Gardner-Denver light and medium weight rock drills are admirably suited for general utility work around mines and quarries, they are equipped with easily operated steel pullers, efficient hole cleaning means and with wet or dry attachments. The LO-3A Line Oilier is especially designed for efficiently lubricating under all conditions, rock drill equipment of all descriptions. Gardner-Denver DS-3A Drill Steel Sharpener are of medium size, low air consumption and give high speed service on bits up to 2½" and on shanks on all sections of drill steel. Let our representative call and convince you.

GARDNER-DENVER COMPANY
QUINCY, ILL. DENVER, COLO.
THE TRAYLOR VIBRATING SCREEN offers more protection. — Rubber screen cloth pads.

These rubber pads placed between the wire screen cloth and sash give added life to the screen cloth.

Traylor screen engineering features not found in any other screen.

"Write our engineering department. They will be glad to submit ideas on your screening or conveying problems. They know.

Don't worry about a little scratch like that," said Thotless. "Hundreds of fellows are getting minor cuts and bruises every day. They don't run to the first aid kit or bother to see a doctor about such trifles. Why should you? Get back to your work and forget about it." Jim did as Thotless said. Some time later infection set in causing Jim to lose his finger, as well as losing several months' pay.

There are countless Jims in every mine, mill and smelter who are letting Thotless run their lives. STONEHOUSE ACCIDENT PREVENTION SIGNS safeguard these men by impressing them with the Safety idea.

Send for Catalog No. 1 illustrating and describing Stonehouse Standard Steel Signs — made for every purpose.

The Goodman Trammer has a Good Chassis!

Chassis—Cast Steel
Frame and battery box are carried on 4 heavy coil springs. Extra large zaxes, 3/4 in. Dia. Ball bearings for side thrust. Extra long axle bearings. All housings dirt and water tight.

The More You Know about the construction features of the Goodman Trammer the More You'll Like It!

Economy in Mineral Exploration means practical application of Geophysical Instruments

Askania Geophysical instruments have been successful in assisting geologists and mining engineers to locate iron, copper, zinc, lead, coal and salt deposits in many districts throughout the world. They remove doubt, eliminate unprofitable borings and speed up exploration work. They have proved through the test of time the accuracy of their analysis.

We are making and selling for geophysical work: Eotvos torsion balances with photographic and visual reading (large and small types), magnetometers, seismographs and other scientific instruments.

For particulars write

American Askania Corporation
1024 Marine Bank Bldg., Houston, Texas
ALUMNI—

Do You Know of Some Boy who has missed a credit which he needs for college entrance? If this lack is in Physics or Chemistry, Solid Geometry or Advanced Algebra, tell him he can make up the work by attending the Colorado School of Mines Summer Session.

Do You Know of Someone who is irregular in his technical course? If so, tell him he can receive during the School of Mines Summer Session, training in Chemistry, Physics, Mathematics, Descriptive Geometry, Surveying, Mechanics, Electricity, Geology, Engineering Design, Metallurgy and English. Credits accepted in other colleges and universities. Registration for the eight weeks courses begins June 30; for the six weeks, July 14.

DO YOUR PART, ALUMNI

APPLY TO THE REGISTRAR, COLORADO SCHOOL OF MINES, GOLDEN, COLORADO, FOR FURTHER INFORMATION

Learning the Latest Word in Turbine Construction

An important departure in apparatus engineering is the General Electric vertical compound turbine-generator. In this machine, the high-pressure element, heretofore separate, is built on top of the low-pressure generator.

This compact construction does away with the necessity for building a separate foundation for the high-pressure unit, permits the use of one set of air coolers, requires less piping, and conserves floor space.

Test men—veterans, as well as more recent graduates of engineering colleges—take charge of the machine after assembly, test for oil leaks, bring it up to speed and check balance in the initial run, and set the emergency and operating governors. Electrical tests follow after the generators are coupled on. This work is part of the training program for general, industrial, sales, or advanced engineering work with the General Electric Company.
What is Colorado... to you? Just an oblong place on the map?

If you're one of the few people who haven't been to Colorado, you've missed some real enjoyment. And if you've only been to Denver on business, or to Pikes Peak for a brief stopover, you have little knowledge of why Colorful Colorado "offers more in terms of real living."

If you knew Colorado, you would like to live here—and you would live in happiness, with more friends, more recreation, more good health and most delightful conditions for your work.

