merely class rooms for its students, but laborato-
ries equipped with the most modern appa-
ratus and room sufficient for their manipulation.
It is this expense of apparatus and space which
adds so largely to the cost of tuition at the
Institute. It is this, also, which makes the
growth of the Institute such a serious problem.

The new building, the plans for which are
now in the contractors' hands, will not only
relieve the over-crowded departments, but will
also provide for the normal expansion of sev-
eral years to come.

It is to be a fire-proof structure, with steel
beams and plaster partitions on expanded
metal lathing, 58 ft. by 161 ft., five stories in
height and a basement, forming, with the
Architectural and Engineering Buildings, a
structure over 300 feet in length, and giving
additional floor space of over 48,000 square
feet, increasing the average per student to
221 square feet, a gain of 25 per cent.

The basement will afford space, 60 feet by
34 feet, for a lunch room. A room, 60 feet
by 50 feet, is given to the Mechanical En-
gineering Department, and this, with the
basement of the Architectural Building, will
afford 6,800 square feet additional space.
The plans for its utilization include an ex-
tension of the Hydraulic Laboratory, by
means of an additional water pit, connected
with the present pit by a 12-inch pipe, and by
a tributary canal 60 feet long, 3 feet wide, and
4 feet deep, giving opportunity for weirs and
other water apparatus anywhere along its
length.

For the Engineering Laboratory there is to
be a tandem compound engine, which, when
working to its utmost capacity with 150 pounds
boiler pressure, will develop about 225 H.P.;
a complete ammonia refrigerating plant of
about 10 tons capacity; a Parsons steam tur-
bine and dynamos of 150 H.P., with sufficient
capacity to run 2,000 lights and a brake of
about 100 H.P., 200 revolutions per minute.
The removal of the gas engine will relieve
the crowding near the Allis triple expansion
engine, where now 30 men work at tables in
a space 20 by 15 feet. The new pit will les-
sen the crowding about the old pit, since the
hydraulic work on a large scale has been
begun; while the fluctuation in the level of
the water will be much less than formerly.
The boiler house will be extended to include
two new boilers, rendered necessary by the
extension.

The first floor will contain three lecture and
recitation rooms, one for Technical Chemistry,
and two for Modern Languages, a modelling
room for the Architectural Department, and
the Margaret Cheney Room and Gymnasium
for women students. These two rooms, with
the recitation and lecture rooms opposite, will
be so arranged that they may be thrown into
one suite for occasional purposes.

The second floor will be devoted entirely to
the Biological Department, and will include a
laboratory of General Physiology, a subject of
importance in its bearing on the general work
of the course; a third-year laboratory for work
on Elementary Zoology, Comparative Anat-
omy, Botany, and Microscopic Anatomy; a
laboratory for Bacteriology and Industrial Bi-
ology for elementary and advanced work in
General and Sanitary Bacteriology, and in
Industrial Biology of the various ferments.
It will contain the various sterilizers, incu-
bators, retorts, and other apparatus belonging
to a laboratory of this kind. It is believed
that this laboratory will be unique in this
country, and perhaps in the world, in the fa-
cilities offered those interested in canning, in
industries bearing on dairying, and in ques-
tions of water supply and sewerage from the
bacteriological point of view. The General
Biological Laboratory and the Research Lab-
atory, allowing space for special work; the
shop for the repair and manufacture of appa-
ratus for the department; and the large dark
room for the investigation of optical and phys-
iological phenomena, and for experiments on
the influence of light on the growth of bacteria,
will be important features. An ample private