April 24, 1937.

Installment V. G ASPING, fighting for breath, Rod at last rose to the surface

he knew what had happened. Rot-

ted planking forming a trapdoor

had let him fall into a pool of water

Outside a bruise on his chin Rod

Instinct made him tread water un-

til he got his bearings. It was dark

at first, but he looked overhead and

saw a patch of bright sky about 50

feet above He saw something else,

a stout wooden ladder leading up

Acress from him Rod saw a tun

nel leading into black nothingness

He silently paddled across the pool

and climbed to the rocky floor of

the tunnel He saw the tunnel once

had been closed up and that steel

crossties were on the floor. Then he

This was a gallery of the original

mine. In some way the seam of

coal had played out here and the

workings had been abandoned.

Quarles, the miner, had found a new

seam of coal leading into this gal-

lery He had dug down, under the

shack in which he lived to the end

of the mine gallery! As this part of

the mine was abandoned, Quarles

was able to keep his find a secret

Later, for went of a workable

seam, the mine had ceased opera-

tions Rod grinned to himself Now,

with this new seam of coal, the

mine could be reopened and his

father could again make money

R he was not cold. Then

usually were warm Perhaps that

accounted for it. It was dark a few

feet from the pool, so Rod took out

his flashlight. Luckily the ducking

had not ruined it. He crept along

Ahead of him a section of the walt

swung back blocking the tunnel. It

was a secret door in the wall of the

Rod slipped back out of sight,

found a depression in the wall which once held supplies of some

kind His foot struck against a wooden box and he stumbled.

Voices sounded hollow and deep

in the shaft ahead. One of them,

that of Jared Quarles, said eagerly:

"I tell you, boys, it's a fortune for

split in the earth and rock. There's

enough coal there to last a million

that was the luckiest thing that ever

happened to me! I've been waiting

12 years for this, 12 long years in the

sore at this Rodney Starr and

wouldn't tell about the immense

He knew the old workings were

exhausted and that the mine would

close up. But soon after Jim got

I got here just as soon as I was re-

leased from Atlanta."

Federal pen in Atlanta."

brother, Boss?" Goldie asked.

years! We'll make a million! Boy, worry about them "

tunnel the way leading to the sean

cautiously. Suddenly he stopped

OD was surprised to find that

he remembered that mines

from his investment.

of coal!

toward the patch of sky.

was unhurt.

understood.

Illustrated by Robert Pilgrim.

SYNOPSIS.

CEKING a story for the neighborhood newspaper | village. Rod, Bomby and Trigger, while listening to

STARR CLARION

plot. Jared Quarles and his gang of crooks are

Builds Television Set for Science Meet

Experimenter Explains | Seein' Things | motor is speeded up, we get the illusion of seeing the entire image at once. This illusion is known as persistence of vision. How His Outfit Works Prize Winners Visit

Radio Repair Work Pays for Research in New Field.

Building a television demonstration set was as easy for Lawrence Friedman, 15, as making a model airplane would be for many another[

The set won a scientific award and a trip to Schenectady, N. Y. for Lawrence and his assistant, Bruno Alter, jr , 17, of 102 Ridgewood avenue Brooklyn, N Y

Lawrence didn't start his radio career with this set, however. At his home. 444 Jamaica avenue, Brooklyn, he had previously built telegraph sending and receiving sets, crystal and all-electric radios, radio testing equipment, a public address system. He did research toward construction of a short-wave heat machine. Radio repair work paid for his experiments.

"Through my high school engineer club I became a member of the our design into uniform squares and American Science Institute," Law- provide a duplicate squared screen

"Each year Institute members from 250 schools in this area have a congress in New York City. I determined to make an operating demonstration model of television for the

"Time was short and I asked an- squares and tell the color of each other club member, Bruno Alter, to square in turn. If this is carried out assist me. We did not even get to with great rapidity by electrical or test our apparatus until we demon- mechanical means, or both, the strated it before the congress.

"It consisted of a framework, 7 solid unit to the human eye. This feet long, 2 feet high and 2 feet wide, is called scanning. with large revolving metal disks on each end, driven simultaneously by done by revolving disks which were an electric motor, a photo-electric drilled with a series of holes in the cell; a powerful electric lamp; an form of a spiral. As the disk makes

"Let Me Explain."

