THE TECH
Entered as second-class matter, Sept. 18, 1911, at the postoffice at Boston, Mass., under the act of Congress of March 3, 1879.

Published daily, except Sunday, during the college year by students of the Massachusetts Institute of Technology.

MANAGING BOARD
A. H. Waite, '14..........General Manager
R. A. Weaver, '15........Editor-in-Chief
C. C. Amsden, '14........Managing Editor
S. Keith, '16..........Advertising Manager
T. W. Killam, '15..................Circulation Manager
H. F. Chapman, '15........Treasurer

H. P. Claussen, '16........Treasurer
W. T. Knieszner, '16.
S. Keith, '16........Advertising Manager

E. A. Weaver, '15 ......Editor-in-Chief

THE TECH, BOSTON, MASS., TUESDAY, MAY 3, 1914.

ENGIEERING AND SCIENTIFIC NOTES

To Prevent Dust Explosions.
The growing use of electricity in mines, not only for traction, but also for working coal-cutting machinery, signaling, pumping, etc., means that sparking will be more frequent than in the past, especially as, under the three-shift system, with the consequent ever-increasing output of coal, every piece of machinery has to work continuously and at higher speeds. It, therefore, becomes more than ever necessary for coal dust to be kept down in mines if disastrous explosions are to be avoided. The second series of tests was made at Washington Colliery, County Durham, a few days ago, of a new treatment of coal dust designed to minimize colliery explosions from the known effects of atmospheric pressure and coal dust particles. The treatment, which was subjected to demonstration tests in the presence of a number of experienced colliery managers, and was pronounced successful, consisted in spraying the roof, sides, and floor of the mine with a viscous liquid, into which the dust particles will sink. It must be converted into a pasty mass from which it cannot be separated, and must not dry at ordinary temperature, and it is exposed to high temperatures ought to cake and not fall to powder. In short, a particle of coal dust once seized must never be able to float away again. This substance, in reality two substances that will dissolve in each other in so remarkable a way as to supplement each other's qualities, forms a colloidal which is viscous and does not dry or alter at 333 degrees F. in an atmosphere dried by a bath of concentrated sulphuric acid; and at red heat it cakes. To give the substance more body and to show at a glance that no dust has been omitted and how much fresh dust has fallen and sunk into the liquid, some chalk is added. A mining and mechanical engineer has developed a sprayer which is simply fixed to the vessel containing the material, and with the powerful rush that comes from the nozzle the dust can be rapidly and easily dispersed and at the same time seized by the liquid. The method suggested is claimed as one that will afford absolute safety from coal-dust explosions. Even the consequences of short-circuiting would, it is suggested, be considerably diminished, and fires would be localized.

Electric Traction in Mines.
Electric traction in mines is making great headway in this country. A track gauge of eighteen inches or twenty inches is usual, the weight limit for locomotives varying from three to six tons, and their speed from four and one-half to six miles per hour. These locomotives, being made to run on very small radius curves, have a short wheel base and a long overhang from axle to coupling, which necessitates a coupling with a good deal of lateral motion

THE GREATEST GAME IN THE WORLD IS TO SUCCEED—BE IT SPORT OR OCCUPATION!

When we evolved the Fatima Cigarettes we made them of the purest and choicest of tobacco. We wanted success for this brand! No one better knows the good quality of Fatima than the college fellow—he started its popularity—today Fatima is the biggest seller in the country. Package plain—quality all in the tobacco.

Windsor Cafe
78 Huntington Ave.
The most attractive cafe in the Back Bay Section
The Best of Everything
Splendid Service
Reasonable Prices
Our special 40c and 50c lunch-earns are very popular
Music evenings and Sunday afternoons

Trinity Court Bowling Alleys
TECH BOWLING HEADQUARTERS
Established 1919
Opposite the Union

Two minutes' walk from all Tech Buildings. Unexcelled facilities; the most picturesque Bowler can enjoy this fascinating and healthful pastime. Alleys reserved and screened for private parties.

McMORROW
-- College Shoes for College Men --
38 Washington St., Boston, Mass.

OPPOSITE THOMPSON'S SPA