AMERICA MAKES BIG DISKS NOW

Lens Manufacturers Solve Difficult Problem With the Aid of Scientists.

CATCHING UP WITH GERMANY

All Mechanical Difficulties in Making of Large Telescopic Disks Have Been Overcome-Process Is Delicate One.

New York.-Large telescope disks are being made in the United States. All mechanical difficulties have been overcome, according to an announcement made by Dr. George W. Morey a member of the American Chemical

This remarkable achievement is due to preparation and handling of the ingredients required for pure and flawless glass and is the result of experiments begun at the outbreak of the world war, under the auspices of the geophysical laboratory of the Carnegle Institution in Washington.

Catching Up With Germany. Before 1914 practically all the optical glass in the United States was imported from Germany. When the United States entered the war the field glasses, range finders, telescopes and other instruments of precision used by her army and navy were equipped with lenses fashloned beyoud the Rhine. Private citizens even loaned or contributed opera glasses

Optical glass of fine quality, however, is now to be had on this side of the water. The climax of this achievement of industrial chemistry has been reached by American makers in the manufacture of lenses for telescopes, At first disks which strengthened our but they cracked in the annealing view were made three or four lnches process. American Ingenuity was in diameter. Recently a special four brought into play to devise a means of and three-quarter inch lens was slowly cooling these immense plates

All Metal Plane Will Revolutionize

Aircraft Design and

Construction.

in Commerce Will Be Displaced

by All Metal Type.

leading airplane manufacturers.

displaced by the sturdy all metal type

The War Plane Passes.

the JL-6 and the old type plane,

There is little comparison between

The only type of airplane that was

The wing beams, the long fuselage, wide open.

successful prior to the JI-6's appear-

the engine bearers, the struts, the

under-carriage were made of either

covered with Irish linen. The fuse-

only a cyclone or a crash could warp

the wings around the fuselage.

discontinuing operations.

brought out after the war by the

New York.—The presence in Amer-

carlously, in commerce will soon be effects.

Marks New Era

Frail Spruce and Linen Ship That Did and control wires of the old type ship

tca of John M. Larsen's JL-6 all metal them. One plane that side slipped to

monoplane will completely revolution the earth was immediately righted

ize aircraft design and construction, and flown away after a new propeller

according to statements made here by had been put on. Not even the fuse-

been used successfully, though pre- foot spread without causing any #1

expert who has witnessed the per- six people. Two pilots may be seated

formance of the JL-6 agrees. One in the control compartment. The mo-

American manufacturing company has live power is furnished by a 160 horse-

ance was the wood and linen biplane, carried on in the cabin with the motor

spruce or ash and the wings were in flying in all time. He has pur-

lage between the wings gave support Junker company of Germany, which

to the panels. It was a strong ship; first perfected the all metal plane. It

But it appears as fragile and deli- Lufberry in the most heroic air battle

cate as a china vase beside the JL-6. of the war. Dr. Hugo Junker, German

There is an all metal fuselage. One engineer, is the original designer of

metal wing spreads from each side of the all metal ship.

The frail spruce and linen ship that attached was injured. Eighty-five

In U.S. Flying

One of the First Submarines



One of the first submarines ever built by John P. Holland, their inventor, of whom it is said that he conceived the idea of submarines as a means of destroying the British navy. Holland was an ardent Fenian and associate of many Irish patriots who have gone down into history. Leaders of the Revolutionary party in Ireland became interested in Holland's idea and commissioned. him to build a trial submarine. He built it well enough, but on its trial spin on Long Island Sound it was struck by a coal barge and quickly sunk. The discouraged Irish leaders gave up the idea. Later Holland built his first successful submarine, "The Holland," which was accepted by the United States government in 1897. "The Holland" is here shown on her trial spin.

