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Correspondence, Columbia, 1887-1889.

WARE MC14

thing of the jesuitism about it, but
which habit & experience have made in-
terate. I value beyond anything, and in
the long run I think do not overvalue,
the maintenance of cordial and friendly
personal relations between ourselves and
the students. This is a delicate flower,
likely to be nipped by the first frost,
and I have not felt sure that you
& Hamilton would be able to maintain
your authority without having to as-
sert it, a thing that I of course can
never dream to do. An interval of
20 or 40 years enables me to be as
familiar as I please without danger
of undue familiarity on their part. Your
position is a much more difficult one,
and I have not felt sure that it was
desirable for you to maintain it on
these terms. At the same time I cannot
contemplate the alternative with any toler-
ation, either for them or for you. I cannot
imagine that they should spend their lives by

(Inquire this manuscript)

1885			
May 19	J. H. Haynes, Photos.	#	45. -
July 27	G. S. Whiting, "		185. -
1886			
Oct. 1	J. H. McAllister, Slides		55. 98
1887			
Nov. 1	S. Trier + Son, Card board		3. 50
" 29	Henry D. Bates, Drawing		15. -
July 1	J. H. McAllister, Slides		81. -

creating such a breezy + hostile atmosphere as exists in some other departments, or that you should have to endure the petty oppositions or ill. will which, for me, would render the life not worth living. I know that a big concern, with 60 or 70 students, they cannot all be "personally conducted" as when there were only 6 or 7. But the climate there established has endured till now, & I dread any change that threatens a harsher air. Think on these things.

One thing more. I expect that after all your Virginia visit has not left you in very good case for your winter campaign.

the school to you and Hamilton, of
afternoons, and am disposed to believe,
after consulting with Hamilton that
my chief reason for hesitating is really
an argument for persisting, (as often!).
I had come to feel that he didn't care
to do anything about keeping order, &
rather relied upon my being within eye-
shot. Once or twice indeed he has report-
ed some trivial disturbance to me instead
of intervening himself to quiet things.
It seems however that this is precisely the
kind of divided & indefinite responsi-
bilities. So long as I was performing that
office, his action was more or less of an im-
pertinence in the fellows' eyes as well as
in his own. This being so I am disposed
to get up and vacate, and leave you
and him to reign supreme.

I suspect that my indisposition to
do so has sprung from a certain
anxiety about antagonisms, — a
feeling that has I suspect some-

(This is letter paper,) I had some talk with him about his trade-schools and the practicability of our profiting by his apparatus in 90th St., which lies idle all day. Afterwards I wrote saying that if he would let me know what was practicable from his point of view I would see whether it could be made to fit into our plans. This was after I had been arranging with King about next term's work. Now Mr. Auchmenty sends me a scheme for 20 or 25 lessons a year, for two years, of two hours each. This is about one afternoon a week, which is just what I have been meaning to give King. I shall send the paper to King and if the two things can be combined I think it can be made worth while - that, besides the profit of the thing itself, the rest of our work will gain more from the seriousness of this work than it will lose from sacrificing the time it will take.

I am much obliged, as I may already have said to you, to abandon

If so. It is a very serious matter,
and is made more so by the pro-
spect of your having to continue
your daily journeys to and fro.
The winter ought to be a very hard
one for all of us, for there is a
great deal to be done, and I want
to be free to put as much of it off
upon you & Stanley as I can see
my way to. There is so much that
nobody can do for me that I am
bound not to do myself what any-
body else can. For this it will not
suffice for you two not to be sick.
You need to be abundantly, and
over-abundantly, well. Self-sac-
rifice in such case is not only
suicidal, but futile. It is extra
strength that is needed, and ex-

the strain doesn't answer the purpose.] However there are many things which, as two years ago, we can talk over to advantage before hand which, when once the term has begun we have neither opportunity nor freedom of mind to discuss. Remember how long we had to wait last winter before we could get a quiet hour together. The moral of this is plain. A week or ten days hence I shall be somewhere within easy reach of the Connecticut River, I will let you know where. I request the pleasure of your company for a week's jaunt. The White Mounts are all different from the Catskills, but they will answer the same purpose. It is always my habit to

hire a companion for my Ripton-ten walk, and you shall have just choice of the position. I can't say that I pay any salary, but travelling ^{come out} expenses and keep ~~and part~~ of my pocketbook.

