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Rose Technic Staff

Rose-Hulman Institute of Technology

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VOL. VII.

TERRE HAUTE, IND., JUNE, 1898.

No. 9.

THE TECHNIC.

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NOTICE TO SUBSCRIBERS.

Hereafter we shall follow the general rule regarding subscriptions, and shall continue sending THE TECHNIC to subscribers until notified to discontinue.

IN the death of Judge William Gray Mack on Thursday, May 19th, the Rose Polytechnic Institute lost one of its most loyal and interested supporters. The Board of Managers has been deprived of one who was ever ready to give cool and deliberate council, and enthusiastic in personally carrying out his full share of the duties. The faculty have lost one who was ever ready to lend encouragement and to co-operate in promoting whatever plans were deemed wisest, and the student body and alumni have lost a friend who looked after their interests and wants with an ever ready and sympathetic ear. Never too busy to lend his time, strength and energy to aid the young man in his struggles through life, he won for himself a place in the hearts and lives of

all who knew him that will never be forgotten. To his kindly and fatherly advice and assistance at a critical moment, the success and prosperous future of more than one young man is attributed. His one desire always seems to have been to aid the student in acquiring a broad and liberal education, of a practical nature, that would best fit him to meet the struggles of life that he must encounter when thrown upon his own resources. The Rose Polytechnic has ever been one of the objects of greatest interest to him, for in it he found the fulfillment of his ideal of a thorough training for after life. He watched over its interests and guarded its needs with the one motive of making it the more effective in carrying out the plans of Chauncey Rose, who had honored him with his friendship and entrusted him with the office of a member of the Board, from the beginning. Up to his last illness he had been a constant visitor at the Institute, watching its progress and noting the increasing field of usefulness with the keenest of pleasure. In his death we have lost a true friend, a warm and gentle nature that was ever ready to make any sacrifice for his friends. The depth of feeling that fills our hearts as we realize that he will no longer be with us cannot be expressed in words, but we can only show by our actions, in doing what he so much desired, being true and loyal men, how sincerely we appreciated his friendship.



ONE of the most notable and thoroughly enjoyed features of Commencement was the address delivered by Dr. T. C. Mendenhall, who is so pleasantly remembered by all as a former President of the Institute. His eloquent address and charming manner of delivery will

long be remembered as one of the greatest pleasures of the closing exercises of this year. The entertaining and instructive manner in which he presented the important problems, and the great value of the address could not but win the closest attention and appreciation of his hearers. The high estimate that he placed on the engineer as a member of society, and the need of a liberal education in the men who held such important positions could not fail to impress upon the minds of all the great changes that have been wrought in the engineering schools in the last few years and that they now represent the highest type of education and that it is a most liberal education. The address is so complete and so thoroughly interesting in every detail that it has been almost impossible to present any idea of the line of thought in the brief abstract we are forced through lack of space to give. The *TECHNIC* regrets that space will not permit the address to be given in full in this number, but promises the pleasure of giving the address next fall as delivered.



FROM year to year the same advice, warning and encouragement has been extended by the retiring Board to the new Board, and from year to year the new Staff has resolved to change many of the details and methods that have been handed down from the first editors. But with the close of the year the same errors and mistakes are observed in the current volume which they had been warned against and had promised to overcome. The present Board has been no exception to the rule, with ideas firmly fixed as to what should be, they made the plunge and were swiftly driven back to the shore where the former editors had been stranded. Yet not without a struggle was the inevitable accepted and not without a few victories has the struggle been ended. With the retirement of the present staff of editors the *TECHNIC* holds the same place in the life of the student and alumni that it always has, a journal devoted to the interests of the school and to whatever may tend to the advancement of the good of those who have been its loyal supporters. A few changes in the methods of conducting the *TECHNIC* have been

made where it was deemed wise, but the original plan and object has been left intact. To the friends, both faculty, alumni and students, we desire to express our deep appreciation of the interest and generous support that has been given to every endeavor. To the business men and supports of the financial side of the *TECHNIC* we extend our thanks for the service you have rendered in making the publication a possibility.

The new Board will enter upon its duties with the staff complete except the representative of the Freshman class, and we trust that they will receive the same loyal support and sympathy that has been ever shown in the past. The new Board, as the result of the election, will be as follows:

T. D. Witherspoon, Jr.	Editor in Chief
A. D. Kidder	Assistant Editor
W. D. Crebs.	Alumni
R. K. Rochester.	Athletics
S. J. Kidder	Local
R. N. Miller	
N. C. Butler, Jr.	Exchange
A. P. Stone.	Artist
H. C. Sch wable.	Business Manager
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ON Thursday, June 9th, Hon. Richard W. Thompson, ex-Secretary of the Navy and President of the Board of Managers, celebrated the eighty-ninth anniversary of his birthday in quiet contentment. Many friends called during the day to inquire regarding his health and to extend congratulations. His increasing age and feeble condition makes it necessary for him to husband his strength, and his many friends and the students and alumni of Rose Tech noted his absence from the commencement exercises with a deep feeling of sorrow. For years our venerable and honored president has delivered the address upon the presentation of the degrees, and this year the exercises seemed in a measure incomplete without his eloquent remarks to the graduating class. Only his failing health and the great need of taking care of the strength he has, prevented his being present, for to him the school and its interests are his dearest treasures.

In all of his public and private life he has

shown that deep and sincere interest in the welfare of the young man that has endeared him to the hearts of all who have gone from the Rose Polytechnic. THE TECHNIC joins with the faculty, students, alumni and many friends in extending their congratulations upon this occasion, and wish that he may enjoy many another pleasant birthday.



THE annual meeting of the Board of Managers of the Rose Polytechnic Institute was held June 14th, in the office of the State National Bank. The officers elected for the ensuing term are as follows: Col. R. W. Thompson, president; W. C. Ball, vice-president; Demas Deming, treasurer, and Ray G. Jenckes, secretary. The finance committee appointed consists of Preston Hussey, Demas Deming and Ray Jenckes. Shop committee, R. G. Cox, H. I. Miller and Ray Jenckes.

The usual routine business of the Institute was transacted and plans for the future were discussed. One of the most interesting and important plans discussed was the disposition of the \$50,000 bequest of the late Josephus Collett, which has just become available through the settlement of the Mackey railroad litigation.

This money will be used in the very near future in enlarging and broadening the scope of the Institute. A new laboratory is one of the plans under serious consideration. The Institute has long been in need of a mechanical laboratory where the apparatus already on hand could be collected into one unit and the whole become much more useful and valuable. This improvement has become necessary, not through any lack of facilities heretofore, but with the increased field of work and the greater demand made upon the practical engineer, it has been thought desirable to thoroughly equip a mechanical laboratory so as to better meet the requirements of the day. The equipment is already unique and complete, containing apparatus that covers the broad field of work as already laid down in the course. One feature of the year's work that deserves special notice and is to be highly commended, is the addition of apparatus built and designed by the students, specially for the needs of the Institute.

REVIEWS.

The Elements of Qualitative Analysis, by Wm. A. Noyes, Ph. D., Professor of Chemistry in the Rose Polytechnic Institute. Fourth edition; 97 pages. Henry Holt & Co., New York. Price, 80 cts.

IT seems scarcely necessary to review a work which has stood the test of actual trial for a number of years so satisfactorily that a fourth edition has become necessary. Reference to several important additions, however, should be made. The host of text books and treatises on Qualitative Analysis which have from time to time been brought to our notice, all present peculiarities which seem to adapt them to special conditions, varying from practically brief treatises on the properties of chemical elements to mere synoptic or tabular schemes of analysis which, like an empiric mathematical formula, will lead to a result supposed to be certain. The latter class of books are likely to lead to much mischief, as they tend to produce a class of so-called chemists who have as little claims to this appellation as the man who pushes the kodak button has to the appellation of photographer.

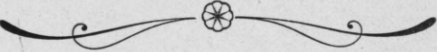
In Dr. Noyes' book we find the purpose to give clear instructions in methods of qualitative analysis and at the same time to bring the student to an appreciation of the necessity of the study of the principles and theory of chemistry if he would become more than a chemical artisan. A further step in this direction has been taken in this edition by the introduction of a chapter on the Theory of Solutions and Chemical Reactions as developed in the last few years. This chapter, clearly written, sets forth in the briefest possible space, the reasons for the chemical changes which form the basis of chemical analysis. The chapter is just suggestive enough to interest the student so that he will seek for further knowledge along this line, and herein lies one of its greatest values.

The book, upon the whole, as a first book on Qualitative Analysis, can not be too highly recommended. The methods and reactions are well selected and the book is not over-loaded with a mass of uncertain confirmatory tests, best of all its tendency is to make the student appreciate the value of general chemical knowledge and experience and stimulate to further study.



Judge William Gray Mack.

BY JUDGE S. B. DAVIS.



IT is difficult for one who has long and intimately known and associated with a useful man to write of such an one without indulging in fulsome panegyric. But such post mortem notices were very offensive to the taste of him of whom THE TECHNIC desires to record an *in memoriam*.

William Gray Mack was born in Hamilton county, Ohio, near the city of Cincinnati, more than seventy years ago. His early youth was spent on the new farm of those days. He had the usual experiences and hardships of the boy on the farm in a comparatively new country, with primitive means and methods of work. He began his business life early, by taking produce from the farm to the city and selling or exchanging for the necessities of life. He delighted, when with intimate friends, to recount his experiences, some ludicrous and many amusing, in the city, where he found people ready to take advantage of his want of knowledge of the world and especially of the city world of trade. No doubt many of the strong traits of character which Judge Mack exhibited in later life were the results of those early experiences. He was ever ready to encourage the boy or young man, away from home and friends, and it is altogether probable that when he met such an one he recalled his own youthful experiences and that longing for the encouragement that too infrequently comes to those in need of it.

He received a scanty primary education in the country schools of the day, then managed to take a course in a nearby college, named "The Farmers' College," in which many eminent men and at least one ex-president received scholastic training, along with some theoretical knowledge

of agriculture. Having determined to become a lawyer, he went to a law school, then of some importance, at Balston Springs, near Saratoga Springs, N. Y., where in due time he graduated. There he made the acquaintance of a young student named Hill, who afterward became his law partner and life-long friend. Judge Mack, after graduating, started to find a place to locate and begin life. He visited in Michigan and Indiana. Finally he decided to begin his professional career at Columbus, Ind. He wrote for his friend Hill and they opened an office, but Mack was soon stricken down with fever and for a year was unable to do anything. He was forced to leave Columbus because of his health, and after a time spent at another small town, he became a citizen of Terre Haute, and for more than forty years he was an active, enterprising, intelligent citizen and promoter of all its worthy enterprises. He became the friend and to some extent, at least, the adviser of Mr. Rose, and when that gentleman selected the men whom he would have incorporate Rose Polytechnic Institute, he selected Judge Mack, as one of the Board of Managers. He continued a member until his death. No one took a more lively or intelligent interest in the Institute than did he. He made its interests his interests. He also demonstrated his confidence in the Institute by placing his only son, now Prof. John G. Mack, of the State University of Wisconsin, there, and by encouraging others to enter. Judge Mack took an almost affectionate interest in the students, and so long as he was able, they always had a sympathetic friend to whom they could go with their troubles. The writer of this, knows that on some occasions his indignation was

aroused by what he thought not quite fair, or too severe treatment of the students by the faculty, and when aroused his tongue was exceedingly caustic. At other times he smoothed over the youthful indiscretions or shortcomings.

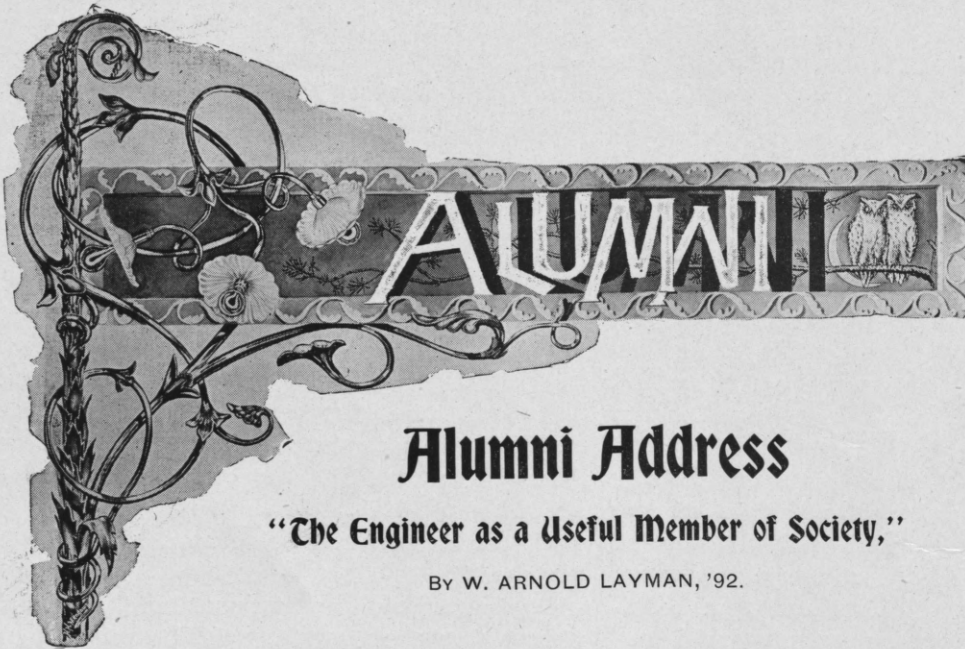
Judge Mack was exceedingly practical and believed in giving to the young man that advantage which best equipped and armed him for the battle of life. And he necessarily was a warm advocate of practical education and had a profound contempt for the purely theoretical. To him "life was real, life was earnest," and required real weapons and a courageous heart to use them.