Flagstaff, Ariz. The first nine and one-half inch disk was turned out last December. Six others have since been made and delivered. As their diameters increase disks are made with greater difficulty. Finally, on February 15, 1920, the first perfect 12-inch disk was furnished. and a large optical glass corporation and binoculars to the fighting forces. now lists this size for short-time deliv-

Making Larger Disks.

The next size attempted was a 20inch disk, in the manufacture of which the problem was still more complex. Several flawless ones were produced,

the body, a wing that measures eight

or ten inches in thickness at the lead-

ing edge, and has a trailing edge as

thick as the blade of your knife. There

are no interwing struts to offer wind

resistance, no control horns on the

alterons, no flying or landing wires,

no control wires free to the wind. It

has been said that the flying, landing

Wings Survive Side Slip.

that only a head on crash will injure

lage to which the metal panels are

The body of the plane contains a

luxuriously furnished compartment

five gallons of gasoline to fly 100

require from ten to fifteen gallons for

that distance. The motor is almost

of the Liberty. A conversation can be

According to Mr. Larsen, the JL-6

represents the greatest step forward

chased all American rights, from the

was from an all metal battle plane

that the boche shot down Maj. Raoul

silent, compared to the deafening roar

The wings of the JL-6 are so rigid

out down its speed by as much

twenty-five miles an hour.

ground for Lowell observatory at of glass, so that they might be free from the strain so likely to destroy them. Experiments by scientists of the geophysical laboratory showed exactly how slowly their temperatures must be lowered, and the cooling' schedule outlined was closely followed. Owing, however, to the extreme cold weather of last March and the shortage of gas, this schedule could not be followed. One splendid disk: strained and broke just when nearly, ready to be taken from the even.

Equipment hitherto used was then scrapped and an electric furnace was specially designed to meet the needs of the problem by experts of an electric company. This device is thoroughly insulated and provided with an automatic appliance which will hold the temperature absolutely constant to a fraction of a degree while the glass is being treated to remove strain. The temperature can be drepped a few degrees a week.

With the aid of this furnace now in process of construction it is believed that the last difficulty in the way of the American manufacture of the largest disks will be overcome. Orders have already been accepted for the production of several large guaranteed disks, including one pair of the 18-inch size for refracting telescopes, and a 36-inch disk for a reflecting telescope. The furnace will receive the 40-inch size. When that goal has been reached, the company will continue, the development, so that eventually the largest and finest disks in the world will be American made.

NEED WEAPONS FOR SAFETY

German Farmers Reluctant to Surren. der Their Firearms, Says Cabinet Minister.

Berlin.-There is a reluctance on the part of some German farmers to: surrender their firearms, due to "the legitimme desire to protect their homes against marauders," Minister, of Agriculture Braun said to a Tagedid its bif in the war and that has men have stood upon the forty-seven blatt representative,

He added, however, that a number of farmers have been "storing arms, deliberately for subversive purposes," but he said that these were not as numerous as generally believed.

Germans, almost every aeronautical that will seat in upholstered chairs "If the people only will keep their heads," Herr Braun said, "I do not believe there will be any organized already announced its intention of power Mercedes engine. It requires outbreak in the near future. The rural situation at this time inspires' miles. Present aeronautical motors confidence."

****** · Vets Receive Money **Due Half Century**

Lansing.-Two Civil war veterans, each more than 80, received aid from the state, which was due more than half a century ago, when the board of state auditors granted them their unpaid bounty and inter-

They were the oldest ten who were similarly treated at the same session.

ananananananananananananan

Parts of the State, Reduced for the Busy.

Timely News Culled From All

SCORES OF EVENTS COVERED

Following closely on the heels of the published statement of Hugh Lemuster, attorney for the State Railway Commission, that elevators holding public warehouse permits must accept grain for storage, the Updike Grain Co, of Omaha notified the commission to cancel its public warehouse permits for elevators located at Aurora, Hastings, Clay Centér, Morse Bluffs, Bruno, Seward, Cohner, North Omaha, Eldorado and Harvard.

