormous amount of information has been collected in regard to former students of the Men's College and the Women's College. Anyone who wishes further details in regard to any individual alumnus or alumna is cordially invited to write Graduate Records, Brown University. He will find his Alma Mater interested and well informed.

*Thomas B. Appleget*

* * *

EVIDENTLY a new dormitory is to be one of the earliest of the additional structures that the enlarged pressure upon the University's facilities demands. A Corporation committee has been at work on the question for some time, has reported that such a building should be erected if a 12 per cent. gross income can reasonably be assured from it, and has been directed to continue its inquiries. Building a dormitory comes down to a plain business proposition ,and it seems as if there ought to be no great difficulty in the way of satisfactorily financing such structures. The chief consideration to be kept in mind is, of course, that a sufficient revenue be obtained from them to pay for their upkeep.

* * *

ANOTHER indication of Brown's eastward trend is seen in the announced decision to erect the Marston Hall of Languages on the property already owned by the University at the corner of Brook and

Manning streets. This means an invasion of the University tennis courts, but space for them can be found elsewhere. It is gratifying to know that the long-awaited Marston Hall is soon to take its place in our ever-increasing group of college buildings. This new structure, it should be understood, is for the accommodation of the modern languages only. Latin and Greek will continue to be housed west of Soldiers Gate.

* * *

WE ARE reminded by the report of the January meeting of the Advisory and Executive Committee of the Corporation that the memorial fence has never been completed. It still remains to be built along Thayer street. But a lighter type of construction, the architects say, should be adopted there, because the Metcalf Laboratory and Caswell Hall are set so close to the highway. No doubt the general effect of the older sections of fence can be secured even if a less ponderous brick and iron combination is evolved.

* * *

AN ADDITIONAL appropriation of eight thousand dollars was made at the January meeting of the Advisory and Executive Committee of the Corporation "for extraordinary expenses, including the completion of the addition to the Arnold Biological Laboratory." We wait with eagerness to read, some day in the not distant future, of an appropriation to dismantle the shabby and deplorable steel structure across the way, just east of the Engineering Building.

# Missing Men

ONCE upon a time—and this is no fairy story in spite of its beginning—once upon a time there was a Brown man whose mail came back to the office of the Associated Alumni with the disturbing stamp: "Moved, left no address."

"More carelessness," said the Keeper of the Graduate Records with a sigh, as she took the man's cards from the files and began the work of tracing him. A letter to his home town brought no response. A letter to the class secretary was as fruitless. A letter to a classmate gave a clue. The clue proved weak, but it led to a stronger one which, after two months of tracing, finally brought the desired result.

One doesn't need to be the brightest young man in the class to figure the time, energy and expense that would have been saved if the graduate in question had been thoughtful enough to notify the postmaster or tell the postman where he was going.

For the last six months, Miss Elizabeth Himes, the Keeper of the Graduate Records, and the Alumni Manager have been trying to reduce the list of Brunonians set down as "temporarily missing." They have had a fair measure of success. They have been aided materially by some class secretaries, by Brown Club secretaries and by individual Brown men with excellent memories or a flair for—well, we almost said, digging up the careless.

The work has had its compensations. There was one man who had been heard from only once since he was graduated fifteen or more years ago. The Alumni Manager knew him well in college. So the A. M., recalling what the advertising experts say about the personal touch, sat him down and wrote his old college chum a long letter reminiscent of college days and mutual college friends. In due time the answer came—and what a heartening answer it was!

In another case the principal of a famous school was asked about a more recent graduate. He replied: "If you knew as much about this man as we do, you wouldn't look any further for him." After

such a scorcher it was a relief to learn from the niece of another alumnus: "Uncle never answers letters, but you may depend on me to keep you in touch with him." Incidentally, several Brunonians just like Uncle have been discovered since last June.

But it is inevitable that there must always be a certain number listed in the records as "temporarily missing." Carelessness, a disinclination to write, a studied desire to avoid any contact with the University—these are the reasons why the Keeper of the Graduate Records intimates frequently that her work is never done. And here are the graduates who have been careless, or disinclined to keep the Alumni office informed of their whereabouts. If you know where any one of them is, or how he may be traced, please do not delay in telling the Alumni Office, John Hay Library, about it.

1871—Gilbert N. Campbell.
1877—Frederic A. Hyde.
1878—Henry C. Shearman.
1890—Frederick H. Hovey.
1891—Francis E. George.
1892—Horace McFarland.
1895—Henry Mahoney.
1897—Rev. Charles K. Bidwell.
1901—William S. Blake, Charles W. Brooks.
1902—Erastus W. Clarke.
1904—Henry J. Brady, Herbert A. Freeman.
1905—John P. Filson.
1906—Halbert A. Bolt, Hollis B. Cubberly, Louis Rosen, Gustavus A. Russ, George G. Shor.
1907—Archibald D. Brown.
1908—James C. Martin, Maurice E. Schur.
1909—Henry R. von Bargen.
1910—William B. Bruce, Willis G. Conant, Earle M. Horton.
1911—Charles A. Barry, James C. Archie, Michael H. Gallagher, Walter W. Jackson, Joseph Zarmon.
1914—Lawrence C. T. Miller, Cyril H. Wakefield, Francis M. Willett.
1916—Joseph A. Landschoff.
1918—Samuel Leiboff.

## COMPTROLLER BURLINGAME IS HONORED

Edwin A. Burlingame, comptroller of Brown University, has been chosen President of the Association of Business Officers of Eastern Universities and Colleges for the coming year. The association is composed of 60 of the leading colleges and universities in this part of the country and has for its aim the improvement of college business methods. Mr. Burlingame has long been one of the active members of the body and has done much to standardize college accounting.

## 1923 REUNION

Arrangements for the First Reunion of the Class of 1923 are now well under way. On Dec. 18 the following members of the class met as a Reunion Committee in Providence and launched an earnest campaign for the success of 1923's first get-together as an alumni body:

J. D. E. Jones, Jr., E. C. Joslyn, B. P. Harris, Fergus Purves, Roger Johnson, W. B. McCormick,

Details of the reunion are, of course, held secret for the present, but literature will be sent to the class members in the near future announcing the major events. Needless to say, the First Reunion ought to be one of the best ever, hence every member of 1923 is urged to make an effort to be back on the Hill during Commencement Week.

*W. B. McCormick, President.*

# Time and Space*

*By R. G. D. Richardson*

Professor of Pure Mathematics in Brown University

THE popular interest aroused in that group of ideas which are associated with the terms Relativity, or Time, Space, and Gravitation, appears to me to indicate sound instincts. This new concept bids fair to revolutionize our thinking to a degree even greater than did the Galileo-Newton theory of the universe or the Darwinian theory of evolution. No matter whether all the details meet with final acceptance or not, physics will always be studied from an entirely new angle. And science and philosophy will have new vistas opened up to them.

It is very easy to startle and confuse with seemingly absurd statements or paradoxes in this new theory. These seeming contradictions are in large measure due to the fact that the technical terms used by scientists have somewhat different connotations from their everyday meaning. I have in mind one popular treatment, written by a man who is neither a physicist nor a mathematician and who does not altogether understand the implications of the new ideas. In his laudable attempt to translate the difficult notions into familiar language and thus to popularize the new theory, he is led to make statements which have no meaning whatsoever either to the scientist or to the layman. It is my purpose in the brief time at my disposal to attempt to orient you in the new thinking rather than to puzzle you with paradoxes.

The general physical laws of nature are statements in compact form of uniformities which experience has shown to exist amongst physical phenomena. They have no compelling or binding power like the laws of the land or Divine dispensations. They are simply generalized statements of what has been found to happen in given circumstances, and may therefore be expected to happen in the future in like circumstances.

The old Greek cosmogony, known as the Ptolemaic, was no mean conception, and explained perfectly every astronomical fact known at the time. The earth was the centre of the universe and the other heavenly bodies revolved around it in more or less complicated patterns. But as new planets were added, epicycle had to be piled on epicycle until the system became extremely complicated and top-heavy. The planets literally looped the loop in fantastic curves. We can sympathize with the mediaeval king who, after studying the theory, said that he regretted that he had not been present at creation; he could have suggested a better plan. Newton discarded entirely the multiplicity of hypotheses necessary to the upholding of the old theory and substituted a single new one, namely, that the sun was the centre of the solar system and that an attraction between two bodies is equal to the product of their masses divided

**Read at a meeting of the Review Club at the home of the Misses Chace, Hope street, Providence, on the evening of December 8, 1923.*

*This paper is largely a compilation; the author makes no claim for originality in the ideas or in the form of their presentation.*

*For those who wish further reading the following popular presentations of the subject are recommended. Others will be suggested on request.*

*Eddington, Romanes Lecture, 1922 (Oxford University Press, 32 pp.), Birkhoff, Lowell Lectures 1923 (to be printed serially in the Scientific Monthly early this year). Bolton, "An Introduction to the Theory of Relativity" (Methuen and Co., London, 172 pp., 5 shillings). Einstein, "Relativity" (Translation, Methuen and Co., London, 132 pp., 5 shillings).*

by the square of their distance. To us this seems a great simplification from the Ptolemaic conception, but it is worth remarking that to most of his contemporaries, Newton's hypothesis seemed so difficult as not to be understandable.

For centuries Newton's doctrine of the attraction of gravitation was the most prominent example of a theory of natural science. It has compelled the admiration of all through the simplicity of its basic idea, through the completeness by which it explained so many of the peculiarities in the movement of the bodies making up the solar system; and finally through its universal validity, even in the case of the far distant planetary systems.

During the last quarter century, however, information has been accumulating concerning many phenomena which has made it necessary to add hypothesis after hypothesis to Newton's in order to have a satisfactory explanation of the universe. For example, the planet Mercury has had some irregularities in its motion; it has been established that gravitation affects not only matter but light, and that light, striking an object, tends to shove it away; it has been shown that motion increases the weight of a body, and that as the velocity approaches the velocity of light, the weight becomes infinite. Motion seems also to affect the shape of a body; particles, which presumably are spherical in shape, shot off by radioactive substances with velocities nearly that of light, multiply many times their weight by the motion and so far as our measurements are able to ascertain, become pancake shaped. Various phenomena which have much in common, such as light waves and magnetic waves, have had some disturbing differences in their theories.

The new theory of relativity does away with a host of hypotheses and puts in their place a single fundamental one which satisfactorily explains the various phenomena. The central fact which has been proved—and which is of great interest and importance—is that the natural phenomena involving gravitation and inertia (such as the motion of the planets) and the phenomena involving electricity and magnetism (including the action of light) are not independent of one another but are intimately related, so that both sets of phenomena should be regarded as parts of one vast system embracing all nature. The relation of the two is, however, of such a character that it is perceptible in a few instances only, and then only by refined observations.