This, as before, I propose quite as much for my own sake as for yours. It is after all only the fulfilment of an old promise, the carrying out of an old programme, four or five years old at the least. If you can give us some where next Saturday that will give you ten days. However I will promise not to work you or walk you too hard. Half of every day is to be given to abstracting.

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Yours, always, faithfully,

Wm. W. W.

Wilmington, Sunday, Sept. 9, 1888.

Dear Sherman —

Your note about the Pulque boxes seems to show that you did not get away from Virginia as soon as you thought to. But I send this to Peck & Hill all the same, perhaps to greet you or your animal. Pulque is a great joke.

The Florence vases came a day or two before. Mille remerciements. As you say they are only a rough draft, I will venture to remark that the second vase seems unnecessary — even more ^{than} so, so to speak. It interrupts the figures ^{which} is the subject of the piece. I protest also against deckt. C'est par trop. Let English people ^{use} shall their participles with a t if they choose, it is their latest fad. They are all mad there. But let us have none of it, or next to none.

Krus went back on Thursday, after more than a fortnight's absence, two days of which he spent, as I think I wrote, with Hamelin at East Stroud. It seemed just the outing he needed, for the vie intime which he leads with his mother, seeing hardly any body else, is bad for him. I think he enjoyed every minute of it, seeing a certain variety of people, and finding great appreciation of his music. Nobody ever saw any body before who could play Wagner from memory, and this, with his extraordinary gift for simulating orchestral effects on the piano, gave people great pleasure and true a legitimate satisfaction.

Hamman came back Wednesday and will be here till we go away next Wednesday. My work is not so far advanced that I can leave it with comfort until then. However by his delay Hamman gets a chance to do a little work with Walker, a chance he has much coveted, and I for him. We went over to Brookline Friday and watched him work all the afternoon, stay-

But we are on too good terms for his silence to
be awkward, as I feared it might prove. Sunday
at Worcester one of the journey ladies undertook to
talk religion to him, as he related to me at
some length. He was pleased that she should
have taken enough interest in him, but held his
own, and answered firmly back. It was much the
best talk we have had. For earnest, and an elevat-
ed state of feeling, that made you feel as if you
never wanted to do anything but, he could be
thought the Catholics had the best of it, though
he didn't want to be a Catholic. But then
an Opera did the same. As to morals and
behavior + right and wrong he would rather
read some book that would explain all
about it, so that he could understand.
Sapiential and performances he despised,
for himself.

Some day perhaps he will broach his Cam-
bridge scheme; and then I shall have to see
my way to starting him on a new road,
without too definite promises as to what
he will find at the end of it.

When I was at Mr Ancher's,
in the Spring, about the Cathedral,

ing to dine, and arranged for a day out of doors,
skating, this next week. Also this gives time for
copying a couple of water-colors here in Milton
which I have desired. One is already done and
is excellent. The other he will get a chance
at this week.

My mind for a minute past had been so
possessed by his strange revelations that I half
dreaded his coming, lest the mutual consciousness
of them should be too oppressive to us both. But
it is not so. The whole thing has suddenly van-
ished from my mind and if I recall it by an
effort it seems faint and unreal, with no possi-
ble bearing upon the life I know. It is all too in-
credible. For him, he is serious & silent, but not ill at
ease and shows at every new turn that union of per-
sonal dignity and quiet susceptibility & consideration for oth-
ers which is the mark of the highest breeding. This is
where he got the good manners that Hamilton is won-
dered at. His little household ways are of the nicest
and make it easy & comfortable for all concerned.
As I do not have much talk, even on our daily tramps,
having unfortunately but few topics in common,
and I being on my guard against discussing

School of Mines.

