

MILLIONS WILL SEE SUN PASS INTO SHADOW

Eclipse Wednesday to Be Greatest Astronomical Show in Years.

(Continued From Page One)

right at the sun with the unprotected eyes. To do so is to run the risk of permanent damage to the retina, and possible blindness. Smoked glass is an old standby for solar observation, but even better, and more readily available in these modern times, is an old, densely exposed and developed photographic negative.

If you have a small telescope, with a tripod, or some other firm support, it may be used. There are special solar eyepieces for telescopes, which reduce the light sufficiently to permit the observer to look right through it when pointed to the sun.

Screen More Convenient

Still more convenient, and permitting a view by several people at once, is a white screen, placed where the back of one's head would be when looking through the telescope. A collar, consisting of a cardboard disc with a hole cut in the center, may be placed around the telescope to shield the screen from the direct rays of the sun.

Then, if the instrument is pointed to the sun, and it is focused by pulling the eyepiece in and out, an image of the sun several inches in diameter can be seen on the screen. Perhaps a few sunspots will be visible, though that is not so likely, because this is the time of fewest spots in the eleven-year cycle in which they wax and wane.

With such a device, at about 1:15 p. m., central standard time, on eclipse day, a slight nick will appear in the sun's right hand edge, as seen in the sky. This nick will increase gradually in size, finally leaving only a narrow crescent of sunlight.

The dark circle, of course, is the moon, invisible until it actually comes in from the sun. At about 2:30, or about 2:25 in southern Quebec, totality will arrive. If you go to the northwest, you will see the moon's shadow approaching, at a speed of about 2,000 miles an hour.

Shines Through Moon's Veils

Or, if you look at the sun at this same time, you will see the crescent of sunlight break up into a series of bead-like spots of light. These are called the Bailey's beads, after the English astronomer who first described them, and they are caused by the sun's light continuing to shine through valleys on the moon, while adjacent lunar peaks already have passed beyond the sun's edge. But the Bailey's beads last only an instant, and then the flashes of light around the moon's dark disk, now visible in its entirety, the solar corona, which has been observed to extend for nearly 12,000 miles from the sun.

Now it is safe to look directly at the sun, for the light of the corona is about a millionth as bright as the unobscured sun, or about half as bright as the full moon. Possibly you may see some brilliant spots of red light, close to the lunar disc. These are the solar prominences, giant flames of hydrogen and other gases, often rising to a height of several hundred thousand miles. Even a very small one could engulf the earth. The prominences are the brightest things visible during a total eclipse, even brighter than the corona itself.

Stars Come Into View

Around the eclipsed sun, which will be in the west, 30 degrees above the horizon, the brighter stars and planets will come into view. The planet Jupiter will shine brilliantly just to the right of the corona; farther to the right, and lower, will be seen Mercury.

The star Regulus will appear below Jupiter, Deneb will be above the sun and Spica to the left. Castor and Pollux, the twins, will be visible in the northwest.

Though the sun will be obscured, the ground will not be as dark as on a moonlight night. In addition to the light from the corona, there is considerable illumination from the part of the atmosphere outside the conical shadow of the moon.

But not for long can one gaze on the eclipsed sun. At the center of the eclipse path it will last for about a hundred seconds. Even forty miles either side of the center it will last for at least a minute. But in the outer ten miles of the strip, its duration falls off rapidly. Right on the edge, it may last only a fraction of a second.

The end of the eclipse is heralded by the reappearance of the Bailey's beads, this time on the right hand edge of the sun. The beads coalesce to form the crescent, which increases in size as the moon moves off to the left. At about 3:35 there is again only a nick in the sun's edge, then this vanishes and the eclipse is over.

Astronomer's to Be Busy

Spectacular as will be the total eclipse of the sun visible in eastern Canada and New England, most of the astronomers along the path will be too busy to pay much attention to its beauties.

Their time, in the brief hundred seconds during which the moon will cover the sun, will be occupied in taking photographs which they will study for months, and even years. Few of the astronomers will be able to give the eclipse itself more than a passing glance, and some actually will have to work during the precious moments in a dark room at the end of a long camera, where they will not see the eclipse at all.

The cameras will be of all varieties and sizes. Largest will be one 85 feet long, which will be set up at Conway, N. H., by a party from the Franklin Institute, Philadelphia.

Though the astronomer can predict a total eclipse of the sun, like that to be seen Wednesday, years in advance, the science of meteorology has not reached the same degree of accuracy.

Not until a few hours before the eclipse happens will it be possible to tell with certainty whether the weather will be clear, or whether clouds will render the elaborate preparations of no avail.

