Summary of Newspaper Articles

Bozeman Daily Chronicle – Bozeman, MT (last date searched 07/05/1925)

Headline: Montana Is Shaken By Earthquake Shocks

Date: 06/28/1925

Info Categories: A, B, E, G, L, N, P

Headline: Gallatin County Is Badly Damaged By Earthquake Shocks

Date: 06/28/1925

Info Categories: A, B, E, G, L, N, P, R

Headline: Gallatin County Center

Date: 06/28/1925

Info Categories: P

Headline: Three Shocks At Billings

Date: 06/28/1925 Info Categories: B, E, P

Headline: Damage Done In Various Parts Of State By Quake

Date: 06/28/1925 Info Categories: B, E, G, L

Headline: Temblors N Washington

Date: 06/28/1925

Info Categories: E

Headline: Felt At Lewistown

Date: 06/28/1925 Info Categories: E, G, L, N

Headline: Third Shock In Billings

Date: 06/28/1925

Info Categories: E

Headline: Park County Shaken

Date: 06/28/1925

Info Categories: E, P

Headline: Felt At Spokane
Date: 06/28/1925

Info Categories: E

Headline: Trains Hemmed In

Date: 06/28/1925

Info Categories: G, L

Headline: No Damage In Helena

Date: 06/28/1925 Info Categories: B, N, P

Headline: <u>Damage In Great Falls</u>

Date: 06/28/1925

Info Categories: B, E

Headline: White Sulphur Springs Is Hit

Date: 06/28/1925 Info Categories: B, E, G, I

Headline: Gallatin's Luck
Date: 06/30/1925

Info Categories: I, P

Headline: Property Damage in Gallatin May Reach More Than \$500,000

Date: 06/30/1925

Info Categories: A, B, E, G, I, L, P, R

Headline: Montana Counts Loss From Recent Earthquake Shocks

Date: 06/30/1925 Info Categories: B, E, I, R

Headline: A Timely Warning

Date: 06/30/1925

Info Categories: A

Headline: N. P. Track Now Open

Date: 06/30/1925

Info Categories: R

Headline: Quakes Were Not Related

Date: 06/30/1925

Info Categories: S

Headline: Earthquakes In Montana And California Recorded

Date: 06/30/1925

Info Categories: S

Headline: Three Forks Quake Damage Is Greatest

Date: 07/01/1925

Info Categories: E, I

Headline: Virginia City Hit
Date: 07/01/1925

Info Categories: B, I

Headline: <u>Hot Springs Spout</u>

Date: 07/01/1925

Info Categories: B, G

Headline: State Drive For Relief Of Gallatin Schools

Date: 07/02/1925

Info Categories: A, I

Headline: Milwaukee Has Heavy Losses Near Maudlow

Date: 07/02/1925 Info Categories: E, G, I, L, N, R

Headline: New Lake At Lombard

Date: 07/02/1925

Info Categories: G, L

Headline: <u>Damage To Asylum</u>

Date: 07/02/1925

Info Categories: B, P

Headline: Repairing Earthquake Damage

Date: 07/03/1925

Info Categories: A, B

Headline: Dynamite Explosions Make Earth Tremble

Date: 07/03/1925

Info Categories: E, S

The Missoulian – Missoula, MT (last date searched 07/12/1925)

Headline: Earthquake Rocks Entire Treasure State

Date: 06/28/1925 Info Categories: E, N, P

Headline: Wyoming Valley Again Scene Of Mountain Slide

Date: 06/28/1925

Info Categories: G, L

Headline: Previous Quakes Felt In Montana

Date: 06/28/1925

Info Categories: E, N

Headline: Auto Takes Plunge Due To Earthquake

Date: 06/28/1925

Info Categories: L, P

Headline: Much Damage Is Reported Done At Manhattan, Sulphur Springs;

Garden City Is Severely Shaken

Date: 06/28/1925

Info Categories: A, B, E, G, I, L, N, P

Headline: Jury Is Quick To Agree When Building Rocks

Date: 06/28/1925

Info Categories: N, P

Headline: Cities In Valleys Around Missoula Are Badly Shaken

Date: 06/28/1925 Info Categories: B, E, N, P

Headline: Earth's Movements Explained By Clapp

Date: 06/28/1925

Info Categories: S

Headline: Three Passenger Trains Are Lost In Quake Slides In Vicinity Of

Three Forks

Date: 06/28/1925 <u>Info Categories</u>: A, B, G, I, L

Headline: Further Tremors Rock Central Part of State

Date: 06/29/1925

Info Categories: A, B, E, G, I, L, N, P

Headline: Marooned Passengers Are Rerouted; Milwaukee Will Be 30 Days

Recovering From Quake Slides

Date: 06/29/1925 <u>Info Categories</u>: A, G, I, L, R

Headline: Mountain Regions Have Felt Quakes During Late Years

Date: 06/29/1925

Info Categories: E

Headline: Yellowstone Is Safe for Travelers; Quake Damages Park Little

Date: 06/29/1925

Info Categories: G

Headline: Earthquake Topic Of Discussion By Missoula People

Date: 06/29/1925

Info Categories: P

Headline: Boston Foundation Wants Photos Of Region Affected By Temblor

Pictures May Be Taken By Plane

Date: 06/29/1925

Info Categories: S

Headline: Painter's Nerve Shaken By Quake

Date: 06/29/1925

Info Categories: N, P

Headline: Another Wyoming Mountain Tumbling

Date: 06/30/1925

Info Categories: G, I

Headline: Damage In Montana From Temblor Will Not Exceed \$500,000

Date: 06/30/1925

Info Categories: E, I

Headline: Missoula Bridge Crew On Way To Quake Scene

Date: 07/01/1925

Info Categories: A, L

Headline: Montanans Will Be Asked To Rebuild Schools

Date: 07/02/1925 Info Categories: A, B, I

Headline: Olympian Is Saved By Giant Boulder

Date: 07/02/1925 Info Categories: G, L, P

Headline: Milwaukee Slides Will Cost Railway Million To Remove

Date: 07/02/1925 Info Categories: G, I, R

Headline: May Insure Here For Earthquakes

Date: 07/03/1925

Info Categories: A

Headline: Hot Water Supply At Springs Is Increased

Date: 07/03/1925

Info Categories: G

Headline: The Mysterious Earthquake

Date: 07/04/1925

Info Categories: S

Headline: Earthquake Insurance Policy Written Here

Date: 07/04/1925

Info Categories: A

Headline: Milwaukee Road May Be Opened Tomorrow

Date: 07/10/1925 Info Categories: G, I, R Headline: Chimney Settled by Quake; Fire Starts

Date: 07/12/1925

Info Categories: B

Headline: Montanans Have A Chance To Help Own People

Date: 07/12/1925

Info Categories: A

Information Categories

A -- Aid:

provide medical services, shelter, donations, loans, advice, encouragement, implement safety measures

B -- Building Damage:

structure itself plus windows and chimneys (typically damage visible from outside the building)

E -- Earthquake Description:

where, when, duration, direction, sound, motion, number and timing of aftershocks

G -- Geologic Effects:

changes at the Earth's surface, fault scarps, rockfalls, landslides, ground cracks, ground subsidence, sand boils, water spouts; effects on springs, lakes, wells