March, 29, 1889.

My Dear Mr. Fow,

I am very glad to get your note. Mr. Schermerhorn has not only given the \$4000. mentioned in it, but five years ago gave \$3000. for the formation of a special working library in the Department; and two years before that \$6000. for the Equipment of the Department, when it was first started, making \$13,000. in all.

It seems to me that in recognition of all this it would be better instead of establishing a \$200. p. prize, to be given every year to some student in the department, to establish a prize of \$500 - or \$1000.

for graduate students, even if it was given only now and then. This might be in the form of a traveling studentship, like the Rotch Scholarship, in Massachusetts or given merely to further advanced studies, here or elsewhere, like the Tyndal fellowship.

I have a very strong feeling that prizes in the school itself are not to be desired, whether given for proficiency in the regular work of the department or for special performances, while anything that will encourage our best men to continue their studies after leaving school is a real benefaction.

It is more over a very attractive feature, and is likely to bring in able men, who will give tone to the place and elevate

the whole standard of endeavor,
 a large prize even though seldom
 [conspicuous, will be bestowed] and draw
 men from afar. Those are the
 men we want to attract, and
 this is the surest way of improving
 the grade of our work. For if
 classes are filled with boys fresh
 from school we must come
 down to that level. If we can
 get older & well educated men,
 even men with some profession-
 al experience, we can then do
 first ~~rate~~ work. Everything
 depends on the material.

at present - we have some of
 both kinds, and we can see the
 difference, of course.

The Rotch student-ships
 grants \$1,000. a year for two years,
 having an endowment of \$50,000.

This keeps two men abroad, all the time. Such a benefaction would do for us what the Prix de Rome does for the "Ecole des Beaux Arts", namely, bring to our doors all the best men in the country and keep them here till they had learned all we can teach. I hope this may come about some day.

Yours very truly

William R. Ware

per G. O. J. G.

Hilton. Dec. 28. 1887.

Dear Sherman -

I put your envelope under my pillow Saturday night and opened it the first thing in the morning. This was my stocking. What I found inside I read with new pleasure and found in it a new meaning, for when you showed it to me before I did not see time to give it any special application. I trust that in way both prose, ^{all} verse, and rhyme, to have been in the right about it, and that all my good will may really serve to help you and not to hinder. But it is as hard to point out the end to be attained as it is to find the road that leads to it.

It was just as well that you did not come down on Friday, for by then I don't most of your flock had flown. There were only three or four of the other men either. They were making over the last job I gave them - did I show it to you? - to draw out a wedding from description. I furnished the photographs, & some fellows furnished some other with a MS. It is very successful, as far as it has gone, and is a good thing to begin on when they come back. I always believe in leaving off in the middle of a job. It is so much easier to resume than to assume a task.

As usual when I get a little let up from the steady strain I have been a little low in my mind since Friday, dull and sleepy to boot. This gloom had

been alleviated by letters, - not the epistolary sort, for I had my husband's letters forwarded to Boston, where I have not yet arrived, and this is the first I have undertaken to write, - but literature. Coming on in the train I had the Popular Science Monthly of the North American, one with a capital article by Husley which you will enjoy some day and the other with one by Mr Gladstone which you will like still better. The first is breezy & interesting, as one learns to expect. The other is less interesting and less to one's mind, and has curious reminiscences of the original Gladstone, the High Church Tory, but this makes all the more striking the calm severity of his mind. It is like being on a mountain top, with a boundless prospect, and not a weather stirring.

[Then I have been reading Mr Darwin's life. It is a curious contrast to Mr Emerson's, and noteworthy in more diverse than their objects and the immediate aims with which they pursued them. But I was mainly struck with their points of likeness, in their modes of life and of daily work and most of all in their real selves, their personal character. The moral nature was the same, and in both cases it gave to their intellectual performances their distinctive characteristics. Both books make, rightly or wrongly, the same impression, that the intellectual machinery was not of any exceptional, but that it was enabled to accomplish very exceptional results by being set at work upon fresh lines of inquiry, congenial to its own disposition. Now the quality of mind that makes this possible, the firmness of mind and modest confidence, the candor and courage, are all moral qualities, as much as are the generosity and self-effacement which adorned them, and which after all are only other aspects of the simple truthfulness that is the substance of the whole. This is indeed Mr Emerson's doctrine. Every man is a genius, if he will only be himself. Originality is the natural state. It is

constraint, and embarrassment, and distrust of one's self, that lead to imitation and anticipability, and second-hand and second-rate performance.