But don't take our word for this. Come up to Colorado on a vacation or business trip; investigate conditions in your occupation and see for yourself. Measure the low living costs. Note the great variety of outdoor joys that cost little or nothing. Look at the bright offices; the convenient, lovely, uncrowded residence districts; the comfortable farms with their abundant production of delicious edibles; the spaciousness that prevents undue traffic congestion; the ideal conditions for wage earners.

Come at any time of year—and compare the weather with what you'd be having back home.

Colorful Colorado's scenery is famous everywhere. But incomparable though it is, Colorado's scenery is the background—not the main attraction. Colorful Colorado's scenic splendor merely means that whether you are at work or play, you only have to look up to fill your eyes with a flood of soul-satisfying beauty.

Come up the next chance you get. Overnight from half the nation, two nights from almost anywhere, Colorado is near enough for the shortest vacation. And bring the family—let them have a wonderfully good time; too! The coupon below will bring you accurate information.

THE COLORADO ASSOCIATION
Colorado fruits and vegetables... both fresh and canned... have a delicacy of flavor possible only from Colorado climate and Colorado soil. Ask for them and note the difference. THE COLORADO ASSOCIATION, 703 Kit Carson Bldg., Denver, Colo.

Send me the booklet, "Up in Colorful Colorado."
Include specific information about...

Name:...
Address:...

THE CHRYSLER BUILDING
The world's highest structure... how DYNAMITE helped to build this mighty skyscraper.

THE Chrysler Building... towering above New York's amazing skyline... looms 1046 feet into the blue. It is the tallest structure ever built by man.

Genius of engineering did it. But the power of dynamite was there... working efficiently, quickly, to blast out solid rock so that the giant foundations might be placed.

Dynamite is the ally of the modern engineer. It is the tool without which carefully designed plans for many heroic undertakings would never be more than paper plans.

Skyscrapers. Tunnels through mountains, under rivers and cities. Bridges and highways. Dams and reservoirs. These... and numerous other... engineering marvels are built with the aid of dynamite. Dynamite digs into the earth and blasts out raw materials used in the making of countless articles we use every day.

Dynamite is more than important to industry... it is necessary!

If you would like to learn more about explosives and how to use them... if you want to learn today for tomorrow's jobs... simply write direct to the du Pont Company for full information.

You will receive a copy of the Blasters' Handbook, which contains a great deal of the vast knowledge of explosives gained by the du Pont Company in 128 years of making and testing explosives. This book is used in the classrooms and dormitories of leading technical institutions. Your copy is free. Write for it.

E. L. DU PONT DE NEMOURS & Co., Inc. EXPLOSIVES DEPT. WILMINGTON, DEL.
will she stand the strain?

Q You sharpen your pencil and figure stresses and strains from every angle. Just to be sure ... you even allow that extra margin of safety.

Q Has it ever occurred to you how much depends on the manufacturer who makes those reinforcing bars, structural angles and girders? For better than fifty years, C. F. & I. has kept the entire industry from mines and quarries to finished steel, from every angle. Just to be sure . . . you even allow that extra margin of safety. Never will that faith be broken.

««

The Colorado Fuel & Iron Co.

General Offices:
DENVER, COLORADO

Steel Works:
PUEBLO, COLORADO
the summer course during the summer, you should tell
give an idea of the extent and nature of the summer
the "Engineering Summer School of the AVest."
pected to register.
along to some young man who may be interested.
summer session at A'lines. Buildings and grounds must be
air. These men are bound to tell something agreeable
the summer to study and enjoy the scenery and fresh
climate are conducive to study and good health, and
choose to attend the regular sessions raising the
about Golden and the Colorado School of Mines after
oramic division featuring views from the rest of the
classes, athletics, features, activities, organization
provide fellowships at such an institution for mem­
tary of the Section.

Prospector to Local Sections
A
COPY of the new 1930 Prospector has just been mailed to each of the Alumni sections. Mines men will find this a most complete volume, handsomely bound in the School's blue and white. The book is an excellent piece of editorial engi­
neering and includes sections on administration, classes, athletics, features, activities, organization and, a new departure in Prospector policy—a Pan­
eramic division featuring views from the rest of the U. S.
This Prospector is dedicated to Irving A. Palmer, Professor of Metallurgy.
Members of each Local Section are urged to look
over the volume which has been mailed to the Secre­
tary of the Section.