H -- Humor:

I -- Impact:

changes in daily routine; rumors; influx of reporters, politicians, cost in dollars

L -- Lifelines:

effects on transportation: roads, bridges, railroads, airports effects on communications: telephone, telegraph effects on power, gas, water, and sewer lines effects on dams

N -- Nonstructural Effects:

effects on plaster, furnishings (typically damage or rearrangement of furnishings visible inside a building)

P -- People:

effects on and responses to, during and after; deaths, injuries, near misses

R -- Recovery:

clean up, rebuild

S -- Scientific:

explanation of the day

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MONTANA IS SHAKEN BY EARTHQUAKE SHOCKS Whole State Feels Quakings From The Earth's Convultions Temblor Rocks Entire Northwest And Does Great Damage In Places--Trains Stalled By Rock Slides And Buildings Wrecked But No Loss Of Life Reported

Billings, Mont., June 27--(AP)--Sections of four western states representing the nations summer playground, were harassed by earthquakes for three hours tonight. Panic resulted in practically every city in western Montana. Just north of Yellowstone Park, at Three Forks, Mont., three land slides were reported to have hemmed in as many passenger trains loaded with vacationists.

Pavements and buildings were cracked in many cities and a half dozen buildings are reported to have been demolished, an electric railroad line was temporarily crippled and there was a recurrence of the recent avalanche at Jackson, Wyo., but no where was any loss of life reported.

The Olympian, fast train of the Chicago, Milwaukee and St. Paul railroad between Chicago and Seattle, is believed to be stalled between two of the avalanches in the vicinity of Three Forks, and two other trains, one a Milwaukee train and the other a Northern Pacific, are reported hemmed in by the slides.

A special train made up at Livingston is racing to the rescue, but there is reported to be little danger.

Reports of damage late tonight began creeping in. The Meagher county court house at White Sulphur Springs, Mont., collapsed and the damage is estimated at \$100,000. The quake was felt from Seattle east to the South Dakota line; from Spokane south to Thermopolis and Casper, Wyo. It left its trademark in northern Idaho, and telephone company officials at Jackson, Wyo., shortly after 1 o'clock tonight declared that the recurrence of the avalanche across the Gros Ventre valley near there evidently was a part of the general disturbance.

Pavements and buildings in Livingston were cracked, the openings varying from a mere crack to breaks nearly an inch wide.

Substations along the Milwaukee railroad's electrified line from Harlowton over the mountains were damaged. Most of this damage is believed to be in the vicinity of Three Forks.

The earth was reported to be still trembling slightly at Livingston at 8:40 o'clock. The quakes were felt as far south as Thermopolis, Wyo., which reported perceptible tremblings of the earth at 6:35 o'clock.

Reports that great damage had been done at Manhattan, Mont., were brought to Bozeman, but no details were given.

There was no material damage to Yellowstone park, according to report made by Superintendent Albright after he had heard from all sections of the playground. Superintendent Albright said reports indicated the quake diminished in intensity as it moved south. The quake is believed to have no connection with the avalanche in the Gros Ventre river valley near Jackson, Wyo., early this week, although Jackson is but a few miles south of the area in which the quake was felt.

Billings, Mont., June 27--(AP)--Nearly two thirds of the State of Montana was shaken vigorously by two series of earthquake shocks early tonight, the first at 6:23 o'clock and the second at 7:07. Panic seized thousands of people in Billings, Butte, Anaconda, Great Falls, Missoula, Livingston, Bozeman, and Helena and they rushed clear of buildings, fearing their lives.

Although no loss of life was reported at first, word that the temblers had taken their toll in property damage soon began to trekle in.

The Chicago, Milwaukee and St. Paul electrified railroad line between Harlowtown and Three forks was reported put out of commission by the quakes and an avalanche of unknown proportions was reported at Lombard, Montana. The walls of a hotel in Great Falls cracked under the upheaval, but the building withstood the shock.

A severe quake was felt at Jardine. It was feared the mines there had been damaged. Livingston, near Yellowstone park reported a series of three tremblors, the first at 6:23, the second at 7:06 and the third at 7:15. The shock created a panic among tourists in the big playground and Park Superintendent Albright ordered out the ranger forces to inspect all active formations.

Police in Livingston said the tower of a high building there swayed with an arc-like movement. Many women fainted there. Out of all the reports of panic and minor property damage there was none telling of any loss of life.

Later reports from Manhattan said that the bank building there was damaged and that its windows were shattered by the temblor. The quake was felt distinctly at Spokane, Wash., where the seismograph at Gonzaga university recorded one shock and then quit. Persons in the top floor of a 15-story office building declared they felt the structure sway. Seattle was the farthest point in the northwest to report the shocks and Rosebud, Mont., near the South Dakota line, was the farthest eastern point to report a temblor. There was a third shock here at 8:30 o'clock.

Steven T. Mather, superintendent of national forests, arrived here during the second series of quakes and was mainly endeavoring to get in touch with Superintendent Albright at Yellowstone park.

A still later report from Manhattan said two school buildings there had been practically demolished and that a theater, a bank and other business structures were badly shaken. It estimated the property loss at \$200,000. The entire Galintin valley was shaken by the temblors according to the report. Butte felt another shock at 9:30 and Anaconda reported its fifth at 9:41.

Three passenger trains, two of the Milwaukee road and the other a Northern Pacific train, are caught between two avalanches near Lombard, Mont., which were caused by the earthquake, and a special train was made up at Livingston to go to their rescue. Train No. 235 of the Northern Pacific with a load of tourists left the train at Logan, Mont., at 4:15 p.m., where they will continue to Yellowstone park.

SIX SHOCKS AT ANACONDA

Anaconda, June 27--(AP)--Six earthquake shocks ranging in intensity from the first which shook buildings and caused occupants to flee in panic to streets to one which was barely perceptible visited Anaconda between 6:20 o'clock and 10:25 o'clock this evening. The first two shocks followed each other in quick succession and lasted about 45 seconds. A third one at 7:05 lasted thirty seconds, the fourth at 8:37 of three seconds duration was barely perceptible. The one felt at 9:41 which was more violent and the last at 10:25 appeared to have gained in intensity. The first four and the last appeared to move from west to east but the fifth was from the north to south. Previous to the temblors a lightning storm raged, six persons being knocked to the ground and stunned by bolts that struck in various parts of the city. Damage from the quake was confined to the destruction of small and fragile objects.

NO DAMAGE AT MISSOULA

Missoula, June 27--Three distinct earthquake shocks were felt in Missoula and surrounding cities tonight. The first and most severe occurred at 6:23 o'clock. The second followed almost immediately while the third one was felt at 7:06. The people ran into the streets from their houses and everywhere considerable alarm was felt. At Darby and Hamilton in the Bitter Root valley, telephone reports stated plaster was shaken from the walls and merchandise toppled from shelves in stores. No damage was done in Missoula or in other cities reporting here. Polson, on Flathead Lake reported a severe quake but no reaction was noted on the lake.

QUAKE AT MILES CITY

Miles City, June 27--Earth shocks were plainly felt here tonight at 6:25 and 7:07 p.m. Pictures were shaken from walls and chandeliers moved with the tremors. In the larger apartment houses some families left the buildings. No one was injured and no damage was done.

