Penicillin, Latest Triumph of Medical Research, Marks Another Long Step Toward Distant Goal

Frederick Belding Powder (1853-

1927), who worked on development of

'Magic' Germ Killer Was Discovered by Fortunate Accident

By AL JEDLICKA Released by Western Newspaper Union.

It is back in 1929.

Prof. Alexander Fleming of London discovers that a mold growing in a container which he is using in research has killed certain germs. Although Professor Fleming does not enter into a thorough investigation of the phenomenon, he takes the time to make a note of it, suggesting that maybe the mold could destroy germs in human infections.

Other English scientists go to work on the mold and in 1940 find it effective in human treatment. Penicillin, the magic drug, has been discovered, and like so many great other discoveries, by chance.

Penicillin is not the greatest nor the final discovery in medicine, but it is the latest and among the most effective, momentarily climaxing medicine's long, steady march forward on the path of alleviating man's pain.

Sought by king and commoner alike, penicillin has proven its usefulness in the treatment of streptococcus pyogenes, a germ that causes pus and promotes diseases like septic sore throat, childbed fever and erysipelas; of staphylococcus aureus, another pus-forming germ found in boils and in infections of the bone; of the pneumonia and diphtheria germs; of the organisms that cause gonorrhea, gas gangrene, meningitis and syphilis.

In Chicago's modern Museum of Science and Industry at the foot of Lake Michigan in Jackson Park, Dr. Milan Novak, head of the department of bacteriology and public health of University of Illinois college of medicine, has established a public exhibit demonstrating the processes in the present production of penicillin.

The penicillin exhibit is just one of many in the museum's medical section, which is under direction of Dr. E. J. Carey, dean of the Marquette university medical school, Milwaukee, Wis. In this section, we are given a graphic picture of man's Seven Benefactors.

One exhibit pictures seven great men and their works which have given mankind boundless relief from its physical illnesses:

Karl Wilhelm Scheele (1742-'86). who discovered chlorine, the constituent of common compounds like salt; tartaric acids, which make fruits taste sour; manganese, the metallic element necessary for plant development, and oxygen, the most universal of all elements.

Pelletier and Caventou, who in

sence of ginger and tincture of orange peel. On the counter of the apothecary shop stands a box of herbal smoking mixture for cure of catarrh, bronthroat and all pulmonary comasked to smoke and inhale it. Hard by the replica of the old

The first time the rare drug was ever released for civilian use was in the case of Patricia Malone, two-year-old New York city girl, who was suffering from the staphylococci type of septicemia. The army gave enough penicillin to halt the disease, when appealed to by a New York

Until Synthetic Method Is Devised, Production Of Penicillin Will Remain Slow and Costly

able in cases where the patient stead. would respond to it, Dr. Austin E. Smith, secretary of the council on

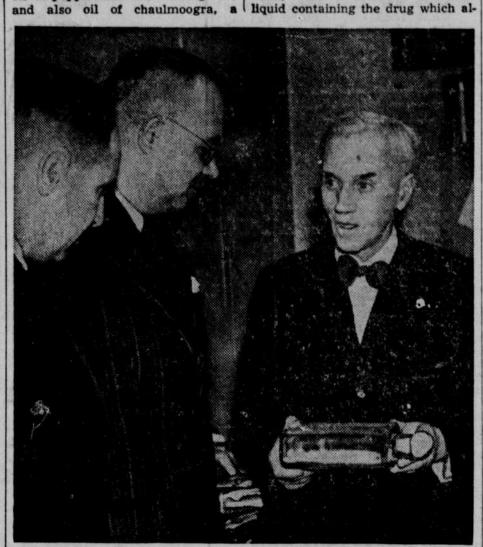
mitted, and in cases where other | ed to 20.

Brought doubly into the limelight | drugs, like the sulfonamides for inby frequent dramatic uses of the stance, are effective, authorities drug, penicillin has been made avail- have insisted on employing them in-

Until synthetic production of penicillin is developed, its manufacture pharmacy and chemistry of the will continue a costly and cumber-American Medical association, said. some process. At the start of the Because of its comparative scar- year, about eight firms were procity, Dr. Smith stated, unlimited ducing quantities of penicillin, and use of penicillin has not been per- the total was expected to be expand-

medicinal constituent of cinchona, | ment of hormones for treatment of glandular deficiencies in 1901, with the wrinkled brown bark found by the Spaniards in Peru in 1630, and the introduction of coal-tar synthetic most effective in treating malaria. drugs in 1884 and thyroxin in 1893 Louis Jacques Thenard (1777-1857) who found boric acid and hydrogen grouped between.