Eight Points
I
A recent number of the American Magazine ap­
pears a list of points which mark the educated
These seem applicable to the engineer. Here they are:
He keeps his mind open on every question until the
evidence is all in.
He listens to the man who knows.
He never laughs at new ideas.
He cross-examines his day-dreams.
He knows his strong point and plays it.
He knows the value of good habits and how to form them.
He knows when not to think and when to call in the
expert to think for him.
You can't sell him magic.

George F. Cooper?
If anyone knows George F. Cooper who was in Tampico, Mexico in 1917, would he please communicate with C. Lorimer Colburn, 511 C. A. Johnson Bldg., Denver.

Industry and Research
MANY colleges all over the country are provid­
ing facilities for research work to assist in solving the problems of industry. Mellon Institute of the University of Pittsburgh is an outstanding example. Few western colleges have attempted to

The subject of this page advertisement was the 1930 Alumni Fund. It will be interesting to quote here from this page, for it will show that the Colorado School of Mines Alumni are not undertaking a task which is un­
popular and impossible. We quote:
"In 1922 we undertook to place Drake in line with practically all the alumni groups in America by the or­
ganization of THE ALUMNI FUND. It was explained at length that the idea provided for an annual gift, of whatever size the giver wished to make, to the Univer­

What Others are Doing
T
THE Drake Alumni, published by the alumni associa­
tion of Drake University, carried a full page adver­
tisement in the May edition with this heading: "Others Can—Drake Can."
"As this is written, Cornell University at Ithaca is en­
gaged in an attempt to get a larger percentage of alumni to contribute to the fund this year than Yale. Yale, heretofore, has held the record. It is a bloodless battle on the field of loyalty being fought with dollars."
"All right. Using the same idea last fall Grinnell raised a huge sum for the support of the College. The short, surgery drive was made just before Christmas time, and was known as the Grinnell Candle-lighting. Every
gift lighted a candle. Candles were lighted all over the world."

A Revolving Research Fund
Many industries have endowed research schools in Eastern colleges and eventually this will occur in the West. Of course, that college prepared to demonstrate superior fitness will be selected as the research school for the
industry.
The Colorado School of Mines is an institution with an international reputation, and there is no reason why this School could not definitely take the lead in research in the mineral industries field. Once the School of Mines proves conclusively to the industry that it is the logical institution in the West for endowed research, much finan­
cial assistance from this source may be expected.

Here is what Georgia Tech alumni are doing in order to attract industries to the research being conducted at their Alma Mater. The Tech Alumni had the follow­ing to say in the last issue:
"Tech is well known and well advertised all over the country, and if it can show a record of creditable work done, the institution should be in a favorable position.

In the early part of February, a small group of alumni organized themselves into a body to undertake the estab­
lishment of a revolving fund for research at Georgia Tech and a minimum budget of $2,000.00 was set as the basis for the small but urgent goal; although more could be used effectively."
"The Alumni Association believes that when all the benefits of this work become apparent it can secure increases to the fund so that perhaps $5,000.00 will be available for the next department."
Most of this fund is to be used in solving problems con­
fronting the textile industry.
The Man Who Spoke to the Seniors at Commencement

By C. H. C. Braiden

Director Scott Turner of the United States Bureau of Mines, has had one of the most varied careers ever credited to the mining industry. He is the pioneer of the engineers of the mineral industries for migratory predilections, many of them seem almost like home living, retired business men who have heard an audience and made his name the Spitzbergen is a story in itself. Not only has he been engaged in mining activities in practically every country in the world, but he has made significant contributions to the advancement of a great profession. I have been privileged to meet them on many trails, and I know their high standing in the mining world.

Spite Spitzbergen had no government, Turner boasted the American flag and took possession in the name of the United States. It is even recorded that when it became necessary to give a semblance of legality to the ownership of Spitzbergen, he stamped them with the great seal of Michigan, borrowed for this purpose. Six hundred square miles of territory were thus governed as a mere incident to the Longyear's mining operations.

Mr. Turner is a survivor of the Lusiatica which was torpedoed by German submarine, an incident which eventually led to the entry of that country into the War. When the United States did declare war, Turner volunteered to a mining institute in that country.

After peace came he went to South America; then he became a consulting engineer for the Bureau of Mines and later, consulting engineer for the Mining Corporation of Canada.