"The best way to explain televis- | top to bottom. ton is to give a comparison. Suppose we want to send a simple de-sending disk, the design gets broken When the disk is going slowly, these cialize in electronics." a telephone line We would divide these lines vary in intensity at dif- image on the screen, but when the amateur radio work.

Newsfacts - Will youngsters

pioneer television as they did

radio? It's problematical, ex-

perts say. In radio, the enthusi-

asm and scientific bent of boys

and girls was largely responsible

for today's successes. * * Youth-

ful television experimenters are

balked by the high price of parts

Furthermore, parts are hard to

get and soon outmoded. Yet, was

not this true of the early days of

the radio? * * Television has al-

ready produced one youthful ex-

pert. In his 'teens, Philo Farns-

worth invented apparatus which

made picture broadcasting pos-

sible * * Frank F. Manning, a

16-year-old Englishman, is ex-

perimenting with infra-red and

ultra-violet rays as substitutes

for glaring flood lights now used

in television studios.

Bruno Alter (Left) and Lawrence Friedman-Being Shawn Ex-

hibits of Electrical Company in Schenectady.

at the other end. To locate a square

we would give its distance from the

top and side in squares and then

tell the intensity of color in that par-

"To make it more like television,

we would go across each row of

image received would appear as a

"In our apparatus the scanning was

one revolution, the holes in it pass

the screen, one at a time, in the form

of parallel lines, progressing from

ticular square.

Laboratories.amplifier, neon lamp and a duplicate

> "The photo-electric cell is to light as a microphone is to sound. When more light strikes it, more current can flow through, thus creating an type operators in the country electrical impulse. This impulse is too feeble to use, so it is sent to the Clara, Calif. amplifier to strengthen it. The amplifier in our set took the place of both the transmitter and receiver in regular practice.

Neon Lamp Used.

"Since some source of light obviously had to be used at the receiving end, a neon lamp is provided. It is more sensitive to small changes in current than the filament type.

"Synchronization is accomplished In practice by using two motors made to run at the same speed. In our apparatus we used a single belt and motor to drive the two disks.

"This is what happens. A ray of light passes through a hole in the transmitting disk, activates the p'ioto-electric cell and thus creates in impulse. The impulse is amplified and proceeds to flash the neon. Since the disks are synchronized, the light from the neon can only pass through the hole in the receiving disk which is in the exact position of the corresponding hole in the sending disk. In this manner an image is formed on the receiving screen similar to the object scanned by the sending disk.

A Rare Thrill.

"It was a rare thrill to learn had won the trip to Schenectady to view the exhibition rooms of a large electrical company, and that I was the Santa Clara Journal. to broadcast on an international hook-up on the science forum type operator in the country In the

cal spectro-photometer, a device to plished operator, considering age determine the amount of light of (Story by Parade Reporter Joannia vienna, 300 Porlage avenue, Palo Alta, Canil) flecis. With at I hope to be able to Newsfacts-Linotype machines net a sufficient sum to buy a cathode have 90 keys, and according to In-

"If an object is placed behind the ferent points along their length electrical engineering and then spe- ators range from \$18 to \$60 a week, sign to another person at the end of into lines from top to bottom and variations do not produce a visible Bruno entered television after 1 * A good operator is expected to

"To send the picture we need four more things: the photo-electric cell," Operated by scanning disk running at the same speed as the transmitting disk.

One of the youngest lineis Frank Blake 3d, of Santa

Frank, 11, spends Saturday mornings and vacations practicing on the machine. "I want him to know newspaper work, mechanically and otherwise," his father says. Frank, of 930 Bellomy street, comes from a newspaper family. Frank's father and uncle, F. J. and



Frank Blake 3d-Vacations and Saturdays at Machine. L. J. Blake, own, publish and edit

But Frank isn't the youngest linesame State, at Westminster, is Jim-"I am now working on an electri- mie Banninger, 5, who is an accom-

ternational Typographical Union "My ambition, of course, is to at- standards take from 21/2 to 3 years end a first-class college, take up to really master. * * Wages of oper-

Thirty thousand mice—but not a crumb of cheese. The mice belong to Mrs. E. D. Blowers, owner of an Eng-

"It's very bad for them," she explains. "It gives them spots." Mrs. Blowers raises only plain-coated mice at