Judge Mack, whilst in no sense a profoundly learned man, was well informed upon all live subjects. He traveled much and his eyes and ears were always open for everything worth being seen or heard. In his travels, too, he delighted to gather up treasures that would be entertaining to his less fortunate friends. And no one ever exerted himself with more delightful zeal to give others the benefit of his treasures than did he, as all who were so fortunate as to visit his home will testify. He was a delightful entertainer, too, with his descriptions of the things he saw and heard, having the rare faculty of being able to anticipate the things his hearers wished to know. He was possessed of a vein of humor that added much to what he said. Possessing a strong sense of the ludicrous, he got

the funny side of the picture, his views were never gloomy or depressing, but cheerful, hopeful. He never complained of the ills of life, could always find something cheerful to think and say of the most discouraging situation. Judge Mack was not only the friend of the Institute, but of all the useful and charitable institutions of the city, having taken an active part in the charity organizations so long as he was able. One of his special pets was the Literary Club, which he founded fourteen or fifteen years ago, and in which he took a zealous interest to the last. His theory was that every man needs something to take him out of the ruts of routine life. He carried his theory into his work for the Literary Club. Writing upon themes of most diverse and unusual character, never "of the shop."

His literary style was unique, terse, clear and always characteristic. It would be out of place here to speak of his career as a professional man more than to say that he was an able and wonderfully strong lawyer and a just judge. He was not, as so many of his profession are, an office-seeker, having held but two offices, once a member of the State Legislature and one term as Circuit Judge. He was vigorous in his treatment of the willful wrong-doer, but tender as a mother with the young offender. Truly, a good man has gone, in the fulness of years and usefulness.





Alumni Address

“The Engineer as a Useful Member of Society,”

By W. ARNOLD LAYMAN, '92.

MY theme this morning is “The Engineer as a Useful Member of Society.” By this I mean useful in the broader sense of contributing to the improvement of the whole social fabric of the Nation. I have in mind the ideal of an engineer eminently successful as a professional man, strongly equipped and reliable as a business man and broadly progressive as a social man. It is an all too common characteristic that the engineer is an engineer and nothing more. His daily task and his one ambition center in engineering work. He rises early to inaugurate his deeply laid plans. He labors unceasingly through the day to demonstrate the practicability of his designs and to advance the progress of his successful effort to its greatest limit. He studies long into the night mastering the theoretical intricacies of some new method of construction. His life, in short, is unremittingly one of continuous application to his profession and its relevant lines of thought. He succeeds professionally, and in so far as the results of his engineering skill contribute to the general welfare, is useful. There is little doubt as to his contentment in his realm.

There exists, however, a call for engineers of broader guage, men who earnestly pursue their

engineering professions and yet are something more; men who may not have been endowed by Providence with the genius essential to great strides ahead of their time, and yet who are in diverse ways serving and developing those around them.

This type of engineer I am advocating, should be, as I have said,

First, Successful professionally.

Second, Strong in business.

Third, Influential socially.

Let us consider him along each of these lines. As a professional man he must necessarily be a well trained man. This training may be the result of education or experience, or both. If he is consistent in his pursuit for it and is mentally endowed for it, he cannot but be strong minded. He must necessarily be a man of great application and concentration in whatever he undertakes. He is and must be honest. He does not hesitate to undertake the most unpromising tasks. He is, in brief, so constituted as to approach an engineering task with indomitable courage and unfaltering assurance of success. He is cool headed, slow to express a professional opinion, and, above all, a man who rarely asserts himself

on subjects he knows little about. His course of study has been such as to make him essentially a man of clearly defined purpose. He counts not so much the financial as the mental profit in any undertaking. Thus far he is the engineer, as he is publicly reputed to be, whether building vast edifices in our cities or opening up to civilization dense wildernesses.

Considering this ideal further he should, as a business man, thoroughly understand the methods of the business world. He should know how commerce is conducted, the principles of banking, and how enterprises are organized and carried through. If there is any direction in which the average graduate from an engineering school is helpless, it is in that of understanding and being able to apply business principles. He is poorly qualified, as a rule, even to the point of being able to protect himself. This partly arises from his concentration in his preparatory engineering work, and partly from his belief that engineering and commercial affairs are not in any sense kindred. He therefore enters upon his professional career pursuing purely engineering work. Subsequent opportunity rarely presents itself for him to acquire business experience, for the double reason that business men cannot entrust business affairs to inexperienced hands, and engineers having attained some degree of professional reputation cannot afford to begin at the bottom of the commercial ladder. Quite too late to qualify himself the average engineer begins to earnestly wish for a wider business experience.

Therefore I say that the ideal engineer will be qualified as a business man. He will have set about his training for his professional work, understanding that he will require, and therefore providing himself with, a foundation business experience. The conduct of large engineering enterprises calls for this, and his fullest engineering success will be advanced by it.

The ideal engineer will also play an influential part in social life. By social life I do not mean that existence eked out in so-called society circles. On the contrary I mean social life in the broadest sense of fellowship with one's fellow-

men. The engineer so qualified will be interested in the political life of his immediate community, as well as that of the nation. He will study civil and criminal law to that extent which every good citizen is called upon to study it. He will contribute his share to the alleviation of distress, physical and political. He will mingle with his neighbors, studying to add to their comfort in and enjoyment of life. He will be a student of current affairs. He will make some study of literature. He will know what to read, how to read and how to write. He will not necessarily be pre-eminent in social fields, but will be what is generally termed a well informed and cultured man.

I contrast with this ideal the picture of the so-called "pure" engineer. He has little interest in social affairs, public or private. His fund of ready conversation is limited to such topics as "plate girders," "retaining walls," "efficiencies," etc. In a literary club he is a listener. In a society gathering he is helpless. Too frequently his private home life is an incidental rather than an essential in his daily routine. He lives not for others, but for himself. With supreme selfishness he is striving for the great public good, forgetting that his concentration in his professional interests is possibly narrowing him.

Referring again to the ideal engineer I have set before you, let me say that he is, in brief, a broad gauge man.

Is it possible for a professional man whose work tends constantly to narrow him to approach this ideal, you ask. I think it is. Indeed it has been my good fortune to know several such engineers, and they stand before me as the highest exemplification of the successful man. In engineering work they are eminent, in business life they are influential and in social life they exert a very strong influence in their communities.

You furthermore ask: How are such engineers to be produced? The question is not easily answered. Indeed, there may exist very diverse opinions as to how they may be produced. My personal view is that this type of engineer is only

the result of clearly defined purpose and unceasing effort to become such upon his own part. Friends and teachers may and should be of great assistance in his development. They cannot, however, create him. Natural conditions are against him. To begin with, every circumstance attending his engineering development tends to make him anything but a broad gauge man. His college work, if it is to provide him with even reasonable engineering training, is exacting and confining. Not only his daylight, but his evening hours, are filled with schedule work. He enters upon this work feeling that his entire future success depends upon his rigid attention to it. Usually it is so much more severe than anything he has before experienced that half through very fear of failing to master it and half through necessity, he abandons every other interest to it. One year of such life usually transforms him into a strict devotee to student life. I am now speaking of the conscientious engineering student who has it in mind to work out a future for himself. After several years of such confinement he is graduated as an engineer and seeks employment in engineering fields. The chances are quite against him if he is poor and lacks influential backing. He is quite likely to be hidden in some department, where his ability has been sufficiently evident for him to be assured of more or less permanent employment at a moderate salary. If he is not permanently buried in such a position he fights his way out of it through sheer force of character only, sometimes at the cost of prospective starvation. But whether he escapes from it or not he is likely to become a man who takes little or no interest in affairs with which he is not directly connected in an engineering capacity. The eventual result is that his life narrows down to one devoid of value in other than engineering directions.

I feel that this is not of necessity the predetermined destiny of an engineer. I also believe that no man's profession should thus isolate him. But the question of the moment is: How is any other form of engineer to be produced? I have thought he might be produced by being broadly

prepared to take up his engineering course of study, by pursuing his college work with a broad ideal of his own future always before him, and by practicing his profession broadly realizing always that he will occupy in the world only the position which he makes for himself.

By broad preparation for his engineering course I mean a liberal preparatory education in literature, history and business, as well as mathematics, reading and spelling. The prospective engineer should not be in too great a hurry to take on his engineering course of study. Let him take all the work the public schools have to offer and then engage for one or two years in some commercial pursuit. Let him learn before going into college how to make out a bill for a purchase of merchandise, and how to keep books, if possible. Let him also cultivate a taste for good literature, and let him allow those who are interested in him help to develop in him what is sometimes termed a "business presence."

Then as a college student let him not close himself up from the social world. Let him belong to some social organization; indeed let him make a special effort to go to those social conditions which the very nature of his college work prohibits coming to him. Let him not bury himself in his student work. Let him cultivate confidence in himself under all conditions, social and professional.

And now, gentlemen of the graduating class, my subject leads me to the points I would suggest to you. I have been discussing the engineer as a broad gauge man and as a useful member of society. I firmly believe that no period of his career so strongly contributes to the determination of his eventual position and usefulness in life as the first few years following his graduation. During this period he shoulders his load. He proves or disproves his estimate of himself. If he is to take on the stamp of the ideal I have been picturing, I believe he will be in some measure guided by the following principles: He will, to begin with, have no false pride as to his own position in the field. He will take upon himself any task to which a superior assigns him.

He will set about the performance of a given duty with the expectation of successfully carrying it through. He will not require explicit instructions as to how every detail of a given problem is to be met, but will use his own ingenuity in successfully arriving at the end in view. I cannot too strongly assert that the engineering subordinate who is not to be depended upon to work out a given result without instruction and supervision in every step, is a burden to his superior; nor can I too strongly assert that the man who asks for few instructions is the man who is sought. This prospective ideal engineer will furthermore not content himself with the performance of the given task in hand. He will qualify himself in all possible engineering directions. He will push himself at once out into social fields, widening as rapidly as he can his acquaintance with men of all classes of society. He will endeavor to be something outside of his

immediate engineering work. Gradually, as the years advance, he will, I think, approach the ideal I have set before you.

Permit me to say in all modesty that this discussion of the ideal engineer is not based upon personal experience, nor has it the stamp of traditional suggestion. It is the expression of convictions that have come to me from contact with numerous engineers of great ability, whose light has seemed completely hidden under the bushel, also from contact with a number of other engineers who seemed the personification of the ideal I have held before you. May I also say that I am not advocating neglect of one's profession for things in other fields. On the contrary, I believe in concentration of purpose and effort as essential to success, but feel that for the average engineer there is a wide field of usefulness outside his profession, as well as within.

OFFICIAL REPORT OF PROCEEDINGS OF THE TWELFTH ANNUAL BUSINESS SESSION OF THE ROSE POLYTECHNIC ALUMNI ASSOCIATION.

TERRE HAUTE HOUSE, }
3 P. M. Thursday, June 16th, 1898. }

THURSDAY, following the commencement exercises, the regular annual meeting of the Rose Polytechnic Alumni Association was held at the Terre Haute House.

In the absence of President S. D. Collett, the meeting was presided over by W. Offut Mundy, vice president.

The roll call revealed the presence of the following members:

- Class of '85—Benj. McKeen, Terre Haute.
- Class of '86—H. W. Foltz, Indianapolis, Ind.; Charles E. Scott, Terre Haute.
- Class of '87—John B. Aikman, Terre Haute.
- Class of '88—George M. Davis, Terre Haute; John B. Peddle, Terre Haute.
- Class of '89—V. K. Hendricks, Terre Haute.
- Class of '91—William H. Harris, Terre Haute; Robert L. McCormick, Terre Haute; O. C. Mewhinney, Terre Haute.
- Class of '92—W. Arnold Layman, St. Louis.
- Class of '93—Arthur M. Hood, Indianapolis.
- Class of '94—F. F. Hildreth, Terre Haute; James S. Royse, Terre Haute.

