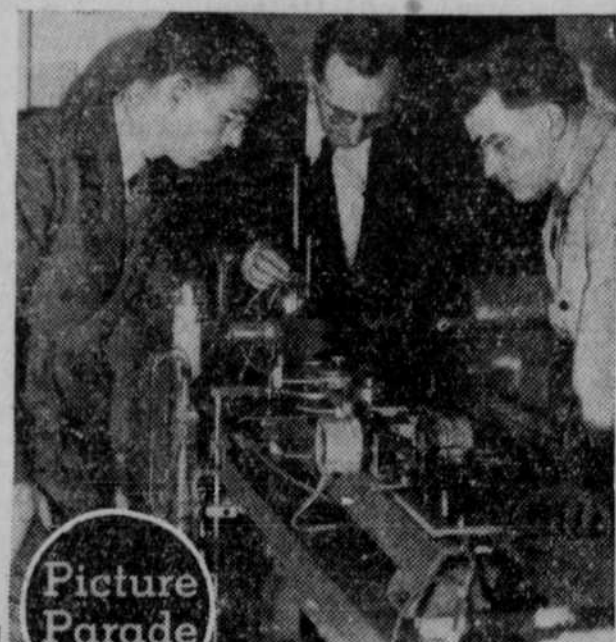


Engineer's Wonderland

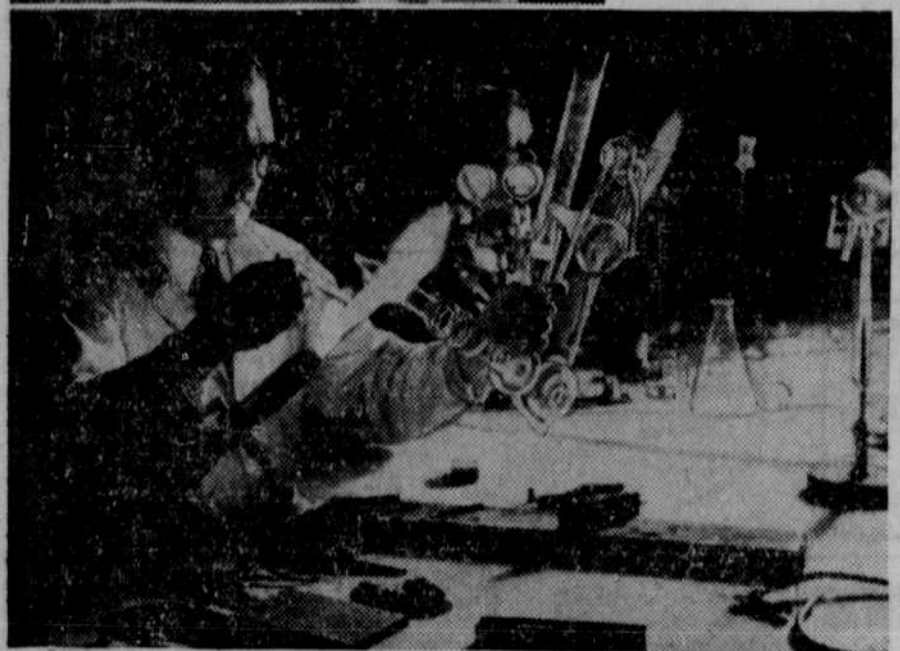
A wonderland of modern miracles is housed within the white Lannon stone walls of the Northwestern University's new Technological Institute at Evanston, Ill. There are rooms where it is always raining, and taps which deliver the pressure of three Niagaras. Right: Analyzing the elements in a piece of metal alloy.



