SIDELINES

BY EDWARD WORCESTER

GERMANY'S PRINCIPLE exoprt today is Nazi propaganda. Nevertheless, at infrequent intervals poignant truths are uttered concerning the more unpleasant aspects of Germany's national life. Decidedly without Herr Hitler's sanction, these embarrassing and shocking facts have been given voice in the country's liberal agencies of publication, even the *Chicago Tribune* occasionally leftist and publishing some of the most important facts.

OF CHIEF CONCERN to the civilized world today is the extremely unfortunate predicament of the German Jews about which everyone is talking but doing very little. Everyone knows that the Jews are being persecuted in Germany and Austria, and in Italy, too, of late—all these use a common code. Few Americans are acquainted with the principles and methods of the Nazi program. Several issues previously, it was stated that minorities, by the very nature of their being minorities, are subject to oppression and maltreatment by the ruling empowered majorities. The Jews are a minority, but they are more than that. They represent an especially cohesive group with a perhaps overemphasized, but nevertheless important cultural and historic heritage. The scape goat of every ruling class, they are again running the gauntlet. Different than ever before is the unfortunate complication that no frontiers are now left for them to take refuge. Whereas New England was the Puritan's recourse for freedom from tyranny, and the far west offered abundant farm lands for the unsatisfied in eastern United States, no equivalent geograpical area now presents itself for Jewish settlement. Expansive capitalism of a past era is now contracting. Alaska, the equatorial areas, and similar humanly unfit and isolated regions have been suggested as possible havens for refuge. The futility of these suggestions is obvious.

FOR WHAT OTHER purpose than a means of promoting a pseudo-nationalism has the nazi party oppressed the Jews. It is a known fact that the German exchequer is depleted. Industry and individuals are taxed to their maximum. Yet tanks, ships, military highways, a standing army, and expensive foreign propaganda departments cost considerable money to maintain and operate. And acting on the provocation that a crazed Polish Jew shot a German petty officer in France, the nazis are taxing the Jews in Germany a neat billion marks. The method of collection is simple—a capital levy on the race. Property and goods are "assumed" by the state with no recourse to legal satisfaction. This $400,000,000 will maintain the party for a period, and the churches appear as a likely source of revenue in the near future.

NOT ONLY direct superimposed taxation has been pushed onto the Jew, but far more cruel, has been his personal maltreatment. He has been rounded into concentration camps with thousands of other unfortunates. He has been brutally handled and made a subject of scorn and derision. Nationally sponsored propaganda has depicted him as the diabolical source of the chaotic fascist condition in which Germany finds herself. We have our own shameful Jim Crow laws, but Germany's recently adopted code of Semitic treatment is far more discriminatory. Her parks and public places are flooded with posters displaying horrid, grimacing caricatures pointed out as sinister plotting Jews. The yellow park benches are allocated for Jewish occupation. The newspaper columns list the un-nazi like who dare to associate with Jews. Theaters and cultural outlets are closed to them. Mendelsohn's music is heard no more.

MONETARY TAXATION is bearable, but no race can withstand the type of cruelty that the nazi party has inflicted on an unfortunate minority. Hate and intolerance brood unrest and foster nationalistic isolation. The world today needs to cooperate and not to emphasize its differences. The Continental Jewish refugees must be taken care of, or a scientifically civilized, but socially medieval world will take a long slide.

PLAYERS—

(*Continued from page one*)

opportunity. Properties for most of the scenes will be on hand by the time vacation starts so that the complete actions can become second nature to the men in the cast.

Those who are in the play along with the part, are as follows:

Osborne .....*Charles McAleer*
Stanhope .....*Bernard Sternfeld*
Trotter .....*Leon Epstein*
Hibbert .....*James Duncan*
Raleigh .....*Ray Nerhus*
Hardy .....*Robert Jaffee*
Mason .....*Tom Hunter*
Colonel .....*Art Hansen*
Sergeant-Major ..*Sid Silverman*
German boy....*Richard Hanneman*
Soldier ..... *Charles Schultz*

Members of the technical staff are:

Production Manager.....
.....*Ralph Erisman*
Stage Manager .....
..... *William Buckman*
Business Manager .....
..... *Oliver Doe*
Assistant Directors .....
Bernard Sternfeld, Ray Nerhus
Set Designer ...*George Danforth*
Properties .....
Roy Brinkman, Robert Underhill, Walter Kahl, Albert Sanowskis
Costumes ..... *Charles Schultz*
Lightning .....
Jerome Pinsky, Howard Tyler
Carpenter .....
Robert Bartusek, Bert Greis-
...k
Sound Effects *Art Hansen*

Running time for the play has been estimated at a little over two hours for the three acts. Because the play starts at eight, there will still be a goodly portion of the evening remaining when the production has been completed. For this reason arrangements have been made to remove the chairs from the main floor after the final curtain, and to round out the evening with an informal dancing session. Music for the dancers will be furnished by Don Charlton and his Armour Tech band.

Medinah Club Selected for Soph Dance on February 10

Under the guidance of Social Chairman J. W. Murray the sophomore class is making preparations for its annual dance. After debating the merits and demerits of several dance sites, it was decided that the dance will be held in the Grand Ballroom of the Medinah Athletic Club. The date of the dance has been set for February 10.

The social committee, which is composed of F. W. DeMoney, W. H. Grosse, J. G. Hartman, and E. A. Ratzel has been busy auditioning orchestras and although an orchestra has not been selected a good one is promised.

Schaad Speaks on Crystal Structure Analysis to A.I.Ch.E.

Although new in many respects and not well understood by most engineers, X-ray analysis of crystal structure is, nevertheless, extensively applied in industry. In a talk before the A.I.Ch.E. last Friday at 10:30, Mr. Schaad, whose doctor's thesis concerned crystal analysis, introduced the field, discussing the discovery of X-rays, methods of applying the X-ray to crystal analysis in industry.

There are five general schemes of X-ray analysis: the Bragg method, the Laue method, and the method involving rotating crystals, powder, and fiber. Laue was the first in the field. He decided that X-rays, discovered by Roentgen and known to have almost all the properties of light, differed from light only in wave length and could be diffracted by a grating comparable to the short wave length. Reasoning that the alignment of particles in a crystal would serve as a grating, Laue obtained the first diffraction pattern and interpreted it mathematically.

Laue's method was to pass polychromatic X-ray emanations through a single fixed crystal and observe diffraction by a plate sensitive to X-rays.

In industry X-ray patterns differentiate between crystalline and amorphous substances, reveal crystal structure, and frequently identify a substance. In metallurgy they are valuable in revealing crystal distortion and in showing the effects of heat treatment.

J. Holmberg Talks To Civil Engineers On Hero Surveying

"Aerial Surveying" was the subject of the talk given by Mr. J. H. Holmberg at the last meeting of the civil engineering society. Mr. Holmberg, who is the head of the firm bearing his name, has had a great deal of experience in this type of work since the World War. For six years the speaker was a member of the air corps, and he resigned in 1922 in order to form his own company.

Survey work as done from the air, involves a great number of problems that have been gradually surmounted. A great many of the difficulties still remain unsolved. The question of photographic plates has been almost solved. At the beginning photographic plates were made of glass. The fact that they would not distort during development was very important, but their bulkiness and fragility more than offset this advantage. Film as developed at the present time suffers practically no shrinkage during development. Specifications state that this shrinkage cannot exceed one part in two thousand. The accuracy of the final map depends on the true representation of the original negative.

Vary Types of Lenses

Cameras of various types are used for this work. A large variety and number of lenses are used in these cameras. Cameras with two, five, and seven inch lens openings are used; cameras have been developed for the Coast and Geodetic Survey with nine inch openings. The larger the number of lenses in a camera, the wider the angle that can be photographed, requiring fewer flights for the completion of a particular section. Lenses with various focal lengths varying from six to twelve inches are used depending upon the type of work being done.

Shutters present another problem in the development of the camera. The ordinary focal plane shutter when opening and closing takes a longer time than that for which it is actually calibrated.

Errors Are Small

In order to calibrate a map and determine the scale to which it was photographed, ground control point must be established and the distance between them determined by actual measurement. Errors of less than 1% can be expected with work of this type. A rougher type of calibration is done by determining the height of the airplane with the altimeter and using similar triangles to determine the scale of the map. Accuracies of 95% are the common criterion for work of this type. A great deal of this kind of work was being done for the AAA when crop acreage was determined. In this type of work the actual areas of the fields are measured with a planimeter.