A Nebraska cow, owned by the University of Nebraska College of Agriculture, at Lincoln, is bidding for a record. In 191 days she has produced an average of more than four pounds of butter daily. In that time she has produced 17,976.7 pounds of milk and 797.57 pounds of butter. She is still milking about 85 pounds daily, and has 174 days left of her year.

A vote of two to one was east against a proposition to straighten and control the Eikhorn river by voters of West Point at a special election, The reasons given for its defeat was the immense cost of material required for construction work and the general high price of everything required to carry out the work.

rome Potter of Omaha, who was killed enforcement.

The sum of \$5,491.20 was the amount received for wheat raised on 52-acre tract on a farm a few miles west of Lincoln. It was sold direct from the machine to Lincorn mills, for \$2.40 a bushel, the field averaging 44 bushels

Attorneys for the regents of the University of Nebraska effarge that the goit in the Lancaster district court at Lincoln, involving operation of the state serum plant, is an attempt of private manufacturers to put the state plant out of business.

Arthur J. Koenigstein, former county attorney of Madison county, convicted of receiving bribes from keepers of disorderly houses, has been paroled from the state penitentiary to his brother, Jack Koenigstein, of Nor-

Between December 1, 1919, and May 1, 1920, the city of Lincoln had but \$8,167 in fire losses, which is considered a most remarkable showing for a city of its size by State Fire Marshal

The village of Hardy was visited by a disastrous fire the past week. Three ausiness heuses, including the municipal ice plant were destroyed. The loss will total several thou and dol-

A report issued by the state labor bureau at Lincoln shows that \$224,121 as been awarded under the workmen's compensation law for disability and death claims during the first six months in 1920,

Teams representing Sidney, Scottsbluffs and several other Nebraska towns and from two Colorado points will compete for henors at a baseball tournament at North Platte the week of August 14.

Henry Bleyhl of Snyder told stock-Dodge county are looking forward to 000 farms are tenanted by renters, the greatest crops in history this year. Reports from Washington are that Nebraska will lose one congressman on

account of the state's increased population unless the lower house of concress is increased to 500 members. A reward of \$500 has been offered for information leading to the arrest and conviction of the person who shot

Alois Heinman, 13, the son of Frank Heinman, at West Point, on July 5. A 160-acre farm four miles east of Beatrice, bought fourteen years ago at a special election,

for 890 an acre, was sold last week for \$350 an acre. Four miles of the new highway be-

ing built between Pawnee City and Table Rock have been completed. Sarpy county officials are investigat-

ng a proposition to pave a portion of Bellevue boulevard through the county.

The War department at Washington has granted the board of county commissioners of Lincoln county permission to build a 66-foot right-of-way across the Fort McPherson military granted rainway employes by the fedreservation in the county.

Nebraska exceeded its quota towards America's gift to Erance, which is to take the form of a statue to commemorate the battle of the Marne, The university of Nebraska sent direct to the New York office the sum of \$231.57 and \$4,129.03 was raised by schools of the state, making a total of \$4,360.60? The state's quota was \$3,500,

Up to the middle of July more than 200 claims for hall losses to Nebraska to organize a company of Nebraska crops were received by the state hail insurance department at Lincoln.

A special election will be held at Gering August 10 to vote on a bond issue of \$120,000 to build two new ward school buildings.

the county.

LARGEST SCHOOL FUND.