Such an achievement is the very essence of scientific thinking. Such simplification and unification of our modes of conception of nature as have been achieved for his generation by Newton and for us by Einstein make also the strongest possible appeal to our aesthetic sense. From this standpoint Einstein's theory possesses merit of the highest degree: every lover of the beautiful must wish it to be true. It gives a vast and unified survey of the operations of nature, with a technical simplicity in the critical assumptions which makes the wealth of deductions astonishing. It is the case of an advance arrived at by pure mathematical theory; the whole effect is to make physics more philosophical (in a good sense) and to restore some of that intellectual unity which belonged to the great scientific systems of the seventeenth and eighteenth centuries, but which were lost through increasing specialization and the overwhelming mass of detailed knowledge.

This new conception must of course be expressed in mathematical language just as was Newton's. That the mathematical form should be more complicated is to be expected, for Newton dealt only with that which is ordinarily known as gravitation, while the Theory of Relativity has relation also to all phenomena, including electricity, magnetism and light, and affects our conception of the fundamental character of force and matter and of time and space.

It is not to be expected that educated people in general will master the very difficult and abstract mathematical reasoning which is involved in the new theory. The

mathematics must be left to a limited number of specialists in precisely the same way that it has been with the older Newtonian theory. Through generations of inheritance we instinctively feel that we share in some degree the concepts of Newton; we are satisfied to accept the Newtonian law because we have grown familiar with it although we do not in the least understand its physical basis. Succeeding generations will have a new inheritance and will find the new ideas the more natural and plausible though they may understand the physical basis not a whit the better.

With your permission I shall take a few minutes to state what in my opinion are some of the important differences between the concepts of the present generation and those of our grandchildren. If it be claimed that none of the little everyday affairs of any of us are affected by this change in hypothesis which can be expressd only in purely mathematical terms, the same may have been said, and with more reason, concerning the hypotheses at the basis of the theory of evolution. The mathematical implications of the one must be left to trained mathematicians and physicists and chemists, as the logical implications of the other must be left to botanists and biologists. It is worth remarking here that there are those who claim that deductions from the new ideas will release material forces which will mark another advance in our conquest of nature such as came as a result of the Newtonian mechanics to mark the opening of the modern industrial era. But I take it that we here this evening are interested more in the features which influence our general attitude toward the universe ,and I shall leave other considerations aside.

A few of the points at which our fundamental concepts must undergo modification are:

1 The relation of gravitation to the other types of forces. This force, which has been a thing apart, is in the new theory fused into our general conception of the universe.

2 The nature of the new geometry of the universe. What constitutes a straight line ? Our notion concerning the number of dimensions of the universe and its extent must be revised.

3 The interdependence of time and space and the dependence of both on matter. Time is relative to space and space to time, and both are relative to matter.

Let us now elaborate these in some detail. Gravitation is a phenomenon which has until now defied explanation; it has been one of the greatest mysteries of the physical world. We are familiar with the impact of one body on another such as of one croquet ball hitting another and transferring to it some motion. On the other hand, force such as electro-magnetic, acting at a distance, has been generally supposed to set up some sort of constraint in its neighborhood called a magnetic field, which may be due to the impact of electrons. If a stone is whirled around at the end of a string, it is easy to visualize the force due to the direct pull of the stone. Gravitation appears quite different from these types of force. Have you ever given serious consideration as to the method by which the earth reaches out and pulls down the apple? There is evidently no impact like that of the croquet balls. Action at a distance is repugnant to our minds and it does not help us to imagine the ether as the medium through which this force is exerted, for earth and apple alike seem to slip freely through the ether. We might as well imagine the ocean pulling two ships together.

As distinguished from electro-magnetic forces, gravitation acts on all matter alike, iron and wood being equally affected. Again, electro-magnetic forces do not act instantly, the force being transmitted with the velocity of light (186,000 miles per second), while for the Newtonian theory it has been shown that gravitation acts instantly. Electro-magnetic forces can be cut off by interposing a screen, but one cannot screen off gravitation. We will all agree that gravitation cannot be classified with any other type of force known, except per-

haps that fictitious force we call centrifugal. Many unsuccessful attempts were made before Einstein to bring gravitation into relation to other forces; it remained for him to make an explanation which seems to fit the case.

Let us imagine a large portion of empty space far removed from the earth, sun and stars. Under such circumstances there will be no gravitation. Consider an observer imprisoned in a large box and having instruments with which he can measure forces. Since there is no gravitation he will not stay on the floor of the box unless he be tied there, for otherwise any impact with the floor will cause him to rise slowly toward the ceiling of the box. Now suppose a rope to be attached to the top of the box and pulled with a constant force. The box will begin to move and if the force is constantly applied the box will move faster and faster and attain a very large velocity. But how does the man in the box regard the process ? The acceleration of the box is translated to him and he feels himself pressing against the floor. He is standing on the floor of the box exactly as I am standing on this floor. If he release a body which he previously had in his hand, the acceleration of the box will not be transmitted to it and it will fall to the floor of the box precisely in the same way as it will here. And the observer will be able to convince himself that the acceleration of the body toward the floor is of the same magnitude whatever the kind of body whether it be iron or wood or any other substance. In other words, this pull from outside the box will simulate every effect of our everyday experience and the man will conclude that he and the box are hanging in a gravitational field by a hook just as we hang a canary-cage.

To give a more homely illustration, let us recall the fact that on suddenly starting up in an elevator we feel more pressure on the floor, and if we should stand on a scale in the elevator we would expect to weigh more. In starting down we would weigh less; if we start down with a velocity which would be acquired by the elevator falling freely, we would weigh nothing at all. Thus in an elevator we are unable to disentangle the force of gravitation and the acceleration of the elevator.

As we sit in this room we are unable to tell whether we are in a gravitational field or whether the earth is being accelerated or whether we should divide the effect between the two forces. There is absolutely no way of distinguishing between them. The theory of relativity goes to the limit, as mathematics is apt to do, and apportions the whole effect to acceleration. This acceleration is caused by a curvature in the space-time track along which the person is speeding. If, when riding in a car, we go around a curve, we are accelerated toward the outside of the track. We feel the pressure of our bodies against the outside of the car in exactly the same way that we ordinarily feel the pressure against the earth, and if we are flung against the side of the car we get the same effect as if we fall from a height to the earth. If the motion of a ship is suddenly checked, passengers are thrown forward as though a gravitational force, pulling them toward the front of the ship, had been created. Gravitation is the same type of force as this other acceleration and has nothing whatever to do with the pull across empty space of one body on another.

Another illustration used by Einstein to free us from preconceived notions in regard to gravitation is that of a rotating disk. Suppose a large horizontal disk or circular platform, capable of carrying an observer, such as may be seen in amusement parks. Let the platform be covered by a large dome-shaped lid which revolves with the platform, so that the observer within cannot tell by direct observation whether or not the platform is in rotation. Suppose the platform is at first stationary; the observer in walking from one point to another of his little world would perceive no difference at any point from any other.

But let the platform rotate and although the observer could not directly perceive the motion, he would be aware of a difference. At every point of his space except the exact centre he would experience a force repelling him radially outward. The greater the distance from the centre the greater the force of repulsion. Now, says Einstein, this force is of the same nature as gravitation, though it is directed away from the center rather than toward the center. The force exerted on the observer situated on the platform is caused by a curvature in the track of the observer situated on the platform which throws him against the side of the dome; while gravitation is the force caused by a curvature in the space-time track in the universe which throws him against the earth. This curvature in the track is caused by the presence of matter.

In other words, Einstein takes absolutely new ground. Instead of trying to invent machinery for the production of a force of attraction which causes the apple to fall to the ground, he denies the existence of such a force. According to his theory there is no more force of attraction between the sun and the earth to hold the latter in its orbit than there is centrifugal force of repulsion preventing it from falling into the sun. Both so-called forces are mathematical fictions: both are different aspects of one entity,—inertia (the tendency to remain uniformly in motion in a straight line if once in motion).

Let us turn next to the difficult subject of geometry. It is here that the chief adjustments in our viewpoint must be made. We shall find that notions which have been the property of leaders in mathematics and philosophy for a half-century, but which are barely known outside these groups, must now become the common property of all thinking men and women.

Doubtless most of you have been introduced to the magnificent structure known as formal geometry, and doubtless some of you remember it with more respect than affection. Let us consider for a moment some one of its propositions and the validity of its statement. One of the most important propositions is the Pythagorean, which states that in any right-angle triangle the square on the hypotenuse (the side opposite the right angle) is equal to the sum of the squares on the other two sides. As our president, Chancellor Chace, will tell you, this was known to the Egyptians, who used 3, 4, 5 for the sides of a right triangle. In Euclid's Elements this celebrated proposition is number 47, and of course it is based on some earlier propositions and these earlier propositions on some assumptions which we call postulates or axioms. When we say that this proposition is true, we mean that, provided the postulates are assumed, logical reasoning leads us to this conclusion. Had the axioms (or assumptions) been different, the conclusion would necessarily have been different. The first 25 propositions of Euclid are proved without any assumptions concerning how many lines one can draw through a given point parallel to a given line. At this point he had a choice of three possibilities as to assumptions. That through a given point and parallel to a given line there is one line; or no lines; or many lines. Euclid faced this trilemma and decided to assume that there was one and only one line possible passing through a given point and parallel to a given line. Otherwise he would not have been led to his theorem that the square on the hypotenuse is equal to the sum of the squares on the other two sides, but to a different theorem. What influenced him in his choice may at this distant date be impossible to determine, but the fact that in the measurement of that day the square on the hypotenuse was known to be at least approximately the sum of the squares on the two sides may have decided the matter. This point of view makes geometry a branch of measurement, that is of physics.

There are geometries of a different nature just as logical as the Euclidean which

has been the basis of our reasoning for two thousand years. On the surface of the earth, for example, the square on the hypotenuse of a right triangle is not equal to the sum of the squares on the others. If we take a triangle with one vertex at the pole and the others on the equator and equidistant from one another by ¼ the way round the earth, every angle is 90 degrees and all sides are equal and the theorem is clearly false.

In surveying a piece of land the size of our lawns we would not be far off in assuming this theorem, but in a plot even so small as Rhode Island we would find the theorem would not be accurate enough and we have to build up a different geometry. Other theorems in the geometry of the surface of the earth will be different also. If two people in different localities each start north we would say that they were going on parallel lines, but eventually they would meet at the north pole. Here is a case of the intersection of what might be defined as parallel lines.