EXCITEMENT IN HELENA

Helena, June 27--Two distinct earthquakes were felt at 6:23 and 6:25. The people poured into the streets and for a time excitement prevailed. Reports of minor damage have come in.

BUTTE ROCKED BY QUAKE

Butte, June 27--The most violent earthquake in the history of Butte rocked the entire city at 6:23 o'clock this evening. The tremor was divided into two shocks, the first and most violent lasting more than 10 seconds while the second one lasted for more than 20 seconds.

Before the first quake had ceased, the thousands of persons rushed into streets. Numerous chimneys were toppled, clocks stopped and several stoves were reported as being thrown over.

No damage was reported from the mines where thousands of men are employed underground.

LATEST REPORTS

Reports from Lombard at 12:30 this morning are to the effect that earth tremors still continue.

Train No. 15 on the Milwaukee, two sections, held up at Eustis, between Lombard and Three Forks, by rockslides.

Train No. 4, Northern Pacific held up at Helena indefinitely by rockslides near Trident. No one on any of these trains injured.

No damage was done to the Bozeman tunnel on the N. P. between Bozeman and Livingston.

[Bozeman Daily Chronicle; June 28, 1925]

GALLATIN COUNTY IS BADLY DAMAGED BY EARTHQUAKE SHOCKS Cities Along Yellowstone Trail Have Losses That Amount To \$500,000--Schools, Churches And Business Blocks Suffer--No Loss Of Life Reported

Earth tremblings with two distinct and severe shocks, occurring within an hour, last evening, were experienced in several parts of Gallatin valley with estimated damage of a half million dollars done to the cities along the Yellowstone trail from Bozeman to Willow Creek. School buildings, churches, business blocks and private residences suffered from the quakes, the worst damage so far learned being the sections in and around Manhattan, Logan and Three Forks.

Wire communications were cut off with many of the cities in the western part of the valley during the evening, and the wild and exciting rumors of deaths and injuries were mainly the result of imagination.

Following the first shock, about 6:23, the people of the city considered they had passed through an experience that was interesting, and while many were frightened, there was a pleasurable excitement among the people.

Remain Up All Night

There was a light trembling a few minutes later, and then came the second shock at 1:23, which to many was the severest, and then the awful fear that accompanies such disturbances attacked the people. Throughout the night, many of the people of Bozeman and the other towns in the seeming path of the quake refused to go to bed and every exaggerated report was accepted by them with a conviction that this part of the world was coming to an end.

There were some people in the city who felt slight tremors as early as 4 o'clock in the afternoon. They say they cannot be mistaken, but refused to talk about them till the shocks later, which left no doubt in the minds of the people as to what they were.

Earth Breaks at Logan

Late reports from Logan, by motorists returning to Bozeman, say there are two fissures in the road about a mile this side of the town. Measurements were taken of one of these earth cracks, and the bottom could not be reached. They were said to be two or three inches wide and were most noticeable.

Trident, it was reported, also was damaged, the cement plant being wrecked, and the rock hills collapsing. The residence district was also included in the wreckage. The Northern Pacific tracks in that vicinity are said to be covered with rocks and made impassable. The reports from Willow Creek were that the town was badly shaken and that a fire was completing the damage. The wire connection with the city was down and verification of the reports could not be obtained.

Recalls Quake of May 31

The path of the quake, if such a thing can be scientifically stated, was not unlike the slight shock which was felt in Bozeman and vicinity on Sunday, May 31. At that time, houses were shaken, pictures fell off mantels and chairs and dishes were misplaced. White Sulphur Springs, Clyde Park, and a strip that went through Bozeman and southwest, felt this almost imperceptible movement of the earth's crust.

None of the reports that have been received indicate the source of the disturbances, and Yellowstone National park, where many supposed would be the worst affected, was comparatively restful.

The railroad companies traversing the state started their crews out to repair any damage that might interfere with the movement of the trains, and others were in readiness to respond to emergency calls.

Chronicle Phone Busy

The Chronicle office was besieged with telephone calls till the hour of going to press, by people anxious to hear from other communities wherein friends and relatives resided or were on vacation trips. Some of the most timid, unaccustomed to earthquake shocks, made insistent demands to learn when the next one would occur. When they were told that the Chronicle could not anticipate these disturbances, some of them were appeared, while others waited up till after 1 a.m., and then were somewhat relieved.

Gallatin Suffers Most

By far the greatest damage occurring in Gallatin county, as a result of last night's series of quakes, fell to the lots of Three Forks and Manhattan. Shortly after the disturbance occurred in Bozeman, word was received that the west portion of the county had been severely damaged, and as it was impossible to get into direct telephone communication, a Chronicle reporter made a hasty trip through the valley visiting Belgrade, Manhattan, Logan and Three Forks. It would be difficult to determine whether Manhattan or Three Forks suffered the most. In the latter city practically every business house on Main street was affected. The Sacajawen hotel, which is a large wooden building, suffered slight damage, only the brick chimney falling to the ground, although later inspection may develop more serious damage.

Damage in Three Forks

Avery's garage is almost a total wreck, the entire front having fallen out and the debris scattered to the center of the street. The west and south ends of the Methodist church are out, and the school building is badly damaged with a caved-in roof and much of the masonry out. The rear end of the Labor National bank is demolished and Barg's Drug store is similarly affected.

In the residence district there were many reports of broken dishes, misplaced furniture, and pictures fallen from the walls. A number of people were reported injured, but so far as could be learned, none were in a serious condition. The patients of the hospital were removed and placed upon the lawn, as it was considered they would be much safer there in the event of other shocks occurring. It is stated the residence of J. A. Siffert fared the worst of any of the residences.

Bridges Injured

The first bridge west of Logan, over a slough of the Madison river, sets firmly upon the piers, but the approach on the east side has sunken and for a distance of about 30 feet there are large cracks in the road. The bridge over the Madison apparently is all right, but the approaches on both sides are sunken with wide seams in the road. Early in the evening men were on guard at all the approaches, cautioning autoists to drive slowly and directing them over the dangerous places. Later in the evening many of these had been repaired and cars were passing without danger.

At Logan the schoolhouse was badly damaged as were also a number of the business houses. Railroad men stated that the Northern Pacific bridge across the Madison, the pier on the east side is cracked and the entire track has moved about three inches to the north. Men were leaving Logan for this point to erect slow orders for passing trains. The lunch room at the depot was closed, as the chimney was shaken down. So far as could be learned, no one was injured at Logan.

Manhattan Badly Wrecked

The main street of Manhattan presents much the same appearance as Three Forks. The cornice fell from the Gallatin Valley building, plate-glass windows in the Mains building, occupied by the Jameson-Vaughan company, are broken, and many other buildings are in a similar condition. The pride of Manhattan, the Community school building, is very badly damaged. The rear walls have bulged and the sides and front fallen both in and out. At 10 o'clock portions of the walls were still falling. The grade school was also badly shaken and damaged. As a precautionary measure, the fire department was ordered out and was in readiness for instant service if called upon. Only a few minor injuries were reported. Aside from a general shaking up, Belgrade has suffered no serious damage. A few bricks fell from buildings and the schoolhouse will need slight repairs. The residence of E. L. Heidel was struck by lightning during the electrical storm.