The 'Magic' Drug. The climatic and currently most interesting exhibit, of course, is the one dealing with the growth of peni- amusing; whether it will caroil of peppermint and wintergreen, cillin, from a mold to a refined



Prof. Alexander Fleming, discoverer of penicillin, is shown with a bottle holding cultures of penicillium notatum, as he converses with two visiting Turkish doctors in his London laboratory, where he made the remarkable experiments.

penicillin:

mold plants.

of its strength.

lin from the liquid.

onstrates the processes of producing

First, there's the stock culture,

with a mold similar to but not iden-

tical with green molds found on

fruits or cheese, shown growing on

Second, the spores (seeds) from

the stock culture are transferred to

a nutrient solution containing sugar,

and they germinate into white wool-

ly plants. In three days, the mold

This mold creates penicillin, which

collects in the nutrient but not in the

Third, as the mold plants mature,

their color changes from white to

gray-green because of the develop-

ment of numerous spores (seeds).

At this stage, the solution contains

since the plant itself contains none

possesses small amounts of penicil-

lin. An elaborate process of ex-

traction and absorption is used to

concentrate and remove the penicil-

Fifth, the purification process re-

moves objectionable substances. If

rs the surface of

jell-like base containing sugar.

source of certain chemical com- | ready has become an awesome, pounds for use in treating leprosy. magical byword. Step by step, the exhibit dem-

Bernard Courtois (1777-1838), who isolated iodine in 1811, when he observed that washings from seaweed ashes gave off purple vapors when treated with sulphuric acid, and then turned into crystals which contained the element, now so useful in medicine.

Antoine Bilard (1802-'76), who discovered bromine in 1828.

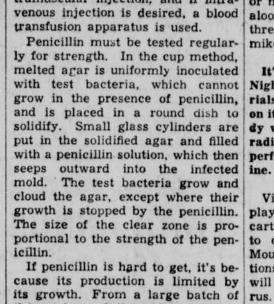
Moderns as well as oldsters find gradual development of curative the museum's replica of the 19th remedies from the early uses of century American apothecary shop ent, streamlined drug store.

To say the least, the old apothecary shop ranked as a colorful spectacle as well as a popular medicinal center, what with its big, square jars of black zingiber, white zinc sulphide, reddish tincture of serpent and gold spirits odoratus. Drawers contained emery, talcum, manna, creta and iris.

Of interest is the 19th century doctor's bulky, varnished medicine case which he carried in his saddlebag as he made his rounds through the 1820 extracted quinine, the active country. In the case, one can find quinine, turkey rhubarb, essence of peppermint, fire of magnesia, es-

chitis, asthma, hay fever, lung disease, coughs, hoarseness, ulcerated plaints, the customer merely being

apothecary shop, we find a drug a powder, into which it is converted exhibit depicting 19th century mediby commercial production. cinal advances, from the discovery of alkaloids in 1816 to the develop-



its growth. From a large batch of rus. the nutrient solution only a relatively small amount of penicillin is observices' needs.



This tiny sealed vial contains 10,-000 Florey units of penicillin.



By VIRGINIA VALE

THE new "Transatlantic Quiz" show scheduled to start April 15 promises to be ry out its purpose, "to find out, through the participants, what Americans know about Britain and what the British know about America," remains to be seen. Col. David Niven, the movie star, who has been with the English army since the outbreak of the war, will be a regular member of the London panel when his war assignments permit. Russel Crouse, playwright, and Christopher Morley, author of "Kitty Foyle," will be regulars at this end. Slated for Saturday afternoons, the programs are done by the Blue network and British Broadcasting corporation.

Bonita Granville's fan mail has shot up considerably since she made "Are These Our Children?"-she's now second in the volume of mail



BONITA GRANVILLE

received by RKO players; averages 2,634 pieces monthly. The list is led by Ginger Rogers, who gets 3,500 letters a month.

Jack Lannon, Hollywood's bestknown fog and rain maker, has a new job on his hands. He's been signed to handle the special weather effects which play an important part in creating the atmospheric setting for Cary Grant's new "None But the Lonely Heart."

Three narrow escapes in raids over German targets and in an RAF torpedo boat are recounted by Dave Olives, RKO Pathe News cameraman who is back after serving for nine months as a newsreel correspondent. He kept on cranking his camera during running fights with the enemy in the air, at sea, and in the Italian campaign. He lived with a torpedo boat squadron for three

a maximum amount of penicillin and the culture is ready for collection. Radio's "Great Gildersleeve" If allowed to become too old, the moved into Hollywood from the San penicillin in the liquid loses some Fernando Valley, primarily to save gas, tires and time-and two days Fourth, the first step in collecting later Warner Bros. sent for him the penicillin is to remove the mold to do a special picture for the Cagrowth from the liquid by filtration. nadian government, in the neighborhood he'd just vacated! of the drug. The liquid thus filtered

More than 12,000 individual programs supporting 60 separate war campaigns were broadcast by Columbia Broadcasting system on the home front in 1943, according to a recent announcement. The promise of postwar television, in full, natleft in its yellow-brown solution ural color, and a plea for freedom form, penicillin loses some of its of radio are also contained in the fought in what state? strength, but is relatively stable as report.

John Loder, host and director of When penicillin is to be injected into a patient, it is dissolved. A at the same microphone with many hypodermic syringe is used for in- of his guests whether he wants to tramuscular injection, and if intra- or not. It isn't that he wants to be venous injection is desired, a blood aloof-a fellow who stands six feet three just can't get together at a Penicillin must be tested regular- mike with a five foot glamour girl.