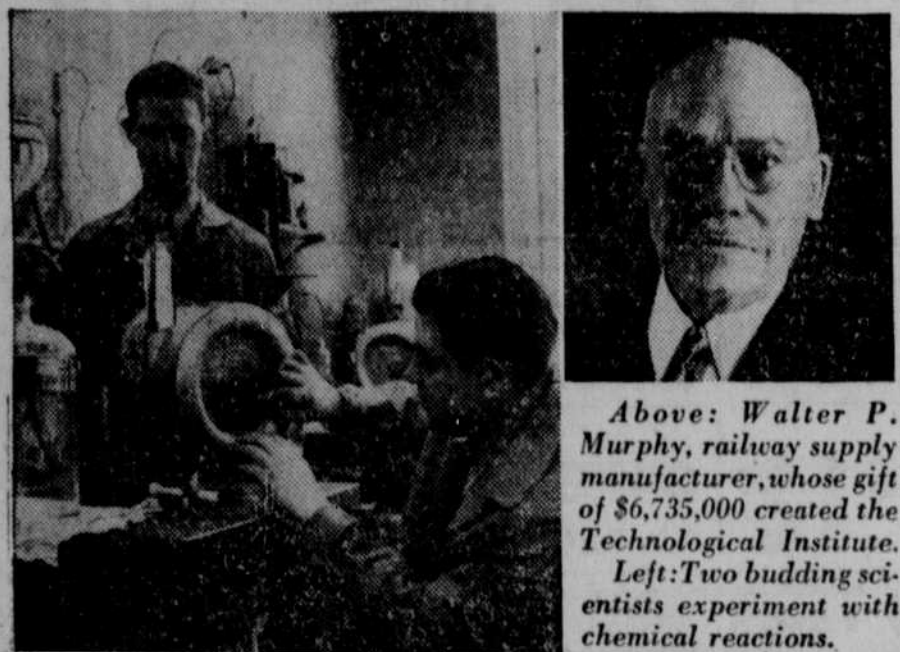
Picture Parade



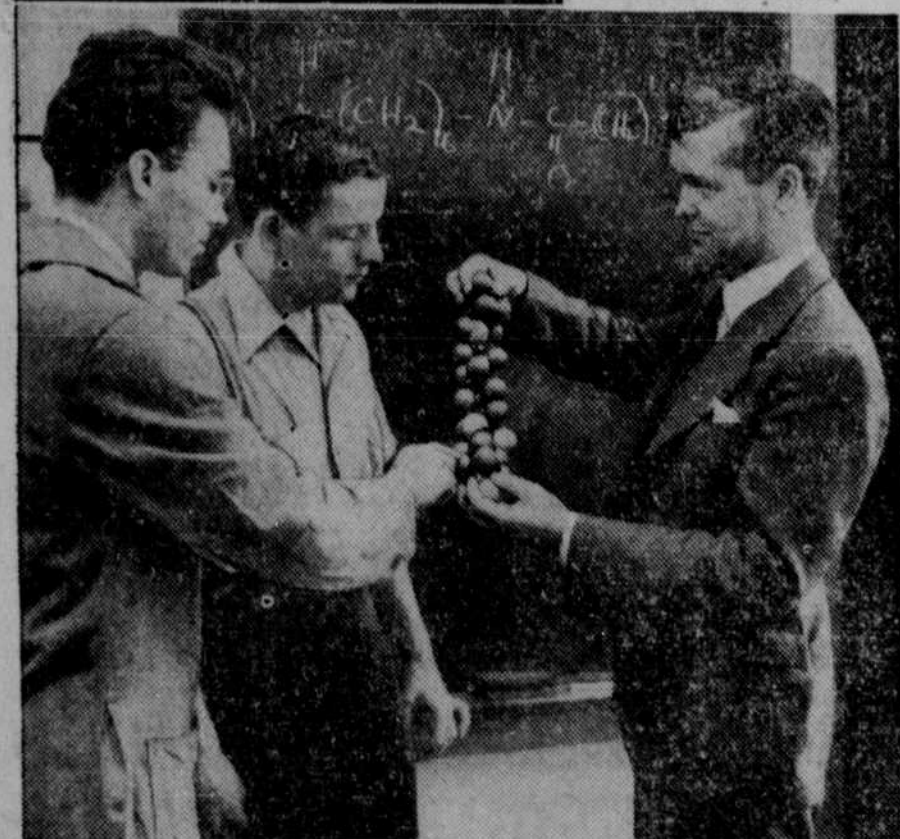
At the institute there is a machine which exerts the pulverizing weight of 5,000,000 pounds, another that sags with the weight of an eyelash. One room is colder than the North Pole and another three times as hot as the Sahara at mid-day. Left: Crushing 13-inch thick concrete or gently cracking egg shells is equally easy for this two and a half story 1,000,000-pound testing machine.