Bozeman was shaken rather abruptly out of its summer quiet last night about 6:20 by what is generally regarded as the most severe earthquake ever noted here. One prolonged shock seems to be the form in which the quake was felt here, though reports from other parts of the state indicate that two separate shocks were felt a minute or two apart. Before the people of the city were fully aware of just what had happened, about 7:05 a second shock, generally regarded as more severe than the first, took place, and by that time the city was thoroughly aroused and remained for several hours a most excited community. Slight shocks were felt at intervals later in the evening at the Chronicle office and elsewhere; but the two recorded above were evidently most severe.

The first quake brought hundreds from the hotels and other brick buildings on Main street to the middle of the street, and many nervous people hesitated for hours to return to their quarters. In the larger apartment houses there was intense excitement, and some terror, but no panic was reported that resulted in casualties. At the Deaconess hospital many of the patients were frightened, but were soon quieted and no permanent injury is expected.

Chronicle Bulletins

With the first shock, the Associated Press wire ceased to operate, and the wire service was interrupted a good deal for several hours. With some help from the telephone company The Chronicle began its series of window bulletins a few minutes after the first shock, and as the more or less interrupted bulletins came, the Chronicle's front window became the centre of attraction for the nervous and excited citizenry.

Many Rumors

Naturally the situation was fruitful of wild rumors. The first one was that the school building at Three Forks had been shaken down. It was several hours before the exact truth about that could be learned. Another most persistent rumor, which had no foundation in fact, was that train No. 219 on the N. P. bound from Bozeman to Butte, was missing and supposed to have been shaken into the Jefferson river.

The Chronicle sent a representative to Three Forks to learn the exact state of things in that direction, and gradually as wire connections were established again, the news of the quake over the state came in.

No Seismograph in Bozeman

It was ascertained that there was no recording instrument for earthquakes at the State college, though Professor Edmund Burke, was apparently out of the city, and could not be found. It was not possible last night, therefore to get any scientific accuracy as to the exact time, or duration of the quake, or the extent of the vibration. One man was quick-witted enough to take out his watch for the first quake and said that it lasted twenty-two seconds. That coincided with the observations at the Chronicle office where four members of the

night force had time enough to be puzzled, to decide what the trouble was, and what course to pursue, and then to hot-foot it to the street, where they were among the first to arrive, and still to see the buildings vibrating like leaves in the wind.

Local Damage Slight

So far as could be learned last night, the damage in Bozeman was only minor. The small gable on the west side of the tower on the Irving school, already condemned as unsafe, toppled to the west and a mass of several hundred bricks tore two large hole in the roof below. Several chimneys with lose bricks lost a part of their coping. At the State college, a little plastering fell from the ceiling of the old assembly hall in the Main building, and a new crack appeared in the ceiling. No other damage was noted by the watchmen. A report was on the street that serious damage had been done at the S. A. E. house, the former Byron Story residence on South Willson avenue, but the damage there turned out to be one small crack in the plastering. There were rumors of pictures shaken from the wall, and dishes shaken from the shelves, but no reports of extensive damage in this kind reached the Chronicle office.

Coal Cars Derailed

At the Northern Pacific station, there were five coal cars, some of them still loaded with coal, on the steep incline by the coal dock. The earthquake started these cars down the incline to the westward; but fortunately the derailing switch was open, and they never reached the main line. Three of the cars were shunted from the track, and the runaways came to a standstill with little damage done. One of the cars was thrown over far enough to obstruct the passing track, but the wrecking crew came from Livingston to clear the track, and would have had it clear before midnight, but they were ordered further west before the task was finished. The damage to the cars appeared to be slight. A few rails were torn from the track, and one switch wrecked.

Too Nervous To Sleep

A number of apartment dwellers and some residents of private homes were too nervous over the events of the evening to go to bed, and several organized impromptu camping parties for the night, preferring the hospitality of Mother Earth to the insecurity of brick walls and heavy roofs.

During the evening a story became current that some one at the college had predicted a more severe quake at one o'clock this morning. Such a prediction was made by one of the recent graduates of the college, on the basis of what has happened in the case of other severe quakes, which are rarely limited to a single shock. This prediction made a good many people still more nervous, and Bozeman was not a quiet nor comfortable town last night.

[Bozeman Daily Chronicle; June 28, 1925]

GALLATIN COUNTY CENTER

Bozeman people passed through their first experience with earthquakes and the subject of conversation throughout the night was confined to the experiences of other countries where such disturbances are prevalent. Sympathy was expressed for such stricken districts as Japan and other areas where there have been great loss of lives by other quakes.

As far as can be learned Gallatin county was the center of the disturbances, with the most damage occurring at Manhattan, Logan, Three Forks, Trident and Willow Creek.

[Bozeman Daily Chronicle; June 28, 1925]

THREE SHOCKS AT BILLINGS

Billings, June 27--(AP)--Three distinct series of earthquake shocks at intervals of from 40 minutes to an hour and a half were felt here tonight. The tremors lasting from 10 to 20 seconds in the case of the first and second series of shocks and for but a few seconds in the case of the last one, drove people from their homes and made them apprehensive for the remainder of the night.

Beyond the opening of cracks in several older brick buildings and buckling of some antiquated wooden block paving, no damage was done.

Scores of towns and cities as far south as Thermopolis, Wyo., and as far east as Rosebud, 117 miles from here, reported shocks, but no damage.

The first series of tremors started at 6:22:30, the second at 7:07 and the third at 8:37.

Stopping of sensitive clocks in the downtown district fixed the hours accurately.

[Bozeman Daily Chronicle; June 28, 1925]

DAMAGE DONE IN VARIOUS PARTS OF STATE BY QUAKE

Great Falls, June 27--(AP)--All Montana rocked Saturday evening under a series of earthquake shocks which began at 6:22 o'clock and continued at intervals in places until 10:40. No lives were lost, but much property damage was done in several cities and two trains on two trans-continental lines are blockaded by resultant landslides. The area affected by the quake extends into Wyoming, Idaho and eastern Washington. Telephone reports received here indicate that White Sulphur Springs, county seat of Meagher county, was the worst sufferer from the quake. The county courthouse, the county jail, a school house and a pool hall were reduced to heaps of ruins. The Methodist church and a large building in Three Forks were wrecked and not an unbroken window pane remained in the town.

Willow Creek, a town of three hundred people a few miles west of Three Forks, is on fire and the entire town is in danger of burning.

Two sections of Milwaukee train No. 16, electrified, are stalled near Maudlow, in Sixteen Mile canyon north of Lombard between two mountain slides.

[Bozeman Daily Chronicle; June 28, 1925]

TEMBLORS N WASHINGTON

Spokane, Wash., June 27--A severe quake disturbance, felt distinctly in all parts of the city, were registered on the seismograph at Gonzaga university here this afternoon at 5:25 p.m. Bonners Ferry, Sand Point and St. Maries, Idaho, each reported temblors lasting an average of two minutes. No damage was reported.

The center of disturbance was evidently nearby, A. M. Jung, observer at the Gonzaga university station, declared.

The instrument failed to register after the first shock.

The disturbances were felt in many homes and downtown business buildings.