If this is so there it is literally true that the lives of these great men teach us how to make our ^{own} lives sublime, and the lives of those that ^{are} interested to us. For the mental quality and capacity is mainly innate and schooling & training can only give it field for exercise & growth in its own way. But morals in manners, behavior, method, and the spirit that shapes them. All this is at command, for one's self entirely, and largely for others. Freedom of mind, independent inquiry, originality, are just the things that can be learned, and, if so, can be taught.

It seems queer to say that originality can be inculcated. But boys can certainly be encouraged to be themselves, and the rest follows. All this gives added force to the familiar maxim that the real object of schooling is not to acquire information but to get command of the faculties, the object of study to learn how to study. This, as I am more and more inclined to think, means practically this, that the thing to examine and suppose is a good method of work, trusting that it will bring knowledge & power in its train, and next if it fails to do this any other method would have failed more signally. In a word the method itself is the chief of possessions.

By a good method can here mean only a method that gives confidence for difficult encounters by ac-

constraining the fellows, in every thing, to the attitude of intellectual independence. I do not much care for, & I do not very much understand, a good deal that is said about training the power of observation, the discipline of the eye. The only discipline I know any thing about is the discipline of the mind, the practice of definite intellectual operations until they become familiar and seem simple and obvious. Knowledge is a knowledge of things and of their relations. Things can be shown & their relations described so that one will not entirely forget and will recognize them if again presented, may perhaps be able to reproduce them ^{one's self} from memory. But to discover the relations of things, by analyzing a complicated case, to identify the elements, and to reconstitute them into a new whole in changed relations, this gives not only knowledge but power, & what is more important the sense of power that gives courage and intellectual freedom (Incidentally it brings about complete acquaintance with the phenomena, with ^{the} things themselves, and so I suppose improves observation)

If this is so I think we probably make a mistake in explaining things too much, even the easy things. Certain things are so simple that a ~~loop~~ needs to be told them only once, & they are obvious, — like the rule for the shadow of a point. Bye and bye, when things become a little difficult & interesting we propose a problem, something for them to discover for themselves. But by that time they are in the habit of being told things, & have formed a habit of understanding propositions, not of investigating relations, and though the biggest fellows make a success of

it that doesn't count. It is the dull fellows by whom a stimulating method is needed. I think they should have it tried on at the very beginning, so as to get used to the situation.

This is simply saying over again what I have so often said before, in talking to myself, and perhaps to you, that we should teach by problems, not by theorems, giving out questions, given the simplest, and denying given the simplest information, which, being so simple, the student may reasonably be asked to discover, and formulate, for himself. This is the principle of Mr Spencer's "In-ventive Geometry"; I remember when I was at school how I hated the theorems & liked the problems. I think that that is the intelligent frame of mind, & one that ought to be encouraged. I was reminded of this last night when I undertook to study a little Graphical Statics. I found the task of reading over the explanation in the book perfectly intolerable. The only thing was to find out what the man was trying to do and try to do it myself. That failing, I read enough to detect the principle he was applying and then worked it out my own way, — which of course seemed to me much superior in method and statement to the one in the book! It was, for me. It suited my turn of mind and was more in harmony with my habits of thought. At any rate it had given me a little bit of original work, albeit in leading strings, and the excitement and flow of working the thing out & putting it into shape.