Class of '95—W. O. Mundy, Louisville, Ky.; A. V. Tuller, Carrier Mills, Ill.

Class of '96—James Farrington, Youngstown, O.

Class of '97—A. F. Gordon, Terre Haute; J. H. Hall, Jacksonville, Ill.; J. D. Ingle, Oakland City, Ind.; J. H. Lendi, Terre Haute; A. G. Shaver, Danville, Ill.

The minutes of the last annual meeting were read and approved.

The special committee appointed during the last year by the executive committee to treat with the Board of Managers of the Rose Polytechnic Institute, with a view to securing Alumni representation on the Board, reported as follows, through Mr. W. Arnold Layman, one of the committee:

"I herewith submit the following communication from the Board of Managers of the Rose Polytechnic Institute:

To the Rose Polytechnic Alumni Association:

GENTLEMEN:—In reply to the communication submitted recently to the Board of Managers by your special committee, on the subject of Alumni representation, I take pleasure in advising you that the same has been

given most careful consideration by the Board, resulting in the unanimous adoption of the following resolutions, which comply fully with the suggestions contained in your communication, with a single modification.

The plan will be in force upon the acceptance of the same.

Resolved, That the Board of Managers increase its membership so that there shall be two more members than at the present time; and that provision be made whereby the two vacancies thus created shall be filled by the Rose Polytechnic Alumni Association in the following manner:

1. That the said Association shall nominate Alumni of at least four years standing, by ballot, two each for terms of one and two years respectively, the term of each nominee being particularly specified, and the said terms to expire at the end of commencement week at the end of said term.

2. That no two of the persons so nominated shall be of the same class unless nominated for the same year, and that said persons shall represent at least two of the four engineering courses offered by the Institution.

3. That all Alumni shall have the privilege of voting for the nominees provided for in the first article, either in person or by letter-ballot.

4. That after the first two managers are so nominated by the Association and elected by the Board, the successors of said two managers shall be appointed for a term of two years, one each year, in the following manner:

(a) A committee of three on elections shall be appointed by the Association, said committee being composed of Alumni living in or near Terre Haute.

(b) It shall be the duty of said committee, during the month of March of each year, to notify each Alumnus by letter and request him to make one nomination for the vacancy which will occur at the end of the following commencement week.

(c) On the fifteenth day of May or the week following said day, the committee shall count the ballots received by them and shall select from the nominees the two persons receiving the highest number of votes, and shall arrange the names of said two persons in order, according to the number of votes received by each, placing the highest first, provided always that each of the said two persons shall have been Alumni of at least four years standing at the commencement following the nomination. When the list has been prepared, a copy thereof shall be forwarded to each Alumnus with the request that he vote for one of the persons named therein, either by personal vote or by letter ballot, on or before the day of the annual meeting of the Association, said day to be designated in the notice.

(d) The polls shall be closed at the opening of the annual business meeting of the Association, and it shall be the duty of the election committee to count the votes,

and the name of the person receiving the greatest number of votes shall be certified by the committee to the secretary of the Association and shall be certified by him to the Board of Managers.

(e) The Board of Managers agree, except for some good and sufficient reason, to be formally set forth in writing to the secretary of the Alumni Association, to elect the person so certified, to membership on the Board.

(f) Any person so nominated by the Association and elected by the Board, may be re-nominated and re-elected for a second term of two years, but no person so nominated and elected shall serve as Alumni representative on the Board of Managers for more than two successive terms of two years each.

Very respectfully,

R. G. JENCKES,
Sec. Board of Managers.

June 15, '98.

On motion of Mr. Charles Scott, it was decided to appoint a committee of three to draft a communication to the Board of Managers, accepting their proposition relating to Alumni representation and thanking them for granting the same; also for the very courteous and cheerful reception which was given to the communication from the Association.

It was later decided that this duty should be performed by the election committee, provided for in the plan adopted for electing the Alumni representatives on the Board of Managers.

The following resolutions on the death of Judge William Mack were submitted by the special committee, recently appointed for the purpose by President S. D. Collett, and unanimously adopted:

WHEREAS, The Universal Father has taken Judge William Mack to his eternal home, and

WHEREAS, Judge Mack was, throughout his long membership of the Board of Managers of the Rose Polytechnic Institute, a true and faithful counselor, giving much of his time and strength to her upbuilding and maintenance and to the advancement of her students and alumni, it is hereby

Resolved, By the Rose Polytechnic Alumni Association, in its eleventh annual business meeting assembled, that the Rose Polytechnic Institute has lost a wise and trusted friend and helper whose services in her behalf stand as a monument to his memory. And be it further

Resolved, That each member of this Association feels the individual loss of a personal friend And be it further

Resolved, That these resolutions be spread upon the

records of this Association, and that a copy thereof be published in THE ROSE TECHNIC; and be it further

Resolved, That a copy of these resolutions be sent to the family.

HERBERT W. FOLTZ, '86.

ARTHUR M. HOOD, '93.

HOWARD M. STANTON, '94.

Committee.

By resolution the secretary was instructed to hereafter have printed and mailed to the members of the Alumni Association as soon as possible after the annual meetings a full report in detail of the proceedings.

Other resolutions were adopted as follows:

(1) *Resolved*, That the secretary have printed and mailed, as soon as practicable, to the membership copies of the new constitution and by-laws, adopted at the annual meeting of 1897.

(2) That hereafter a committee of three on elections be appointed each year by the president, whose duty it shall be to carry out the plans for conducting the election of Alumni representatives on the Board of Managers of R. P. I., as granted to us by the Board.

(3) That the Alumni association hereby expresses its congratulations to the Rose Polytechnic Institute and to Mr. John B. Aikman, '87, on the recent election of the latter to a membership on the Board of Managers.

Considerable informal discussion then followed, with a view to ascertaining some feasible plan whereby a more active interest might be developed among the Alumni in the welfare of the Association and the Institute.

It was generally conceded in this discussion that the Alumni had not been as active, individually, as they might, in making known, to those in their respective localities, interested in such matters, the very excellent and superior advantages offered by the Rose Polytechnic Institute for training in technical and engineering lines.

With a view to the accomplishment of something in this direction, the society was instructed by resolution to appoint in each class an assistant secretary, whose duty it shall be to enter into and carry on as continuously as possible, a correspondence with the members of his class, with the object of inducing them to exert all

possible personal effort in behalf of the Rose Polytechnic Institute.

It was further decided by resolution that Mr. Aikman be appointed a committee of one to suggest to the Board of Managers, provided the plan may seem advisable to them—the propriety of their assuming the expense hereafter of having one hundred extra copies of the ROSE TECHNIC printed at each publication, which shall be mailed to a carefully selected list of high schools and public libraries, which are not now receiving that most excellent of college papers.

That the ROSE TECHNIC be requested to print in full the Alumni address delivered today by W. Arnold Layman, '92.

On motion of Mr. Layman it was decided that hereafter the graduating class be invited to attend the annual business meetings of the Alumni Association, it being understood, of course, that—according to the constitution, they are not entitled to participate in the proceedings of the meeting until they have been voted into membership in this association.

It was further decided by the unanimous vote that the thanks of the Association be and are hereby extended to Messrs. W. C. Ball & Co., editors of the Terre Haute *Evening Gazette*, for their kindness in sending during the past two years, free of charge, to members of the Alumni, copies of the Gazette, containing accounts of the Alumni meetings.

ELECTION OF OFFICERS.

Election of officers for the ensuing year resulted as follows:

John B. Peddle, '88, Terre Haute, president.

J. David Ingle, '97, Oakland City, Ind.; vice president.

John B. Aikman, '87, Terre Haute, secretary and treasurer.

Executive committee—H. W. Foltz, '86, chairman, Indianapolis; Robert L. McCormick, '91, Terre Haute; Victor K. Hendricks, '89, Terre Haute.

The class of 1898 was then unanimously voted into membership of the association.

The treasurer's report was as follows:

REPORT OF TREASURER R. P. I. ALUMNI ASSOCIATION,
JUNE 16, 1898.

ALUMNI FUND—RECEIPTS IN 1897.		
Balance on hand as per last report	\$53.80	
Annual dues paid last meeting after report was submitted	34.00	\$87.80
DISBURSEMENTS IN 1897.		
Clerical work done for Sect	\$5.00	
H. M. Stanton, Postage and T. W. Work for Committee on Alumni Report	9.25	
Printing Report of 1896 Alumni Meeting	22.75	
Printing Report of Alumni Rep. Committee	14.00	
Printing Menu Cards, 1897	7.50	
Invitations and Postal Cards for Exc. Committee	7.00	
Stamps for Executive Committee	4.68	
Stamps for Secretary	4.37	
1,000 Envelopes for Secretary	1.50	
Printing same	1.00	
To balance shortage on Banquet fund	3.50	
Balance at close 1897	7.25	\$87.80
RECEIPTS IN 1898.		
Balance from 1897	\$7.25	
Annual Dues for 1898, received to date	34.00	
To this date, balance on hand		\$41.25
BANQUET FUND, 1897.		
RECEIPTS.		
From members present	\$123.00	
From Alumni Fund	3.50	\$126.50
DISBURSEMENTS.		
Chas. Baur (Banquet, Music, etc.)	126.50	126.50
Respectfully Submitted, J. B. AIKMAN, Treasurer.		

Adjournment.

THE BANQUET.

The annual banquet of the Association held at the Terre Haute House, Thursday evening, June 16th, 1898, like its predecessors, was a brilliant success. The dining room, as the members of the Association marched into it, at something after 9 o'clock, presented an attractive scene. A long table, handsomely decorated and glistening with glassware, extended the length of the room. Ranged by classes the members were seated, Vice President Mundy and Secretary Aikman occupying seats at the east end. At the suggestion of Toast-Master Mundy, before the banqueters took their seats the R. P. I. yell was given and given with a will. Those present were:

Board of Managers—W. C. Ball, J. B. Aikman.
Faculty—Dr. C. L. Mees, President; Dr. Thos. Gray,

Profs. J. A. Wickersham, F. C. Wagner, Arthur Kendrick, A. S. Hathaway, J. B. Peddle.

Class of '86—H. W. Foltz, Indianapolis; Charles E. Scott, Terre Haute.

Class of '87—J. B. Aikman, Terre Haute.

Class of '88—George M. Davis, John B. Peddle, Terre Haute.

Class of '87—V. K. Hendricks, W. B. Wiley, Terre Haute.

Class of '91—O. C. Mewhinney, W. H. Harris, Terre Haute.

Class of '92—W. Arnold Layman, St. Louis.

Class of '93—Arthur M. Hood, Indianapolis.

Class of '94—F. F. Hildreth, James S. Royse, Terre Haute.

Class of '95—W. O. Mundy, Frank H. Miller, Louisville, Ky.; A. V. Tuller, Carrier Mills, Ill.

Class of '96—George E. Wells, Indianapolis; James Farrington, Youngstown, O.

Class of '97—A. G. Shaver, Danville, Ill.; J. H. Hall, Jacksonville, Ill.; A. F. Gordon, Terre Haute; David Ingle, Jr., Oakland City, Ind.

Class of '98—Ned S. Kidder, Cale Walmsley, Terre Haute; A. C. Eastwood, Clairborne Pirtle, Shelby S. Roberts, Harry B. Stilz, Louisville, Ky.; F. A. Whitten, Sloane, Ia.; F. C. Brachmann, Cincinnati, O.; W. E. Ford, Little Rock, Ark; John E. Hubbell, Altona, Ill.; John M. Lansden, Jr., Cairo, Ill; M. B. Stewart, Muscatine, Ia.; Charles E. Theobald, Archbold, O.; Brent Wiley, Paris, Ill.

The programme and menu was an artistic affair, gotten out under the direction of Herbert W. Foltz, of the class of '86, without whose presence at these annual gatherings the feast would be incomplete. On the first page was a Cuban flag, as a patriotic reminder of the country's conflict in which a number of the Rose Alumni are identified in positions for which their Institute training fitted them.

PROGRAM OF TOASTS.

W. O. Mundy, '95. Toastmaster.

"College Widows" Shelby S. Roberts, '98
"Rose Polytechnic Institute, Past, Present, Future"

..... Dr. C. L. Mees, Pres. of Faculty
Song—"My Little Rose" Robt. Sterritt
J. B. Aikman, '89.