The most fundamental notion in any geometry is that of the straight line, which is defined by Euclid as the shortest distance between two points. In the geometry on the surface of the earth, as every navigator knows, this is an arc of a great circle. These shortest lines are called geodesics. In the geometry of relativity, we choose for straight lines the paths of light. Now we know by experiment that light is bent in passing by a heavy body like the sun. Geodesics will then not be the same in the neighborhood of heavy bodies as they are in empty space. Straight lines or geodesics will then not always be superposable. It is conceivable that, with enough bending, a geodesic would eventually be turned so much that it would return into itself in some such fashion as a circle on the sphere. The universe may then be limited, instead of extending off to infinity as in our former conception of it.

To illustrate further one of the new geometries with which we must become familiar, imagine a level surface of still water on which lines can be traced giving us the ordinary Euclidean geometry, and imagine further that a short needle, well oiled, has been laid on the surface so that it does not break the surface and thus floats. The needle then lies supported by the unbroken water surface bent into a cusp or depression. This is a surface normally two-dimensional like a plane but bent or depressed slightly in the direction of a third dimension in the vicinity of the needle; in other words there is a curvature in the space. If we examine the geometry of figures traced on the curved portion of the water, we shall find it non-Euclidean. The geodesic in this part of the surface will be a curved line of some kind, but if continued well beyond the cusp in either direction, the geodesic will soon be indistinguishable from an ordinary straight line; and remote from the needle the surface will be Euclidean.

Supposing now a particle much smaller and lighter starting from a point distant from the needle and moving freely in a direction which will carry it near the needle and well within the cusp. The path of the moving particle, at first a straight line, will as it enters the cusp assume the curved or geodesic form proper to the space in which it finds itself. Assuming no attractive force to exist between the particles, the moving particle will pass on and out of the cusp, its path again becoming straight; but on account of the brief twist to which it was subjected in passing through the cusp, the final straight portion of the path will not in general be a continuation of the first straight portion. The particle will have suffered a permanent deflection, just as a child's toy automobile will generally take a somewhat different direction after it goes over some hollow place in the floor.

An observer watching the motion of the particle through what we may call Euclidean-Newtonian spectacles which do not show him the curvature of the water surface, will say, "Yes, on passing the heavier

needle the light particle seems to have suffered a force of attraction of some kind and to have been deflected from the straight track." But let him replace these spectacles by others of Einsteinian make, and he will say, "No, I see now there was no force of attraction at all. It was purely the inertia of the moving particle combined with the peculiar curvature of the surface which it had to traverse that produced the change in its path."

Einstein's equations describe an analogous phenomenon occurring in a space of four dimensions curved or slightly cusped around each particle of matter. A ray of light coming from a remote star traverses for millions of miles a region of space remote from material bodies and in an ordinary straight line, as in Euclidean space. But if it passes near to the sun, whose great mass causes a considerable cusp or warp in space, rendering it non-Euclidean in the immediate vicinity, the straight line becomes twisted into the geodesic proper to such a curvature; and when it again becomes straight it has been permanently deflected from its original course.

We turn now to the third point at which our conceptions must necessarily be altered. This concerns the relativity of motion and of time and space. The term relativity refers to time and space. Newton made the assumption that time and space are absolute entities and that the moving systems of the universe are dependent on this absolute time and absolute space. It was explicitly assumed by Newton, and tacitly assumed by others until recently, that time flows on at the same rate everywhere in the universe (if that expression means anything) and that there is such a thing as simultaneity; that is, two events such that all observers in the universe would agree that they occurred at the same time. This notion, as we see later, is no longer tenable. On these conceptions of absolute time and space was built the science of mechanics. The resulting formulas sufficed for all motions of a slow nature; it was found, however, that they would not conform to the rapid motion apparent in electro-dynamics. In the new theory absolute time and space are discarded and are considered in every instance as relative to the moving systems.

I stand at the window of a moving train and drop a stone. To me it seems to fall directly downward, but to a person near the track it describes a curved path like a pitched ball. To an observer at the north pole it will have in addition the motion incident to the rotation of the earth on its axis every twenty-four hours. To one on the sun it will have all these but, in addition, a great swing in the arc around the sun, while to an observer on a so-called fixed star, will be added the motion of the sun through space, relative to the star, which may be enormously great. From this we gather that motion is interpreted differently from different viewpoints; that is, motion is relative to the observer, and we can describe a path only as relative to a particular body of reference.

Who is the proper observer? The astronomer in describing phenomena places himself on the sun: most of the rest of us think of everything as related to some point on the earth. The intersection of the meridian through Greenwich and the equator is one point of reference, and from it latitude and longitude are measured. Many of us are satisfied to think that everything revolves about Providence, (R. I.) The relativist says that none of these standpoints is better than any other; that none gives the facts any better than any other; that one is as good as another; that there is no favored point for observation.

But you will ask: Is there not some fixed substance, say, the ether, that is at rest and in which we can imagine ourselves stationed and from which we can observe the universe as it waltzes around us? The answer is: No. Experiment has failed to detect any such position or medium and now sets up the postulate that there is no way of detecting absolute motion. We may detect

motion relative to something else which may be thought of as fixed or in motion, but there is no such thing as absolute motion or absolute rest.

Having explained that all motion is relative, let us next discuss the question of simultaneity. Suppose one observer is on an embankment alongside a train and lightning strikes the rails both ahead and behind the train. If he has a set of mirrors arranged so as to see both ahead and behind and sees both flashes at the same instant, he concludes that the two strokes are simultaneous. Suppose a second observer in motion on the train such that when the two strokes take place he is just midway between the places where the lightning strikes. By the time that the light reaches him, however, he has moved forward somewhat and the flash from the front will appear to him earlier than the one from the rear.

In other words, what is simultaneous to the man on the embankment is not simultaneous to the man in motion, and what is simultaneous to the man in motion is not simultaneous to the man at rest. The observer on the embankment has then a different way of computing time from that of the observer on the train.

Two boys, equal in swimming prowess, stand on the bank of a stream one hundred yards wide, and decide to swim. One is to go up stream one hundred yards and return, while the other is to go to a point directly opposite on the other bank and return. If there is no current they return at the same instant; but if a current exists the cross-stream swimmer returns ahead of the other. In attempting to synchronize clocks by two observers at different stations, resort is made to light signals of some sort. If one station is in motion relative to the other light, the swimmer makes the journey quicker in one direction than in another and one time will thus be found to be running faster than the other.

One of the important deductions from the new theory is then that, while there is such a thing as local time (that is, time at a fixed station), there is no such thing as universal or absolute time. There can be no such thing as simultaneity. The denial of absolute simultaneity is a natural complement of the denial of absolute motion. The latter asserts that we cannot find out what is the same place at two different times; the former, that we cannot find out what is the same time at two different places. It is curious that the philosophical denial of absolute motion is readily accepted, while the denial of absolute simultaneity appears to many people revolutionary. The apportionment between time and space of an event by one observer will not be quite the same as for another if he is in motion in regard to the first. That is, time and space are properties of matter which are not independent of one another; an idea sometimes stated in the form "time is a fourth dimension." This will not seem so unnatural to us if we reflect than any notion involving motion, and hence velocity, involves time; for velocity is distance travelled divided by time elapsed. Time and space are never separated in nature and we have no right to separate them in our theories which are supposed to represent nature. We may here repeat the oft-quoted words of Minkowski, "The views of space and time, which I have set forth, have their foundation in experimental physics. Therein is their strength. Their tendency is revolutionary. From henceforth space in itself and time in itself sink into mere shadows, and only a kind of union of the two preserves an independent existence."

Let us suppose we have two ships sailing side by side and on parallel courses in a direction roughly north-east. The navigator on one has a gyroscope compass which points to the true north, that on the other a magnetic compass which points to the magnetic north. The course of the one ship will appear to have more north and less east in it than that of the other. Both mariners have north and east in their courses but not in the same proportions. In an analogous manner, two observers in the universe observing the same phenome-

non, will make record of the time and space in different proportions.

We have been accustomed to regard our world as composed of a continuous succession of instantaneous states, as though the world of events was stratified. Each event is supposed to lie in a definite instant or stratum running throughout the universe. Indeed, we are accustomed to extend it beyond the universe, and we even use the word "now" with reference to the existence of those who have passed into the Great Beyond. The recent investigations show that this supposed stratification is an illusion; there is not the slightest evidence for such a view of world structure. The instantaneous state which we have hitherto taken to be a natural stratum in the four-dimensional world of events is merely an arbitrary cross-section created by ourselves. We can take a differently inclined section which includes to the north of us events which happened a little while ago and to the south of us events still in the future. Such a bizarre combination can be made in every way equivalent to the state we now call instantaneous, and indeed it *is* an instantaneous state according to the outlook of some non-terrestrial observer with suitably assigned motion.

As another consequence of the interdependence of time and space, lengths of moving bodies will appear different to observers at rest and on the moving body. This is what is meant by saying that a body is shortened in the direction of its motion.

Let us examine the nature of the cube which I hold here before you. You see one face, or two faces, or three faces. You can measure the edges and the areas of the faces and the volume of the cube. And a physicist could do this with his instruments without being very near the cube if he took several different positions in its neighborhood. Now the relativist steps in and says that the set of aspects presented by viewing the cube from different fixed stations in space are insufficient to give a correct theory of its physical shape. He says that yet another set would be presented if the cube and the observer were in relative motion. If the observer were to keep on the move while collecting his impressions or making his measurements, these impressions and measurements would be different from those he would get while standing still. For example, if the cube is moved sideways keeping one face parallel to this wall behind me, the fixed observer would see the figure not as a square but as a rectangle having its width less than its height. It is true that for slow motions this change is imperceptible: the earth moves in its orbit about 18 miles per second (relatively slowly with regard to light) and to an observer stationed on the sun the diameter of our planet in the direction of its motion would appear to be contracted about two and one-half inches, an amount not observable. But when motion approaches the velocity of light as it does in the case of some electrons, such an effect is actually produced, as has been shown by observations. If it were usual for objects to move at that rate, these changes of shape would be accepted as matters of course.