I fancied some of your second class trying to study the same page. It was plain to me that they would either get completely floored, or just con-

with the thing to memory. Perhaps a few of them
would have mastered, by a dogged perseverance,
that I could not overcome, the somewhat de-
tailed chain of reasoning in the book. But this
would have more meaning if they first tried to
work the thing out by themselves even if they
failed, and the habit of doing this, if possible,
as the only really satisfactory way, is what I want
to establish. Find, if impossible, as I did, they would
appreciate the more highly, as I did, the ingenuity of
the author. But at this point it would be possi-
ble to point out the principle of the solu-
tion, and with this hint give the fellow another
trial.

This same experience confirmed me in my
views of the value of having things done, graphi-
cally, even when the principle is so obvious that
the nature of the result is surely anticipated,
in theory. It is amazing how much force a theory
derives from concrete examples, especially so am-
ples of one's own contriving. It is easily enough
accepted, for instance that, in the polygon of
bones, the resultant will be the same in about
every order the sides of the polygon succeed one
another. All the same the verification by
putting them in several different sequences is
always a pleasing surprise. It is this sort of co-
incidence that I think so improving. It verifies the-
ory by experiment, turns an anticipation +
matter of incoherence into fact, and by thus
bringing new matter within actual experience

puts it behind one and under foot, as it were, where
it is a firm basis for the next step. Things thus
digested are assimilated, and become matters of
course, which is what one ~~wants~~ wants them to be.

All this I have often recognized clearly enough
before, but this book about Dr. Baxton has brought
it up afresh, ~~as it~~ needs constantly to be done, it
is so much easier to tell the fellows things than
to lead them, and leave them, to find them out. Of
course they will not all succeed. There there that
do not care sit at the feet of those that do, &
thus learn to do things for themselves next time.
I do believe that the attitude of mind is the
main thing in original work. When a man comes
to think that posture he begins to live. Now
in the intellectual gymnasium this jump can
be taught, & a class of boys be turned — as by
a somersault — into a class of men.

But while this reading has thus impressed me
^(with these famous volumes) ~~and~~ you see I read a book so seldom that
when I do it takes right hold of me — and
made me see that in both your work and in mine
it is more important how the fellows do their
work than how we do ours, in point of form, it
has at the same time made me think very
seriously of that other question, both for you and
for me. Working two or three hours a day, which
was all his health would permit, Mr. Baxton
in forty years not only, having assumed an inde-
pendent attitude of mind, did some notable
thinking, in new and difficult realms, but accom-
plished an enormous amount of work, reading

writing and experimenting. You have set your
footy goals before you, mine are more than half
gone, much more. But it is not too late for me
and it is not too early for you to take a leaf
out of his book and contrive, by arranging for
a desirable mode of life, day by day, to save all
the waste that comes from misdirected labor and
to ^{thus to} achieve the maximum of result with the mini-
mum of toil. For my own part it is hard to break
the habits formed when I had no choice but to
let one make-shift succeed another, and hurry as
best I might through a dozen subjects a week.
It was imperative to make fit preparations, much
more, to keep fit records. The consequence is that
for my thirty years' work I have nothing to show
but a scattered rubbish-heap of worthless memoranda,
and many hours of good work have left no record,
save in my memory. Since I have had my
power at my command I have had much self-re-
proach at allowing this creation of things to continue,
always meaning, when the present press was over, to
begin to read and write and study, as the plain
duties of my position required. Instead, as you
(know, I spend all my time in doing things, what
I call working. Now what has brought me up
with a sound turn is being shown how much
two or three hours a day, only, of real work, may
accomplish, well bestowed.

It has not needed this warning, or careful ex-
ample, to deter you from a like mistake. It has
been the greatest satisfaction to me to think
that your work in the school would not crowd ^{you,} and
that you would have sufficient time to do it up in
perfectly good shape as it went along, making ample

preparation, and then stacking it away in good form
for next time, and having the opportunity I didn't
doubt you would have the sense to use it. All that
is well and just as it should be, and a sound be-
ginning for your forty years. Happily they are not all of
them our present business, and we may trust that
if the next three or four are well and wisely spent
the rest will follow nicely and well. What this present
work may lead to, in the school or elsewhere, we are
can tell. It is an adventure. But through the issue,
ten years hence, is uncertain, I do not think of any
risk greater than it would be in older and bet-
ter worn paths. Truly, the path being new, and no
body knowing what way lie beyond the next turn,
it is occasion for vigilance, and manifold pre-
parations.