The accompaniment was played by Mr. M. Stewart, '98.

"Panaceas" H. W. Foltz, '86

"Arbitration a la Dewey"

..... W. C. Ball, Member Board of Managers

"Individualism" Dr. Thomas Gray

"Taps" Theo. L. Condron, '90

Remarks on Alumni Association affairs and reading of

letters of regret from S. D. Collett, '90, president, and Lieut. S. M. Rock, '92, ensign U. S. S. "Corwin," who could not come because he is now on his way to Manila, his vessel acting as one of the ships to convoy the second expedition to the Phillipine Islands.

The menu was as follows:

Olives.	Little Neck Clams.	Caviar
	Salted Almonds.	
	Consomme en Tasse.	
	Cheese Straws.	
	Fillet of Muskelonge—Cenvoise.	
	Dressed Cucumbers.	
	Lamb Chops a la Dewey.	
	French Peas.	
	Patties of Sweet Breads—Bechemel.	
	Punch Maraschino.	
	English Plover au Cresson.	
	Asparagus.	
	Lettuce and Tomato Salad.	
	Strawberry Shortcake with Whipped Cream.	
	Ice Cream in Form.	
	Assorted Cake	
	Coffee and Cigars.	

Toastmaster Mundy, who fairly sparkled with good humor, and who seasoned his remarks with Attic salt, called on a number of others, among them Prof. Peddle, Messrs. Aikman, Layman and others, whose responses were felicitous and evoked much applause. A delightful evening came to a conclusion with some prefatory remarks and the reading by Mr. F. F. Hildreth of a written response, by Theo. L. Condron, of '90, whose home is at Chicago, and who could not be present, to the final toast, "Taps." It was as follows:

CHICAGO, June 16th, 1898.

Mr. President and Gentlemen:

"Taps," in this hour of military and naval enthusiasm, must be understood to mean 'lights out,' and therefore I conclude that I have been assigned a place near, or at, the end of the programme. But before the sounding of "taps" a few words may be said about the work of the day. The labor of our student years may be compared to the early morning exercises in camp before breakfast. As we know, the real labor and heat of our day comes after we leave the student halls. First, we drill with the "awkward squad" and learn that it is not all in books

by any means. Perhaps we remain privates, or we may become corporals, but in either case, it is no holiday campaign that the army of engineers is engaged in, and instead of rushing at once to exciting battles, achieving glorious victories and winning rapid promotions for dash and valor, we have only dull, uninteresting camp routine and picket duty where the only enemy likely to intrude within the lines is a new recruit. The man who can do well in the plodding work of an instruction camp may later be a leader in an active campaign, but some are sure to lose heart and interest before that chance comes and they will sicken and seek more comfortable entertaining and profitable pursuits and give up the ambition to become engineer officers.

We, as engineers, have reason to be proud of our fellow engineer, Lieut. Hobson, who has so distinguished himself for bravery before Santiago. His act was not one of dare-devil dash amid the enthusiasm of battle, but was one requiring a clear, cool head, capable of working out minute details of a real engineering problem and then putting his plan into operation in the face of almost certain death.

Let us then rise and drink to the health and success of the engineer officers of our army and navy at the front and give three cheers for Hobson, his crew and the flag.

T. L. CONDRON.

With this one of the most pleasant of a long series of banquets came to a close, and with the saying of farewell the Alumni dispersed.

"ERRATA."

In the article on "A New Form of Galvanometer," which appeared in last Month's TECHNIC, several errors were made, due to the fact that the figure was not lettered in accordance with the text. However, the following corrections will make matters plain: In line 7, page 222, after (L) insert: where (L) is the distance between the wire (W) and the point at which the suspension fibre of the mirror is fastened to the arm (D); and in line 8, page 222, change (D) into (L).

J. H. L., '97.

WILEY—WAITE.

Miss Katharine Wiley and Mr. William H. Waite, '93, were married June 21st, at the home of the bride's parents, Mr. and Mrs. William Wiley, on North Seventh street, Terre Haute. Mr. and Mrs. Waite left that evening for an extended tour through the east and will be at home in Toledo, O., after July 21st.

Mr. Waite will be remembered as a member of the class of '93 and is at present with the Vulcan Iron Works, Toledo, O. The TECHNIC extends its best wishes to Mr. and Mrs. Waite.

KESSLER—BECKER.

The following announcement has been received: Mrs. Mary Kessler announces the marriage of her daughter Katharine to Mr. Maurice E. Becker, on Tuesday, June 21st, 1898, Connersville, Ind. Mr. Becker, of the class of '93, is at present draftsman for the Connersville Blower Company, Connersville.

ALUMNI NOTES.

Bixby, '92, is rejoicing in the arrival of a son, born May 14, 1898. The TECHNIC extends congratulations.

A. L. Hupe, '91, assistant engineer with the Louisville Bridge and Iron Co., of Louisville, Ky., spent several days in Terre Haute during the last of May.

Guy Pierson, '97, writes, "I have just heard that Roger Newbold, '97, is a volunteer in an Alabama company and at last report he was acting as one of the cooks."

A. H. Meyer, '97, spent several days the last of May with his friends in Terre Haute. While here he hinted of an early return to the city in the fall—nothing definite was told, however.

Cards are out announcing the wedding of Miss Adaresta Thompson, of Kansas City, to Mr. Frank Charles Fletcher, who was at one time a student at the Rose Polytechnic and who has a wide circle of acquaintances in this city. Mr. Fletcher is connected with the railroads in Kan-

sas City. The ceremony took place at the Troost Avenue Methodist church, in Kansas City, on Wednesday evening, June 1.

The engagement has been announced of Mr. George H. Chapman, of the class of '88, and Miss Harriet Hubbard, of Eau Claire, Wis. The wedding will take place about the last of August.

In the *Electrical World* for May 14, we note with pleasure an article on "Short Methods for Determining Transform Efficiencies," by S. E. Johannesen, '93, which was copied from the TECHNIC, of March, 1898.

The *Electrical World* for April 9, contains an interesting article on "Station Photometry," by Buckner Speed, '94, which will be of interest to the Alumni, not only because written by one of the Rose Tech men, but also on account of the valuable information given.

Roger Newbold, '97, is now a member of the firm of Meighan & Co., contractors in marble, stone, brick work, grading, etc., of Birmingham, Ala. A new department has just been opened, by which the firm will enter into contracts for installing electrical machinery. Lansden, '98, has just received a responsible position in the new department.

The TECHNIC is indebted to Mr. Howard M. Stanton, of the class of '94, for the following invitation, Mr. Stanton being a member of the graduating class. The faculty and the class of Ninety-eight of the Indiana Law School, University of Indianapolis, request your presence at the fourth annual commencement, Wednesday evening, May 25, 1898, 8 o'clock, Grand Opera House, Indianapolis.

J. E. Lufkin, '97, has become a high private in the ranks of the 1st U. S. Volunteers of Texas and has started to Cuba. Just before he started he kindly sent the TECHNIC one dollar for his subscription next year, saying, "This is the last dollar I have made and perhaps the last I ever will." The best wishes of the TECHNIC go with him and we sincerely hope he will be spared to earn many another dollar to pay his subscription with.



Field Day.

THE ninth annual field day of the I. I. A. A. was held at the Business Men's Driving Club Park on Friday, May 20th.

Notre Dame carried off the honors. This was the first appearance of these young men from South Bend in the I. I. A. A. field day and they acquitted themselves with honor. Not only did they make the greatest number of points, 46, for the day, but Captain Powers broke the State records on three occasions.

Purdue ran second in the number of points, scoring 44. The strongest work of this team being in the runs, the field teams were weak.

DePauw took third place with 17 points in the track and field.

Rose stands among the last, with only one point in her favor, third place in the mile run.

Despite the threatening clouds and a track ankle-deep in mud the meeting may be said to have been successful. The inclement weather and unfavorable circumstances under which the meet was held did not dampen the ardor of the hundred or so college men who had gathered to witness the events. Beyond the representatives of the colleges few others attended the meet, the city of Indianapolis being very poorly repre-

sented even considering the circumstances.

The condition of the track prevented any attempt at record-breaking and made it impossible to hold the bicycle events, which were postponed until Saturday. Mr. T. W. Stone, of the Chicago Athletic Association, acted as referee and with the assistance of the time-keepers, starters, etc., handled the fields admirably and rushed the events through.

Purdue had the strongest organization, but toward the end of the day began to weaken and Notre Dame forged to the front until it was certain that victory lay in her grasp if the bicycle events did not give Purdue the advantage. The work of Captain Powers, of Notre Dame, was the feature of the afternoon. In the running broad jump he raised the State record from 20 feet 10 inches to 21 feet 9 inches. In the running high jump he established a new record, lifting the cross-bar from 5 feet 6 inches to 5 feet 8 inches. He then raised the State record for the pole vault to 10 feet 2 inches. The other contestants having dropped out at 9 feet 6 inches, he tried to break the record and succeeded with the above result. One other record was broken by Roller, of DePauw, who raised the shot

EVENT.	WINNER.	COLLEGE.	RECORD.	SECOND.	COLLEGE.	THIRD.	COLLEGE.
100 Yards Dash	Thompson.	P. U.	0:11 2-5	McCallum.	W. C.	Jones.	P. U.
220 Yards Dash	Porter.	W. C.	0:25 2-5	Swinhart.	D. P. U.	Farley.	N. D. U.
120 Yards Hurdle	Batten.	P. U.	0:20	Montgomery.	P. U.	Chapman.	E. C.
220 Yards Hurdle	Cassady.	P. U.	0:30 1-5	Hoover.	N. D. U.	Chapman.	E. C.
One-fourth Mile Run	Teter.	I. U.	0:56	Corcoran.	N. D. U.	Peacock.	E. C.
One-half Mile Run	Green.	P. U.	2:18 1-5	Brent.	P. U.	Teter.	I. U.
One Mile Run	Green.	P. U.	5:49 4-5	O'Dell.	D. P. U.	Froehlich.	R. P. I.
Running Broad Jump	Powers.	N. D. U.	21' 9"	Thornburg.	E. C.	Peacock.	E. U.
Standing Broad Jump	Malloy.	N. D. U.	10' 3"	Murry.	I. S. N.	Thomas.	D. P. U.
Running High Jump	Powers.	N. D. U.	5' 7"	Peacock.	E. C.	Klipsch.	P. U.
Pole Vault	Powers.	N. D. U.	10' 2"	Kearney.	N. D. U.	Cassady.	P. U.
Hammer Throw	Roller.	D. P. U.	103' 11 1-2"	Eggeman.	N. D. U.	Powers.	N. D. U.
Shot Put	Roller.	D. P. U.	39' 2"	Powers.	N. D. U.	Eggeman.	N. D. U.
Five Mile Bicycle	Waters.	N. D. U.	20:00	Rawlins.	I. U.	Duncan.	U. of I.
One Mile Bicycle	Anderson.	P. U.	4:01	Waters.	N. D. U.		
One-half Mile Bicycle	Greenick.	P. U.	1:48	Rawlins.	I. U.	McGregor.	H. U.

	1st.	2nd.	3rd	Total
N. D. U	5	6	3	46
P. U	7	2	3	44
D. P. U	2	2	1	17
I. U.	1	2	1	12
E. C.		2	4	10
W. C.	1	1		8
I. S. N.		1		3
U. of I.			1	1
R. P. I			1	1
H. U.			1	1

record eight and one-half inches, making 40 feet 1½ inches. Kearney, of Notre Dame, also broke the record in the pole vault, clearing the bar at 10 feet, but was beaten by Powers with the record of 10 feet 2 inches.

The track events were run off at the same time as the field trials, but the deplorable condition of the course prevented anything in the way of records being made. Still the races were all hotly contested and the finishes were close and exciting.

Rose Tech had contestants entered in twelve events, but when the time for running off the events arrived some of the men did not enter.

Froehlich, '99, has the honor and credit of winning the only point made for Rose in the meet, winning third place in the mile run.

Willbanks, '01, and Lyons, '01, did not qual-

ify for finals in any of the events in which they were entered. McLellan, '99, did not go to Indianapolis. Schwed, '99, finished about the middle of the bunch in the quarter mile.

The bicycle events had been postponed until Saturday, when they were run at the request of Purdue and Notre Dame, although the track was in as dangerous a condition as the day before. Neither of Rose Tech's men entered these races, as they had been given to understand that they would not be held and their suits had been packed and sent to the depot.

However, upon the contestants of Purdue and Notre Dame insisting, the events were run, as the championship depended upon the bicycle races, the two contestants being so evenly matched in the events of the day before. Pfleging, '00, entered for the half mile and qualified

in the trial heat, but did not run in the final, as he was racing in his street clothes.