The largest amount ever distributed in the school apportionment has been virtually completed by State Superintendent Matzen at Lincoln. The amount is based upon 391,838 children of school age and shows a total of \$601,-919.96, distributed to the counties of the state as follows:

	County.	Amt. Due.	County.	Amt. Dua
	Adams	\$9.612.18	Howard	6.182.05
ı.	Antelope	8,534.34	defterson	8,130,50
ш	Arthur	1.063.03	Jonnson	5,285.15
	Banner	1,213.79	Kearney	4,534.46
	Blaine	1,385,26	Keith	2,930.82
	Hoone	7.263.20	Keyn Paha	2,459.56
	Box Buite	2.961.48	Kimball	2,608,34
ĸ.	Boyd	5.069,42	Know	10,821.39
	Brown	2 747 89	Lancacter	
'n	Huffnlo	10,686.39	Lancacter	28.725.89
g	Duri	6,178.58	imeom	10,093.74
	Butler	7,620.00	Logan	1,345.83
ŗ.	Chies	F 507 00	Loup	1,606.76
H	Cectar	9.0000.70	Madison	9.849.78
ŀ.	Chase	2.0024.74	McPherson	1,436,22
Ю	Cherry	3.021.71	Merrick	5,337.84
М	Cheyenne	6.099.20	Morrill	3,974.98
E.	Clay	4.407.45	Nance	4,886,39
ř	Colfax	6 982 99	Nemaha	6,467.40
۶.	Cuming	6,010,50	Nuckolis	6,724,42
e.	Custer	99333333	Otoe	9,239.70
		15,278,62	Pawnee	5.414.83
ě.	Dakota	A. 正常体 文件	There is be broom	2.782.97
N	Enwson	5.162.81	Pheips	4,788.03
H	Dettel			6,218,02
•	Dixon	1.675.14	Patte	9.881.14
	THEORY	0.080.07	420011c	5,283,71
63	Dodge	10.197.36	Dad Willes	
	Douglas	55.247.16	Direction metals are	9,327.53
9	frandy	3,224.06	Rnek	2,508,20
ŭ.	Fillmore	6,847,27	Saline	8,654,67
N.	Franklin	5.39235	Sarpy	4.064.11
п	Frontier	5,575,70	of margaretter are	10 007 12
ı	Fornas	6,522,40	Stotts Bluff	9,181.24
ð.	Cingo	13.265.27	Seward	7,888,92
v	Garden	3,210,75	Sheridan	.041.76
и	Carneld	2,241.48	Sherman	
н	Gosper	2,832.92	Sioux	6.126.90
п	Grant	698,57	Sapux	2,692.86
Ш	Greeley	4.748.50	Stanton	4,414.33
п	Hatt	0.010.00	Thomas	7,443,96
54	Hamilton	6.648.57	CHOTHES	832.94
ij	Harian	5.097.45	Thurston	4.244,10
	Hayes	2.177.68	Valley	5,208.88
•	Hitchcook	7. 574 15	Washington	6,067.63
١	Holt	8,834,12 8,264.20	Wayne	P.718.44
	Hooker	500 10	Webster	5.843.50
ď,		582.16	Wheeler	1.866.72
			York	3.151.49

Edam Drake of Bridgeport, a soldier, drew No. 1 in the land drawing contest at Alliance, entitling him to homestead rights on a 640 acre fract of some of Aroused by the death of Mrs. Je- the best land in Morrill county, Other Nebraska ex-soldiers who drew first in an automobile accident near Fre- choice on the other tracts are; Fredmont because an approaching driver crick Johias Wortle, North Platte, 480 did not dim his headlights, Dodge acres; Ira David Bryond, Lincoln, 639 county authorities have instituted a acres; Karl C. Kaschke, Oshkosh, 320 campaign for speed and headlight law acres; James Capplegate, Lincoln, 646 acres; Charles F. Tous, Exeter, 480 acres; Lonnec R. Shears, Broadwater, 610 acres. The land, totaling over 4,000 acres, was recently restored to home fead entry by the government, following several years of litigation,

County assessors of Nebraska, meeting with the state board of equalization at Lincoln approved a plan for making valuations of real and personal property in the counties. The planof the board has been to assess land on the sale valuation and reach an average for each county. This will raise the assessments in some countles.

Michael R. Sullivan of O'Neill, former state bank examiner, was appointed receiver of the defunct Farmers' bank of Page. Eugene Smith, president of the bank, was found dead in a cow pasture, his head in a barrel of water, several weeks ago. His death disclosed that he had manipulated the bank's funds and records.