"I have mice of nearly every color - red, black, white, blue, silver, choc-

ing it on the truck? But it was alarm worth it, Boss"

was a job and I hated to have to do it, but I knew those snooping kids cried "Look how the water has might bring a bunch of police back | been splashed on the tunnell Gosh, | Then we wouldn't have had a Boss, somebody's fallen down the chance to look for the secret direct shaft!" tions." He hesitated a moment. "I "Impossible!" Quarles cried. Then wonder if we did the right thing after a moment. "Well, if they did I not leaving a guard with those hope they drowned in the pool. pesky kids? That Rod Starr'll cause Listen, you boys had better stir some trouble, and----*

"Say," Butch put in quickly, thing There's a bare chance some- Quarles walk down one passage, the shaky ladder. They were "those kids are tied up so tight they body's here, hidden in one of the Rod risked turning on his flashlight pounced upon by Rod's father and never will get away! Don't you tunnels."

The door closed and Rod heard go up and pull up the last section red, were the words: footsteps coming toward him of the ladder," Butch suggested Beams from flashlights daggered callously. through the blackness, made weird "There's probably another way ment swept across his face. He "That where you were when they shadows race up and down the tun- out," Quarles worried "Whoever's stood erect and in his hand were a shipped you in the letter from your nel

"Yeah, Goldie. I got this letter a said. "Say-what's that?"

ness Another rat followed.

"Yeah, and they'll fight if you get pool, his flashlight darting about. 'em cornered," Pete said. "I ain't cornering no rats," Butch felt the box he had stumbled over.

here " The four men passed Rod so ploring hand felt long slim things close he could have touched them. in the box **BOY," Rod heard Pete sigh. A few yards farther they came to mand was it a job tearing the pool of water. Quarles looked down that shack and load- upward, let out a sudden cry of

"Say," he cried softly, "we didn't "Sure, Pete." Quarles laughed "It leave the cover off the entrance!" "Yeah, and 'cok here," Goldie

around and see if you can find any-

"The way to keep 'em here is to the box, printed in faded letters of

Darting Down the Tunnel Toward Rod's Hiding Place.

"DANGER-DYNAMITE."

tunnel! Get your guns ready!"

tensed, drew himself straight, ready

The knot of men stopped four feet

nervous beams along the passage.

something jumped from the niche

in which he was standing, some-

said.

nerves"

isfled.

here might have overheard what we half dozen of the long sticks from "This is a creepy place," Quarles were talking about and tell the city the box. council in Warwick. Then we

wouldn't get the mine at all. All brother, Jim, was here. He was a squeak and a monforeman of the night shift. He was a squeak and a monster rat scampered along the out and see what you can find. I

UARLES came into view. His money I'm going to set aside a out and see what you can find. I

Unarties came into view. His money I'm going to set aside a out and see what you can find. I tunnel to vanish in the dark- ain't taking no chances now!"

footsteps. Quarles remained at the Moving his feet cautiously, Rod how to find the secret passage, and this place. I don't like it down did not show from the shallow niche in which he was standing His ex- for the discovery certain to follow

Rod waited a moment, saw

Nearing the Goal.

Adhem's, may lead all the rest!

Yes. We're nearing the goal of determining who is winner of Parade's great "get-together." And it won't be long before we can make the announcement. At least, we are now able to see corner of the desk. Watch Parade for the announcement of the winners. Your name, like Abou Ben

left a message by his dead brother, a former mine of one shack, Rod suddenly finds the ground giving darted to his gun. The other men way beneath him. Down, down he plunges, goes into stepped forward.

planning to buy the long-deserted and supposedly age to free themselves. They trace the crooks to the full on Rod's face! worthless Barbara coal mine. The mine, owned by mining village, then Bomby and Trigger return to mine shaft. And the water had use when the coal apparently gave out. Quarles was I the village. While looking through the foundations employe, revealing that a map to a new seam of coal is written on the boards of a shack in the mining a subterranean pool and continues to sink!

through the startled men in the

mine gallery. Even in the danger of the moment they publish, 16-year-old Rod Starr and his the plotters talk, are surprised by Quarles, tied up chums, Bomby Bell and Trigger Tubbs, uncover a and left in a cabin near the mine. When Quarles and of those darned rais!" He

his gang leave, however, the boys find a file and man-The wild cry of surprise swept from Quarles' thick lips. His hand