For modern research in chemistry and physics the ancient art of glass blowing, shown here, is still an essential factor. James F. Morris prepares many intricate and unusual pieces of apparatus in the new Technological Institute.



Above: Walter P. Murphy, railway supply manufacturer, whose gift of \$6,735,000 created the Technological Institute. Left: Two budding scientists experiment with chemical reactions.



Chemistry Professor Malcolm Dole (right) explains to students what a molecule of nylon looks like. The chemistry department works in co-operation with the engineering department.



The Technological Institute of Northwestern University.

History in the News

Released by Western Newspaper Union.

Molly Pitcher Fights Again

OUT of the ghostly land of tradition and myth, they've summoned Molly Pitcher to fight for her country again. This time she isn't serving a cannon, as she did at the Battle of Monmouth during the Revolution. But she's serving in the cause of liberty just the same—selling war savings stamps and bonds to help beat the Axis.

And it isn't just one Molly Pitcher who's doing this, either. There are 5,000,000 Molly Pitchers. Clad in colorful red, white and blue costumes, they're presiding over one of the Molly Pitcher war bond booths that have been set up in thousands of independent grocery stores all over the United States. They're volunteer women workers who are members of women's clubs, church and parent-teacher organizations, the Red Cross and the grocer's own family. They started it on July 1—three days after the 164th anniversary of the battle in which the original Molly Pitcher won immortality—and they're going to keep it up until they've helped the members of the Independent Food Distributors' council sell their share of the \$1,000,000,000 worth of bonds and stamps per month, the goal which the United States treasury department has set for the nation-wide campaign through retail outlets.

Thus the name and fame of a Revolutionary war heroine will be heard again throughout the length and breadth of the nation to whose



A modern Molly Pitcher sells a war bond to a food store customer.

founding she contributed. Although history has preserved her name under the name of Molly Pitcher, that wasn't her real name. She was born Mary Ludwig at Carlisle, Pa., on October 13, 1744, the daughter of John George Ludwig, who came to America from the German Palatinate.

When Mary grew up she was employed as a servant in the family of Gen. William Irvine of Carlisle, who was destined to become a famous Revolutionary leader. There on July 24, 1769, she was married to John Hays, a barber. At the outbreak of the Revolution Hays enlisted in Proctor's First Pennsylvania artillery and when he marched away for service as a gunner, Mary marched with him, as was the custom of wives of privates in those days.

Little is known of either John Hays or his wife until the battle of Monmouth, N. J., fought on June 28, 1778. At that battle Hays' battery was stationed on rising ground between Livingston's and Varnum's brigades. It was a terrifically hot day, the mercury rising to 96 degrees in the shade. During the fighting Mary Hays discovered a little brook running back of the hill where her husband was stationed and she began carrying water to him in a pitcher. Soon she was serving other thirsty soldiers as well and there was no more welcome sound amid the roar of the cannon than the cry "Here comes Molly with her pitcher!"

As the battle grew fiercer and her trips to the brook more frequent, the call was abbreviated into "Molly Pitcher" and thus her nickname was born. Suddenly Hays fell, seriously wounded, during a charge made by the British cavalry and infantry. As no one was competent to take Gunner Hays' place, the cannon which he was serving was ordered moved to the rear.

Thereupon Molly, dropping her pitcher, seized the rammer which her husband had been using and declared that she would carry on in his place. She proved to be a good substitute and so won the admiration of the soldiers that they told their officers about her heroic conduct. As a result next morning Gen. Nathaniel Greene presented her to Gen. George Washington, the commander-in-chief, who praised her gallantry and then and there made her a sergeant in the artillery.

Later she was placed on the list of half-pay officers and for many years after the Revolution she lived at the Carlisle Barracks, cooking and washing for the soldiers. Some years after the death of Hays she was married to Sergt. George McCauley or McKolly, who seems to have been a worthless sort who lived on her earnings and abused her cruelly. In 1822 the Pennsylvania legislature voted her a gift of \$40 for her services in the Revolution and \$80 annually for life. She died January 22, 1823, and was buried with military honors.

Of course no one could blame Hollis very much. As a matter of fact folks were heartily sympathetic, and complimented him on his fine marksmanship.