On the whole, field day was a disappointment this year, both financially and in the showing made by Rose Tech and it is to be hoped that Rose Tech will be better represented next year, both among contestants and spectators.

FIELD DAY NOTES.

The R. P. I. delegation at Indianapolis was Prof. Hathaway, Howell, '99, Froehlich, '99, Stone, '99, Schwed, '99, Meriwether, '00, Pfleging, '00, Mees, '00, Dickerson, '01, Lyons, '01, Perkins, '01, Schwartz, '01, Wilbanks, '01, and Willis, '01.

Several of Company B men were on hand to yell for the "Rose and White."

Hanover failed to get a place and Franklin did not have a team entered.

An accident happened in the mile bicycle race. Rounding the last turn, Foley, of Notre Dame, ran into Boyle, of Purdue, throwing him heavily to the ground and dislocating his shoulder.

INDIANA UNIVERSITY—ROSE POLYTECHNIC.

That long looked for trip to I. U. came and went and although we came home with our percentage a few notches lower we cannot but be content with how it happened. The game was lost, like its predecessors, on infield errors. Of course "Jakey" pitched winning ball. He is head and shoulders above either Whitely or Choler in his chosen art. Austin caught well and Freudenreich played his usual scrappy game at first. Meriwether surely had an off day on second. The team:

R. P. I.	I. U.
Voorhes, ss.	Moore, 2b.
Trumbo, p.	Daily, cf.
Gibbons, 3b.	Stalker, ss.
Austin, c.	Pitcher, 1b.
Freudenreich, 1b.	Davis, rf.
Likert, lf.	Alsop, 3b.
Kidder, cf.	Harris, c.
Weatherhead, rf.	Hume, lf.
Meriwether, 2b.	Whitely, p.
	Choler, p.

Score:

	1	2	3	4	5	6	7	8	9	
R. P. I.	0	1	0	0	0	1	1	1	3	7
I. U.	0	3	5	1	0	0	0	3	0	12

The work of I. U.'s fielders was some degrees above that of their battery. Moore batted well for them; so did Alsop. Daily carried off their fielding honors. An even deal all round, and the double umpire system kept the game wonderfully free from the usual wrangle which mars the interest in college contests.

NORMAL—ROSE POLYTECHNIC.

On Saturday, May 21, Rose was defeated by the Normals at Terre Haute Ball Park, with a score of 6 to 3. The day was unpleasant, attendance small and not a great deal of interest was shown by those present. Although there was no especially good playing by either side the Rose men did better infield work than usual. They were quick and sure, and shut out all base stealing. Their greatest trouble seemed to be that they were weak at batting and the hits were few and far between. McLellan was put in the box on account of Trumbo being unable to play, and pitched a very good game, considering the fact that it was his first experience in that position in a regular game. He had little speed, but succeeded in getting the ball over the plate nicely, with a baffling curve. Austin held his place behind the bat in fine style and Meriwether showed himself to be just the man for short. Weatherhead covered second so nicely that it was decided to keep him there permanently. Gibbons got two of the four hits made and McLellan hit a two-bagger in the seventh, bringing in Meriwether, who reached first on a hit and then stole second.

Comparatively few errors were made by either side, but the game seemed to drag along too much to make it exciting. Even the ever present "rag chewing" between the supporters of the two teams was weak and excepting an occasional outbreak the "boiler-greasers" were entirely unmolested by the "oats and hay" aggregation. The Rose men went to the grounds with little expectation of winning and were, therefore, not much disappointed, for by losing it would require another game with the Normals to decide the tie, and this was greatly desired,

owing to the large deficiency in the Athletic treasury.

The score:

R. P. I.	R	H	P	A	E	I. S. N.	R	H	P	A	E
Voorhes, r. f.	0	0	0	0	2	Hill, 2b	0	1	3	4	1
Gibbons, 3b	1	2	1	2	1	Hall, c.	0	1	8	0	1
Austin, c.	1	0	5	1	1	Headlee, c. f.	0	1	0	0	0
Freudenreich, 1b	0	0	12	0	0	Chenoweth, l. f.	0	1	2	0	0
Kidder, c. f.	0	0	1	0	0	Williams, r. f.	1	0	0	0	0
Troll, c. f.	0	0	1	0	0	Early, ss.	1	0	1	3	2
Likert, l. f.	0	0	1	1	0	Lankford, p.	2	1	0	1	0
Weatherhead, 2b	0	0	3	4	0	Lindley, 1b	2	3	12	0	0
Meriwether, ss.	1	1	3	4	0	McCarthy, 3b	0	3	1	2	1
McLellan, p.	0	1	0	4	0						
	3	4	27	16	4		6	11	27	10	5

R. P. I.	1	2	3	4	5	6	7	8	9
I. S. N.	2	0	0	0	0	0	1	0	0—3

Two base hits—McLellan, Hill. Bases stolen—R. P. I. 4. Base on called balls—on McLellan 1, on Lankford, 2.
Struck out—by McLellan 5, by Lankford 8.
Umpire, Dan Miller.
Scorers, Stilz and Torrence.

VAN SHOPS—R. P. I.

On Decoration day morning Rose played a five inning game with the Vandalia shop nine. The weather on this morning was very disagreeable and there were almost no spectators. Nevertheless, the game was well played and interesting, and Rose succeeded in adding up 7 runs against 3 made by the Vandalia's. Trumbo pitched a splendid game and received much better support than usual from the rest of the team. The batting by the Rose men was also something out of the ordinary. Taken all in all the playing was such that had it been in the early part of the season it would have been quite encouraging to the base ball men.

R. P. I.	0	4	1	2	0—7
Vandalia	0	1	0	1	1—3

THE DEPAUW GAME.

After the team had been compelled to surrender to the Wabash and I. U. teams little hope was expressed of victory at DePauw, manifestly one of the strongest teams in the State. All interest centered on giving them a clean race for their certain victory. The game was played Monday, May 23d, an extremely warm and glistening afternoon on their skinned field.

For Rose the playing was decidedly warm, ex-

cepting, perhaps, the first, second and third basemen, who seemed a little off.

DePauw played about an even game for five innings, then pulled ahead.

The game was not characterized by brilliant playing so much as by the hitting. DePauw hit well and timely, Rose hit hard but not bunched enough; in fact DePauw credits Rose for the hardest hitting done against her on her home grounds, where they have not lost a game this year.

The following is the summary:

R. P. I.	R	H	P	A	E	DEPAUW.	R	H	P	A	E
Trumbo, p.	0	1	0	3	0	J. E. Bohn, lf	3	3	1	1	0
Gibbons, 3b	0	2	1	0	4	Pulse, p.	3	2	0	4	0
Austin, c.	0	3	4	1	0	Haynes, cf	2	2	1	0	0
Voorhes, rf	1	1	0	1	1	Murray, 3b	1	1	2	1	1
Freudenreich, 1b	0	1	11	0	3	Ellis, rf	1	2	0	1	1
Likert, lf	1	1	1	1	0	Peck, c.	0	1	8	1	0
Weatherhead, 2b	0	1	5	2	4	P. Bohn, 2b	1	1	2	3	0
Kidder, cf	1	2	1	0	1	Longwell, 1b	0	1	13	0	0
Meriwether, ss	0	2	1	4	1	Little, ss	0	0	0	0	2
	3	14	24	12	13		11	13	27	11	4

R. P. I.	1	2	3	4	5	6	7	8	9
DePauw	0	2	0	0	0	0	1	0—3	1—11

Struck out—By Pulse, 7; Trumbo, 2.
Base on balls—By Pulse, 4; Trumbo, 4.
Umpire—Fischer for DePauw; Miller for Rose.

NORMAL—R. P. I.

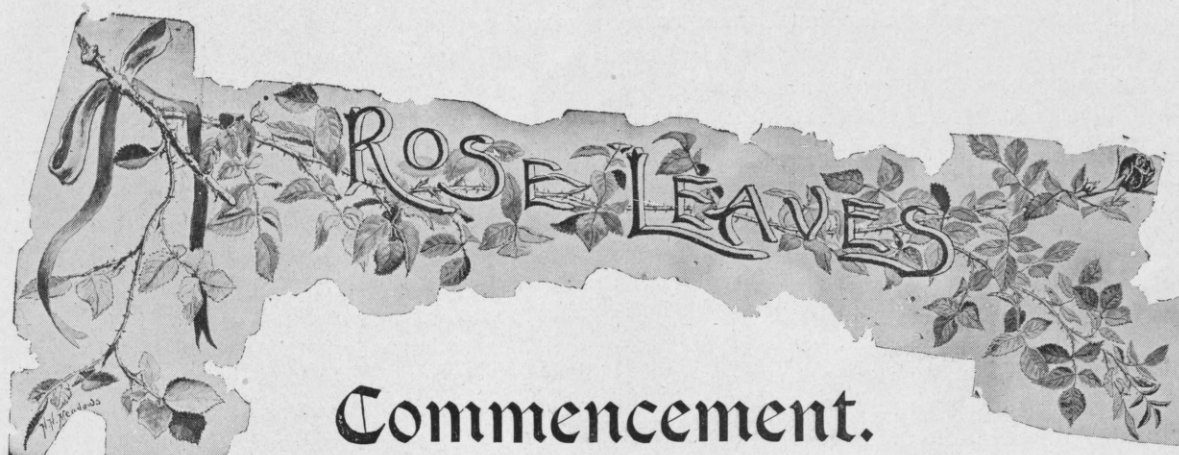
The last game and most decided victory of the '98 season was played and won by Rose at Terre Haute Ball Park on Saturday, June 4, against the Indiana State Normal. The defeat of the Normals was complete, with a score of 19 to 4 against them.

The score:

R. P. I.	R	H	P	A	E	I. S. N.	R	H	P	A	E
Wilbanks, lf	1	0	2	0	0	Hill, 2b	1	1	2	5	2
Trumbo, p.	5	3	0	3	0	Hall, c.	1	0	10	1	6
Gibbons, 3b	2	1	4	2	1	Early, ss.	1	1	1	2	4
Austin, c.	3	3	4	0	2	Chenoweth, lf	0	1	0	0	0
Voorhes, rf	1	0	1	0	1	Williams, rf	0	0	0	0	1
Freudenreich, 1b	4	4	6	1	2	Lindley, 1b	1	0	11	1	2
Likert, cf	1	2	3	1	1	Clark, cf	0	0	0	0	1
Meriwether, ss	2	2	2	3	3	McCarthy, 3b	0	1	2	0	4
Weatherhead, 2b	0	2	5	3	1	Lankford, p.	0	1	1	3	1
	19	17	27	13	11		4	5	27	12	21

R. P. I.	6	0	1	3	1	0	5	1	2—19
I. S. N.	2	0	1	0	0	0	0	0	1—4

Three base hits—Trumbo, Likert, 2.
Two base hits—Trumbo, Austin, Early.
Base on called balls—By Lankford, 4; by Trumbo 1.
Struck out—By Trumbo, 3; by Lankford, 5.
Time of game—2:10.
Umpire—Dan Miller.



Commencement.

ON Thursday, June 16th, at 10 o'clock, for the fourteenth time in the history of the Rose Polytechnic Institute, the Alumni and friends of the graduating class were gathered together in the main hall of the gymnasium to witness the final exercises of the year and the awarding of degrees. The hall was filled with the friends of the class and conspicuous among the crowd were the Alumni who had returned to again partake of the festivities of commencement. Upon the platform were seated Mr. W. C. Ball, Vice President of the Board of Managers; Dr. T. C. Mendenhall, President of the Worcester Polytechnic Institute; President C. L. Mees, Rev. C. E. Percival, Mr. W. Arnold Layman, '92.

PROGRAMME.

MUSIC.

PRAYER.

MUSIC.

ALUMNI ADDRESS.

MR. W. ARNOLD LAYMAN, '92.

MUSIC.

ADDRESS.

DR. THOMAS C. MENDENHALL.

Presentation of Diplomas.

Awarding Prizes.

Benediction.

MUSIC.

The members of the graduating class occupied chairs on the right hand side of the platform. The Ringgold orchestra furnished an enjoyable programme of music at intervals during the exercises, from the visitors' gallery.

After a few remarks by Dr. Mees, Rev. Percival lead in prayer, and Mr. W. Arnold Layman, '92, was then introduced, and delivered the address on behalf of the Alumni Association.