The steady advance of land values in Nebraska was made apparent the other day when Jeff J. Newman, who homesteaded in Perkins county 12 Jonathan. He had sacrificed much years ago on the virgin prairie, sold and endangered his life for David's his 4,400 acre farm near Venango for more than a half million dollars.

Lincoln merchants who guaranteed to make up any amount over the \$700,000 appropriated by the 1915 legislature for extending the State University grounds will be required to pay about \$4,500 for the improvement.

The first 1920 Kimball county wheat was marketed, the other day, by Wilflam Gray, and brought \$2.50 per bushel. It was from a field averaging ferty bushels to the acre.

Petitions are in circulation in Chadron to authorize the expenditure of \$89,594 by the city, to take up the deficit created in the new water extension program.

J. O. Randall of the state agriculmen at South Omaha the other day, tural college at Lincoln estimates that while there visiting, that farmers of nearly 50 per cent of Nebraska's 130,-

The Odd Fellows' lodge at Hebron. surrendered its charter to the grand lodge of Nebraska because so many of-

Its members have died or moved away. Nebraska's corn crop for this year is estimated at 188,000,000 bushels by the state department of agriculture. Reports from threshers in Seward

county show wheat yields running over 30 bushels to the acre. By a vote of 93 to 56 people of Mur-

dock voted for a consolidated school Reports show the wheat yield in sev-

eral sections of Thayer county is making \$100 an acre. Work on \$310,000 worth of new pay-

ing for Chadron was started a few days ago. Federal census figures give Greeley

county a population of 8,685.

It is estimated that railroad workers in Nebraska will receive over \$500,-000 additional salary monthly, as the result of the 21 per cent increase eral labor board at Chicago.

Aaran S. Watkins of Germantown. Ohio, was nominated for president and D. L. Colvin of New York for vice president by the national prohibition convention at Lincoln. Prior to the nomination W. J. Bryan was chosen for the drys' standard bearer but refused the honor, stating he preferred to stick with the alcinocratic party.

A movement is on feet at Fremont national guards.

Things are becoming quite lively around the fair grounds at Lincoln in preparation for the 1929 State Fair, September 5 to 10.

E. F. Fike, cashier of the Nebraska At an election for the purpose of State bank of Valparaiso, was disconsolidating rural schools of the dis- charged at his preliminary hearing betricts, voters of Lillian community, fore County Judge D. M. Parmenter at Custer county, defeated the proposi- Wahoo on charges of submitting false tion by thirty-nine votes. It was the reports to the department of trade and first consolidation school election in commerce on the call issued February 14, 1920.

IMPROVED UNIFORM INTERNATIONAL

SUNDAY SCHOOL

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Moody Bible Institute of Chicago.) (Copyright, 1920, Western Newspaper Union)

LESSON FOR AUGUST 8

KINGLY KINDNESS OF DAVID.

LESSON TEXT-II Sam. 8:15; 9:1-13. GOLDEN TEXT-David executed judgment and justice unto all his people.-

ADDITIONAL MATERIAL Dest 28:

PRIMARY TOPIC-David Kind to a JUNIOR TOPIC-David's Kindness to

INTERMEDIATE AND SENIOR TOPIC -David Showing Himself Kingly. YOUNG PEOPLE AND ADULT TOPIC -Elements of Strength in David's Char-

1. David's Righteous and Impartial Reign (8:15).

When he was established as king over all Israel, he executed judgment and justice unto all his people. In this respect he stands as a type of the Lord Jesus Christ; for when Davld's greater son, the Lord Jesus, shall reign over all Israel, righteousness and justice will prevail in, all the