[Bozeman Daily Chronicle; June 28, 1925]

FELT AT LEWISTOWN

Lewiston, June 27--(AP)--Lewistown experienced two distinct earthquake shocks tonight, one at 6:22 and one at 7:07. The tremors shook the large business blocks and in residence districts and caused fixtures to swing. Denton and other points felt the tremors. Harlowtown reports trolley wires on Milwaukee, Chicago and St Paul railway west out of commission as well as sub-stations between Harlowtown and Three Forks. A landslide of unknown proportions was reported near Lombard.

[Bozeman Daily Chronicle; June 28, 1925]

THIRD SHOCK IN BILLINGS

Billings, June 27--(AP)--A third shock of comparatively light intensity was felt here at 8:39 o'clock.

Red Lodge, a coal mining town 60 miles southwest, reported three series of tremors. No damage was done there.

Stephen T. Mathews, superintendent of national parks, arrived here during the second series of quakes with Superintendent Albright of Yellowstone National park.

Hardin, 52 miles east of here, reports three distinct series of quakes at the same hours as they were felt here. Rosebud, 114 miles east of Billings, is the farthest point east to report quakes.

[Bozeman Daily Chronicle; June 28, 1925]

PARK COUNTY SHAKEN

Livingston, June 27--(AP)--Three distinct earthquake shocks shook Livingston to the very foundations tonight. The first occurred at 6:23 and continued for a time variously estimated at from 30 to 40 seconds, the second shock occurred at 7:06:30, the third at about 7:15 and was completely over in 10 seconds. Every section of Park county reported the shocks and in Jardine, Gardiner, Mammoth, Livingston, Clyde Park and Wilsall, the buildings, both business and residences, were emptied as if by magic as terror stricken people rushed to the street in search of a place of safety. A telephone call from Jardine stated that the shock was very severe and fear was entertained that damage to the mines of Jardine Mining company have resulted.

Manager H. C. Bacorn ordered an immediate inspection. In the Yellowstone National park, the shock was sufficient to create a panic and the people rushed from their homes. Superintendent Horace M. Albright instructed his ranger force to inspect the various active formations within the park to determine what damage if any had resulted. In Livingston several cases where women fainted have been reported and at Clyde Park, the stock of tinware of Jack O'Leary's store was shaken from the shelves to the floor. The policemen who were in the city hall building reported it nearly impossible to leave the brick structure and that the tall tower of the building described an arc of several feet.

Though it is very likely that the brick buildings were somewhat weakened by the shock no material damage in any of the towns and cities has been reported.

[Bozeman Daily Chronicle; June 28, 1925]

FELT AT SPOKANE

Spokane, June 27--(AP)--A severe earthquake was recorded on the seismograph here at 5:25 p.m. today according to A. M. Jung, observer. Distinct shocks were felt in all parts of this city.

[Bozeman Daily Chronicle; June 28, 1925]

TRAINS HEMMED IN

Livingston, June 27--(AP)--Two Milwaukee passenger trains and Northern Pacific passenger train No. 235 are hemmed in by a huge rock slide near Lombard, according to the report of the Northern Pacific office. A special train was made up here. Both the Milwaukee trains and the Northern Pacific trains are safe according to the Northern Pacific's report. The trains in each instance are hemmed in on all sides by the rock and land slide which occurred as a result of the earthquake. Train No. 235 is two miles west of Lombard. Milwaukee trains are 2 miles west and 4 miles east. Train 235 carries Enterprise reporter.

[Bozeman Daily Chronicle; June 28, 1925]

NO DAMAGE IN HELENA

Helena, June 27--Chimneys were shaken down, bricks loosened from copings of buildings and other household effects rattled, office effects damaged on floors, window glass was broken, and practically the whole of the population rushed from dinner tables into the streets and other open spaces, when earth tremors were felt here tonight. Four shocks came. No great property damage was done.

The shocks were felt at East Helena about as here. Chimneys were shaken down and windows cracked in buildings of the veteran's hospital at Fort Harrison. The patients were given a severe scare, but it was not necessary to remove the bed-patients from the wards, it is said.

[Bozeman Daily Chronicle; June 28, 1925]

DAMAGE IN GREAT FALLS

Great Falls, June 27--(AP)--One of the walls of the Grand hotel, a three story structure in the business district were reported to have been cracked by the shock, but other damage thus far reported was confined to fallen chimneys and ceiling plaster. A third earthquake was recorded here at 7:07 p.m.

[Bozeman Daily Chronicle; June 28, 1925]

WHITE SULPHUR SPRINGS IS HIT Courthouse Demolished by Quake-Loss Will Reach One Hundred Thousand Dollars

Livingston, June 27.--Livingston and the territory surrounding was shaken four distinct times Saturday night and residents were panic stricken by the first shock, which lasted 40 seconds, and was most severe. White Sulphur Springs, will be compelled to erect a new courthouse as a result of the quake. E.B. Hubbard, telephoning from that city to the Enterprise, said the courthouse was completely wrecked and that the schoolhouse pool hall and county jail were also put entirely out of commission.

Damage is estimated at close to \$100,000, figuring the replacement values. Reporting from Yellowstone National park, Superintendent Horace M. Albright relieved any fears that the damage had resulted in the park and said Old Faithful geyser spouted as usual 16 minutes after the first shock and again after the second shock. The quake diminished in intensity after the upper geyser basin reported its shaking and was barely felt at the south border. The authorities stated that the quake apparently had no relation with the sliding mountain in the Gros Ventre valley, south of the park.

[Bozeman Daily Chronicle; June 28, 1925]

GALLATIN'S LUCK

Gallatin county along with Bozeman has experienced its first earthquake shocks of an importance to be considered by the world. The experience was a novelty to most of us and because there was no loss of life resulting, or more than one person seriously injured, it can be recalled in future years with an intimacy with such a phenomenon that will make interesting conversation. All future events will now date from the time of the earthquake. and the big winds, or the high waters or the dry years will be relegated to the background. Unless there are more shocks and more and greater damage done, and no one can tell or forecast these manifestations of the earth's cooling, the people in this part of the country will be very well satisfied having been privileged to be on the scene. It will not, however, let us sincerely hope, be necessary to resort to camouflaging the affair by referring to the quakes as something else, and even if inclined to do so, it would be difficult to lay the damage to fires, winds or any other kind of destructive elements, for none accompanied the tremblings. Other communities refuse to countenance guakes, and because the severe earth tremblings are often accompanied by fires that complete the damage, the blame is given to the fires. Earthquakes are awful things, and so are fires. But fires can be more or less prevented and controlled by human agencies, while nothing can be done with the convulsions of the earth when it starts its upheavals.

The slight taste this community received of earth shocks gives some idea of what the peoples in the countries where they are comparatively frequent have to undergo. Sympathy with these people will be more acute after our own experiences. While the property loss in Gallatin county, and this section of the state probably suffered the greatest loss, is deplorable and will be a great hardship on the different communities throughout the valley, especially in the cities of Manhattan and Three Forks, great consolation can be derived that the shocks were no greater than they were and that the most terrible feature of all guakes is the loss of life, which did not become a factor. Imagination that is running riot during these exciting days, when slight tremblings are being felt by the nervous every few hours, can find scope for their feelings in thinking what might have happened had the severest of the shocks occurred during the time the school buildings, which were the most damaged, were occupied by the little children. There was to have been a dancing party at the community high school at Manhattan Saturday night. Had the shocks come at the time the building was crowded with people, it can only be guessed what the damage would have been during the panic that would have followed. The material loss sustained by Gallatin county, even should it reach the estimated loss of half a million with twice that much for the railway companies, the fact that there was no loss of life, which could very easily have happened in distressing numbers had the disturbances happened at almost any other time, makes this part of the country feel that it is most favored.