President Mees then introduced, in an eloquent manner, the speaker of the day, Dr. T. C. Mendenhall, who was received by a burst of applause from his friends and old associates, as former President of the Institute. Only a brief abstract of Dr. Mendenhall's eloquent address can be given in this issue, which is as follows:

DR. MENDENHALL'S ADDRESS.*

Mr. President, Members of the Board and Faculty and Ladies and Gentlemen:

"I think it is just about a year ago that I had the pleasure of being invited in company with a friend, to make a little tour of the Berkshire hills in Northwestern Massachusetts, our principal errand being to assist in the dedication of a new educational institution of great importance. It happened on that occasion that my short address was first on the programme and when I got through my friend who followed me by saying (and I have since thought that it was an excuse for being absolutely unprepared for the occasion)

*THE TECHNIC desires to thank the *Gazette* for the privilege of publishing this abstract which appeared in the *Gazette* of June 16th.

that on the way over I had stolen his manuscript and read his address, and the worst of it was that he came very near proving that it was so.

"I have had something of that feeling during the last half hour in listening to the very interesting address Mr. Layman has read before us and I would like to accuse him of having stolen my address.

"There is an old Confusian proverb, of which I am also reminded, in which we are told by this wise Chinese philosopher to beware of the appearance of evil. Never stop to tie your shoe in the melon patch of the enemy.

"I would hesitate to take the line of thought suggested by Mr. Layman if I thought that I was in a melon patch of an enemy, but feeling that I am not and knowing that I am among my friends, I may venture to take a few of the choicest melons which Mr. Layman has plucked and plugged so nicely and shown that they are good, and open some of them to find what else is worthy of consideration."

Prof. Mendenhall then said that he would not describe the history of the world as made by men of politics and war, but by men of mind.

"The world owes more to the engineer than we have been willing to admit.

"Let me go back to the time when man was in a primitive condition, when he had to depend on his own muscles for making a way in the world.

"Perhaps we do not know much about man in that condition, fortunately for our self respect, but we can imagine something of the kind in the beginning of things.

"When we look about us and see the other animals by which man is surrounded, I think it is interesting to note that there are many of them who far excel man in muscular power and energy.

"They are more powerful and more courageous in the mere matter of brute courage.

"I think it is interesting to ask for a moment why is it that man has succeeded in reaching his present position?

"The only satisfactory answer we can give is that there existed in man from the beginning of

what I may call for want of a better name, the germ of human intellect."

He said that man's first step forward began in an engineering operation and it was by engineering operations, from the start, that victory was accomplished.

"Some man, it is said, learned to throw a stone, and in learning this was able to attack his enemy out of his enemy's reach, which was of course, an important thing.

"The twanging of the bow was another thing the savage learned, by means of which he could attack his enemy at a distance.

"It is a little unpleasant to reflect upon, but it is doubtless true, that man first put his foot upon the neck of his fellow and not upon that of other animals."

The doctor added that slavery must be regarded as a step in the history of civilization, where man became important by the amount of man power he could control.

"This man power was for a long time the unit. It was a great step when some one learned that certain animals could be domesticated.

"Man's enemies were made man's friends by this. There is a lesson in it all, that there is always a gain in converting one's enemies into friends and utilizing them.

"We do not know the next agency man made use of, but perhaps it was the power of air in motion.

"The use of wind power may have occurred earlier than the flowing water. It was used in wind mills and in driving ships at sea and thus relieved the man power at the oar.

"The next step was the discovery that there was energy in flowing water.

"I often regret that I do not know the names of the men who did these things so that we might build a monument to them, but unfortunately their names are lost.

"It was a long time before the next great step was taken and that was the greatest of them all. This was the recognition of the fact that there was work in the combustion of fuel.

"This step was of vastly greater import than the utilization of moving air or falling water, both of which were subject to evident deflections."

Professor Mendenhall then said that the use of fuel had, up to this time, been but for warmth and domestic need, but no use had been made of that kind of fuel which we may call embalmed power.

"The discovery that one might get work out of fire, instead of pure muscle force, created an enormous demand for fire and fuel and this demand was only supplied by searching the crust of the earth and discovering its hidden supplies of fuel.

"I know it is doubtless true that every age is the golden age to the people that live in it, but I think that impartial history one thousand years from now will separate the 19th century from all that has gone before as being greatest in the utilization of power, other than that of the muscles of man and beasts.

"You can number the greatest engineers from the beginning, perhaps four or five. There are none who stand higher than James Watt, the Scotchman, who invented the steam engine.

"Not very far from where I live is a town called Boston. I suppose it is known to many of you, by name, at least.

"The town is supposed to be the center of literature, scholastic and artistic accomplishments of the whole United States.

"In one of its most beautiful buildings, namely the great library, costing millions of dollars, will be found a very considerable list of names, cut in solid rock on which it is erected—names of men, who, from the earliest time, have been distinguished for having contributed to the welfare of their time. Among those will be found a column of distinguished engineers, but in this column will be found the name of 'Watts,' not 'Watt,' who invented the steam engine, but 'Watts' who wrote that beautiful poem, 'The Dog's Delight,' etc. This is what they have done in Boston."

Following the professor gave an eulogy on Watt, as having improved the steam engine to

such an extent that he might really be called its inventor.

"While the next century has seen a great advance in the price of fuel," said he, "the next century will witness a change, and it is to this future that I will invite the attention of these young gentlemen before me.

"Perhaps some of these young men are destined to be great engineers. In the future there will be many great engineers, but we cannot to-day put our fingers upon the men who are to solve the great problems on which the welfare of the human race will depend twenty or fifty years from now. So I say these young men will have problems on which to try their skill. The opportunities that they will have are unparalleled in the history of science and art. It is quite common for a young man to have a sort of belief that all the great work has been done, that all the great victories have been won, and that there is nothing likely to appear in his professional life that will offer opportunity for distinction such as has happened in the past. A little study of science of applied science particularly, will show you that this is quite untrue, that the number of of things that are to be done during the next fifty years are as important as the things that have been done during the last fifty years. There remain for you many difficult problems to solve that offer as great rewards as ever offered themselves to your predecessors."

Professor Mendenhall then described the needs which science would feel in the next decade. It would be perhaps only one hundred years, he said, until the present coal supply would be exhausted and man would be reduced again to the period when physical force was the main power.

The question is: "Will man prepare himself for this time?"

As possible remedies he suggested the utilizing of various energies about us other than that of coal for power. The winds and tides, and the energy of the sun were mentioned to the young engineers just starting in their professions as possible fields for investigation and a means of

gaining distinction, while doing untold service to the human race.

The peculiarity of scientific training in that it cultivated truthfulness, was pointed out and the fact was mentioned that engineering students were often of a better moral standing than those of theological schools.

"I say, therefore, in conclusion, if you show the ability to solve these problems of the next century as I am sure you will, if you will do this, do not also fail to do something more, and that is, to carry into the next century a spirit of love for truth and honesty, respect for the opinion of others and a pureness in all conduct which is the only salvation for the future of especially this country in which we live.

"These are some of the things in the mere matter of the utilization of power that you may have to think of. I look to these young gentlemen who have the opportunity in a professional career to consider problems of this magnitude. You do not belong to the present generation of engineers. You do not belong to the present century. We do not recognize you as nineteenth century engineers. We recognize you only as belonging to the next century. It is for you to make the next century what the nineteenth century is, for you to distinguish that century by devices and improvements that will ameliorate the condition of mankind, make life easier, and take away its discomforts at a rate that is greater than the good work that has gone on during the present century."

In the absence of our honored president of the Board of Managers, Hon. Richard W. Thompson, D. D., who is in too feeble a state of health to attend the exercises, President Mees introduced Mr. W. C. Ball, vice president of the Board of Managers, who addressed the members of the class, in words eloquent and sincere:

MR. W. C. BALL'S ADDRESS.

It has been the custom, continued through so many of the commencements of this Institute, for the venerable and venerated President of the Board of Managers to address the members of

the graduating class, that the occasion seems incomplete without him. But the weight of years rests heavy upon him. The burden of his multiplying infirmities makes it necessary for him to husband his strength. How great this need is is evidenced by his absence. Were it possible he would be here. To him, as he has often said, these annually recurring exercises have been as hopes to youth.

In his absence the duty has been delegated to me by the Board of Managers of addressing you in their behalf in connection with the presentation to you of your diplomas.

What I may say is but an incident of the day. The impressive feature of this occasion is the fact that you, the members of the class of 1898, have completed the prescribed four years' course, purposely and for your good made hard to traverse, and that to-day you receive, not as a favor but as rightfully yours, the diplomas as certifying to what you have done.

Ordinarily a diploma from a classical college or theological seminary or law or medical school has small value in and of itself. True the diplomas from a medical college possesses value in meeting the requirements of the statutes in states prescribed to check too clamorous quackery. But the doctor gets no patients, the lawyer no clients, the theologian no pulpit on the strength of his diploma. With the Rose Polytechnic and similar technical schools of high grade and with Normal schools for the training of teachers, the record is different. Between the instruction imparted here and the life work for which it fits its students the connection is closer than in the case of most other institutions of learning.

Enterprises requiring the services of trained brains and hands, in these days of marvelous development, must needs rely on institutions such as this to supply their constantly increasing demands. Thus these diplomas, certifying to the world that the holders of them have pursued a course of study intended to make them experts, and passed examinations prescribed to test the fullness and accuracy of their knowledge, are, if I may borrow a phrase from the race course, with

which we of Terre Haute are necessarily more or less familiar, both a pedigree and record. Horses are valued for and sold on these things. Men are employed on the basis of what they know and can do. There is little sentiment in business. Your diplomas are evidences, the best obtainable in the absence of actual knowledge of your capacities and capabilities, of what you know and can do.

Why are these diplomas from the Rose Polytechnic Institute of special value? There are two reasons.

The lines on which Chauncey Rose established this school were of such breadth and scope, so responsive to the demand for men trained in the theory and practice of the mechanic and kindred arts; and the course of study here has been so thorough and complete that the graduates of this school have been fitted to fill, better than others less admirably equipped, positions that call for just such specially educated men.

The second reason is that the alumni of the school, the graduates of the successive classes that have gone out from these halls, in factories and shops, on railroads and in mines, in laboratories and in field, in all the world—applications of the branches taught, have demonstrated to the Captains of Industry, the world over, that Rose men could be depended on for good work.

These things make you debtors to many persons and in many ways. The debt falls due to-day.

First of all you owe a debt, and will owe it so long as your lives last, and the more you pay the greater your sense of obligation will grow, to that sturdy citizen of heroic mould, the man of clear brain and generous heart, the wise philanthropist who conceived and planned and founded this polytechnic institute that bears his name and to which you are indebted, primarily for your education.

All he would ask at your hands, were he living, all that those who cherish his memory do ask, is that you be men, gentle men in the full meaning of the word, and that, wisely using your talents and your training, while caring for yourselves,

you make this old world a better world for others and a pleasanter world in which to live.

You owe this also to your instructors who have been and are your true friends; with whose trials and tribulations on your account, mayhap in coaxing and pushing and pulling you over the course, you are more familiar than I could be expected to be, since only echoes of these things reach the Board of Managers.

You owe it, moreover, to the undergraduates of the present and future years to transmit to them unimpaired the rich heritage of the school's high reputation, given it by its alumni, and of which you are the beneficiaries.

What the mothers of your blood are to you, and mothers who gave you your lives at peril of their own, this Institute is, in a sense, to your intellects. All your mothers ever asked of you, or ever will ask, is that you be good and true men. That is all the Rose Polytechnic Institute, the cherishing mother of your brains, asks of you. What is best for you is best for them. They live in you. Your best is their best.

It has come to be a fashion to consider young men, standing as you do to-day on the threshold of life, the college course complete, as filled with fanciful and exaggerated notions of their powers and prowess. This may have been true in some cases and may be true in some cases yet to come. But that it is not the prevailing feeling, that it is the exception and not the rule, I am absolutely sure. The young man who has pursued to a successful conclusion, as you have, a course of study designed to train and test his powers, must of necessity, know something about what he can do. With this knowledge, however, is a feeling, almost overwhelming at times, that the school tests are, after all, prepared ones and do not match the conditions that will confront him in the larger field of the working world. He is eager, yet timorous as is a boy standing on the bank of a river. He wants to jump in—intends to—must. He thinks he can swim. In fact he has done much swimming. But it was along the shore where the water was still and shallow and warm. This river seemed different. The cur-

rent appears swift and the water looks cold. The depth! Who can tell how deep it is? And the other shore, with the purple haze about it—how dim it looms in the distance.

My young brothers! The water is cold at the first. But if you plunge in head-foremost, not wade around in the shallows, the afterglow will warm you.

And the water is deep—over your heads in some places. But you can swim you know. Four years were spent in learning how. Besides the easiest swimming is where the water is deep.