In order to specify what is going on in a body in motion, we must state the position of its particles relative to some system of lines or planes which are called coordinates. We are in a general way familiar with systems of coordinates such as are used for exhibiting relations between quantities by graphs or diagrams. We say a friend lives on the corner of 72nd Street and 8th Avenue, meaning 72 streets and 8 avenues from a certain point, and if we want to add a third coordinate we may say 8th story up. This sort of coordinates can be extended out to infinity in all directions. On the earth we locate points by the coordinates called latitude and longitude. The earth carries its system of coordinates with it and the navigator is concerned with the ship's relation to these coordinates. But an observer on the sun would have to make allowance for the change of position of the coordinates, which consist here of the meridian through Greenwich and the equator. It may be considered that each particle in

the universe carries with it a set of coordinates. The mathematical theory must then be built up so that an observer at one position in the universe must be able to interpret in terms of his own system of coordinates information which he receives from an observer at another point and which is given in the other's system of coordinates. Observers in different parts of the universe and in varying degrees of relative motion will interpret the same phenomenon in various ways; it is the role of mathematics to get at the core of the situation and give by fundamental equations such a statement of the facts that any one of the observers will agree that, as regards the time, space and other factors involved, it is correct for himself; and he will be able also to compute the data in terms of which his fellow will observe the phenomenon:

As a consequence of the new geometry, it turns out that not only is it possible that our universe is limited, but that speeds of material particles conceivable in such a universe are limited also. If wind goes rushing by at the rate of 60 miles per hour, and we drive into it at the rate of 60 miles per hour, we will find that our wind gauge registers 120 miles per hour, and if we drive with it 60 miles per hour, we will find the gauge registers 0 miles per hour. The light from the sun travels 186,000 miles per hour, and we would expect that when the earth is moving toward the sun, light would reach us with greater velocity than when we are standing still. But so far as measurements can tell us, this is not the case. The famous Michelson-Morley experiment shows that light seems to reach us at exactly the same speed whether we are travelling toward or away from it. In that respect the velocity of light is like the infinity we deal with in mathematics where infinity plus 1 equals infinity and infinity minus 1 equals infinity. In fact, the velocity of light plays in the theory of relativity a role a good deal like infinity, for it would appear that in our universe nothing material can be observed which goes faster than light.

Time will not permit our discussing in any detail other interesting features of the theory, some of which are still in a highly speculative state. But we may mention a few of them in passing.

Of two events, one may seem to be in observer A's past and in observer B's future, while another event may reverse the situation by being in A's future and B's past. The notion that the order of events is not the same to everyone compels a review of our theories of cause and effect and of foreordination and freewill. To the relativist many of the older philosophical and theological controversies can have no meaning. President Granville of Gettysburg College, himself a mathematician, has written a book giving a possible explanation of the miraculous by means of the new theory. Many religious organizations are studying the theory for new light on their doctrines. But I cannot claim to find much interest in such speculations.

The theory of relativity may not give us a much better explanation of the ultimate nature of things but it gives us a better conception of the relations between the fundamental stuffs. If matter is only a kink in space, we could have no matter without space. On the other hand, so far as I can see, we would have neither time nor space without matter. And since matter seems to be nothing but electricity, since without motion we would have no mass, the number of elemental things has been considerably reduced. Till recently it was believed that time and space existed by themselves even if there was nothing else—no sun, no earth, no stars—while now we are led to believe that time and space are not the vessel for the universe but could not exist at all if there were no content such as matter.

Again, the universe is either finite or infinite, but our imaginations can grasp neither alternative in terms of the old ideas of space and time. Just as the surface of the earth is two-dimensional and limited in extent and still has no boundary, so it seems possible that our universe of more

dimensions is finite and yet unbounded, a self-contained universe keeping intact its store of matter and its energy.

In closing, may I be permitted to express a personal conviction that by adding to our general knowledge and by developing the power of the imagination, the new theory has enlarged the ethical and aesthetic values of life. (The charge often made that science and scientists are materialistic seems to me to be based on lack of comprehension of the ideals and the method.) One of the remarkable features about this new theory is that, starting from a purely experimental basis, it compels us to accept the super-sensual as a fact. In emphasizing the relativity of the physical world, the new theory makes clearer, too, the dictum that conduct is also relative, and makes it easier to understand the adjustments necessary in our contact one with another. Moreover, appreciation of the aesthetic values which add so much to the joy of life seem dependent on knowledge and the training of the imagination: for ignorant savages seem blind to the beauties of nature and unresponsive to the appeal of art.

But I think I hear our genial referee say *Time*—and—*Space* for a better man.

# The Clubs

Secretary Edward K. Aldrich, Jr., has sent out notices to all Brown clubs that the annual meeting of the Advisory Board of the Associated Alumni will be held in Providence on March 4, the night before Visiting Day at the University. There will also be a morning session on March 5 to discuss matters of importance to the Association and to Brown in general.

The place for the evening meeting will undoubtedly be the University Club, with a dinner to precede business. President Archibald C. Matteson and the Executive Committee are now drawing up the programme for both sessions. Matters of interest will be Alumni Trustee nominations, the naming of standing committees and, it is forecast, a discussion of how best the Associated Alumni may aid the University in its growth and development.

Each Brown Club having at least ten members is entitled to be represented at the meeting of the Advisory Board. There are also seven delegates at large who were elected last June, the officers of the Associated Alumni and the Alumni Trustees. Since the 1923 session, two new clubs, one at Putnam, Conn., the other the Merrimack Valley, with headquarters in Lawrence, Mass., have been formed. Another at Manchester, N. H., is under consideration.

"The meeting is of real import to the future of the Associated Alumni," said Secretary Aldrich in his notice to Brown Club secretaries. "It is not impossible for every Brown Club (there are 30 of them) to be represented. The larger the attendance the more apparent and clear it will be that the Association is progressing and that it is actually becoming a vital factor in Brown life and Brown affairs."

## NEW YORK

While the printer was shouting hoarsely for the last copy for this number of the Monthly, word came from New York that the annual dinner of the Brown Club of New York would be held Feb. 28. So that is the date for all Brown men interested in this affair, one of the biggest and usually one of the best of its kind during the year, to stick in their hats—or on their engagement calendars. None of the details for the dinner were available as this was written (Jan. 5), but by this time we suppose that everything is progressing toward a dinner that will be in every way up to the high standard set by Brunonians in New York. President Faunce has already

said that he will be there. So, Brown men in and about New York and neighborhood, remember the date, FEBRUARY 28!

W. J. Walsh '17, W. B. Leonard '21, formerly of Providence, and C. H. Appleby '23 of Glen Cove, L. I., have joined the Club as permanent residents.

## PHILADELPHIA

Secretary Harry G. Leighton '03 of the Brown Club of Philadelphia writes: "The Philadelphia Alumni held their first get-together this winter on Dec. 18 at Young's Cafe. The attendance was good.

Dr. Keen, who founded the Philadelphia Association over fifty years ago, was present, as he always is when Brown men get together in this city. He gave us a short talk, which only went to prove that we have the most loyal Brown alumnus in the country in Philadelphia, and as for his enthusiasm for old Brown, the more recent graduates cannot beat it. Moreover, only a few days before, he had just returned from Europe, where still more honors had been conferred upon him.

"Tom Appleget was with us, too, and told us about the most recent happenings on College Hill. His was an inspiring talk; just what we needed. Furthermore, he gave two talks to schools in the city; Penn Charter and Episcopal Academy. In both places he was well received and we are looking forward to his coming again.

"Carleton Morse '13, told us about the difficulties of awarding the football cup to the Philadelphia Suburban League where there were three undefeated teams claiming the championship. Jimmy Murphy '17 put on one of his justly famous impersonations. This one was entitled, "Dean Randall's Address to the Freshmen before an Examination." Needless to say Dean Randall was well portrayed.

"Plans are being worked out to put the name of Brown before the public this winter in a way that it has never been done in Philadelphia before. We will have more to say about them later.

## PROVIDENCE

As the Monthly was on its way to press, plans were practically ready for the annual meeting and dinner of the Brown Club of Providence, set for Monday, Feb. 11, at 7 o'clock in the evening at the Providence Biltmore. President Faunce long ago promised to be present and the committee, headed by Alfred B. Lemon '13, had arranged for the presence of two prominent speakers from out of the city. (We have heard that A. A. Stagg of the University of Chicago, famous football coach and ardent advocate of clean sports, will be one of them). Serving with Mr. Lemon on the committee are Henry G. Clark '07, McDonald L. Edinger '15, Frederick A. Ballou, Jr., '16 and Earl M. Pearce '17. The Brown Club of Providence is working quietly and effectively along various lines for the University and we hope that its dinner will be what the suburban correspondent blithely describes as "a huge success."

## MERRIMACK VALLEY

William H. Cady '98 was elected President of the Merrimack Valley Brown Club at a meeting held in the Red Tavern at Methuen, Mass., on Dec. 20. It was due largely to Mr. Cady's personal work that the Merrimack Valley Club was started and it is accordingly fitting that he should guide its destinies during the next year. James S. Eastham '19 was chosen to serve as secretary-treasurer.

Dinner preceded the meeting, and after dinner Professor Charles H. Forbes '90 of Andover, who in addition to his A. B. at graduation received the honorary degree of A. M. from the University in 1915, spoke of his travels in Europe last summer. Some 20 alumni from Andover, Lowell, Lawrence and Methuen were present to hear Professor Forbes and, at the business meeting, to elect Mr. Cady as the Club leader.

"We are hoping," Jimmy Eastham wrote the Alumni Manager, "to have the Brown

orchestra give a concert in our neighborhood some time during the next few weeks. Our annual dinner and a Brown night for the high school (Lawrence, we presume) are also being considered."

## NEW BEDFORD

Rufus A. Soule, Jr., '99 was re-elected President of the Brown Club of New Bedford at the annual meeting and dinner held at the New Bedford Hotel on Dec. 28. The officers named to serve with Mr. Soule were: Vice President, Kenneth A. Flanders '17; Secretary, Frank A. Walker '08; Treasurer, Charles F. Archambault '12; Executive Committee, Frank H. Gifford '81, Theodore B. Baylies '95; Subfreshman Director, Harry H. Burton '16; Delegate to Advisory Council, Secretary Walker.

The meeting was a lively and enjoyable affair even if the Alumni Manager was one of the speakers. President Soule did the introducing with neatness and dispatch and made everybody get up, tell his name out loud, his occupation and where he lived. He called on Edmund Wood '76 as the first speaker, and Mr. Wood replied by describing some of the things that the corporation is doing toward betterment and progress on College Hill. He discussed the proposed Freshman dormitory, the Marston Hall of Languages and other topics of pertinent interest.

The Alumni Manager, picking up where Mr. Wood left off, recounted undergraduate doings, non-athletic and athletic, and urged a greater interest in the work of the Associated Alumni. Ira E. Swaney '24, a guest of his brother, M. F. Swaney '23, spoke briefly about the election of Jim Sheldon as captain of the football eleven for 1924; Robert P. Adams '23 had some comment to make on next year's football schedule, and Nat Underdown '26 discussed track prospects and the new coach, Fred Powers. Harry Burton told of plans for a concert in New Bedford by the University orchestra and Mr. Gifford put in a word for the University dramatic society, which may appear in New Bedford this season. The idea of the club starting a scholarship fund was broached and fully endorsed. The Brunonians of New Bedford are up and moving and the Alumni Manager hereby notes that he is grateful for the opportunity of sitting in with them for an evening.

