

## REALISTIC FORMS GIVEN TO LATEST MOTION PICTURES

Three-Dimensional Idea  
Thought About as  
Early as 1853

### PRODUCERS DOUBTFUL

Recently in Paris, Louis Lumiere, who was the first to exhibit motion pictures in France, announced that he had solved the problem of producing motion pictures in stereoscopic relief, so that life appears on the screen apparently in three dimensions.

#### Use Stereoscopic Methods

This problem of relief was solved many years ago by means of the stereoscopic method in which photographs are made in pairs at the same time and at the same focus but not at the same point of view. The two lenses and the two plates or films take pictures separated by the distance between the eyes—a matter of about three inches. Present the twin photos to twin eyes by means of the stereoscopes' twin lenses, and the brain performs a miracle of fusion, resulting in a single picture in relief.

#### Difficult in Application

Applying this principle to motion pictures is not easy. The camera presents no difficulties. Either two shutters may be provided with two rolls of film traveling synchronously, or right and left-eye pictures may be taken on a single film by a mirror or reflecting prism. Projecting and viewing, however, present a real problem, for the usual equipment is expensive and cumbersome.

Long before there were movies—in 1853—the anaglyph was devised. Photographs to be seen by the right eye were tinted red and those intended for the left, green. Through spectacles which had one red and one green glass, one saw a single picture in true relief. Any two complementary colors could be used.

#### Rely on Mixture of Colors

It is this principle that Louis Lumiere has revived and improved upon. Struck by the fact that the old motion-picture anaglyphs taxed the two eyes unequally (the two images were not of equal brightness) and that visual strain resulted, he decided that there must be more brilliancy and that this must be the same for both images.

The brightest rays are the yellowish-green in the middle of the spectrum. At opposite ends lies the dull red and violet rays. Lumiere divided the spectrum in two straight lines through the portion of maximum intensity. Left-eye pictures are made by all the rays that lie to the left of the dividing line and right-eye pictures by the rays lying to the right. In this manner, the luminous density is equally distributed between the two eyes. Each eye does not see single color, but a mixture of colors lying on either side of the center of the spectrum. From here the problem becomes one for the dye chemist.

#### Audience Must Use Spectacles

To separate the two sets of colored pictures, suitably tinted, gelatine covered spectacle are worn. The left eye looks through gelatine dyed with a mixture of naphthol green, eosin (red), and tartrazin. The right eye looks through a double coating, one stained with cyanol blue and the other with a saccharine solution of diethylmetamidophenol. The rays passing through to the left eye are those in the yellowish-green-orange portion of the spectrum; those seen by the right eye are complementary to the left. According to reports, a strikingly lifelike picture is the result of viewing the specially tinted photos with the specially tinted glasses.

Is it practical? Will the public wear spectacles to see favorite actors in sculptural solidity? Hollywood thinks not and merely raises an eyebrow whenever anaglyphs are mentioned.

Approximately 45 percent of the freshmen at Washington University are related to former students at that institution, according to figures compiled from registration cards. Although not all freshmen filled out special cards, those who did listed more than 500 relatives who formerly attended the university.

## Senior E. E.'s Visit Lighting Institute

Last Friday afternoon, the Chicago Lighting Institute and the current electronics show were hosts to the senior electricals on their weekly inspection trip. Demonstrations of the uses of photo-electric cells and Thyratrons were made for the upper classmen, and lectures on those subjects and on the use of color in lighting were given by Mr. Germain of the Westinghouse Electric Company and Mr. Mitchell of the Lighting Institute.

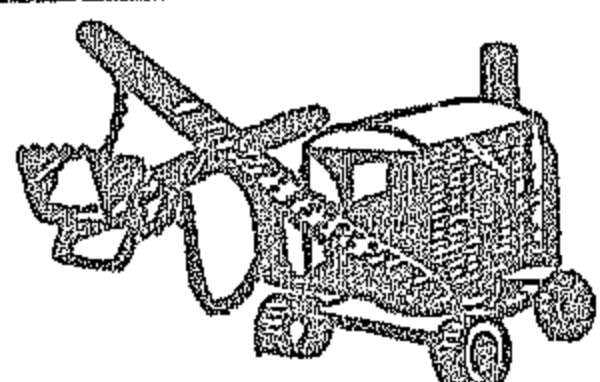
Numerous uses of the photo electric cell were explained and demonstrated by Mr. Germain, with the aid of diagrams and apparatus.

Mr. Mitchell's lecture was also fully illustrated by demonstrations made with actual equipment. Proceeding from the elementary process of breaking up white light into the primary colors with the aid of a prism, Mr. Mitchell demonstrated how blue, red, and yellow may be recombined into white by means of a revolving cube.

By changing the colors of the light in the room, the speaker proved the possibility of psychological influence of color, and demonstrated color variation as a method that can be used to decorate rooms.

Starting on a new track he showed the quality of light given off by a sodium vapor lamp and briefly enumerated its advantages over the currently used gas filled lamps. In conclusion, Mr. Mitchell demonstrated the strange qualities of ultra-violet light in showing the influence of the light on teeth, vaseline, and specially treated cloth.

## THE STEAM SHOVEL



RICHARD BERGER gave a very significant demonstration of his Pontiac's ability to negotiate soft sand on a senior schmiars recent inspection trip to the Hammond beach. Dick is thinking of adding a steam shovel to the car's equipment.

Hold your nose for this one: From Prof. Carpenter's metallurgy class comes the following atrocious punning. Martin-ite took Pearl-ite in his Austin-ite ferr-ite. Remember contributors, "The bun is the lowest form of wheat."