"Steady!" Rod warned, voice omnous Then quickly: "Before you

make a move you'd better notice what I've got in my band! Point a flash at the box where I'm standing and you'll see what it is. Make a false move and I'll blow the lot of

cet, finally settled on the box marked "Dynamite," Quarles and his men gasped, fell back in wild confusion.

begged "You--you'll blow up the whole mine! Gosh, Rod, put that stuft down If you drop it we'd all

'Don't try to climb that ladder or

getting cold now after the excitement. Quarles and his men stood huddled at the edge of the pool sullen and silen! Rod ordered them to throw their guns in a pile at his feet. The fat promoter, face pasty white under the beam of Rod's flash, was biting his lips in defeat, quivering with rage

THEN a welcome sound echoed 👢 in Hod's ears. It was a shout, hoarse with anxiety, from bove And Rod's heart leaped, for he recognized the voice of his

"Hallooco - halloocoo belowi

Rod-d-ddddi'

"Are you all right?"

op the ladder; watch 'em!"

you! Up that ladder and make it snappy No foolishness!" Muttering angrily, cursing their

luck, Quarles and his men climbed back with him.

Mr Starr's car bound for Warwick and a hot dinner.

tunnel in the direction of "I've got to get to Ted Waring, at

CES," Mr Starr said, "and I the Barbara Mining Comaway, their flashlights throwing pany will announce their reopening with a full-page ad! It'll "I don't see anything," Quarles take the place-Rod, you want to be careful with that dynamite in "There sin't nobody down here, your hand! That stuff is tricky,

it; this underground stuff gets on my Rod laughed. He held up one of

"Guess you're right, Goldie," dynamite box. Quarles muttered, but Rod knew "Don't worry, Dad, it isn't dyna-

Virginian Steps on Alligator

So recently he sent two empty Brings It Back Alive; Experience Is 'Thrilling.' sweet note attached "Make me

How would you like to go wading and step on a live alli- one of your marvelous cars with gator? David Lee Payne did. And it happened in Virginia. Imagine, an alligator in next week, a new car was de-

"Brother and I were hunting crawfish in a small creek near "What shall we do with the other home," writes the 16-year-old from Route 6, Box 5 B, can?"

"We were about to return home, when I stepped on the head of the

lying nearby. The alligator died ithin a few days, however. But I have never had a more thrilling

How the 'gator got up to Virginia is a mystery. It was thought it escaped from a zoo.

Newsfacts-Farthest north alligators have been known to live is the southeastern coast of North Carolina, a good 200 miles from David's home. Thence, they are found along the United States coast all the way south to Mexico, and nowhere else except China. * * Often confused with crocodiles, alligators have breader jaws are seldom man-eaters * * Though fearing man, 'gators relish dogs, even pursue them on land * * So much do they need heat that 'gators in a Chicago zoo now have the sand in their cages electrically warmed.

Ash Too Bad!

"He's allus in the dumps."

'I Aim to Be—' by Jack Winder

An aviator. Why? Because I am most

interested in aviation. have read many books and articles on law, medicine and other careers, but somehow aviation has more appeal Though I wish to



know the mechanics of air-

ation ten years Lindbergh ago-I was 7

Jack Winder. years old, then. We were living in Fort Worth, Tex

Editor's Note: This is another in a series of articles by indi-vidual Paraders on future careers. Succeeding ones on difly. These are written, not by oldsters who have already "arrived," but by boys and girls

who are now in the process of hewing out careers. planes, too, I At the field I met many aviators northwest. I want to really and got free rides, thus learning the always ask all fly I want to rudiments of flying. I once rode the questions I be in the air and with "Red" Robbins, former holder can think of feel as free as a of the world's endurance record about aviation

I am interested chiefly in speed and of people who I first became endurance And I'll never forget know the aninterested in avi- the thrill of meeting Charles A swers. Men in