It's an April birthday for "First Nighter," one of radio's veteran segrow in the presence of penicillin, rials-625 consecutive performances and is placed in a round dish to on its Mutual network. Barbara Ludsolidify. Small glass cylinders are dy was selected as "First Lady" of put in the solidified agar and filled radio twice, in 1940 and '43, for her with a penicillin solution, which then performances as the perennial hero-

Victor Borge has been signed to play the voice of a new animated The size of the clear zone is pro- cartoon character who is expected portional to the strength of the pen- to outstrip Donald Duck, Mickey Mouse, etc., in the public's affec-If penicillin is hard to get, it's be- tions. Victor's Scandinavian accent cause its production is limited by will be used to portray Wallie Wal-

Barbara Stanwyck turns blonde tainable. As yet no synthetic meth- for the second time in her career od to produce the drug on a mass- for the role of the murderess in scale has been developed, and until "Double Indemnity." "I'd always some such process is installed, the visualized murderesses as brucivilians' share will be strictly de- nettes," she protested. "But evitermined by the military and naval dently blondes are considered more unscrupulous this season."

ODDS AND ENDS-Howard Hawks is right in his element as technical ad viser on sword-fishing scenes in the new Humphrey Bogart picture, "To Have and Have Not"—Hawks is rated among the nation's top game fishermen . . . It's a fur-lined sarong for Dorothy Lamour for Yukon sequences in the Crosby-Hope "Road to Utopia" . . . Alana Ladd, Alan Ladd's eight months' old daughter, has already been introduced to the motion picture world-her mother took her calling on papa during production of "And Now Tomorrow" . . . RKO is going all out on "Adventures of Sinbad the Sailor"; it's to be a lavish Technicolor production.

PATTERNS SEWING CIRCLE



Patchwork Apron.

IT'S the nicest apron that ever went into a kitchen! Big enough to cover your dress, well-fitted so that it is as smooth as you'd like an apron to be, bright with color applied in an interesting design at the hemline, it's an apron which lends itself handsomely to any good bright colored percale, muslin or cotton.

Barbara Bell Pattern No. 1937 is designed for sizes 14, 16, 18, 20, 40, 42 and 44. Size 16 requires 236 yards of 35-inch material; 432 yards bias fold for trim-

Oath on Bayonet

When a Nigerian native enlists in Britain's Royal West African Frontier Force, he is allowed to

swear allegiance by touching his

tongue to his bayonet, the age-old

custom of such pagans who have

no holy book, like the Bible or the

Koran, on which to take an oath.

MONEY CAN'T BUY

than genuine pure St. Joseph Asp world's largest seller at 10¢. Why more? Big 100 tablet size for only

than any other dry
than any other dry
than any other dry
yeast we ever used, say

No Ice-box Needed



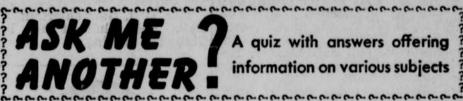
skirt, big pockets and romantic tie-sash is here to stay—everyone, young and old, is bent on getting plenty of sun and air this summer. This bolero and sun-dress is one of the prettiest to be found! Barbara Bell Pattern No. 1942 is de-

signed for sizes 12, 14, 16, 18, 20 and 40. Size 14, ensemble, requires 4% yards of 39-inch material. Little sister's sun-dress with its

own matching bolero can be made

in the same fabric as her older sister's or mother's! Barbara Bell Pattern No. 1943 is designed for sizes 3, 4, 5, 6, 7 and 8 years. Size 4 requires 2% yards of 39-inch material for the ensemble.

Send your order to: SEWING CIRCLE PATTERN DEPT. 530 South Wells St. Enclose 20 cents in coins for each pattern desired. Pattern No......Size..... Name



A quiz with answers offering information on various subjects

The Questions

1. What is the facial aspect for which the Cheshire cat is noted? 2. What are a ship's davits?

3. WAC officers and enlisted personnel wear replicas of the headgear of what warrior maiden?

4. Who were the first printers? 5. What is the supercargo on a ship?

6. How long has Turkey been a republic? 7. If a stirrup bar is that part of

a saddle to which the strap is fastened, what is a stirrup cup? 8. The Battle of Brandywine was

9. Where must all federal revenue raising bills originate? 10. What lines follow the quota-"Silver Theater" on CBS, can't work | tion: "Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery?"

The Answers

1. Grinning. 2. Cranes for the lifeboats.

3. Athena. 4. The Chinese.

5. The officer or person on a merchant ship in charge of the

commercial details of the voyage. 6. Since 1923.

7. A cup of wine or the like taken by a rider about to depart; hence a farewell cup.

10. "As for me, give me liberty

8. Pennsylvania. 9. In the house of representa-

or give me death.'

essential to human nutrition.

-Buy War Savings Bonds = So Crisp! = Kellogg's · Kellogg's Rice Krispies equal the whole ripe grain in nearly all the protective food elements declared