## MANCHESTER

Welcome to the newest Brown Club in the Associated Alumni! It was formed by the Brown men in Manchester, N. H., and neighborhood on the evening of Jan. 14, following a talk by President Faunce before the University Club of Manchester and a more intimate talk by Executive Secretary Thomas B. Appleget '17 to the Brown men who came with graduates of other colleges to hear President Faunce. The officers elected follow:

President, Stanton Owen '90; Vice President, Bertram Blaisdell '92; Secretary, Dr. Henry W. N. Bennett '97; Treasurer, Arthur W. Rowell '93; Executive Committee, Professor George I. Hopkins '75, Daniel S. Jenks '90, and the three principal officers, ex-officio. Mr. Rowell was named delegate to the meeting of the Advisory Board of the Associated Alumni, to be held March 4 and 5 next.

The forming of the new club was due chiefly to the interest and action of Mr. Rowell, who for some weeks has been carrying on correspondence with the Alumni Manager and Mr. Appleget with regard to the organization. There is a big field for Brown in New Hampshire, many of whose sons have been graduated from the University, and we are confident that the new club will cover this field earnestly and ably.

## CONNECTICUT VALLEY

The annual dinner of the Connecticut Valley Sons of Brown was held in Springfield on Jan. 31. Secretary Herbert F. Osteyee '13 wrote just before the event:

"Dr. Faunce will be with us this year for the first time since 1920. Everybody is looking forward to seeing and hearing him again with a great deal of pleasure."

"One of our prominent members, William C. Hill '94, principal of the Central High School of Springfield, has recently received an unusual honor in that his school has won permanently the Harvard Scholarship Trophy awarded to preparatory schools whose students make the best record at Harvard. The Central High School has made a remarkable showing in view of the severe competition for this trophy, and much of the credit is due to Mr. Hill's efforts. Ralph P. Boas '08 has also contributed largely to this achievement.

"Brown is particularly well represented in the teaching profession in the Connecticut Valley. Although the work being done by the teachers is in no way spectacular, it brings genuine and worth-while prestige to the University."

### WASHINGTON ALUMNAE

Mr. and Mrs. James V. Bennett (Marie Ettl) are living at 126 Webster street, N. W., Washington, D. C.

The Washington Star of an early December date said: "Alumnae of Brown University entertained Dean Margaret S. Morriss of the Women's College in Brown University from December 6 to December 8. Dean Morriss is visiting Washington in the interests of the Women's College and also for the purpose of arousing constructive enthusiasm among alumnae of Brown University in Washington. She visited the high schools and college preparatory schools of the city under the guidance of Mrs. Paul Kaufman, wife of Dr. Kaufman of American University. A tea, with the wives of Brown alumni as special guests, an evening meeting with Mrs. Charles R. Stark of Takoma, Md., and dinner at the national clubhouse of the American Association of University Women, followed by a theatre party, were special features. Among the wives of sons of Brown were Mrs. Charles Evans Hughes, Mrs. John F. Jameson and Mrs. Wilbur, wife of Dean Wilbur of George Washington University. Miss Annie E. Rathbun is president of Brown alumnae in Washington."

## A Loyal Brown Men

*Editor Brown Alumni Monthly:*

Another good Brown man has gone. William Cary Joslin, Brown '76, died in Raleigh, N. C., on Sunday morning, December 30th. He was a man who achieved large things in the field of education during a long and active career, but one feels, somehow, that he would be quite proud and content if his obituary were the simple inscription, "Brown '76". For he was first and last a Brown man, fiercely loyal and proud of his class and college connections. Practically every college officer has a file of letters from Dr. Joslin. My own file has many. He was a prodigious and interesting letter writer. I remember letters, many of them, giving me the names of young men whom he had interested in the University; letters before important athletic contests asking for opinions in regard to this or that player and the condition of the team; letters after games asking why the coach did this or the captain that, or commending individuals for acts which had pleased him; letters in regard to members of the faculty and students and courses and programs; letters in regard to needs and problems and proposed buildings; letters which breathed, every one of them, an extraordinary interest and loyalty in everything connected with Brown. He was in as close touch with undergraduate affairs as anyone on our campus. It would be hard to estimate how many individual students he followed; how many he helped with encouragement and advice. He made every

Brown man who met him a little prouder of a college which could arouse and hold such an allegiance. My last picture of him was characteristic. He was sitting on the steps of the Delta Kappa Epsilon Chapter House talking and laughing with a group of undergraduates, as young in spirit and as much at home as any man in the group.

William Cary Joslin was born in Thompson, Conn., on November 17th, 1852. He studied at the Webster, Mass., High School, Williston Seminary, Easthampton, Mass., and at Brown University, receiving the A. B. in 1876. Brown conferred an honorary A. M. upon him in 1897, and Tufts the L. H. D. in 1899. He married Miss Elizabeth Florine Freeman of Philadelphia in 1882. He was editor of the Times, Webster, Mass., in 1876 and 1877. Then began a long career as an educator and a connection with many schools. He was principal of the academy at Watertown, Conn.; teacher in the Cottage Hill School at Poughkeepsie; principal of the Academy at Oxford, N. Y.; master at Williston Seminary; principal at the Scranton High School; vice-principal of Peddie Institute; Latin master at Bethlehem School; president of Westbrook Seminary; superintendent of schools at Media, Pa.

Many will remember that he suggested and actively advocated the pronoun "e" as a common pronoun for third person, singular number, taking the place of "he, she, him, her, it, his and hers". He was a member of Delta Kappa Epsilon and Phi Beta Kappa.

*Thomas B. Appleget*

Providence, Jan. 10, 1924.

# Swimming Ability at Brown

*By Leslie E. Swain*

Assistant Professor of Physical Training

A COMPARISON of this year's entrants with those of the last two years as to speed and percentages able to pass the test without lessons may prove of interest to those alumni who by graduating soon enough were able to avoid this test, as well as those who were forced to take it.

One of the most interesting facts is in the percentage of those able to pass without lessons. At the end of this fall that percentage in the class of 1927 entrants is 11 per cent. better than it was at the end of last fall in the class of 1926, and 8.1 per cent. better than at the end of the fall in which 1925 entered. Brown has very rigidly enforced her entrance requirements this September, allowing almost no men to enter with conditions. Is it not highly probable that there is a correlation between these two facts? Of course all colleges must be receiving more and more among their entrants who are able to swim, because we would naturally feel year by year the influence of the provision of better swimming facilities throughout the country, and the introduction of life-saving and swimming programs such as the Scout organizations and the Red Cross are putting on. Sometimes these quick drives lead to a false belief in one's ability, but they at least focus attention upon the need of learning to swim. It is, however, hardly logical to explain such a big increase in ability to pass the test this year over that of the two previous years in this way. A few years of as rigid enforcement of the entrance requirements may tell whether this corresponding gain in swimming ability is really related to the gain in the scholastic certification of the entrants, or is merely a freak and only a seeming rather than a real correspondence.

The actual percentages of those passed

without lessons at the end of the fall term is as follows:

| | |
|---|---|
| Class of 1927, | 74.8 per cent. |
| Class of 1926, | 63.8 per cent. |
| Class of 1925, | 66.7 per cent. |

The following table is self-explanatory:

Average time in 100-yard swim—Fall 1923-24, 2 min. 3.4 sec.; fall 1922-23, 2 min. 0.3 sec.; fall 1921-22, 2 min. 8.7 sec.

Average time in 50-yard back stroke—Fall 1923-24, 1 min. 21.4 sec.; fall 1922-23, 1 min. 20.3 sec.; fall 1921-22, 1 min. 26.4 sec.

No. of men who made 1.30 or better in the 100-yard—Fall 1923-24, 32; fall 1922-23, 16; fall 1921-22, 36.

No. of men who made 1.00 or better in the 50-yard back stroke—Fall 1923-24, 44; fall 1922-23, 46; fall 1921-22, 25.

The three best times in the 100-yard swim were made by A. W. Smith '27, 1.01 2-5; E. Talamini '27, 1.02, and J. P. Knowles '27, 1.08 2-5; in the 50-yard back stroke, by A. W. Smith '27, 33; E. Talamini '27, 38, and A. P. McNulty '27, 44 3-5. Last year's best in the 100-yard was 1.06 4-5, made by M. F. Coles '26, and in the 50-yard back stroke was 33 3-5, made by J. M. Stifler, Jr., '26.

# Corporation Affairs

The January meeting of the Advisory and Executive Committee of the Corporation of Brown University was held in the President's office on Friday, January 11, at 2.30 p. m. The report of the Superintendent of Grounds and Buildings was read and approved.

An additional appropriation of $8,000 was made in the budget for extraordinary expenses, including the completion of the addition to the Arnold Biological Laboratory.

The Committee on New Dormitory, consisting of Messrs. Adams, Chafee, Taber and Burlingame, rendered a preliminary report, recommending that a hall of residence for 150 to 200 students be erected, provided an annual gross income of 12 per cent. on the expenditure could be reasonably assured, the matter of site to be determined later after consultation with the Committee on University Planning and Development. The Committee was directed to continue its study of the problem.

After a discussion regarding proper rates of graduate tuition it was voted to appoint the President and Mr. Sharpe as a special committee with power to act. A preliminary report was received from a special committee on the continuation of the college fence, the architect of the Metcalf Chemical Laboratory and the Consulting Architect having agreed in the opinion that a lighter form of construction was desirable if the fence were to be continued close to the buildings on Thayer street.

A report was received from the Building Committee on the Marston Hall of Languages, the Committee consisting of the President, Messrs. Wood, Knight and Burlingame. It was voted that the building should be placed on the corner of Manning and Brook streets on land now occupied by tennis courts. The plans presented were approved in substance and it was voted that bids should be secured and the Committee should have power to proceed with the erection of the Hall, if the bids come within the amount available for construction.

Much time was then devoted to a discussion of departmental libraries and their relation to the University Library as a whole.

It was voted to appoint S. J. Dreyer as Assistant in the Gymnasium to have charge of the instruction in Boxing. It was voted to appoint Benjamin D. Merritt, now teaching at the University of Vermont, as

Instructor in Greek for the year 1924-25, during the absence of Professor K. K. Smith on his sabbatic leave.

The meeting adjourned at five o'clock.