As applied to engineering work, aerial surveys are used in many ways. Route surveys for transmission and pipe lines can be made by this method alone. When a final line is decided upon, the actual survey can be made at a greatly reduced cost. This type of work as applied to highways was first used by the highway department of the State of Minnesota. Surveys of this type can be made at a cost of only a few dollars per square mile.

Plan New Floor, Fixtures For Basement Washroom

In keeping with the extensive remodeling plans for all buildings of Armour Institute, W. Koster, Superintendent of Buildings and Grounds, announced Friday that improvements have been arranged for the basement washrooms in the main building.

A clean sweep is promised in the remodeling process which is scheduled to be completed during the Christmas holidays. In addition to a new concrete floor, which will replace the old tiles, a complete set of modern fixtures will be installed.

The present equipment is, with some repairs, substantially the same as that installed when the main building was constructed. They have long been out of date, function poorly, and must give way to a modernization program. The south west room is to be converted into an additional locker room, furnished with a number of new lockers.

Rho Epsilon to Be of New 1000 Watt Transmitter During Christmas Holidays

A new [illegible] transmitter operating on the [illegible] phone band is planned by Rho Epsilon, Armour's new radio [illegible] during the Christmas holidays the old apparatus will be completely rebuilt. Among its other activities the fraternity will be the Chicago representative of a nation-wide network of college amateur radio stations. It will handle news from other colleges in cooperation with the National Intercollegiate Press Association. Regular schedules should be established early next month on frequencies of 3585 and 7170 kilocycles.

With fifteen pledges this semester Rho Epsilon has no trouble in keeping things humming. The formal initiation will be administered this year in three sections so that the pledges may recover in time for the final exams.

Almost all the pledges are radio "hams," and it is a rule of the fraternity that 80% of the members must be licensed amateurs. The men who are pledges at the present time are W. O. Anthony, W9SXQ; E. J. Bauer; M. Camras, W9CSX; W. Clark, W9QIC; F. Ellin; E. T. Hass, W9LQN; L. Holmes, W9JGS; L. Maze; S. Mentzel, W9PBT; E. Minicka, W9WLG; C. D. Pierson, W9QYE; H. F. Quarnstrom; E. M. Rosenthal; A. C. Seda, W9BDM; R. Smessaert, W9MDQ.

Senior Electricals to Hold Christmas Party Dec. 17

Members of the senior class of electrical students will hold a Christmas party on Saturday evening, December 17, at 8:30 P.M. The Halloween party was attended almost 100 per cent, which induced the planning of this Christmas party.

Music will be furnished either by radio or amplified recordings. Refreshments will be served.

While the party is somewhat restricted to seniors, juniors are also invited. Tickets are priced at 50 cents per couple.

Feeling the need of close cooperation before graduation as a better method of continuing friendship after graduation, the senior electricals have planned a series of social events for the next year.

Good Insulation Is Subject at A.I.E.E. Meeting

An inspection trip is being planned by the A.I.E.E. for Friday, December 16th. A tentative schedule includes either the State Line generating station or Electromotive Corporation of Latirange. Arrangements for transportation are being handled by William Kurtz, vice-president of the A.I.E.E. and students needing transportation are urged to make arrangements with him.

At the meeting of the A.I.E.E. last Friday, F. J. Dahlquist, a representative of the Oakonite Company lectured on "Electrical Insulation." His talk dicsussed the variation in mechanical properties between vulcanized rubber, varnished cambric, and treated paper as insulating materials.

Temperature changes are probably the most important factor which determines the type of insulation to be used. Rubber is used only up to a temperature of 140 degrees Fahrenheit. New synthetic discoveries in the research departments have introduced a synthetic rubber which is superior to the ordinary type used. The new type can be colored any shade, without affecting the mechanical or electrical properties of the rubber, but it is too expensive for ordinary insulation. The main advantage for rubber insulation is its flexibility which is not found in other insulations.

Paper insulations are produced by washing, steaming and chemically treating manila rope so that it can be manufactured into a good grade of paper. Standards regulate the thickness of paper to be used, the elongation and tensile properties.