Rain is not necessary to spoil an eclipse prediction. A single cloud, properly placed before the sun in an otherwise clear sky, will do just as much to ruin eclipse observations as a heavy storm.

FARMERS HOLD FIRM BLOCKADE

Trucks Stop When Strikers Shout 'Halt'—or Suffer

This is the second story in a series of five by Bruce Catton, staff writer for NEA Service and The Times, who was sent to the Midwest on a belt to find out what the farm strike is all about.

BY BRUCE CATTON

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SILOUS CITY, Ia., Aug. 30.—The picket lines of the striking Iowa farmers present an interesting, unforgettable picture at night—a weird picture of half-lights and deep shadows, with hard-hatted grimaces lying beneath a verger of gay humor.

The picket lines, of course, were established to keep farm produce from being moved to the markets until a higher price has been obtained.

In the Sioux City area, where the strike originated, the lines are just about air-tight. "It is not exaggerating to say that a regiment of regulars hardly could keep truck loads of livestock and other produce from entering the city any more efficiently than the farmers have been doing it."

Six main roads are being picketed—three on the Iowa side of the Missouri river and three on the Nebraska side.

There never are less than forty or fifty pickets on each road. Sometimes each post has as many as 200 men on duty.

At night, when you approach one of these posts, going toward Sioux City, you find a military air about things—a military air which, at the same time, is coupled with a strange informality.

The men are all dressed alike—blue overalls and shirt, battered hats of felt or straw, heavy boots. They lounge about carelessly, chatting quietly, presenting a stony front to strangers, and watching every car that passes with exceeding care.

The first thing you encounter is an outpost or two, three or four men. They will be standing or sitting beside a huge sign, illuminated by an oil lantern, which says "STOP, Farmers' Holiday Association."

When the headlights of a car appear down the road the men become tense and watchful. As the car's headlights pick them out they stand up, looking forward.

If it is a pleasure car, they let it pass—looking carefully, however, to see if farm produce happens to be loaded in the back seat. If it is a truck, they signal it to stop.

Usually the truck stops. A couple of the men spring up on it and inquire "Molag Ueshrdlu hrdl unnsip's interior. If it is empty, or if it contains 'noncontraband' goods, they let it go on.

If it contains livestock, poultry, eggs or grain they order it to turn back. The driver, if he is wise, obeys without a murmur. Sometimes, of course, the truck does not stop. Then the men in the outpost signal, with a red lantern, to the main body, a hundred yards down the road.

The main body emerges from the shadows in a fever of activity. Big logs, railroad ties and beams are tossed across the road.

That usually persuades the driver to stop. If he tries to go on through he is apt to explode a tire or two, or break a spring; even if none of these things happen, his speed is certain to be cut down enough so that the men can climb up on his truck—and the result is the same.

CIRCULATE about among the pickets and you will find them telling of incidents in which recalcitrant truck drivers were made to stop.

"There was a fellow tried to get through this afternoon," says one man. "He blundered in the black night. He just stepped on the gas when we threw down the railroad ties."

"He lost three tires, broke his

stars come into view, which will be in the west, 30 degrees above the horizon, the brighter stars and planets will come into view. The planet Jupiter will shine brilliantly just to the right of the corona; farther to the right, and lower, will be seen Mercury.

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A three-man outpost of the farmers' "army" is pictured above, guarding a highway near Sioux City and ready to challenge any truck bearing produce to market. When these fellows say "Halt!" they really mean it, for a few hundred yards down the road are farmers ready to toss cross ties, logs,

front axle and busted his radiator. And was he mad?"

"Oh, he wasn't carrying anything. His truck was empty. He just wanted to show us he didn't have to stop."

There are chuckles. Some one murmurs, "He showed us, all right."

Two big trucks loaded with hogs come up out of the night and are halted by the outpost. The drivers lean out as the situation is explained to them.

They have driven sixty-five miles; they will have to cart their hogs sixty-five miles if they turn back. They peer down the road to where the main body, in attention caught, sits restlessly.

The hogs grunt plaintively. They are getting relieved from the runways in the Sioux City stockyards, if they only knew it. The drivers accept fate, turn about, start home.

ONE of the organizers of the strike tells you that being in charge of the picket lines isn't an easy job.

"You've got to keep up their enthusiasm," he says, "but you've got to keep it within bounds, too. This isn't a lark. It's serious business."

"We don't want any trouble, but we are going to do what we've got to do. Keeping the boys keyed up without getting 'em keyed up so high that they get into fights with the truck drivers isn't an easy job."

A grinning, deeply tanned young picket complains that most of the producers and shippers in this part of the corn belt have given up trying to move goods to Sioux City by truck.