The current! yes there is a current. This is a river—the river of life—not a stagnant pond. But it is not as swift as it seems. Many of these ripples are only on the surface, made by the wind. Besides the current, if you will note it closely, is running toward the other shore—where you want to go. It flows close to that hill where the grass is greenest and tall trees grow. There are people over there. They are your friends. Swim over to them.

And now, if you please, here is something for you to show them—your diplomas.

TITLES OF THESES.

FOR DEGREE OF MECHANICAL ENGINEER.

Test on Pumps and Waterlifts used in Irrigation.
OZNI P. HOOD, M. S.

FOR DEGREE OF CIVIL ENGINEER.

Engineering and Architectural Works in Frankfort.
ALONZO J. HAMMOND, M. S.

FOR DEGREE OF ELECTRICAL ENGINEER.

Design for a One Thousand Kilo-Watt Transformer with Variable Voltage.
SVEND E. JOHANNESSEN, M. S.

FOR DEGREE OF MASTER OF SCIENCE.

Odometers.
ARTHUR M. HOOD, B. S.

Electric Cranes.
JAMES FARRINGTON, B. S.

FOR DEGREE OF BACHELOR OF SCIENCE.

Design and Specifications for the Change of the Vine Street Cable Railway, Cincinnati, Ohio, to an Electric Conduit System.
FREDERICK C. BRACHMANN.

Design for a Coal Conveyer for Wabash Mills, Terre Haute.
NED S. KIDDER.

Test of a Stanley-Kelley-Chesney Two-Phase Alternating Current Motor.
CHARLES E. THEOBALD.

Test of the Gaskill Pumping Engine, Terre Haute Water Works Company.
FRANK A. WHITTEN and WILLIAM F. FREUDENREICH.

Design of an Elevated Crossing for the C, C., C. & St. L. Railway over C & E. I Railway, Terre Haute.
Substructure—CALE WAMSLEY.
Superstructure—JOHN T. MONTGOMERY.

Electric Welding
HARRY B. STILZ and KIMBROUGH E. VOORHES.

Study of the Electrical Resistance of Solutions.
GUSTAVE F. KLOER and CHARLES KLOER.

Design for a Four Hundred Foot Span Petit Truss Bridge. Two Designs.
W. ELLIS FORD and SHELBY S. ROBERTS.

Test of Electrical Railway Power Station at Galesburg, Ill.
MORTON B. STEWART and JOHN E. HUBBELL.

Determination of the Proper Temperature for the Tempering of Steel.
THOMAS FLETCHER.

The Proximate Analysis of Coal.
NED M. AUSTIN.

A Study of the Breaking Down Strength of Dielectrics.
WALDO B. RYDER, JR. and FREDERICK W. SCHNEIDER.

Test of Locomotive Service on the North Alabama Division of the L. & N. Railway:

—Complete Boiler Test with Different Coals
CLAIBORNE PIRTLE.

—Engine Test with Total Work Done
ARTHUR C. EASTWOOD and BRENT WILEY.

—Dynamometer Test on Train Resistance on Grades and Curves.
JOHN M. LANSDEN, JR.

CANDIDATES FOR DEGREES.

MECHANICAL ENGINEER.

OZNI P. HOOD, B. S., '85—M. S., '95.

CIVIL ENGINEER.

ALONZO J. HAMMOND, B. S., '89—M. S., '94

ELECTRICAL ENGINEER.

SVEND E. JOHANNESSEN, B. S., '93—M. S., '95.

MASTER OF SCIENCE

ARTHUR M. HOOD, B. S., '93.
JAMES FARRINGTON, B. S., '96.

BACHELOR OF SCIENCE—CLASS of '98.

IN ELECTRICAL ENGINEERING.

FREDERICK CHARLES BRACHMANN	Cincinnati, Ohio
ARTHUR CLARKE EASTWOOD	Louisville, Ky
THOMAS FLETCHER	Little Rock, Ark
WILLIAM FREDERICK FREUDENREICH	Terre Haute
JOHN EDMUND HUBBELL	Altona, Ill
NED SOLON KIDDER	Terre Haute
CHARLES KLOER	Terre Haute
GUSTAVE FREDERICK KLOER	Terre Haute
JOHN McMURRAY LANSDEN, JR.	Cairo, Ill
CLAIBORNE PIRTLE	Louisville, Ky
WALDO BRIGHAM RYDER, JR.	Charlotte, N. C
FREDERICK WILHELM SCHNEIDER	Evansville
MORTON BISHOP STEWART	Muscataine, Ia
HARRY BALL STILZ	Louisville, Ky
CHARLES EDWIN THEOBALD	Archbold, O
KIMBROUGH ENOCH VOORHES	Danville, Ill
FRANK ALLEN WHITTEN	Sloan, Ia
BRENT WILEY	Paris, Ill

IN CIVIL ENGINEERING.

WILLIAM ELLIS FORD	Little Rock, Ark
JOHN TULL MONTGOMERY	Carrollton, Mo
SHELBY SAUFLEY ROBERTS	Louisville, Ky
CALE WAMSLEY	Terre Haute

IN CHEMISTRY.

NED MAGIL AUSTIN	Terre Haute
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President Mees then awarded the following prizes:

The Heminway gold medal, awarded for the highest standing during the four years' course—Mr. Harry B. Stilz, of Louisville, Ky.

The bronze medal, for the highest standing in the Freshman class—Mr. Robert N. Miller, Louisville, Ky.

Honorable mention, awarded to the men in each class having the highest marks or marks within 4 per cent. of the highest for the year's work.

Senior Class.—Harry B. Stilz, Louisville, Ky.; John E. Hubbell, Altona, Ill.

Junior Class—Arthur D. Kidder, Terre Haute; Frank J. Jumper, Terre Haute; James J. McLellan, Louisville, Ky.; Cecil Howell, Mt. Sterling, Ky.; Walter D. Crebs, Dayton, O.

Sophomore Class—Jesse I. Brewer, Terre Haute; Henry Leser, Indianapolis; Sidney J. Kidder, Terre Haute.

Freshmen Class—Robert N. Miller, Louisville, Ky.; Reginald P. Dryer, Terre Haute; Harry A. Schwartz, Louisville, Ky.

THE SENIOR RECEPTION.

Wednesday evening before Commencement the gymnasium was thrown open and the alumni and friends of the graduating class were delightfully entertained with a reception given by the faculty.

The gymnasium was tastefully decorated for the occasion and presented quite a different aspect from the usual appearance of a basket ball game. Chairs had been arranged along the side walls and the floor waxed for dancing. In the visitors' gallery the orchestra was placed and furnished delightful music during the evening. At ten o'clock the floor was cleared and dancing was indulged in. Conspicuous among the crowd that filled the large hall were the alumni, who seemed to enter into the conversation and festivities as though it were only yesterday they had graduated and not that years, perhaps, had elapsed since they had filled the same places before. The night was ideal and the track and campus furnished excellent strolling places. The evening was thoroughly enjoyed and appreciated and the last dance came only too soon.

SCIENTIFIC SOCIETY.

The fifth and last meeting for the year was held in the Physical Laboratory May 31st. The general business of the society for this and next year was considered and the publishing of papers was debated upon at length. This matter was finally referred to the new executive committee to consider along the lines presented at the meeting and for them to report at the first meeting next year. A Rose Scientific Annual, to include the lectures given during the year in the Faculty course, and the papers of the Society, would make a very valuable collection of interesting and instructive matter, as well as illustrating in a manner what is being done at Rose.

Schwed, '99, read a paper on "Interlocking Systems of Railroad Switches;" his article was very carefully prepared and illustrated by a number of ingenious models and drawings. Stilz, '98, presented a paper on "Alternating Current

Motors," which was exceedingly interesting, as it embodied some of the investigations made by Theobald, '98, upon a Stanley-Kelley-Chesney two-phase alternating current motor.

Dr. Mees and the students entered into a deliberate discussion of the papers which showed well the interest which had been taken in them.

At the close of the meeting Dr. Mees addressed the Society for a few minutes, in which he dwelt upon the attitude of the Faculty and himself toward the Society and the work that it is doing. He complimented the Society's past record and offered encouragement and advice for its future. A possibility of the future is a semi-monthly meeting held during time set aside from regular school work; at one of the meetings the regular Faculty lecture course will be given and at the other monthly meeting the Society's papers will be read. This plan presents some excellent features, at the same time requiring the serious and systematic attention of the members.

The following officers were elected for next year:

N. C. Butler, Jr., '99, President.

Robert York, '00, Secretary-Treasurer.

J. T. Schwed, '99, Senior Councilman.

T. D. Witherspoon, Jr., '00, Junior Councilman.

THE CAMERA CLUB.

The combined May and June meeting was held at the Y. M. C. A. rooms June 3rd. The awards in the contest are on exhibition in the club's case at the Institute, the successful members being: Schwartz, '01; Kidder, '99, and Schwed, '99, the three honors in each of the four contests being distributed among them. Schwartz read a paper on "The Chemistry of Photography," and Miller, '01, dwelt extemporaneously upon a review of the current journals. Early in October the club will contest on "The Summer of '98," this subject calls for a collection of three or more pictures for each entry. The other subject for that meeting will be "A Detective or Snap Shot," implying a view of a moving object necessitating an instan-

taneous exposure. Later in the year the Club hopes to give a lantern slide exhibition, inviting the school body to be present.

THE CIVIL TRIP.

The '00 and '01 Civils, under the direction of Professor Howe and Mr. Harper, are in camp at Forest Park, making the annual railroad survey. The party numbers about eighteen and opened camp Friday after commencement. Their headquarters are at the Park, while the survey will extend from the Big Four R. R. at that point to the Pennsylvania R. R. at or near Glenn. Their route will doubtless be chosen some east of last year's course. Kidder, of the '99 Civils, is with the party to assist in some work in photographic methods as applied to taking topography. The survey will be completed by July 4 or before. The party consists of Professor J. D. Harper, A. D. Kidder, '99; S. J. Kidder, '00; Leser, '00; Loofbourow, '00; Mees, '00; Meriwether, '00; York, '00; Dickerson, '01; Dryer, '01; Gibbons, '01; McKibben, '01; Rochester, '01; Stevens, '01; and Willis, '01, Westfall, '97, and Platts, '99.

RESOLUTIONS OF CONDOLENCE.

THE BOARD OF MANAGERS

At a meeting of the Board of Managers of the Rose Polytechnic Institute, held May 20th the following action was taken on the death of Judge William Mack, an old and honored member of the Board, and its Vice-President:

WHEREAS, death has removed from this sphere of earthly activities Judge William Mack, for many years a loyal and useful member of this Board, therefore be it

Resolved, that we, his surviving and associates, place on record a testimonial of our appreciation of his fidelity to the important trust confided to his keeping. Profoundly interested in the institution which the far-sighted and wise philanthropy of the late Chauncey Rose established, he acted always as if it were a precious privilege to promote, at no matter what sacrifice of his time and energy, the welfare of the Rose Polytechnic Institute. For it he felt the solicitude of a fond parent for a favorite child and to the discharge of his official duties he brought loyal devotion and persistent solicitude. To visit the Institute, to become acquainted with the students and encourage them in their careers, to interest himself in whatever

might conduce to its advancement were things that came naturally to him, for his heart was in the work. The Rose Polytechnic Institute has lost a loyal friend in his death and the members of the Board a valued associate.

Resolved, That this action of the Board be spread upon its records and that the members attend the funeral in a body.

THE FACULTY.

A meeting of the faculty of the Rose Polytechnic Institute was held May 20th. The following tribute to Judge Wm. Mack, a member of the Board of Managers, was read and adopted:

WHEREAS, Judge William Mack, as a member of the Board of Managers of the Rose Polytechnic Institute has ever given to the institution his kindly help and in all its affairs shown that unselfish interest so markedly characteristic of his nature, we desire to record our appreciation of his generous help and encouragement. To his wise counsel and enthusiastic aid in developing the work of the Rose Polytechnic Institute much of its success may be attributed.

To the faculty his loyal support was ever given. This with the personal friendship so heartily shown on all occasions was to the faculty as well as to each individual a source of inspiration. To the students he was a most kindly friend and counselor and many will gratefully remember the good influence which he may have had in the formation and moulding of their character leading to success in life. Be it therefore,

Resolved, That the faculty of the Rose Polytechnic Institute in the death of Judge William Mack has lost one whose help and encouragement will be sadly missed.

That it shares the sorrow and sense of bereavement with his family and that to them its heartfelt sympathy is extended.

That these resolutions be spread upon the minutes of this meeting and a copy be transmitted to the family.