There indeed, as I think I was saying be-
fore, are manifestly in order on your own ac-
count, and it is an additional and further
satisfaction to believe that our arrangements
will leave you time, as mine ought to leave
me, for reading and writing and study, be-
sides what your school work suggests.

Here there is a suggestion which perhaps I have
not made, though it has been so much in my
mind that I may have dropped it. sometime,
by the way. So long as you are in the school
it is proper to proceed as if you were to remain
there, as indeed there is every reason that you
should, unless, or until, some preferable alter-
native offers. So long as you are there, then, it
is proper to go on as if you were there in
permanence, and were in the line of promo-

tion. It is from this point of view that I was pro-
posing the other day that you should join hands
with me in that text-book, and that your share
in it should be as large, and be made as con-
spicuous, as might be. Another thing, and it is
this to which I was coming, is that you should
also share with me, or relieve me of, at a
time, my various topics of instruction, working
them also, one by one, into proper shape, as you
are doing the Elements, and thereby carrying
forward and completing your own courses of
reading and study. If it is true that our cur-
riculum where it is complete will be a truly
liberal course of education, and if it is true
that the way to learn things well is to teach
them, then by the time you have been the
pupil, and have taught and, with ample
time, learned to teach, the various topics em-
braced in the course, — even as it is now, —
you may well feel that you too have had a
really liberal training, albeit at your
own hands, and have encompassed at least,
in a way of your own, the round of
scholarly attainments and accomplish-
ments that have so often seemed within
your grasp.

The drawing, the mathematics, the
elements, you have already well in hand.
Any one of these I am ready to ^{take in} release
for any one of my own topics, as soon as

you are ready. Meanwhile, that you may make
the most of the passing hour, for yourself and
for the boys, do not neglect your own drawing.
I think it would be a good plan, as I think
we were agreeing the other day, if you would do
as Hawline did the other day with the little
Museum, and make, yourself, every drawing
you require of the class.

Perhaps the best next thing is one of the
history classes, for I have heard you lament
that you know no history. In your evenings
you could do much, and you would find hap-
pily that much history can be read aloud.
(Do you know that this is the most domestic
exercise in the world, and, to my mind, the
most conducive to domestic happiness.) I
do not mean only architectural history,
but all the illustrative notes, making
notes and citations to some for illustration.
Besides, the fellows need to be referred to
the authors, and how often there with
confidence to books we do not know.

There is no hurry. The thing can be
done as thoroughly as you please, — if
you please at all. And meantime you
can accumulate notes for diagrams
and hints for many things. The Ancient
History is perhaps the most accessible, and
as this comes along every year, it would

be ready for you any day. But I do that tolerably well myself, and it is the Modern History that most needs making up. This would lead you into France & study and refresh your French and Italian.

But another thing that needs doing is Philosophy, and this I am quite sure I have spoken of. To read up, for instance, the Philosophy of Art, beginning with the Theory of Vision and putting your hand on the writers, chapter and verse, who have discussed perception, and form, and aesthetics, not to speak of the metaphysics of mathematics & mechanics, — which is extremely engaging — would furnish you a writer's study and give our boys a wholesome taste of the things of the mind.

I shall go back on Tuesday, possibly on Monday. Wednesday I shall be busy with my Competition. Thursday & Friday I shall be ready to look things over with you. Drop me a line saying when you will come down as I must. — Down town one day.

Pray make my best regards to your wife. You know well enough without being told how much happiness I wish you both.

Yours, always,
A. C.