Director Turner is an energetic, pioneering type of American. He is a great leader. Whether he is on tour or away from the home office, he spends many pleasant hours fishing the streams and lakes, and trapping with gun through the big timber in northern Canada. He has a fondness for jobs as miner and assayer that often seem to the young engineer too lowly to accept. It was this trait, among others, that made the man of mineral and metals, whose love for the rugged outdoor life is so great. Yet, this is only one of the many sacrifices which all men must make when they are called into public service. Such men are imbued with the desire to contribute every portion of their capacity to the service of his country and the common welfare of the nation; and, other than the honor and recognition which their selection for high office implies, and that they may serve the public, the sacrifice itself is a reward for them.

The following years brought to Mr. Turner much of the same sort of experiences that come to the young mining graduate in his first years out of school. He went from one district to another, to Panama, and then to Alaska. At last he had won recognition, and in 1911 he was invited to become a member of the Spitzbergen "No Man's Land", just 700 miles from the north pole. And here, perhaps, is the most interesting chapter in the story of Director Turner's life.

The Mineral Industry and the Young Engineer

1930 commencement address

By Scott Turner

We are here today to witness the graduation of 63 members of the Class of 1930 of the Colorado School of Mines. It is an important occasion, and one in which the public takes a great interest. The school has long been famous for the educational facilities it offers young men and women, and for the high professional standing of its graduates. It is proper that we should pause to review the path the student has trod, and to reflect upon the perspective opening before him as an engineer.

It was wise to take part in this ceremony and to say something to these young graduates. In searching for a theme, it occurred to me that perhaps my best contribution would be to discuss certain beliefs as to college training, deal with the situation in which the young engineer finds himself on graduation, touch on the new ideas of the social and political responsibilities of the engineer, and point out what he may expect to find in practice, and above all, what he must do to orient himself properly in the mining profession and maintain the best traditions of our brotherhood.

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reviewing their experiences may comfort you when you
coupled with lack of responsibilities and selfish aims, seem
doubtless dread the separation from your friends. Many
of you are. Such friendships, beginning at an impressionable age
upon effort, work, and accomplishment. The mining en­
localities, where the technical staff may be small and the
apt to undertake difficult jobs in isolated or dangerous
and proceed to develop friendships. People living in the
unusual; unity may come at once from common task or
mon danger menace them, and at once they react in a
Who is more often asked to meet the unexpected, combat
baddie without a friendly manner. Whenever a common cause makes com­
and while the habit of work may have been formed during
too slow for industry. The speed, initiative, accuracy,
may actually be turned to ultimate advantage.
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in taking part in engineering discussions and in writing
spare from soliciting employment, or use the periods when
idleness is being eliminated.
the first and the third necessitated going to coal mines 700 miles
away. They are. Not so many years ago, business was conducted on a
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college year, the student could generally set his own pace.
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Until then, if it is, it is, and the student has to rely on his own
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mone5', get a commensurate return for it. The engineer
such a faculty before you can properly manage a mine.
the modern engineer is not a specialist, but a generalist, and
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his money's worth. The engineer-student who has had
would not consider that the training of an engineer is too often
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for publication through the United States Bureau of Mines,
scores of papers on mining and milling methods and
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engineer as to his relative position in our modern industrial civilization.

Some wax has noted that man is the noblest work of God, but that man is the only one who has said so. Perhaps engineers are the only claimants as to the necessity of their going in for public life and service; at any rate, some liberal educators still maintain that a well-rounded general education is the better training.

"While the engineer may have contributed to the new social and economic order, in addition to having materially bettered his professional technique, let us not go beyond the bounds of reason in importance in public life. The keenest engine, when elected to public office, may have to subordinate many of his professional ideals, put aside and forget various of his engineering habits, and adjust himself to the new job so completely that we might see in him few of the characteristics of the professional engineer. In fact, to do his job, he must become something of a conventional public man. He may face the necessity of substituting compromise and broad adjustment for the rigid rules of straight engineering. Expediency may have to be his new watchword, rather than accuracy and engineering truth. To me, the prosperous engineer who relinquishes his profession and becomes a successful public administrator, demonstrates his adaptability and general competence rather than his technical skill. His engineering education and experience may have fitted him for his new field of activity, but let us be a little cautious in insisting that engineering principles and ideals are being rapidly introduced into public life. Why not simply stick to it that a liberal education, plus an engineering course, makes for the most adaptable and useful citizen? We can still with reason claim that the introduction of more engineering into government is good.