"Shucks," he says, "when no trucks come along it ain't exciting."

A little group of older men

moves over to the reporter as he starts away.

"Now then," they say, "be sure you give us a good write-up, and make folks understand that we're not here to kill, because we're fighting for our rights and we're going to get 'em."

"It isn't only ourselves we're fighting for. We're fighting for all America, because the wealth of the nation comes from the farms, and when the farmer is broke the whole nation is in trouble."

"How long will this strike last?" they are asked.

"We'll stay here," says an elderly man with white stubble on his chin, "until hell freezes over, and then we'll skate across on the ice. You tell 'em that."

MEANWHILE, the husky farmers who patrol the roads outside of Sioux City seem to have the situation very well in hand.

One man says that in ordinary times some 600 truck loads of farm produce reach the Sioux City markets daily. Soon after

the strike began the number was cut to about ten.

From the outset, Sheriff John A. Davenport adopted anything but an aggressive attitude.

If a farmer came up and says that he wants to bring a load of goods to town, the sheriff will send out deputies to escort him; otherwise, he keeps hands off.

"I don't know where all this will end," Davenport says. "So far we have not had any serious trouble. I hope that we won't have any."

"We are doing all that we can to make the affair go along peacefully."

A husky farmer beyond the picket lines remarked:

"One of our farm boys can lick any three of those deputies, and the deputies know it."

Next—A close-up description of the farmers' plight as given by one of them—Fred Krige, president of the Nebraska Farmers' Holiday Association—who says, "You can work your head off for a full year and then wind up \$2,000 in debt, under present conditions."

and spiked boards into the path of any vehicle whose driver fails to obey the command.

Below are two weary pickets who have gone off duty, catching a little sleep in a nearby hay stack. The map shows the area around Sioux City in which the farm strike began and from which it spread.

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'THEY TELL ME' SMELLS CRIME IN DERBY RACE

Leaders Shake Out of the Dandruff and Tune Up for Hot Finish.

SKULL STANDINGS

Tom Quinn	10,354
Judge William H. Sheaffer	7,722
Cootie McGinnis	5,866
E. W. McGinnis	2,565
Earl Cox	1,436
W. E. McGinnis	1,355
W. E. (Bill) Williams	626
Police Chief Mike Morrissey	482
Joe W. McGinnis	427
Henry O. Goettl	409

THEY TELL ME—that Tom is in front today in the Brown Derby and that he's putting front room furniture he sells at White's in kitchens to make way for his ballot counters with their rubber stamps.

Now, that just reminds the Old Maestro—Ben Stern—vitch—that "two watermelons can't be held in one hand."

THEY TELL ME—that Judge William H. Sheaffer is stuffing the ballot boxes. Ah! methinks me left lobe hears, via the grapevine, the underground railway and the Saturday Afternoon Tatting circle that his backing can be laid at the door of the ones who have nine lives, i. e., and a b. c. too, which equals Cap Coffin, General Coxey, the fellow who wrote the K-K-Katy, and that double-crossing vote-getter of a senator who writes me mash notes at Christmas.

What! Hiner, Too?

They Tell Me—that Ward B. Hiner, candidate of the Liberty party for the gubernatorial nomination, is shaking the dandruff out in the hope of getting the royal headpiece. (Ah! Printer! another epigram. Our hatdom for an epigram, any kind of an epigram. Good! that's just the thing. Dust it off.)

"When I have put my head into the mortar, why should I fear the pestle. Our kingdom will not contain two kings. A dew-drop is a storm in half an hour."

At this juncture THEY TELL ME ran out—or maybe—it was the Printer. No! it was the "pestle." Oh! for a "pestle" and a cold bottle. But, anyway, the epigrams had all been used for today's kiddie hour over Station B. U. L. L.

So you'll have to excuse THEM and know that what he wanted to tell you is that the Brown Derby campaign to select the city's most distinguished citizen is rife with fraud charges, wind-jammers, and just oozing with votes.

Dates on Ballots

The updated ballots deadline brought in precincts from Beech Grove to Broad Ripple. Today's the day of the first dated ballot. Get your votes in before midnight Wednesday on today's date.

Remember, the last dated ballot in this contest will be printed today. THEY TELL ME—broadcasting.

"I've got one more epigram for you. It's for you, Thomas Quinn, Judge Sheaffer, Cootie McGinnis, i. e., and a b. c. too. 'Hold fast to thine hat. It may be blown off by the wind! Toodle-loo!'"

"But I'm THEY TELL ME. I just want to say one word before you sign off. Hello! peepsy."

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