## GREAT IS ADAM SMITH

Adam Smith, Freshman swimming captain, who turned in a time of 1 min., 7 4-5 sec. for the 100-yard backstroke at the Brown-Lehigh meet at Providence, Jan. 12, in an exhibition event, bettered his previous national scholastic record by 1 2-5 seconds, and incidentally came but three seconds from the world's record. Smith came to Brown from the Erie Central High School, Erie, Pa., which held the high school swimming championship of the United States last year.

This sensational tank performer holds the record in every event in the Allegheny Mountain District, which comprises three States. His national interscholastic record of 6 min., 24 1-5 sec. in the 500-yard backstroke still stands. If Smith stays in college, Coach Huggins will have a man to step into Captain Jones's shoes next year, for the Brown captain is competing for his last year on the Hill.

## NOTES OF THE MONTH

Brown beat Stevens at wrestling, Jan. 11, 18 to 8.

Brown beat Lehigh at swimming, Jan. 12, 46 to 16.

Brown beat M. I. T. at basketball, Jan. 12, 33 to 27.

Brown beat Brooklyn Polytechnic at basketball in Brooklyn, Dec. 21, 15-11.

The Brown Menorah Society gave a smoker at the Brown Union on Jan. 7.

Dr. Walter H. Snell '13 will coach the baseball nine this year for his third season.

Visiting Day at Brown will be Wednesday, March 5. Full announcement of the programme will be made later.

The Washington dinner is scheduled for Feb. 5. It is hoped to have the Brown orchestra in Washington on April 8 or 9.

# Brunonians Far and Near

## Faculty

Courtney Langdon, professor of romance languages at Brown, has been commissioned to translate Guglielmo Ferrero's "Roman Historians" for the "Our Debt to Greece and Rome" series. He expects to complete his task in a short time. Professor and Mrs. Langdon will sail for Italy the second week in February. After a half-sabbatical year abroad he will return to resume his duties at the University.

## Alumni

### 1855

Augustus O. Bourn has placed in the University Library three typewritten volumes containing "A Discussion of the Planetesimal Hypothesis of Chamberlin and Moulton." They represent a long and distinguished labor by the senior Bristol alumnus, whose researches into the cosmic mysteries continue unabated.

### 1860

Thomas W. Bicknell has been re-elected president of the Rhode Island Citizens' Historical Association.

### 1869

Dr. George H. Felton of Berea, Ky., has offered to the John Hay Library some interesting old books that were his father's library. One of them, "The Boston Book," containing, so we are told, "specimens of metropolitan literature," and published in Boston in 1837, sounds highly interesting. Among the authors represented in it are Edward Everett, Francis Wayland, O. W. Holmes, Lyman Beecher, Daniel Webster and N. P. Willis.

### 1871

The Kendall Manufacturing Co. of

Providence, makers of Soapine and French Laundry Soap, was established in 1827 and for several years prior to his death in 1921 was owned by Robert P. Brown '71. It has now been reorganized with two high officials of the well-known Lever Bros. Co. (soap manufacturers) and O. V. Kean, as controlling owners and managers. Among the directors are Henry Salomon '02 and A. Chester Snow '07. Since Colonel Brown's death three years ago, the property has been managed by the trustees of his estate, George H. Newhall and Edward P. Jastram '95. "During this time," says an advertisement, "the average operating profits, before depreciation and Federal taxes, were $144,000 per year."

1874

John B. Wheeler was the speaker recently at a meeting of the Cadmean Society, University School, Cleveland. The reporter who covered the speech for the University School News concluded: "Mr. Wheeler is certainly a credit to his Alma Mater, and he spoke very affectionately of it."

1876

Dr. William Cary Joslin died at the home of his son, Harold V. Joslin '04, in Raleigh, N. C., on Dec. 29. He was born at Thompsonville, Conn., Nov. 17, 1852, the son of William and Harriet Shumway Joslin. He prepared for college at Webster High School, Webster, Mass., and Williston Seminary. Brown gave him the honorary degree of A. M. in 1897 and in 1899 Tufts College conferred on him the degree of L. H. D. During his long career as an educator he taught at many schools, among which were Williston Seminary, Peddie Institute, Westbrook Seminary and Staten Island Academy, Stapleton, N. Y. From 1910 to 1920 he was supervising principal of the Media, Pa., public schools. His last active work was done at Yeates School, Lancaster, Pa., where he was master of Latin for three years. His three sons were Brown men—Harold '04, Cedric '13 and Harley n-'16. The death of Cedric in Porto Rico in September, 1922, was a severe shock to Dr. Joslin. Yet to the end he kept his cheery smile and his interest in worth-while things. He was particularly fond of sports and he kept in touch with many of the boys whom he had taught. "A typical New England gentleman," one has described him, and the description was apt in its fullest meaning. Dr. Joslin was a member of Delta Kappa Epsilon and Phi Beta Kappa.

Dr. Charles V. Chapin, Superintendent of Health in Providence, is delivering a series of lectures this winter before the students of the Harvard Medical School on "Relative Values in Public Health Work."

1878

Rev. Gideon A. Burgess is historian of the Rhode Island Citizens' Historical Association.

1882

Simeon Borden, clerk of the Superior Court of Bristol County since 1896, died at his home in Fall River, Mass., on Jan. 17 after an illness of ten weeks. He had been in poor health for the past few years, but had not given up his court duties until about two months before his death. Mr. Borden was born in Fall River, Jan. 27, 1860, the son of Simeon and Irene S. Hathaway Borden. After his graduation from Brown he practiced law in Fall River and in 1888 became assistant to his father, then clerk of the Superior Court of Bristol County. He succeeded to the clerkship in 1896 and had held it since without opposition. His wife, who was Miss Minnie W. Hood, died in 1895. Miss Sarah Borden, a sister, is the only survivor of Mr. Borden's immediate family.

The $250,000 fund for the Sam Walter Foss "House by the Side of the Road" and the Park Avenue Methodist Church at Somerville, Mass., has been completed and building operations will soon begin.

1884

Colonel William M. P. Bowen has assumed the duties of secretary of the class in place of the late Frederic N. Luther.

1886

Professor George Grafton Wilson of the Harvard faculty spoke at the civic luncheon of the United League of Women Voters in Providence on Jan. 14 on "The Hague as I Saw It in 1923."

# A Fifteen-Year-Old Boy

*(By Strickland Gillilan)*

THERE is just one thing in the world finer than being a fifteen-year-old boy — it is owning one. I'm the lucky one in this case. My boy will be fifteen next Christmas (yes, he was a fine present), and do you know what I'm going to do right afterward?

I'll tell you:

I'm going to take out an endowment policy on his life. And now I'll tell you why:

He's probably going to college some day. That'll cost me money. I don't begrudge it. He has to have his equipment for life in competition with a lot of school-taught chaps. It is money well-spent. Like life insurance premiums, it is an investment and not an expense. It will help him acquire the ability to help himself. Maybe later on he will amount to a great deal more than I think I amount to at present.

After college, he will be starting out on his own hook. Paddling his own canoe and all that. And if he's even as smart as I am, he will be carrying some life insurance.

Therefore:

If I take out insurance on his life (which I can do when he has turned fifteen), I can get it at a very low rate. And what does this do? Well, (a) if the lad were to meet with some fatal misfortune before the finish of his college career (and some do), I should be financially reimbursed for the cost of his education to date; (b) if he were to lose his health, I should have provided him with a policy he could not get later; (c) and if (as I verily believe, in my faith and hope and love for him) he should live to complete his schooling and settle down in a home of his own, he will have insurance protection at a rate so low (owing to accumulated dividends) as to be almost negligible.

See?

Now if you can discover any way in which the above plan is unwise, write and tell me. Personally, I can't see anything but wisdom and profit in the scheme.

1889 and 1893

Lawrence W. Rathbun, son of Edward H. Rathbun '89, and Miss Frances Matteson, daughter of Archibald C. Matteson '93, were married at the Central Congregational Church, Providence, on New Year's Day. They will live in Woonsocket.

1894

Professor Harold D. Hazeltine of the University of Cambridge, England, sends a subscription to the loyalty fund and writes that he hopes to be present at the class reunion in June. He asks the class agent to consider the subscription an annual matter until further notice and adds: "I wish very much that this subscription might be more, but there are so many demands on one here and elsewhere. . . . But I want you to know that although my subscription is small it expresses a whole lot. I feel, as we all do, that I owe much more than I can say to the old University, and I wish this small subscription to express my own personal loyalty; the subscription is but a symbol of that." Incidentally Professor Hazeltine encloses a check to cover his contribution for the next five years.

1896

Robert C. Sanger writes that he is at present field secretary and organizer for the Salvation Army in Des Moines, Iowa. His home is in Franklin, N. H.

E. N. Robinson, head coach of the University football team, represented the New England district at the third annual meeting of the American Football Coaches Association held in Atlanta, Ga., on Dec. 29.

1897

James P. Coombs, better known as just plain Jim Coombs, is making himself famous among radio enthusiasts by his singing which is broadcast regularly from the Capitol Theatre, New York, where the amiable Jim has been soloist for some time. Radio fans were introduced to him on Sunday evening, January 6, when S. A. Rothafel, announcing, called him "Daddy" Jim Coombs, "Good old 'Daddy' Jim Coombs from Brown University." Coombs when in college was football centre and a singer on the glee club.

Francis A. Rugg wrote under date of Dec. 13 from Biskra, Algeria: "You will think I am a 'dead one' for having delayed so long to send in my Historical Catalogue data. That is what I just missed being—a dead one—on Aug. 20, 1923, when an auto car on the Route des Alpes dropped into a ravine with a party of 18 Americans, three French and one Belgian. . . . I have been spending most of the time since getting over the effects of this fall of between 50 and 60 feet. At present I am travelling in Algeria and Tunisia, standing the racket pretty well and progressing towards sound health quite steadily."

1898

William H. Cady tells us that he is receiving his mail at 79 Brown st., Methuen, Mass.

Professor C. H. Currier has been studying at the University of Cambridge, England, during his leave of absence and has also found time to visit the Universities of Dublin, Glasgow and Edinburgh. At Cambridge he met Professor Harold D. Hazeltine '94, who is professor of law at Downing College.

1898 and 1907

The annual ocean yacht race to Bermuda will start this year from New London, Conn., on June 21, and a little bird whispers that William H. Hand and Arthur Seabury, both of New Bedford, Mass., are preparing to sail in it again.

1899

Charlie Remington whispers quietly but confidently that plans are under way for the 25th reunion of the class next June.

Professor Arthur H. Blanchard, head of the department of highway engineering at the University of Michigan, has been made a member of the research council of the National Transportation Institute. Professor Blanchard is also president of the National Highway Traffic Association.