Much to his dismay, ROBERT SOUSA DALTON found that the girls working at Lever Brothers and Amaizo corn products all wore trousers. He claims that the reason for this is to cut down on the sex-appeal.

CHUCK RIESZ was stopped by a cop on a motorcycle in Washington park recently. Says Chuck, "Gimme the ticket quick, I'm in a hurry."

PROF. B. always gives the Chemicals spats before the eyes. He probably wears them to bed to keep his ankles warm and then forgets to take them off.

ED LINDEN says that GORDON ZWISSLER is the kind of a guy that

## Facts About Patents Told to Junior W.S.E.

"What Engineers Should Know about Patents" was the subject discussed by Mr. B. A. Schroeder, patent attorney, before the Junior Section of the W. S. E. last Thursday.

After clearing up the common misconceptions about patents, the speaker defined patents as "rights to exclude others from using, making, or selling the invention as covered in the patents."

Inventions are then classified into two contrasting groups: those that are applicable to patent protection, and those that are not. Among the former are inventions on art, machinery, composition of matter, plant, and improvements on any of them. Those that are excluded from protection by patents are mathematical formulae, and business methods.

The process of obtaining a patent consists of the filing of application in the patent office, together with an exact specification, description, and complete diagram of the process. Applications must be filed, the speaker emphasized, as early as possible, in order to avoid any unexpected legal entanglement. Prior to the filing of application, inventors are advised not to publish any information about the process, as in so doing patents are invalid.

would change the fuse if the lights should go out.

Last week's edition of the News stated that there were six women in "The Red Robe," but the names of only five were printed. Could the one that was omitted be FRANCES X. P.?

## NEW PROCESS OF MAKING ALCOHOL USES ETHYLENE

New methods developed in the laboratory to produce alcohol from petroleum by-products are the basis of a new plant soon to open near Chicago. Already granted a permit to manufacture denatured alcohol, this new unit of the Union Carbide and Carbon Chemical Corporation will utilize ethylene and other gases in making synthetic alcohol. These light gases, by-products which were formerly burned as waste, result from the cracking processes now used to extract a greater proportion of gasoline from crude oil.

In view of the fact that the supply of these olefine gases is likely to increase in the future, this method of manufacturing alcohol is likely to increase, according to Benjamin T. Brooks, writing in a recent issue of "Industrial and Engineering Chemistry." American production of alcohol has always been by fermentation, although synthetic methods have been developed in Europe to utilize carbon monoxide and hydrogen in preparing the constituents of anti-freeze preparations. The new method of using oil-cracking wastes is so cheap, that it will probably be able to compete with fermentation alcohol made from molasses. The recent attempts to use surplus corn in producing alcohol do not seem economically feasible in spite of present low prices.

One reason for the success of the first trial plant using this process is the small space required as compared to fermentation alcohol from corn or otherwise. The size of the Whiting plant is shown by the construction of

## Math Club Has Talk on Complex Numbers

Addressed by a speaker who was thoroughly acquainted with his subject and who presented it with ease and fluency, the audience of the Math Club meeting in Science Hall on last Friday was entertained by Herman Bauermeister's talk on complex numbers.

The speaker, starting with a discussion of the classes of numbers, proceeded on with a complete analysis of the graphical solutions of complex numbers, stressing methods which were not generally known by those present, and which bordered on the realm of the calculus. One of the types of solution involved the use of a series of parallel planes in addition to the conventional two, and provided for the solutions of equations when the variables were both real and imaginary. At the close of the presentation of his prepared material, Bauermeister answered many questions which were forthcoming from an alert audience.

storage tanks with a capacity of 7,000,000 gallons.

Ethylene, which is usually separated from the other gases by treatment at low temperatures, has a number of applications, one of which, strangely enough, is the ripening of fruit. Much of the fruit and vegetable supply coming to the Chicago markets from California has been artificially ripened by this gas.

The process which converts these gases into alcohol uses a synthetic method which gives a product of unusual purity. Nevertheless, the alcohol is to be entirely denatured since it is to be used industrially and in anti-freeze compounds.

# WE ASKED NEWSPAPER PEOPLE:

"IS THIS FACT  
IMPORTANT TO YOU?"

"CAMELS ARE MADE FROM FINER, MORE  
EXPENSIVE TOBACCOES—TURKISH AND  
DOMESTIC—THAN ANY OTHER POPULAR  
BRAND."

(SIGNED) R.J. REYNOLDS TOBACCO COMPANY  
WINSTON-SALEM, NORTH CAROLINA

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Tob. Co.

**ENERGY!** An editor gives his experience: "The enjoyable way of easing strain is smoking Camels," says Ray Baker. "Camels bring back my 'pep,' and I can tackle the next big story with renewed energy!"

**SO MILD!** Miss Margaret Nichols, expert woman reporter, says: "Camels are a smoother smoke. They have a mild flavor—delicate and pleasing—entirely different from any other cigarette. Camels taste better!"

**FLAVOR!** "Camels have a great taste—rich and pleasing," says Herman J. Lamkin, linotype operator. "I've smoked them for many years. I can smoke as steadily as I want to, and Camels don't ever affect my nerves."

**HEALTHY NERVES!** Pat Robinson, sports writer, says: "I've been smoking Camels ever since they were put on the market. I smoke at least two packs of Camels a day. They never interfere with my nerves."

**VALUE!** "Camels are made from costlier tobaccos. They're the real 'extra value' cigarette," says E. E. C. Pickwood, ace news-photographer, who often uses fast airplanes to get "front page pictures" for a great New York newspaper. "I'm loyal to Camels," Pickwood continues. "They taste so much richer and smoother—never frazzle your nerves. I have smoked Camels for years and I, too, would 'walk a mile for a Camel.'"