A month later two cowboys from the S Bar 4 outfit were slain when

The Early Days

By VIC YARDMAN
Associated Newspapers
WNU Features.

"THE Rusty Gulch lynching of the Sam Larrigan kidnapers," Tom Trainor was saying, "typifies the spirit of the old West. The spirit of the people who came out here and built an empire out of a wilderness."

Tom paused reflectively, and rolled a cigarette, lighted it, and blew smoke rings at the ceiling of his tiny adobe office.

That's the way those old pioneers of the early days handled things (he went on). If the law didn't mete out justice, folks took matters into their own hands. And it was by resorting to this method that the little wilderness settlements survived and became flourishing cities; that the honest folks triumphed and crime was suppressed.

Of course the thing was not accomplished without bloodshed and loss of life, but the victory was worth the sacrifice, for it meant progress, and progress was our watchword in those days.

Sheriff Hollis Barnard survived probably longer than any of the corrupt law upholders. But that's because Sheriff Hollis was shrewd and smart, as quick mentally as he was with his gun. And it wasn't until after Sheriff Barnard had been in office two years, and reaped a rich harvest for himself at the expense of the taxpayers, that folks began to get suspicious. And it wasn't until long after that that anything definite was proved.

Sheriff Barnard, it turned out later, was working hand in glove with a band of outlaw desperadoes led



Sheriff Hollis Barnard survived probably longer than any of the corrupt law upholders.

by the notorious Cy Morrison. Cy and his gang of cutthroats had been terrorizing and pillaging the ranchers of the whole Salano valley for quite a while. Folks were getting fed up with him, and demanded something be done about it.

That is why they elected Hollis Barnard to the office of sheriff! They figured he was dead set against crime and corruption; they figured on him being the fastest man in the country on the draw; they figured he had the courage and the spirit necessary to the job.

And so they elected Hollis and Hollis set out to establish law and order in the Salano valley. But it wasn't until a year later that he made his first arrest. It came out later that the arrest was made because those who had elected Hollis were beginning to complain of his failure in the capacity of sheriff and were threatening to put in a new man. And that wasn't at all what Hollis Barnard wanted.

And so, following the murder of a rancher and the plundering of his house, Hollis arrested two of Cy Morrison's henchmen, Buck Mercer and Hitch Crane, and installed them in the jail at Big Springs. There was talk that night of a lynching, because the rancher who had been murdered was well liked, and it was time, said folks, that Cy Morrison's gang was taught a lesson.

But Hollis wouldn't stand for a lynching. He made a great talk about his duty as a law officer and how he had to protect his prisoners, and backed up what he said by exhibiting a sawed-off shotgun and a couple of six-shooters.

So the lynching party dispersed and the next day Hollis set out for the county seat with his prisoners. Toward mid-afternoon his horse came loping back to town, riderless. Alarmed, a group of citizens galloped out on the trail. They met Hollis coming in on foot, a nasty wound on his forehead and a story to tell of how Cy Morrison's gang had swooped down on him, taken his prisoners and he, Hollis, had escaped with his life, only after a running battle, in which three of the desperadoes had bit the dust as a result of the sheriff's accurate shooting.

Of course no one could blame Hollis very much. As a matter of fact folks were heartily sympathetic, and complimented him on his fine marksmanship.

A month later two cowboys from the S Bar 4 outfit were slain when

they resisted some of the Morrison gang, who were conducting a rustling expedition. The honest folks began to grumble and demand that Hollis do something about it.

Hollis gathered a posse about him and rode into the hills, but without success. Morrison's hiding place was too cleverly concealed to be thus easily located.

Another two months passed, and then one day a cowboy from the Silver Horse ranch rode into town on a lather-streaked pony and announced that his boss, Old Jed Nason, had been murdered by Cy Morrison. This was the spark that ignited the fuse, for Old Jed was prominent in the valley and beloved by everyone.

Irate citizens demanded that Hollis Barnard do something or turn over his star. And Hollis chose to do something. He waited until the excitement caused by the Jed Nason killing had quieted down a bit, and then brought in a pair of prisoners, Johnny Streber and Smoky Lane, the former being Cy Morrison's righthand man. He installed them in the calaboose and announced that on the morrow he'd fetch 'em over to the county seat and lock 'em up.