C. Henry Smith, librarian of the University of Colorado, and well known as a football referee, has been elected a member of the National Football Rule Committee to represent the Rocky Mountain States. Mr. Smith is at present adjuster for the Rocky Mountain Football Conference (he names officials for all games) and keeper

of the conference records. He expects to attend the reunion of the class next June, making the trip from Boulder, Colo., to Providence by motor car.

Roscoe M. Dexter is Secretary of the Old Slater Mill Association, which has recently taken over the Slater mill in Pawtucket, R. I., the birthplace of the American textile industry, for the purpose of restoring the property and preserving it for posterity. The mill was built in 1790.

The following vote was passed, Nov. 30, 1923, by the National Council of Teachers of English in session at Detroit, Mich.: "Resolved that the National Council of Teachers of English desires to express to Mr. Mellinger E. Henry of the New Jersey Association of Teachers of English its sincere appreciation and endorsement of the personal and press campaign he has made and is now conducting for the betterment of English teaching conditions in his city and state, and to extend to him the assurance of sympathy and of such co-operation as is practicable in his efforts."

1902

Major Henry W. Stiness commanded troops at the recent military maneuvers in Haverhill, Mass., when three regiments staged simulated war conditions for three days. He also commanded the 13th Infantry contingent in competitive drill at the Copley-Plaza Hotel ball room in December, when the Marine Corps and Navy were defeated for a $500 silver cup offered by the Army and Navy Club of Boston.

1903

John H. Cady was re-elected president of the Providence Chapter of the American Institute of Architects at the annual meeting on Jan. 9.

1904

Noble B. Judah, civilian aid for the Sixth Corps Area, U. S. A., was in December appointed by the War Department to command the 332nd Regiment of Field Artillery as a unit of the 86th Reserve Division. The Army and Navy Journal said at the time: "This perpetuates the 149th

Field Artillery of the Rainbow Division, which was in action more days than any other American Artillery outfit in France. . . . Mr. Judah started as a private in the old First Illinois and was lieutenant colonel in the 149th at the close of the war. Colonel Judah is securing the appointment of the same battalion and company commanders as far as possible, thus carrying out the thought which General Pershing expressed at the Rainbow reunion in Indianapolis last summer: 'We ought to retain the personnel of these organizations in order that they may hand down the traditions established during the war.' "

Ray Otis wrote to the Alumni office not long ago asking for a revised class list, so the office boy sleuth figures that the class reunion committee is getting its decks cleared for action for the 20th reunion next Commencement. More later, as the country correspondent used to say.

Ralph W. Chandler, whose address was missing for a time, is reported safe, sound and working hard as assistant Pacific Coast manager of the Federal Mutual Liability Insurance Co., with his office at 354 Mills building, San Francisco.

Irving J. Beckwith is pastor of the Blakely Baptist Church, Olyphant, Pa.

Arthur E. Cameron gives his present occupation as industrial engineer and his home address 226 McCartney st., Easton, Pa. He resigned as treasurer and works manager of the Twining-Large Lime & Chemical Co., Carpentersville, N. J., in November, 1923.

Mr. and Mrs. S. Foster Hunt have taken up their permanent residence at 110 Benevolent st., Providence.

1905

Frank E. Marble, president of the Brown Club of Lynn, Mass., was a campus visitor not long ago. Frank has several boys in Lynn and Swampscott he is trying to steer toward College Hill.

1906

"Joe Wheeler's dream has come true," said the Youngstown, O., Vindicator in a recent issue. "For years he has talked and worked for a branch library down town. To-morrow it will be opened to the public. 'The people won't come up the hill,'

Wheeler has said. 'It isn't because they don't want to. Nearly everybody here works and losing half or three-quarters of an hour on the way home to go up to Rayen ave. to select a book is a big item in a worker's day. People who would like to take books from the library forget about it because they never see the building, or they keep putting it off until some convenient time that never comes around.'" With the new branch, Mr. Wheeler, who is one of Brown's big and growing family of librarians, expects that there will be an increase of 100,000 books loaned by the Youngstown Public Library this year. Incidentally, the new building was erected without a cent of cost to Youngstown taxpayers. Everything, from the skilled labor to the shrubs to set the structure off, was given whole-heartedly by citizens and business firms. If that isn't public spirit, what is? And, we might add, if such a gift doesn't testify to how they feel about Joe Wheeler in Youngstown, what does?

Albert E. Whittaker died Dec. 18 at his home in Central Falls, R. I., shortly after he had been stricken at his drug store, Garden st. and Pawtucket ave., Central Falls. After his graduation Mr. Whittaker studied at the Rhode Island School of Pharmacy. He opened his store in Central Falls 12 years ago and had made it successful. His interests away from business were confined chiefly to the Knights of Columbus, Pawtucket Lodge of Elks and the St. Mary's Catholic Club. He was also a member of the Oak Hill Tennis Club. His father, John Whittaker, and a sister, Mrs. William H. Malloy, survive him.

1908

Bob Pinkham of the Pinkham Press, Boston, was an Alumni office caller the first of the year while on his way out to see Don Pryor on business.

Professor James A. Hall of the University faculty has been appointed a member of the special committee on the cutting and forming of metals of the American Society of Mechanical Engineers. Professor Hall has been doing considerable research work along this line and has read papers on his findings before various engineering bodies.

Frank A. Walker is the junior member of the firm of Leary and Walker, engineers, of New Bedford, Mass., whose specialty is the construction and equipment of textile mills, power, hydraulic and industrial plants.



1909

Sydney Wilmot's present address is American Society of Civil Engineers, 33 West 39th st., New York, or Plymouth ave., Colonial Heights, Tuckahoe, N. Y. He wrote not long ago: "My new work (with the A. S. C. E.) is very interesting and the associations of this society are unequalled in the profession. I have been so busy as to have little time to miss the pleasant associations of the University."

Lawrence S. Elliot is in charge of the Jewelry Department of Jordan Marsh Company, Boston.

Dr. William P. Buffum, Jr., is occupying his new home at 159 George st., which was designed for him by Albert Harkness. Dr. Buffum's office address is 122 Waterman st., Providence. His specialty is the care of children.

**BROWN ALUMNI MONTHLY**

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Henry R. Palmer, Editor and President

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FEBRUARY, 1924

Ray Buss, with Mrs. Buss, has just returned from a trip to Bermuda.

Ivory Littlefield, who is Vice President of the Title Guarantee Company, has just moved his company into larger quarters. The attractive rearrangement of offices at 66 So. Main st., Providence, was designed by Albert Harkness.

1909, 1904, 1915

Herbert M. Sherwood, Oscar L. Heltzen and Sidney Clifford have formed a partnership for the practice of law under the firm name of Sherwood, Heltzen and Clifford. They will continue at 1503 Turks Head building, Providence, the practice heretofore conducted by Pirce (the late James A. Pirce '92) and Sherwood.

1910

Frederick A. Gardner is assistant engineer of the State Highway Department of New Hampshire, his address being 27 Franklin st., Concord. He is married and has a son, William Alfred, on the last lap of his 4th year if you take six months to a lap.

George Holmes Kelley is with the American Bridge Company as civil engineer in Pennsylvania, his home being at 514 Park Road, Ambridge.

When he isn't playing golf, Thornton M. Richards is working at being Vice President of the Westerly Textile Company in New York city, where he commutes from his home, 79 Sterling ave., White Plains.

Writing from New York city, George Arthur Round hopes there will be time enough to prepare a genuine Rhode Island clambake for his class reunion one year hence. In the meantime he is marking time as assistant chief engineer in the engineering division of the Vacuum Oil Company, and living at 59 East 87th st., New York city.

Joseph Henry Cull thought some time ago there was room for another mill in Pawtucket and came from New Jersey to build one for the manufacture of silk. It is the Joseph & Cull Silk Mills, Inc., Joe's middle name having been lost in the christening. He lives at 486 West ave., the same city. His wife, formerly Miss Irma A. Gyllenberg, graduated from the Women's College in 1909.

John P. Farnsworth is now President and general manager of the Providence Dyeing, Bleaching and Calendaring Co., having climbed the ladder on the rungs of purchasing agent, assistant treasurer and Vice President by easy stages. He is also a director of the High Street Bank; trustee of the Citizens' Savings Bank and a trustee of the Providence Public Library.

Paul B. Howland has obtained a leave of absence from the Providence Journal, and sails Feb. 16 on the S. S. Duilio of the Italian Navigation Line, for a trip to Egypt, Constantinople, Athens, Italy, France and England.

Stephen D. Paddock is ready to settle all 1910 difficulties and others by law at 412 Turks Head Building, Providence. Other personal matters should be sent to 27 Humboldt ave.

Maxwell Krause writes he is at present a hardware merchant in Lebanon, Pa. He wants to see his class make a better showing in the Royalty Fund list.

J. Richmond Fales is Treasurer of the Standard Engineering Works, his address being 289 North Main st., Pawtucket.

Among the professional honors held by Edward H. Mason, physician and lecturer, McGill Faculty of Medicine, Montreal, are membership in Alpha Omega Alpha, McGill 1913; Sigma Xi, McGill 1922, and associate member, Association of American Physicians, 1923. His address is 214 Bishop st., Montreal, Canada.

H. T. Phinney is special agent (fire) of the Providence Washington Insurance Company, his home address being 325 Douglas st., Syracuse, N. Y.

Edward W. Wall numbers among his professional affiliations associate membership in the American Society of Civil Engineers, membership in the Engineering Institute of Canada, and the Corporation of Professional Engineers, Province of Quebec. He is general superintendent of the Atlas Construction Co., Ltd., and lives at 1048 Sherbrooke st., East, Montreal.

The address of Harold S. McIntosh is 1099 Campbell Road, West Haven, Conn., where he is a civil engineer.

Henry H. Hibbs, Jr., is director of the Richmond School of Social Work and Public Health, his home being at 17 North 5th st., Richmond, Va.

1911

John M. Montz is teaching in the Civil Engineering Department of the Ohio State University at Columbus,

Robert C. Murphy of the American Museum of Natural History is delivering a series of lectures on natural history and exploration under the auspices of James B.

Pond of New York. Mr. Pond speaks pretty close to the truth when he notes that "Mr. Murphy is one of the most entertaining speakers ever booked at the Pond Bureau."

1912

Max Grant has been chosen as a member of the executive committee of the Rhode Island Republican finance committee. Max is in the banking business in Providence.

1913

Bill Reed, who is teaching Latin and mathematics at St. Mark's School, Southboro, Mass., was looking up old friends on and about the campus during his last vacation.