[Editorial]

[Bozeman Daily Chronicle; June 30, 1925]

PROPERTY DAMAGE IN GALLATIN MAY REACH MORE THAN \$500,000 Manhattan, Logan And Three Forks Badly Damaged--Milwaukee Trains Routed Through Bozeman Over Northern Pacific--Sixteen Mile Canyon Blocked

Slight tremors were felt in Bozeman twice during last evening, once at 10:30 and another at 11:35 p.m. Guests at the Bozeman hotel hastily dressed when the second shock came and left their rooms. The first shocks felt by people in the southwest part of the city, and also in the downtown districts, also further excited the residents.

But the tremblings were so slight that many were inclined to think they were the result of imagination on the part of the most nervous of the population. No damage was reported. Two severe shocks, one at 6:23 and the other at 7:08, Saturday evening, caused practically all of the damage in Gallatin county, including that in Bozeman, Manhattan, Logan, Three Forks and Willow Creek. There were other earth tremors during the night and Sunday, one more noticeable than the others, being Sunday afternoon at 3:30. The damage to Bozeman property is confined to the razing of chimneys on many homes and the cracking of the walls of several brick and stone structures. The city authorities have roped off the Parkin-Budd brick building on East Main street, formerly occupied by the Crowley second-hand store and now used by Stephen Mitchell as an automobile salesroom, to protect the people. It is said the building, which is one of the oldest brick structures in the city, having been built in 1866, was badly cracked, and the subsequent settling might injure pedestrians. A chimney on the Krueger block, corner Main and Bozeman, had to be removed by orders of the city for similar reasons.

Following the quakes, cracks were found in the Commercial National bank building, but they were of a minor nature and it will take a closer inspection by experts to determine any loss. The Irving school building tower will probably be removed altogether, and the great hole made in the roof of the school, which has not been in use for several months, will be repaired.

Manhattan and Three Forks were the hardest hit and suffered the greatest loss within the county outside of the railroads, the Milwaukee suffering the greatest damage due to the landslides in and around Lombard. Belgrade people felt the shocks but aside from chimneys on dwellings toppling over, there were few instances of injury. Central Park escaped without much damage, and Logan and Willow Creek had their share of property losses.

Shocks All Over

Every part of the Gallatin, from the extreme north end to the south, and from east to west, felt the shocks. Up the West Gallatin they were noticeable, but the rocks held their places and there were no reports of obstructions of the roads due to the quakes. Salesville and the country districts to the southwest also felt the shocks at the times they occurred in Bozeman and the rest of the county, and from there no reports of damage are made. Everywhere in the city and the other cities in the county there were people much affected by the earth tremblings. The shocks made many people sick, giving them a nauseating feeling, or fainting spells, or a dizziness that remained with them for many hours. But one accident of a serious nature has been reported, that of Mrs. Ernest Gray, Three Forks, who sustained a broken leg while hurrying from her home after the first shock. The high heels of her shoes caught in the cracks of the steps and she fell. Other injuries consisted of bruises and cuts from broken glass and falling materials.

College Buildings Unhurt

An interesting feature of the earth tremblings in Bozeman is that the lower parts of the city sustained what minor losses were reported. The people living south of the city, and especially on the college hill, realized there were quakes, but aside from that there was no trouble. An examination of the buildings at the Montana State college shows no damage. Neither was there any damage found at the county court house, although this building is notoriously weak and fragile in portions, and could not withstand a severe shock. Immediately following the first shock Saturday evening, O. W. Cermak, a rancher on the East Gallatin, saw some distance away the water of the river rise to a great height as if forced up by some subterranean explosion. The water and spray hung in the air for a perceptible period, according to the report.

The bridge over the Jefferson river on the road to Helena, out of Old Town, has been declared unsafe, and travelers are not permitted to cross it. The abutments and approaches have been dislodged, say the reports.

Rumors of New Formations

There are numerous cracks and fissures in the roads for a mile this side of Logan in Three Forks, and back again over the Old Town road to Trident. Few of them are any more than cracks, some of them crossing the highways and others along the side and close to the ditches. It is said that several new warm springs have been opened up by the force of quakes in the vicinity of Old Town and that on the road to Boulder across the Jefferson there has been a new crack formed. Another story is that the Jefferson river dropped three feet within a few hours, owing to a crevice opening in the bed of the stream. Aside from knowing of the cracks in the roads, it cannot be authentically learned of the warm springs, the new creek or the dropping of the river.

Of all of the reports received during the height of the excitement, when it was expected that exaggerations would be confounded with the truth, the story about Willow Creek was furthest from the facts. Several times during the evening and late in the morning came the report that Willow Creek had been badly damaged by the shocks and that the town was in flames. The wires were down and no connection could be made with the town, but Sunday it was learned that very little damage was done there, a few bricks fallen from chimneys and one or two buildings hurt a little, being the extent.

Manhattan Worse Hit

Manhattan sustained the greatest damage. There was no exaggeration of the reports that came from that city and from Three Forks. If anything, the Chronicle's statements were very conservative as to the total losses sustained in these towns.

The new Manhattan community school building, erected last year at a cost of around \$85,000, is a wreck, as also the red brick grade school building across the street, built 12 or 13 years ago at a cost of \$35,000. It will take experts to determine the loss on these two buildings, and it may be possible that they will have to be razed to the ground and rebuilt. The only thing left is the material, which can be salvaged with profit for the rebuilding. In the business section of the town, the Manhattan State bank building was injured, as was also the Walter White building, where was once the Home State bank. Other business blocks and the Kid theater were damaged more or less and in several places along the main street ropes have been stretched for the protection of the pedestrians. The Mains building was also badly damaged, and the home of Harry Altenbrand was wrecked inside. One of the buildings of the malting plant was damaged.

Quarter Million Loss

The total loss in Manhattan, which cannot be more than estimated at the present time, and it might take several days to discover some of the damage that does not now show itself, is placed at \$250,000. Salvaging the material from the school buildings and the other brick buildings on Main street will cut this amount appreciably.

At Logan, besides the damage done to the Milwaukee railroad, the school building is damaged, and many houses are without chimneys. There are many places where bricks were torn from the school, and cracks have been found throughout. An estimate of the damage done in this little railroad town is between \$30,000 and \$40,000.

Three Forks Loss Heavy

Next to Manhattan, Three Forks had the greatest loss. There the high school building looks as if it would have to be rebuilt, the seams and cracks showing from the top to the bottom of the structure. The First Methodist church will have to be rebuilt, that brick edifice showing the worst effects of the quakes. The only thing left is the brick.

Nearly every home in the town is without a chimney, and on Main street, the business thoroughfare, the wrecked and damaged buildings are everywhere. Few escaped some evidence of the earth's convulsions and the fallen bricks, broken glass and other material from the buildings on both sides of the street made passage along the pavements dangerous and in some quarters impossible for the remainder of the night.