1887

President Barnard:

Dear Sir-

In establishing a school of Architecture it was obvious that the first thing to do was to form sufficient collections of books and photographs, prints and drawings, so that ample illustrations of the subject matter might be at hand. But it was not so obvious how such collections could best be utilized in the daily routine of instruction. It was at first attempted to use this material in the illustration of lectures. But a lecture is best helped by a small number of large sized illustrations, whether models or diagrams, and it proved impossible to use to any advantage the large amount of small scale material which necessarily make up the bulk of our collections. The only thing to do was to use diagrams on the blackboard during the lecture and to refer the students to the bookshelves and portfolios for more detailed information. But such researches, when thus left to personal zeal and enterprise, were unsystematic and unfruitful, even for the few who undertook them, while for most of the class the collections might about as well not have been formed. The worst of it was that the more complete and well rounded ^{was} ~~made~~ the presentation of my topics, the less need did my students feel of supplementing it at the original sources of information, so that the better I did my work, the more unsatisfactory was the result. To meet this difficulty, I at first resorted to the device, as mentioned in previous reports, of confining my own work very much to

generalities, leaving it to the different members of the class to study up special topics and present them in proper shape. In fact I had the students lecture to each other. The direction of these separate studies, and the revision of the material collected so as to make sure that it was in presentable form, made, of course, rather more work for me than if I had kept the lecturing in my own hands. But it was better for the students, giving each in turn not only a certain amount of practice in research, but valuable exercise of a purely literary kind, both in reading and in writing. But though each student thus became quite at home in the two or three subjects that fell to his lot, on other points he was no better off than before, and often not so well, the apprentice hand of the lecturer not always being a sure one.

I have accordingly this year employed another method. This is the year in which Mediaeval Architectural History is studied, the third and fourth year students taking the subject together, and making up a single class of eighteen members. To this class I gave during the first half of the year a course of about a dozen lectures in which the whole subject was rapidly gone over. The class did very little work in connection with them, most of their afternoons being at that time occupied with problems of design. As the mid-year examinations approached, however, I assigned to each student a special topic upon which he was to prepare materials for an essay, indicating various sources of information in addition to the notes of my own instructions, which he or his fellows had taken down. The class took this in excellent part, worked

at their several subjects with great zeal, and wrote out from memory during the half dozen hours given to the examination an exceedingly creditable series of papers, two on each of the nine topics suggested; Vaulting, Tracery, Mouldings, Carving and Sculpture, Wooden Roofs, and Byzantine, Romanesque and Gothic History. These papers have during the second term formed the basis of a review of the ground in detail. Each topic has been taken up in turn, a week or fortnight being given to its consideration. At the beginning of this period, the two examination papers, reviewed and corrected, have been read to the class by their authors, and at the end of the time each member has reported to the class what ever new information or additional illustrations his own researches have brought to light. That these studies might be at the same time exhaustive and independent the illustrative material at command was divided into nine groups, each comprising a certain number of books, photographs and prints, and each group was assigned to two young men to be explored, the assignment being changed with every new topic. It thus happened that all the material was systematically examined on each occasion, and that each student by the time the term was finished, had made the tour of the whole. This has, of course, taken a good deal of time, and the problems in design have meanwhile been largely interrupted. Their place, however, has been made good in part, so far as drawing goes, by the sketches or diagrams the class have prepared in illustration of their reports.

These reports have been presented in a two hour exercise. They have been more interesting and instructive, and

have held the attention of the class much better than the more formal discourses of previous years, while the more frequent, ^{if} ^{and} ^{more} ^{brief} practice in the presentation of carefully prepared and well arranged material has been an equally valuable experience.. The work has steadily improved in character as the term has advanced. A similar system was tried with the same class in the instruction in the Decorative Arts, with equally satisfactory results.