STUDENTS

By the students of the Rose Polytechnic Institute assembled, be it

Resolved, That we express our sincere regret and deepest sorrow over the death of Judge Wm. Mack, vice-president of the Board of Managers and friend of each student.

That his death will be a great loss to the Institute and to each of us.

That we express our sincerest sympathy to the members of his family, who feel his loss most.

That a copy of these resolutions be given to the daily papers of the city and to the ROSE TECHNIC and that a copy be spread upon the minutes of this student body.

WHERE THE FACULTY WILL SUMMER.

Professor Wagner and family will spend the summer at Ann Arbor, Mich.

Professor Hathaway and family will spend the latter part of the summer on the lakes in Michigan. During the early part of the summer Professor Hathaway will attend the American Association for Advancement of Science.

Professor W. A. Noyes, and his family will spend the summer at Jolly Oaks, Delaware, Wis.

Dr. Mees will attend the Trans-Mississippi Teachers' Association, June 29th, to be held at the Omaha Exposition, where he will read a paper on "The Preparation in Physics in Secondary Schools for Universities and Colleges." The rest of the summer he will spend in Terre Haute, looking after the interests of the Institute.

Professor Place will spend the summer at Ithica, N. Y.

Professor Peddle and family will spend the vacation in Tennessee.

Mr. Harris will attend the summer school at Cornell University, Ithica, N. Y.

Professor McCormick and Professor McMeans will remain in the city most of the summer.

Professor Faurot will spend the first part of the summer in Bloomington, at the Indiana University, reading in the library.

Professor Wickersham expects to spend the latter part of the summer at his old home in Van Buren Co., Mich.

Professor Kendrick will spend the summer at his home near Boston and attend the meeting of the American Association for the Advancement of Science, where he has been invited to read a paper.

Dr. Gray and family will spend the summer on the lakes in Michigan. Dr. Gray will attend the meeting of the American Association for the Advancement of Science in Boston, where he will read several papers.

Professor Howe and Mr. Harper will spend most of the vacation in Terre Haute.



The Lone Star—Froehlich.

Holliger, '99: "Will a diamond shine in the dark?"

The first General Assembly of the year was held on May 19, 1898.

Schwed, '99, will be with a bridge company at Cleveland, O., until fall.

There were a number of out-of-town guests at the commencement exercises.

Schwed, '99, "This crank won't work unless it is in contact with the boss."

Prof. McCormick: "If you don't know this, at least try to make me think you do."

Likert, '99, will have his old position in the shops of the Vandalia railroad during the summer.

Edwards, '99, has accepted a position in the Cramp Ship Yards at Philadelphia for the summer.

Mrs. Burton will spend part of the summer with Professor and Mrs. Ames, in Worcester, Mass.

C. Benjamin Dussan, '01, has returned to New York, where he will spend the summer with relatives.

McLellan, '99, resumes his place with the Ohio Valley Telephone Co., Louisville, Ky., for the summer.

Thompson, '99, is expecting to assist his brother in Pennsylvania in machine work during the summer.

The beautiful roses that adorned the desk on Commencement morning were the gift of Mrs. Heminway.

Lyndon Kittridge, '01, was overcome by the heat in the foundry the day before the examina-

tions and was unable to attend all. He will stand the exams in the fall.

Insley, '00, will spend the vacation draughting in the office of Herbert W. Foltz, '86, architect, Indianapolis, Ind.

Hubbell and Freudenreich, '98, passed with honors the Civil Service examination for admission to the Patent Office.

Kidder, '99, will be connected with the Center Valley Lead and Zinc Mines at Webb City, Mo., until school opens again.

York, '00, is at Forest Park with the Civils. He expects to take a P. G. in Civil when he completes his course in Electricity.

Professor Hathaway: "I am so afraid I will take some one else's pencil. You know I often do and never think anything of it."

Mr. and Mrs. Lansden and the Misses Lansden of Cairo, Ill., attended the commencement exercises to see Lansden, '98, graduate.

The shop force were kept busy the last part of May invoicing the shop, preparatory to the annual report to the Board of Managers.

One of the instructors remarked that the man who, in a quiz, spelled tension "tention," must have been accustomed to the command "Company 'tention!" in a military school.

The Juniors wanted to be dismissed and all joined in a chorus with the evening bells and whistles: "Ummh! Ummh!!" Professor Hathaway tumbling to the hint: "Is it six o'clock?"

Wednesday, June 8th, Dr. Mees called a general assembly of the students. The address touched upon the history and future of the Institute and the attitudes of the Alumni and students.

A beautiful collection of pictures of the Insti-

tute were on exhibit in the main hall during commencement. The photographs are the work of Professor Peddle, who has duplicate copies for sale.

Mr. and Mrs. William Brachmann and Miss Brachmann, of Cincinnati, Ohio, Mrs. Henry Schneider of Evansville, Mr. and Mrs. Wiley of Paris, were present at the exercises on commencement day.

At the meeting of the Terre Haute Science Club, held May 24th, Professor Kendrick read a paper on "Michael Faraday," and Mr. J. F. W. Harris read a paper on "The Development of the Military Rifle."

The Seniors who made the engine test for their thesis in Birmingham, Ala., are deeply indebted to both Newbold and Arn, of the class of '97, for the kindness and assistance shown them during their stay in the city.

Schwable, '99, was unable to take the examination on account of illness. He returned to his home in Greenville, Ohio, where he hopes soon to recover. His address for the summer will be Turpin House, Greenville, Ohio.

Avery, ex-'00, and Huthsteiner, ex-'00, will return and take up their work with the class of '01. All will be glad to hear of Huthsteiner's return, as he is one of the best all-around athletes Rose Tech has had for a number of years. Avery will be welcomed as the veteran snipe hunter.

Montgomery, '98, did not wait until he received his degree ere he started out in search of a position. He left the city on Wednesday of commencement week for Chicago, where he has accepted a position with the Metropolitan Railroad, Chicago, of which Menden, '91, is Assistant Engineer.

At the Alumni banquet the menu cards were passed around and each guest signed his name. Prof. Hathaway wrote his name backwards on Ford's menu. When it was returned Ford looked at it long, and, turning to Professor Hathaway,

remarked: "Really, Professor, that is the only way I ever did understand you."

During the exciting wait before marching in to their seats, the men of the graduating class worked off some of their superfluous energy by an impromptu dance in the dressing room of the gymnasium. Tom Fletcher and Ned Kidder did the double shuffle and the Highland fling to perfection while the others kept time by clapping hands.

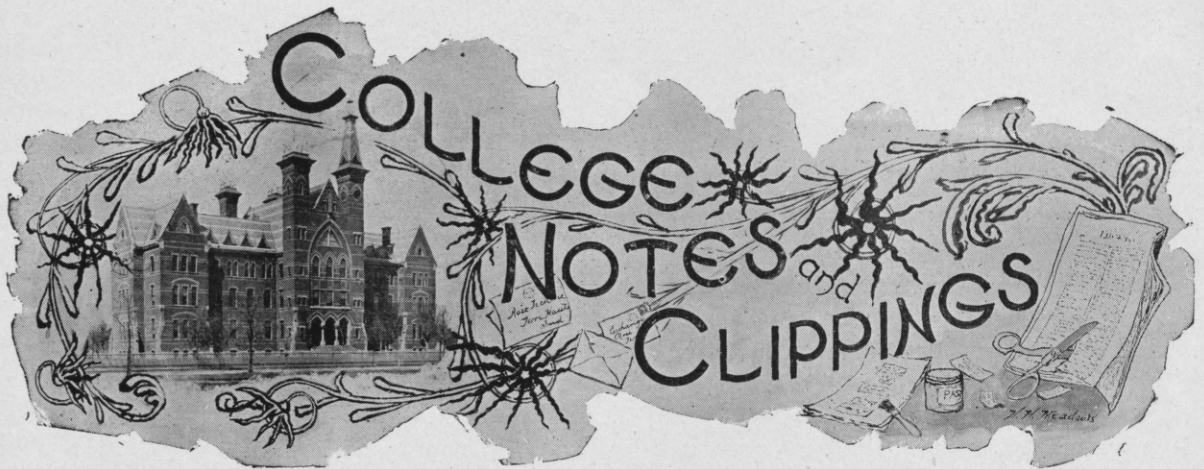
Lyndon Kittredge, '01, was elected delegate of the Rose Tech Y. M. C. A. to the Students' Conference, which is held each summer at Lake Geneva. He will represent the Rose Tech at the convention and will make a full report next fall of this interesting meeting. From Lake Geneva he will return to Dayton, O., his home, and spend the summer.

Butler, '99, will spend the summer working for the Correspondence School of Locomotive Engineers and Firemen, of Chicago. He will have two classes, one in Terre Haute and the other in East St. Louis, while not engaged in the class room he has been given the privilege by the Vandalia of traveling over their road and making a close study of the management of the road and the equipment of the rolling stock.

All of the present Senior class have positions or offers, though some cannot be announced at this date. However, the following have accepted positions: Lansden, Meighan & Co., Contractors, Birmingham, Ala.; Hubbell and Freudenreich, Patent Office, Washington, D. C.; Kidder, Wabash Mills, Terre Haute; Montgomery, Metropolitan Elevated Railroad, Chicago, Ill.; Wamsley, Engineering Corps of Big Four.

The summer addresses of the TECHNIC Board will be as follows. Any letters on business should be sent to the summer addresses and not to THE ROSE TECHNIC:

T. D. Witherspoon, Jr., Chavies, Perry Co., Ky.
A. D. Kidder, Webb City, Mo.
W. D. Crebs, Dayton, Ohio.
N. C. Butler, Box 742, Terre Haute, Ind.
H. C. Schwable, Turpin House, Greenville, Ohio.



In 1901 Yale will have a bi-centennial celebration.

In the Wisconsin-Illinois debate, May 20, Wisconsin was victorious.

The *Observer* comes to us this month in somewhat larger proportions than usual and contains several good college stories.

The *Rocky Mountain Collegian* has a very war-like appearance. Military clothes, epaulettes, etc., predominate in board and class photos.

The *Yale Scientific Monthly* came to us this month for the first time. It comes nearer being a scientific journal than anything we receive from colleges, and we welcome it with great joy.

On Class day the Seniors at Wittenberg, after making appropriate speeches, took up the book containing the minutes in full of their class meetings and committed it to a large bonfire.

The *Engineering Magazine* for June is an exceptionally fine number. It would be difficult to say which article is the best, because the list covers a wide field and they are all good.

Mr. James W. See has commenced a series of articles on "Patents" in the *American Machinist* which are full of interest to the general reader, and are of great practical advantage to would-be inventors.

Massachusetts Institute is to have a new library and it is to be open four nights each week. This is indeed a blessing to the men. If a library

can be kept open two or three hours after supper it will be used more.

The *Penn Chronicle* of May 10 has two or three pages on College Journalism that incoming editors would do well to read. The articles are written by ex-editors of the *Chronicle*, who from their experience and observations of later editors are capable of giving sound advice.

The military spirit seems to have struck right and left among the colleges. Rensselaer contributed about a dozen men, Champaign has sent her share, while at Iowa the battalion has taken up arms against the Dean and the Governor. The men volunteered their services, but were rejected by the Governor at the Dean's request.

With a few exceptions the exchanges for the past year have been well gotten up and extremely interesting even to persons not connected with the schools from which they come. Judging from the various cuts of editorial boards some of the journals have even been successful financially and we are allowed to view the features of the men and women whom we have known only by their writings. In many cases marked improvement has been made during the year which may or may not be the result of practice by hitherto inexperienced writers. The topics of the day have been treated in such a way as to display a thorough knowledge of what is going on about us and sound minds to take rational views of the problems. College journals are not the highest

class of literature, neither are they indicative of the literary achievements of the college. The articles and editorials are usually written hastily, with a view to giving college news in the briefest way and in this, some of them excel most wonderfully.

The exchange column still needs improvement. This column should serve as an index to the ex-

changes, enabling the reader to know where to look for articles that will particularly interest him. Some papers would do well to have a "Wit and Humor" column or at least have one in addition to the exchange. Fortunately, however, some of the editors are allowing their paste pots to go dry and we expect great things to be brought forth next year.



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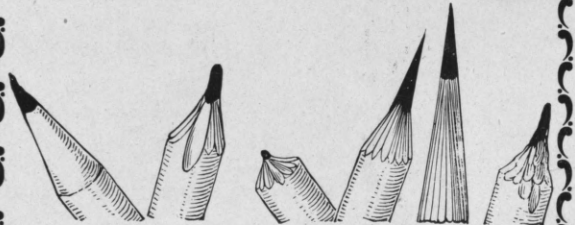
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