Avery Building Damaged

The Avery garage showed the worst damage. Almost the entire brick front above the first story fell into the street, and the interior throughout was sprung and otherwise injured. Large plate glass windows in other parts of the city fell to the pavements, large sections of the brick copings and parts of the walls of the two bank buildings were scattered about the street, few of the buildings along the entire street escaped some damage. The loss to the entire town is estimated variously between \$200,000 and \$300,000. The losses in all of the towns is total as far as insurance is concerned, for no one in this part of the country ever considered earthquake protection.

A wind and rain storm of some violence for a short period preceded the quake in Bozeman. At the time of the first shock the skies were so overcast that it was necessary to light the lights. When the first trembling came, the people forgot all about the storm. Sunday was bright and warm, and thousands of people motored to the stricken cities down the valley. They came from all over this part of the country, Butte, Deer Lodge, Harlowton, and the cities on the west and north, and from Livingston, and as far east as Big Timber and even Billings. All of them wanted to see what an earthquake could do, this being Montana's first acquaintance with anything that could be dignified by the name.

Many Visitors Through Valley

The streets of Manhattan and Three Forks were lined with automobiles throughout the day and evening, and refreshment parlors did a thriving business. Many preserved memories of the destruction by camera pictures, and these fans were everywhere.

There were many people found in all of the cities who were positive that they felt numerous shocks other than the ones recorded. At Manhattan at least a dozen tremors were felt up till Sunday noon, and in the afternoon about 3:30, one definite shock toppled over one of the walls of the red brick school. Sunday night, people in Bozeman felt a distinct shock around 11 o'clock, and yesterday morning, there were slight tremblings noticed. Many of the people in all of the towns, and not those confined to Bozeman alone, refused to go to bed at all, and some were on the verge of nervous prostration. The passing of a heavy truck along the pavement and the slight jar it occasioned, meant another quake to them,

and the Chronicle office was besieged with inquiries as to the next disturbance. Long before noon, Sunday, there were no more Chronicles to be obtained from the extras that had been printed. The demand was far above the supply, for the people having friends in other parts of the country wanted them to know what had happened and to appease them as to the extent of the damage.

Milwaukee Heavy Loser

Earthquake shocks in the vicinity of Lombard, close to the north line of Gallatin County, Saturday night, caused many rock slides and the caving in of tunnels along the route of the Chicago, Milwaukee & St. Paul railway, that the right-of-way is completely blocked with hundreds of men working day and night to clear away the debris. All of the trains of the company have been rerouted through Montana, from Miles City to Butte, over other roads, the freight traffic going over the Great Northern and around by Great Falls, and the passenger trains over the Northern Pacific through Bozeman. Two passenger trains of the Milwaukee passed through this city yesterday, and both the Northern Pacific and the Milwaukee will maintain their schedules. It will take another day or so to complete the freight schedules over the Great Northern.

The wrecking of the tunnel at Lombard and the tumbling of a huge cliff into Sixteen Mile Canyon near Deer Park, have caused the greatest damage to the Milwaukee railroad. Work trains, equipped with heavy cranes, have been hurried into the district, and 700 men are now working day and night to clear away the huge rocks and other debris which tumbled into the canyon and across the right-of-way. Dynamite is being used to loosen up the fallen material and break the great rocks and boulders that slid down the hills. It is said that a million dollars will not cover the damages to the railroad.

Provisions from Bozeman

Provisions are being sent from Bozeman to help feed the workmen; the Lovelace Wholesale grocery having sent out a shipment of canned goods, cigarettes and tobacco, and the Kopp Meat company delivering 600 pounds of meat yesterday, by way of Menard and across the hills by auto to Maudlow, the nearest point on the Milwaukee. The Gallatin Valley railway also suffered considerable damage in and around Logan. The bridges over the Madison, consisting of 13 spans and 10 feet high, has the piling twisted and broken off and the approaches have settled from 12 to 18 inches. There is a large crack in the earth at the north and south, and the ground is settled. There is also a rock slide at the Logan bluff. The curve approach to the overhead bridge crossing the Northern Pacific on the Butte branch, is thrown out of line, and other damage has been found in this section. Thirty men have been busy on this part of the line since Saturday night, and it is expected that everything will be cleared by Wednesday noon, permitting traffic as usual. The Northern Pacific has its lines clear and are running trains as usual. The rock slides at Trident have been cleared and the telegraph and telephone lines have been repaired. [Bozeman Daily Chronicle; June 30, 1925]

MONTANA COUNTS LOSS FROM RECENT EARTHQUAKE SHOCKS

Helena, June 29--Montana today began a detailed check of damage resulting from the earthquakes of the past 36 hours to find so far as reports showed at noon, little probability that damage estimates of half a million dollars would be greatly increased. No additional injuries were reported today.

Shocks this morning, the latest about 2:30, were reported by Great Falls, Billings, Helena, Bozeman, Logan, Three Forks and Manhattan, but none was heavy enough to do additional damage.

Discovery this morning of large cracks in the wall of the county jail and that the building had listed about seven inches was the first damage noted in Missoula, where no tremors were felt since Saturday night.

White Sulphur Springs, county seat of Meagher county, reports its damage can be covered by \$10,000; Manhattan and Three Forks where the damage was heaviest, are beginning to clear up their ruins after spending a second night in the open. At the latter place, four shocks were reported after midnight last night. Manhattan reported two slight shocks. Northern Pacific railroad officials said today their lines were all open, that trains will be on schedule. Great Northern traffic was not affected.

[Bozeman Daily Chronicle; June 30, 1925]

A TIMELY WARNING

Much of the damage done by the earthquakes will not be discovered till later, and the city manager, Fred M. Brown, calls attention to the fact that great caution should be taken in not building fires in stoves and furnaces till it is positively known what the condition of the flues and chimneys is.

"Don't build hot fires until an examination is made of the home," suggests the manager. "This caution may prevent trouble and further damage later on. There are many cracks and breakings in the walls and masonry that may not be seen just now, and these may open up later. Have your home gone over by a competent workman."

[Bozeman Daily Chronicle; June 30, 1925]

N. P. TRACK NOW OPEN

Butte, June 29--That the Northern Pacific tracks between Lombard and Toston, which were blocked by a rock slide caused by the earthquake last Saturday night, have been cleared and that trains are now operating over this section, was announced by W. H. Merriman, of the Northern Pacific, Butte office tonight. Service was resumed last Sunday evening, he said.

[Bozeman Daily Chronicle; June 30, 1925]

QUAKES WERE NOT RELATED Government Scientist Says Montana And California Disturbances Have No Connection

Washington, June 29--(AP)--The California and Montana earthquakes, although occurring so closely together, were said today by William Bowie, chief of the division of geodesy of the coast and geodetic survey and president of the International Geodetic association, to have been unrelated.

Pointing out that congress is expected to appropriate funds at the next session for the earthquake survey of the Untied States authorized at the last session, he asserted that the disturbances are local phenomena and that no community is absolutely free from the possibility of such an occurrence.