A Member of the Congress of the United States recently commented to my complaint at the difficulty of placing facts before a Congressional Committee. He said that the trouble with engineers is that they think everything should be judged, and legislation should be passed, solely on the basis of engineering fact. Actually, he said, the Congress may properly be more interested in what the people want than in the facts. Often the two are wide apart, and in such cases, facts alone may not govern legislation. This man put into words what I had noted but had not understood—that science, which deals with facts, must still with reason claim that the introduction of more engineering into government is good.

Honorary Degrees Conferr

Three honorary degrees were conferred at the 1930 Commencement exercises. The Doctor of Science degree was given to Scott Turner, Director of the Bureau of Mines; to Richard A. Parker, Denver Mining Engineer; and to Charles W. Henderson of the Denver office of the Bureau of Mines. A biography of Director Turner appears elsewhere in this issue.

Richard A. Parker has been active in promoting engineering education in this country for many years. He is a graduate of the University of Colorado and is president of the Colorado section of the Columbia Alumni Association.

Mr. Parker's career as a mining engineer dates from 1878 when he became a surveyor in the state of Colorado. At one time he was president of the Zinc Lead and Smelting Company and a director of the U. S. Coal and Oil Company. It was a result of his advice that the United States Smelting, Refining and Mining Company bought properties which gave this great corporation its start.

Richard A. Parker has been a member of the Mining Bureau, Denver Civic and Commercial Association, for three years. He is a member of the American Institute of Mining Engineers and the Colorado Scientific Society and various associations of engineers. He is one of the directors of the Denver Art Association.

Charles W. Henderson has been a resident of Denver since 1908 when he was placed in charge of the United States Geological Survey. In 1925 Mr. Henderson was made head of the Denver office, economic bureau, of the United States Bureau of Mines, a position which he still holds.

A most noteworthy service which Mr. Henderson has rendered this State is his activity in promoting the cooperation of the government and private interests in Colorado, which is being undertaken by the United States Geological Survey in conjunction with the Colorado Geological Survey.

Mr. Henderson is the author of the "History of Mining in Colorado." He has written many articles on the professional and political measures of the mining industry. Doctor Meyer, he is a member of the American Institute of Mining Engineers, the Colorado Geological Society, Teknik Club of Denver, the A. I. M. E. and various other social and professional organizations.

Charles W. Henderson

HONORARY ALUMNI

Doctor Paul Meyer Has Been Made an Honorary Alumnus

The second honorary membership in the Colorado School of Mines Alumni Association was conferred upon Dr. Paul Meyer at the annual meeting of the Association May 15. The membership was voted in response to a petition submitted by a group of Alumni who once were students of Doctor Meyer.

Unable to attend the meeting because of illness which has confined Doctor Meyer to his bed for several weeks, he was compelled to accept the certificate of honorary membership at his home in Golden. A reproduction of the certificate is shown here.

Doctor Meyer was professor of Mathematics at the Colorado School of Mines for seventeen years. He came to Golden in 1890. It is recorded that he arrived on the campus the same day as Dr. Regis Chauvenet. The distinguished former president of the Colorado School of Mines and Doctor Meyer met for the first time on the steps of the Chemistry building, then the principal office on the campus. Thus it can be said that these two men, so prominent in the history of the School, began their association on the campus of the School, for the School is very valuable service to Mines at the same moment.

This meeting was the beginning of a sincere friendship, which endured until the passing of President Chauvenet. Doctor Meyer not only received a degree of professor of mathematics, but he worked hand in hand with President Chauvenet during the crucial formative period to build upon the first beginnings of the School of Mines an institution whose prestige has never since been doubted. To the efforts of these two men, Regis Chauvenet and Doctor Meyer, is due in great part the well-deserved reputation of the Colorado School of Mines today.

The ability of Dr. Paul Meyer as a mathematician was recognized by contemporaries, and his mathematical contributions were given recognition throughout the world. The presence of Doctor Meyer on the School of Mines faculty has given to the institution a vitality which has been recognized in President Chauvenet's memoirs that "Professor Meyer filled the chair of mathematics with distinction until his retirement."

Doctor Meyer took up the practice of medicine in Golden in 1908, a profession which he followed successfully. It was the recognition of his long service to the School, the Board of Trustees, made Professor Emeritus of Mathematics in which capacity he has since served.