Carleton Sims has returned to the old home town, now being associated with Starkweather & Shepley, insurance brokers, of Providence.

1915

Alfred W. Anthony, Jr., is vice president and a director of the Columbus Consolidated Gold Mining Co., with its main office in the Hearst building, San Francisco, Cal. Anthony has returned West after spending several weeks in New England, visiting old college friends and acquaintances.

Robert W. Jones has been playing the leading male role in "My China Doll," a musical extravaganza now on tour in the East.

1917

Ray Jordan is associated with the firm of Sherwood, Heltzen and Clifford in the general practice of law at 1503 Turks Head building, Providence.

1919

Ken Johnson, who is studying law at the Harvard Law School, has announced that he will be a candidate for Selectman when the town election in Milton, Mass., is held next March. He is the youngest candidate ever to aspire to a place on the board, so the Boston Traveler reports, and he says that his age is an asset rather than a handicap in his campaign. Some of the wise old heads of Milton, the story goes, think differently, but Johnson is in the race to stay. Keep agoin', Ken!

1921

Rev. Edwin L. Thornton, former pastor of the Allendale, R. I., Baptist Church, became the minister of the Baptist Church in Oyster Bay, N. Y., the first of the year.

John J. Muccio has been assigned as Vice Consul at Hamburg, Germany, by the Department of State. Muccio was a consular assistant at Washington up to the time of his promotion.

Russell P. Jones, taking his third year at the Law School of the University of Wisconsin, was recently elected a member of the Board of Student Editors of the Wisconsin Law Review.

1922

Art Mereweather is doing graduate work at Massachusetts Institute of Technology.

Tom Corcoran, Howard Cummings, George Webb, Stuart Tucker, Winfield Ohlson, Ernest McCormick and Joe Beagan are among the '22 men who are heading toward the LL. B. degree at the Harvard Law School.

1923

Bob Adams is punching the time clock daily at the Butler Mill, New Bedford, Mass. Oh, yes, Bob's learning the mill business and expects to keep hard at it for many months to come.

Don Thorndike's most prized tennis trophy (to date) is the Mayor Gainer cup, which Don received direct from the hands of the Mayor not long ago for winning the municipal park tennis championship of Providence last July.

Herb Hofford is now on the reportorial staff of the Philadelphia Evening Bulletin.

Larry Lanpher put the cover on his typewriter in the office of the Evening Bulletin, Providence, late last month, waved good bye to the city editor and the rest of the boys, and sailed on a trip around the world on the stout ship Samaria. Larry expects to be back early next June.

## Alumnae

1898

Miss Emily Gardner Munro, for the last 14 years principal of St. Margaret's School for Girls at Waterbury, Conn., died at the Waterbury Hospital, Jan. 8, 1924, after a long illness. She was born in Bristol, R. I., and was the daughter of the late Otis and Hannah Billings (Waldron) Munro. Her girlhood and young womanhood were spent in Bristol.

She was graduated from Brown University with the degree of bachelor of philosophy in 1898 and received the master of arts degree in 1907. From 1899 to 1900 she was instructor of English at St. Mary's School in Burlington, N. J. From 1900 to 1901 she was in charge of Christodora house, New York city, doing settlement work and studying for the master of arts degree. She specialized in sociology, which was the subject of the thesis presented for the degree.

From 1901 until 1909 she was instructor of English at the Albany, N. Y., School for Girls. In 1909 the trustees of Saint Margaret's School unanimously called her to be principal of the school.

Of Miss Munro's character and work, Rev. John M. Lewis, rector of St. John's Church and St. Margaret's School, says:

"At Saint Margaret's the real work of her life was done. She brought to her task a splendid enthusiasm and an unusual ability. For 14 years she held the leadership of the school and under her management it prospered in every way. She showed a remarkable ability to train and develop the minds of young girls. Every year increasing numbers of girls have gone out from Saint Margaret's to pursue their studies in colleges for women and the girls have always brought credit to the school in which they were trained.

"Miss Munro took an advanced rank among the educators of the country. One of her chief characteristics was her unfailing courage. She scorned the idea of failure. Difficulties in her pathway seemed only things to be conquered and she always conquered them. She fought her supreme fight and won a glorious victory. For more than a year she struggled with ill health.

During all those months she never murmured and was hopeful and happy. . .

"During the year of her illness, a signal honor came to her which is probably unknown to most of her intimate friends. She was called to be dean for women at one of the greatest universities in the country.

"In spite of the last analysis, however, it was not her academic and scholastic achievements, conspicuous though those achievements were, that endeared Miss Munro to her many friends in Waterbury, but it was rather her warm, sympathetic nature and her keen understanding of people, especially of girls."

Miss Munro leaves one sister, Miss Harriet Munro of South Bethlehem, Penn., and three brothers, Willard, Herbert and Frederick Munro, all of California. She was a first cousin of Professor W. H. Munro '70, Dr. W. L. Munro '79 and Professor Dana C. Munro '87.

The Waterbury American closes a eulogistic editorial with these words: "She will be mourned by all who knew her and remembered as one of the city's most capable and beloved women."

Following is another installment of items regarding 1923 sent us by the secretary, Dorothy T. Mowry, 87 Winthrop st., Taunton, Mass.

Anna C. Coggeshall is teaching Latin and history in the North Kingstown High School, Wickford, R. I.

Agnes Cole is teaching French and Latin in the high school at Stafford Springs, Conn.

Margaret M. Cummings is a student teacher in physical training in the Providence High Schools. Also working for M. A. at Brown. Address 77 Taber ave., Providence.

Alice E. Desmond is taking a secretarial course at the Katherine Gibbs School. Address 22 Overhill road, Providence.

Miriam S. Dick is teaching in the 9th Grade of the Junior High School in Reading, Pa.

Elizabeth Ewart is a Grace H. Dodge Scholar in Bryn Mawr College.

Marion L. Fairweather is with the Merchants' National Bank in Providence.

Katherine T. Fanning is engaged in medical social work at the Rhode Island Hospital.

Josephine M. Flumere is Spanish correspondent in the Export Department of the Dennison Mfg. Co., Framingham, Mass.

Alice H. Glaeser is a teacher of French and modern history at Williamson, N. Y.

Ethel L. Hagstrom is at home, 129 Sheffield ave., Pawtucket, R. I.

Ruth Hanchett is teaching English in the Sumner High School, Holbrook, Mass.

Marion G. Hassinger is at home, 634 North Fifth st., Reading, Pa.

Henen A. Hoff is a teacher of history and English at Lambertville, N. J.

Mary C. Hogan is a student teacher in Providence. Also working for M. A. at Brown. Address 17 Beech st., Pawtucket, R. I.

Mary E. Holland is at home in South Somerset, Mass.

Marion S. Holland is at Saunderstown, R. I.

Dorothy B. Hotchkiss is at home, 130 Mineral Spring ave., Pawtucket, R. I.

Sarah Jacobson is doing clerical work at home, 751 South Water st., New Bedford, Mass.

Dessie Kushelevitch is assistant manager in a remnant and dry goods business in Woonsocket. Address 87 Elm st., Woonsocket, R. I.

Evelyn B. Lochman is now Evelyn (Lochman) Macnie, and is working for A. M. at Radcliffe. Address 3 Concord ave., Cambridge, Mass.

Irene M. Long is teaching in the Woonsocket High School.

Ruth A. Lothrop is in France for a year of study and travel. Address Ecole Normal, St. Germain-en-Laye, France.

Helen C. McNaught is studying the violin at the New England Conservatory of Music, Boston.

F. Josephine Maguire is now Mrs. Willard F. Johnson. Address 155 Broad st., Hartford, Conn.

## ENGAGEMENTS

Dr. and Mrs. Charles E. Collins of Providence have announced the engagement of their daughter, Miss Helen Collins, to Raymond E. Palmer '20.

The engagement has been announced of Miss Edith Estelle Farnum of Providence to Edgar J. Staff '15, who has been assistant line coach of the University football squad for several seasons.

The engagement has been announced of Miss Elizabeth W. Whitman, Women's College '13, to Lewis S. Latimer of Bronx-

ville, N. Y. Miss Whitman was at one time administrative head of Miller Hall.

## WEDDINGS

1905—Colgate Hoyt and Mrs. Muriel W. Williamson of Philadelphia were married in Mrs. Hoyt's home city on Jan. 5. According to the newspapers, Mr. and Mrs. Hoyt will make their home in Flourtown, one of the Philadelphia suburbs.

1915, Women's College—Miss Edna Frances Southwick, daughter of Mr. and Mrs. Edward L. Southwick of Pawtucket, R. I., was married to Merwin Grant Potter of Lowell, Mass., at the home of her parents, on Dec. 29. Miss Elinor Randall of Freehold, N. J., a classmate, was bridesmaid. Mr. and Mrs. Potter will make their home in Lowell.

## BIRTHS

1891—To Mr. and Mrs. Samuel A. Everett, a daughter, Katherine, on Jan. 2.

1899—To Mr. and Mrs. Howard D. Day, a son, Allen Frost, on Dec. 27, 1923.

1906, Women's College—To Mr. and Mrs. Henry E. Childs (Judith B. Hopkins) a son, Henry E., Jr., on Jan. 8.

1909—To Mr. and Mrs. Herbert M. Sherwood, a daughter, Caroline, on Jan. 11.

1912—To Mr. and Mrs. Sheldon C. Collins, a son, Stephen Chalkley, October 11, 1923, grandson of A. C. Collins '78.

1914—To Professor and Mrs. Samuel T. Arnold, a son, Samuel T., Jr., on Jan. 10.

1914—To Mr. and Mrs. Chester A. Files, a son, Chester Arthur, Jr., on Dec. 21, 1923.

1915—To Mr. and Mrs. Frederic J. Hunt, a son, Frederic J., Jr., on Dec. 20.

1915—To Mr. and Mrs. Ralph B. Graham, a son, Gordon, on Dec. 25, 1923.

1916—To Mr. and Mrs. Steward T. MacNeill, a son, Justin, on Jan. 15.

1916—To Mr. and Mrs. Frederick L. Ferris, a daughter, Helen Dorothy, on Dec. 31.

1919—To Mr. and Mrs. William H. Edwards, 2nd, a son, Albert Knight Potter, on Dec. 21, 1923, grandson of Professor Albert K. Potter '86.

FOUR years in Providence must have given to every Brown man an acquaintance with the names of those who are directing the affairs of the Puritan Life Insurance Company of Rhode Island.

NO matter where Brown men are now located they must have experienced a familiarity with the motive forces of this Rhode Island Institution.

THIS feeling of personal interest is reciprocal. It yields unusual satisfaction to us to receive applications for life insurance from Brown men.

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