But this time Hollis' smartness failed him. For he had figured that, as before, he could forestall the inevitable party of lynchers with speech-making, sawed-off shotguns and six-shooters. And he figured wrong.

About midnight a group of fifty men appeared before the jail and demanded that Hollis turn over the prisoners. Hollis' face appeared at one of the iron-grated windows, and he began to make a speech. A gun barked and a bullet ricocheted off one of the iron bars close to Hollis' face. He withdrew hastily and a moment later the sawed-off barrel of his shotgun appeared at the window.

But the crowd had been expecting that to happen, and they were prepared. Twelve of them were holding, concealed, a battering ram. And the moment the shotgun appeared they started toward the jail door. The shotgun roared, but the crowd was moving pretty fast, and before much damage could be done had reached the jail door. Once, twice they drove the heavy fence post against the panels. Then the door gave way and they were inside.

Tom Trainor paused and crushed out his second cigarette. After a moment he continued: "There was a cottonwood tree right handy to the jail, the mob strung the prisoners up in short order. Only when the crowd fell away it was discovered three, instead of two bodies were suspended from the limb. The third was Sheriff Hollis Barnard."

"Yep, someone had become suspicious of the cuss, and when they broke into the jail and found he'd been playing cards with the two prisoners in the outer office, they began jumping to conclusions.

"The next day the citizens organized a posse on their own hook and rode into the hills. They spent a week combing every crevice and canyon, and one day they rode into a hidden valley and found a couple of cabins there and guessed they'd come on the rendezvous of Cy Morrison which was exactly what had happened."

"Only Cy wasn't among those captured. And none of the prisoners would tell where he could be found. That is, none but one. And this chap, a mere kid whom folks believed had got a wrong start in life by running away to join the outlaw gang, squealed only after he'd been promised his life (which promise, by the way, was kept). The kid told us that Cy Morrison sometimes went under the name of Hollis Barnard."

Nutrition Expert Tells Best Way to Use Honey

Honey can be substituted for sugar in most recipes if a few changes are made, according to Miss Lydia M. Tarrant, nutrition expert.

"Honey is a natural sweet that can be used in baking, candy making, preserving foods, sweetening sauces, making frosting, or in any other recipe where cane sugar might be used," Miss Tarrant said. "In addition, it is more quickly absorbed and digested in the body than sugar."

Although a cup of honey is as sweet as the same amount of sugar, each cup of honey contains one-fourth liquid, she explained. Therefore, one-fourth cup of liquid should be deducted from each recipe for each cup of honey used.

However, cakes with chocolate, dates, raisins, nuts or dried fruits require the same amount of liquid when honey is used because these added ingredients absorb moisture.

To counteract the acidity of honey, one-fourth to one-half teaspoon of soda should be used in addition to baking powder in all baking recipes. A lower temperature than usual should be used in baking because honey caramelizes quickly.

To measure honey, Miss Tarrant recommends dipping the spoon or cup in water first, or using a spoon or cup in which fat has been measured.

"Honey is best kept at room temperature," she advised. "Freezing hastens granulation. Since honey absorbs moisture readily, it should not be stored in damp places. However, if it is crystallized or too thick to pour easily, place the container in warm water until the honey reaches the desired consistency."

TO YOUR Good Health

by DR. JAMES W. BARTON
Released by Western Newspaper Union.

VITAMIN A AND EYES

So much is being said over the radio and in newspapers and magazines about the wonderful results of treatment by vitamins that many thoughtful physicians are naturally becoming a little doubtful as to the truth of all these claims.

The vitamins are going through the same "trials" as have other special forms of treatment for various ailments and it may be a considerable time yet before we learn the full or true value of vitamins in the treatment of simple and serious ailments.

For years it has been known that vitamin A was effective in the treatment of eye diseases, particularly those that affect the covering of the eyeball.

One of the common eye ailments seen mostly in children is follicular conjunctivitis where there is inflammation of the covering of the eyeball together with formation of little pink lumps the size of a pinhead (lymph follicles) on the covering of the eyeball and edges of eyelids. There is also some photophobia—fear of light. It is found mostly in schools.

The usual treatment has been use of eye washes, attention to the general health, hot and cold applications, tinted lenses, correction of eye strain or other defects. Although all cases recover in time, there are some where the symptoms persist for many months.