II. David's Inquiry for Some of Saul's House to Whom He Might Show Kindness (9: 1-3).

This story of faithful love to a dead friend is quite refreshing. David experienced great grief when he received the news that Jonathan had fallen in battle. Now when he is made king and success has crowned his efforts in the subjugation of his enemies, he sets himself to make inquiry as to whether there is any one left of Saul's family to whom he might show kindness for Jonathan's sake. When Mephibosheth, Jonathan's son, was found, David ordered him to be brought to him and restored to him his grandfather's estate. Being unable to cultivate it on account of infirmity, he arranged that it be cultivated for him. Not content with this, he ordered that Mephibosheth should eat at his own table as one of his sons. This example of David's nobility teaches us that those who are blessed and prospered should step to inquire as to whether there are not some deserving ones whom they can help. It may be that children of some old friends who rendered us help in former days need care and help. Then, too, some faithful servant of God could be cheered along life's way. This should not be simply done as an act of charity, but in recognition of some lasting obligation in view of help rendered by their fathers in bygone days. This was the case with

The chief value of this lesson will be realized by making it a living story illustrating the plan of salvation. David's making inquiry for some one upon whom he can bestow kindness illustrates God taking the initiative in providing salvation for lost and needy souls. This is clearly suggested in David's expression, "show the kindness of God." Mephibosheth did not seek David's help or sympathy. Quite likely he had a fear and dread for him like the sinner has in many cases for the Lord. Salvation originated with the Lord. He did not make this provision because of man's merit, but out of a heart of grace, for the sake of another, even Christ.

III. Mephibosheth Is Found (vv. 4.

This lame man was found in the house of Machir in Lodebar. This strikingly illustrates the sinner's condition. The sinner is utterly unable to walk uprightly before the Lord. Mephibosheth was in the house of Machir, which means "sold." This is exactly the sinner's condition-sold unto sin and Satan. Lodebar means "no pasture." This, too, suggests the sinner's condition of soul which nothing can satisfy but God. The sinner maimed and enslaved by sin has an "aching void" which only God and his grace can satisfy.

IV. Mephibosheth's Sense of Unworthiness (vv. 6-8).

When he was brought into the presence of the king he reverently fell upon his face. Every sinner in the presence of God feels unworthy of his saving grace.

V. David Restores to Mephibosheth the Forfeited Estate of His Father

He not only restored this estate, but provided a means of tillage. God not only receives us into his family as children and restores to us the estate forfeited by Adam, but provides for its culture and development.

VI. Mephibosheth at the King's Table (vv. 11-13).

This act of kindness on the part of David was done out of the sincerity of his heart. This illustrates God's kindness to us in Christ.

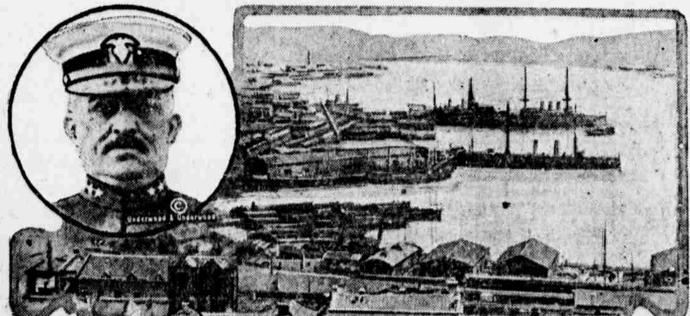
Find Good in Evil.

Train yourself to find the good in what seems evil, to make of disaster an opportunity for your courage, to master suffering by patience to learn from sorrow sympathy .- G. S. Merriam.

Rooted In Christ.

As ye have therefore received Christ Jesus the Lord, so walk ye in him: rooted and built up in him, and established in the faith as ye have been taught, abounding therein with thanksgiving.-Colossians 2:6 and 7.

With the U. S. Navy at Vladivostok



The picture shows a view of Viadivostok harber showing the United States battleship New Orleans in the foreground, a Japanese battleship next, and a Chinese battleship in the rear. The insert shows Admiral A. S. Gleaves. commanding the American paval force.