From Fort Worth my family know about a topic. I met the manager of the local moved to California. There I vis- I am now trying to get an ap-"Poor papa," mouned the office airport and became friendly with ited large airports, saw air races pointment to West Point. From his son, a boy my age We spent and watched Army and Navy air there I hope to go to the Army boys had watched the barber singe "Oh," sympathized our luscious many hours at the field, and I heard maneuvers I learned all the types Training School at Randolph Field, a customer's hair. "What d'you supstenog. Lotta Kerves, "a pessimist, many facts about aviation which I of Army planes and the part each San Antonio, Tex. I keep in mind pose he's doin'?" one asked finally. still remember. I used to play in played. I also visited an aviation the success of such men as Lindy, "Don't be so dumb," answered the wailed the office boy. "A an old "Jenny" near the field and school and learned much of air- Byrd, Post and Merrill as a goal to other. "He's lookin' for 'em with a plane construction. Meanwhile, I achieve.

read as many books on aviation as I could get hold of. I have studied navigation, meteorology and learned of other fliers' experiences by read-

I have visited every airport D. C, where I Blair road

now live at 7215 aviation. I have

found, are more

than willing to tell you all they



Stew Auto Be Ashamed. Seems Stew Pidd had tough luck 30,000 Mice Never Fed Cheese

tin cans to the factory with this Woman Breeds Rodents of Every Color for Show.

clate, to name a few. I feed them rats special mouse foods and milk Some of my mice are valued at 150 pounds-about \$750.

"The farm is a colony of sheds, each shed stacked high with cages. At feeding time there is a noise like rain as the mice scramble at the wires of their cages." The farm is within 200 miles of Washington, at Wood Lane End, Hemel Hempstead, Hertfordshire.

> Mouse Club has 600 members, half of them boys and girls. * * The N M. recognizes 27 breeds, varying hiefly in color, and lists show standards for each. Show prizes are cups, spoons, certificates, cash. * * Reason for mice breeding's sudden popularity is the little capital needed to start. * * The fad has spread even to America Last year the American Mouse Fancier's Club was organized. made plans for shows.

Barberous.

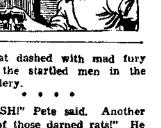
lish mouse "farm." And Mrs. Blowers absolutely will not livered. The note attached read: feed them cheese.

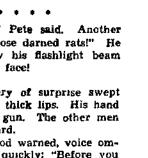
Newsfacts - England's National

For some moments the two small

CLOUD







A beam of light stabbed at Rod's

"Don't throw it, kid!" Quarles

"Back to the pool," Rod snapped. I'll blow it to bits and you along with it. Remember, one of you may shoot, but not before I slam these sticks of dynamite against the tunnet wall?" "We -we ain't shooting, Rod,"

Pete said quitkly. "O-o-only be mighty careful with that dy-dyna-Long minutes passed. Rod was

"Yes, Dad I'm sending some men Rod turned to Quarles. "All right,

momentarily. On the outside of the group of officers he had brought

Ten minutes later, the story told, Rod, Bomby and Trigger were in Rod gasped, and a smile of excite-

"I fell you, son," Mr. Starr said proudly, "it's wonderful! Just think, the mine will reopen, and if that seam of coal is anything like you av it is we'll all make

Rod's hiding place Rod shrank the Trumpet," Rod said. "Too bad new seam of coal he'd found. He closed up this end of the mine, saying the coal seam had petered out. They're as big as cats."

Hod, Itom his hiding place, saw into the depression in the tunnel our own newspaper was published wall, held his breath. He heard a petered out rats. They're as big as cats."

Hod, Itom his hiding place, saw into the depression in the tunnel wall, held his breath. He heard a petered out rats. They're as big as cats."

Hod, Itom his hiding place, saw into the depression in the tunnel wall, held his breath. He heard a petered out rats. They're as big as cats." "Boys, there's somebody down the Waring'll give the Clarion a credit line, and that'll help. Then next Rod heard the rush of feet, then Saturday we'll have a full account sick. Before he croaked he wrote this letter to me. The letter told put in Then: "Say, let's get out of the stooped, careful that his head the slow walk of the men toward, with pictures. Boy, won't that be him along the mine tunnel. He an issuel" Rod grinned happily.

Boss," Goldie protested "Let's beat might explode, and-"

the sticks he had taken from the

the leader of the crooks wasn't sat- mite! Those long sticks in the empty dynamite box were-candlest Rod felt something stirring at his I was bluffing Quarles and his gang feet, heard a faint squeak. Then all along!"