What about vitamin A in this particular type of eye ailment—follicular conjunctivitis?

Doctors M. R. Sandels, H. D. Cate, K. P. Wilkinson and L. J. Graves, in the American Journal Diseases of Children, report the results of their investigation of 119 children with follicular conjunctivitis treated by vitamin A. Twenty-one of the 22 children in series 1, who received extra vitamin A, showed improvement, and of these 11 were entirely free of conjunctivitis at the end of the nine-week experimental period. No improvement occurred in the eyes of any of the 17 children who were not given vitamin A.

In another series, 60 children who received graded amounts of vitamin A were improved while of 20 children who received no vitamin A during the same period, only two who had received a more generous diet showed any improvement.

These physicians state, therefore, that lack of enough vitamin A appears to be the cause of follicular conjunctivitis.

Relaxation Key to Sleep

A broker who claimed he had not slept for many days journeyed 1,500 miles to consult a woman skilled in the treatment of nervous conditions. Upon arrival he was ushered into the woman's office and given a particularly easy chair to recline in. He told his long story to the patient healer and when he had told his pathetic account of many sleepless nights, he was told that going without sleep so long really did not matter very much and that his health had not suffered. The healer was summoned from the office for 10 minutes, and upon her return she found her patient wrapped in deep slumber, snoring so loudly that her office windows had to be shut. He slept for many hours and awoke much refreshed.

I am quoting from an article on sleep by Dr. Robert L. Pitfield, Philadelphia, in Medical Record.

Why did this broker go off to sleep so easily?

It was because when told that loss of sleep had not affected his health, he stopped worrying about it.

It is worrying over the effects of loss of sleep that actually prevents many individuals from going to sleep. It is allowing the mind and body to become limp or languid that brings on sleep.

I know a physician who has overcome his inability to sleep by just "going dead," mentally and physically—not a thought on his mind and every muscle relaxed.

It has been found that, if we lie at complete rest with nothing on our minds and with body completely relaxed, the temperature of the body, the heart rate, and the blood pressure go down almost to the same extent as when we are asleep. Naturally, knowing that relaxation of mind and body is 80 per cent as restful to the body as sleep itself, we are very apt to go off to sleep.

QUESTION BOX

Q.—Is there any cure for phlebitis?

A.—There is special cure for phlebitis. Rest is the usual treatment. Your physician is always quite willing to call in a consultant if you wish.

Q.—What would cause several strands of white hair to appear suddenly? I am only 20 years old.

A.—This is not an unusual condition. See your own physician and see if any gland condition is present.

HOUSEHOLD HINTS

Clean your oil mops in hot water to which has been added washing powder, with a little ammonia.

If you cannot get candleholders for the birthday cake, decorate top with marshmallows and stick a candle into each one.

Shake your turkish towels vigorously before hanging up to dry. This removes wrinkles and raises the nap.

When stewing dried fruits, the addition of a small amount of lemon rind will give a better flavor.

To keep coat buttons from tearing out, sew a smaller button on the under side, running the thread through both.

To keep fish from breaking when cooking, put the pieces in hot fat with skin side uppermost and allow them to brown before turning.



Power of Few
Literary history and all history is a record of the power of minorities and of minorities of one.—Emerson.

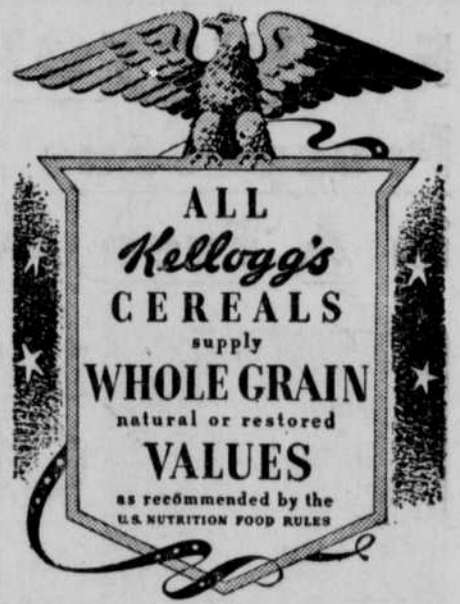


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