Samples of wire produced by the Bakenite Company were shown to members. One sample which particularly interested the group consisted of three large cables between which [illegible] was pumped to reduce the wire temperature.

New Invention Aids Fatigued Students In Regaining Sleep

By R. E. PERRY

There has recently appeared at our Armour a labor saving device of such magnitude and unparalleled ingenuity that Edison, and the inventor of the "Just Dandy" mustache cup, fade into the gray light of obscurity. It is entirely meet that this should be so, for one could always blow on a hot coal instead of turning on the electric light, but who, what genius, may snatch a snooze in class without the protection of an eyeshade filtering out a professor's peering eye and light all but 5200 Angstroms? (Never mind looking it up, that's green light ignorant.)

Confides in Prof. Freud

There have been a number of notably feeble attempts to overcome a teacher's deep rooted superstition that sleeping means the snoring one is not paying strict attention. Notable among these is the one Nikolas A. Natinchek, the ex-officio chemist, confided in Prof. Benjamin B. Freud; it was, said this optimistic lad, far easier to concentrate with the eyes closed, thus shutting out all but the professor's learned discourse, (also all pertinent formulae on the board.) Doctor Freud apparently agreed. He now helps Natinchek gather data on the method by requesting his confirmation and derivation of every third theory.

The green eyeshade, to coin a name for the invention, avoids the pitfall noted above by presenting to the wearer the air of a man who studies to the point of collapse, and then, to save his rapidly failing vision, resorts to the shade. Dark glasses formerly served the same purpose save that they failed in bonding a learned air and suggested that the eyes were so weak that beautiful ladies were forever trying to help the bearer across streets. Imagine the annoyance!

Before His Time

A theorist had suggested, in his grammar school thesis, an alternative to the green eyeshade, but like most theorists he was sneered at. This man, no doubt several days before his time, declared that if eyeballs were painted on the eye lids it would take a canny pedant indeed to decide from a distance whether the peepers were open or shut. This pioneer was stopped by the fact that as soon as he shut his eyes to paint them he couldn't see himself, and thereupon, in desperation, went off to fight the Martians in New Jersey. Recent developments, however, have cleared up this baffling point, and it is to be expected that any day someone will make a friend and blossom out with the most efficient of all insomnia preventives.

Seniors Begin Courtesy Drive "To Keep Hats Off"

In accordance with opening of the new Student Union Building and the necessity of keeping it as immaculent as it now is, a group of seniors have inaugurated a courtesy campaign to stop the thoughtless wearing of hats in buildings, the throwing of papers, cigarette ashes, chalk, erasers, etc.

It was decided at a meeting of the senior commissioners to begin a drive for courtesy between students. It is hoped that the other classes will get behind the campaign started by the seniors.

Testing of Subway Soils Continues in Armour Laboratory

Work has progressed favorably on the new subway project. The first contract for the North State Street section has already been let, excavation starting Saturday, November 17. Bids for the Clybourn section will be submitted in the near future.

Up to the time of the bidding a large amount of work on the project was in connection with the constituents of the soil; soil tests are still in progress here at the Institute. This consists, to a large degree, of settlement analysis and structural stability of the soil in question. Acting as a general investigator and approver of designs, is Professor Ensz, associate professor of Armour' civil engineering department.

Indicate Best Locations

Many of these soil tests were made at the soil research laboratory which operates under the direction of Prof. Ensz. The soil samples which were taken at various points of the selected subway site were submitted to the soil laboratory for testing. The tests indicated the location as being suitable for the construction of a subway.

In analyzing for settlement and stability the clay samples were determined for water content, plastic limits, and ultimate settlement. These exhustive tests were started several months ago, and concerned all the physical properties of the soil. Of these the aforementioned are some of the salient features.

Tested by Graduate Students

The soil research laboratory, where the soil samples are being tested, has been a part of Armour Tech for two years. It is principally concerned with highly advanced soil mechanics; several graduate students and student assistants are working there constantly. Soil testing consists mainly of determination of water content, liquid and plastic limits of clay, specific gravity, particle distribution, and size and resilience of particles in general. The latter is important from the standpoint of the subway project, since it deals with ultimate settlement of the soil.

The main object of the soil research laboratory is to further knowledge of the true nature of soils under various conditions.