TEE YOUNG
The First Engineer Football Captain

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OHIO STATE UNIVERSITY

Member of the Engineering College Magazines Associated
"Towering Masses"

Here the new architecture expresses itself in great vigorous masses which climb upward into the sky with a pyramidal profile—gigantic, irregular, arresting. An earlier, conventional building on the near corner is overshadowed, engulfed in towering masses of the newer building which are prophetic of an architecture of the future which is vividly stimulating to the imagination.

Certainly modern invention—modern engineering skill and organization, will prove more than equal to the demands of the architecture of the future.
Contents

Manufacturing Building Bricks ............................................................. 5

The Value of Public Speaking to the Engineer ........................................ 7

"Exactly Approximate" ......................................................................... 8

Analytic Decision .................................................................................. 9

The Chemist, Creditor of the People ..................................................... 11

The Electron Pencil ............................................................................. 12

Editorial ................................................................................................. 14

The Bookshelf Speaks ......................................................................... 16

Campus Notes ....................................................................................... 17

Crankes and Countershafts ................................................................. 19

Alumni Notes ........................................................................................ 21
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COLUMBUS, OHIO
THE ARTERIES OF A MODERN FACTORY

In tunnels, behind walls, beneath floors in every American factory, complex systems of piping inter-connect the various departments. Delivering water, steam, compressed air, oil and gas to every point where they are needed, these pipe-lines enable each department of the institution to specialize in its particular function. They make possible the centralizing of the production of power, heat and gas at efficient large-capacity plants. They allow the isolation of fire hazards and obnoxious processes. Should one of them fail, however, production might be crippled, even stopped. That is why it is so important to get uniform quality in every part of a piping installation; why the Crane name, the assurance of dependable quality on products that cover all piping needs, means so much to architects, engineers and owners.

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What Makes Defense "Air-Tight"?

A team with fast, hard-tackling ends and a weak line can no more stop a straight attack, than heavy guards and tackles can break up open plays, when the ends are weak. An "air-tight" defense must stop plays both through the line and from the ends; it must withstand attack from every quarter, just as a good bearing must withstand all loads.

The bearings in the wheels of a motor car, for instance, have a vertical load upon them, represented by the weight of the car. This is termed "radial load". It corresponds in effect to a straight charge by backs upon a football line.

When the car sways, however, or when its course is sharply changed, a part of the weight of the car is thrown sidewise against the bearings in the wheels. This load is called "end thrust". It corresponds in effect to a diagonal attack upon a football line.

In actual operation, a wheel bearing must meet continuously both "radial load" and "end thrust"—must as it were, withstand attack through center, off tackle, or from the ends. Because of its tapered principle, a Timken Tapered Roller Bearing withstands, in one bearing, all these loads. It is upon this principle that the unquestioned leadership of Timken Bearings is founded—a leadership extending beyond the automotive field throughout industry generally.

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