In the History of Ornament, the third and fourth year classes have during the past year studied the Ancient, Oriental and Classic styles. The subject has, as in past years, been treated in weekly lectures, upon which one student each week has been required to hand in a written report. Hektograph copies of these reports, distributed to the class, have thus furnished to every one in the course of the year a reasonably complete set of notes on all the lectures of the course. This has been of great value to the whole class for reviews and for reference, while the literary practice thus afforded in recasting and editing the hasty notes of the class-room has been of great service to each in turn. Still further to systematize the work and to render the collections more available, a complete syllabus of the lectures has been prepared and printed in advance, giving, besides the topics and sub-topics of each lecture, a full list of the references and illustrations to be found in the Libraries and collections accessible at the College. A considerable part of the exercises in drawing has also been

devoted to illustrating these lectures either by sketches, tracings, or original designs, thus compelling the students to a more thorough study of the particular forms belonging to the styles under investigation. This work as well as the general conduct of the drawing room, has as in previous years been in Mr. Hamlin's hands, entirely to my satisfaction and to that of my young men.

Equally important and salutary changes have this year been made in the work of the second year class. The subject of shades and shadows had, for the first time, been given them in their first year, and the time thus gained was used to great advantage to improve the elementary work which occupies a chief part of the second year. To the study of the details of columns, capitals, arches, etc., etc. was added a series of exercises in drawing out, from prints or photographs, famous buildings in which these details occur. The class thus found practical employment for their knowledge as fast as they acquired it, and were thus confirmed in its possession, while at the same time getting some preliminary training for the exercises in design of the next year.

The lectures on Ancient Architectural History given to this class have been supplemented by the use of Reber's History of Ancient Art, as a text book. Each student has been given half a dozen pages at a time to report upon, and has been required to furnish an abstract or table of contents, of the paragraphs in question, with notes and illustrations drawn from all available sources. This kind of recitation

has proved very satisfactory, sixty or seventy pages being gone over in a two hour exercise. The whole class are examined, of course, on the whole book.

The First Year class have this year for the first time been brought daily into the Department, during the second half of the year, all their drawing being done under my direction. They have made unusual progress owing in great part to the adoption of somewhat novel method of work. The material they have used in making copies has been carefully varied from that of the original, prints and drawings being copied with the brush, photographs with the pen or pencil, and water colors in black and white. This has made it impossible to draw without thinking, and has thus cultivated an intellectual as well as a merely mechanical diligence. This method, moreover, by substituting a work of interpretation for that of mere copying, not only avoids the impossible attempt to produce fac simile imitations, but secures for exercises from the flat much of the advantage sought to be obtained in drawing from the round. The class have had a lecture on drawing or on shades and shadows once a week, and have, altogether, gained a position which will enable them to undertake their architectural work, when they come to it in October, to much better advantage than any of their predecessors.

In addition to the stated instruction I have also, as in the previous years, illustrated with the Magic Lantern the subjects pursued in the department, occupying one of the Law

School lecture rooms one evening a week during the spring. It was my privilege also to distribute to my classes tickets for the lectures delivered under the auspices of the Archaeological Institute of America, both for those given by Dr. Waldstein, Professor Gildersleeve, Professor Merriam and Professor Goodwin, and for the ten lectures upon the Archaeology of Rome by Professor Sanciani. Most of my young men ~~were~~ gladly avail^{ed} themselves of these opportunities, greatly to their profit.

Towards the end of the year the graduating class have had three or four weeks instruction in modelling, for which I was glad to secure the temporary assistance of Mr. Edward A. Spring of Perth Amboy.

But though much more and better work has been done in the department than in previous years, this better organization and greater efficiency have served to show, only more conclusively than before, that there is not time, as the course has been so far conducted, for many things that ought to be included in our curriculum.

The establishment of an Architectural Laboratory, for example, which six years ago was proposed as an immediate object of endeavor, has so far proved impracticable, quite as much for lack of time as for lack of space.

Meantime it has become clear that a larger share of time has been assigned to some topics, notably to the Mathematics of the Second Year, than can properly be afforded,

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1881

The undersigned do hereby certify that the
 following is a true and correct copy of the
 original as the same appears on file in
 the office of the undersigned.
 Witness my hand and seal this 1st day of
 August 1881.
 J. W. [Signature]
 [Seal]

I hereby certify that the above is a true
 and correct copy of the original as the
 same appears on file in the office of
 the undersigned.
 Witness my hand and seal this 1st day of
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