While the Montana disturbance, Mr. Bowie said, is the first in that region of which there is any record, he thought both that and the California quake today would be found to have occurred along old "fault" lines where the earth's crust previously had been fractured. California, he added, is charted as a more active quake region because studies have indicated that the coastal mountains there are "young" mountains still in process of formation and development. In older mountains, formation seismic disturbances are rarer. In emphasizing the liability of any section to earthquakes, Mr. Bowie asserted that present seismic disasters indicated the probability of a major disturbance near the eastern seaboard within the next 100 years.

He said he believed that the survey which congress has authorized would make possible a great advance in the study of earthquakes and their causes. Within the next five or ten years, he thought, earth faults and presses would be so comprehensive as to make possible a fairly accurate estimate of the time and locality of major disturbances.

[Bozeman Daily Chronicle; June 30, 1925]

EARTHQUAKES IN MONTANA AND CALIFORNIA RECORDED

Kileau Observatory, Island of Hawaii, June 29--(AP)--Both the Montana and the Santa Barbara earthquakes were recorded on the seismograph at the observatory here, Director Thomas A. Jaggar Jr., declared here today.

The recording of the Santa Barbara earthquake was so strong, he said, at 4:15 a.m. (6:45 American Santa Barbara time), that he at once suspected a disaster somewhere in California.

The Santa Barbara shocks, Mr. Jaggar stated, were distinct from those recorded here for the Montana temblors this morning.

He expresses the opinion that the Montana shakes were after shocks.

Mr. Jaggar received today from the Engineering Economic foundation in New York, a radiogram, asking him for information regarding the Montana earthquake.

The radiogram read in part:

"The people of the east are considerable exercised over the series of quakes which began more than seven months ago in Virginia and Carolina and worked northward through Boston to the region between Montreal and Quebec, now appearing in the Rockies. It looks as though the strains were being relieved across the continent, but we cannot tell the relations of the various fault movements."

[Bozeman Daily Chronicle; June 30, 1925]

THREE FORKS QUAKE DAMAGE IS GREATEST School Building And Church Are Entirely Ruined--Loss On Business Blocks Manhattan's School Loss Around \$80,000 State Fire Marshal Brooks Expected To Make Inspection Today--Church Damaged

Experts have made examinations of the damage done by the quakes and shocks of Saturday night and the tremors following up to Monday night at Manhattan and Three Forks, and they claim that the latter city will sustain a loss of around \$100,000, and that Manhattan's loss can be replaced for \$80,000. These inspections were made of the school buildings, churches, and business blocks, and do not take in the losses sustained by private individuals in their homes.

The school building at Three Forks is a total loss, according to one expert, and although the outside appearance gives no indication of this it is claimed that the building will have to be razed and rebuilt. It is also said that this building was one of the best and most substantial anywhere in the valley and that notwithstanding this fact, it was completely wrecked. The First Methodist church at Three Forks is also completely wrecked, nothing being left but the salvage. The business blocks in the city are worse off than first reported but the Avery garage, which looked the worst, can be repaired for a few hundred dollars. The two big schools in Manhattan will take many thousands of dollars to fix up, but much of the lower part of the structures, especially the Community high school building, may not have to be taken down. The damage done to the business buildings and two bank buildings is not as great as first reported. The damage done to the private dwellings, almost every one of which shows some effect of the quakes, is not taken into the estimate. State Fire Marshall Brooks, Helena, will be in Manhattan, Three Forks and other cities along the Yellowstone trail today to make an inspection and give his views of the situation. He will be accompanied by local experts, and if they decide that all the school buildings will have to be torn down to the ground, this will have to be done.

Last of Shocks

The last quake reported in Bozeman was that of 11:35 Monday night, when a slight shock was felt by many people all over the city. People on the streets or on the ground floors did not get the full effect of the tremor, but those living above the first floor, and especially several floors above the street declare the trembling was particularly noticeable.

That seemed to be the last convul-[?]

[Bozeman Daily Chronicle; July 1, 1925]

VIRGINIA CITY HIT

Butte, June 30--Because the building has been closed for the summer, the school house at Virginia City, presumably had been damaged by an earthquake shock, according to advices received by the Miner from the Madison county seat this evening. It was stated that the courthouse also was damaged and that last night the officers on duty took the county prisoners to another building. It was stated that the telephone building, while not damaged to any extent, was rocked during the different quakes as were other buildings in the historic old town.

[Bozeman Daily Chronicle; July 1, 1925]

HOT SPRINGS SPOUT

Butte, June 30--According to a report brought to Butte today, a grocery store was damaged at Norris, a hot spring shot into the air, and that one spring had increased to ten times its average flow as a result of earthquake Saturday evening.

[Bozeman Daily Chronicle; July 1, 1925]

STATE DRIVE FOR RELIEF OF GALLATIN SCHOOLS Reconstruction Of Buildings Wrecked By Quake Planned Governor Erickson Will Issue Proclamation And Committee Will Be Named To Accept Contributions--State Will Furnish Engineering Force Needed

Helena, July 1--Seeking any assistance Montana can give toward restoration of the five schools in Gallatin county wrecked by Saturday night's earthquake, a delegation of Gallatin county citizens met here this afternoon with the state land board.

The delegation, headed by Lucile Quaw, county superintendent, includes G. M. Lewis, chairman of the Manhattan school board; O. H. Campbell, Manhattan; R. H. Johnston, superintendent of schools, Logan; H. S. Batchelder and Joe Menapace, members of the Three Forks school board.

The five buildings shattered by the quake, Mr. Lewis said, were constructed at a cost of \$269,000 and will cost a large part of that sum to restore. The Community high school building at Manhattan was built two years ago at a cost of \$85,000 and the grade school building cost \$35,000 10 years ago. Both must be rebuilt, at least above the first story and possibly parts of the first story not already down will have to be torn out, he said. The Willow Creek school, which cost \$62,000 four years ago, may have to be entirely rebuilt, the Three Forks school, eight years old and costing \$60,000, appears to need complete reconstruction. The Logan school, one year old and built at a cost of \$27,000, was badly shattered but may possibly be repaired at a cost of \$7,000, Superintendent Johnston said.

Calling for relief of stricken school districts of Gallatin county, Governor J. E. Erickson will issue a proclamation calling for public subscriptions according to action taken at today's Rotary meeting at which the governor was present.

State Fire Marshal W. G. Brooks, Helena, and R. Rasmussen, Bozeman contractor, made an official inspection of the damage done to the buildings in Manhattan, yesterday. They agreed that the total loss, the result of the quakes, will be \$130,000.

The two men will continue their inspection today, and will visit Belgrade, where it is said the school building is also damaged, Logan, Three Forks and Willow Creek. The result of their findings will be known this evening.

[Bozeman Daily Chronicle; July 2, 1925]

MILWAUKEE HAS HEAVY LOSSES NEAR MAUDLOW Rock Cliff Topples Over On Tunnel And Huge Rocks Cover Right-Of-Way Army Of Men Working Under Difficulties Experts Determining Actual Damages To Property In Towns Through Valley

A trembling of the earth was felt by many people of the city between 1 and 2 o'clock, yesterday morning. It was so slight that many were in doubt about it until they consulted with others, but those who experienced the shock declare it was definite enough to arouse them from a sound sleep, after which they could see the hangings from the chandeliers swinging. No damage has been reported, although, it is said, these slight shocks will further enlarge the cracks and fissures that were caused by the first and severer shocks. The damage done to the Chicago, Milwaukee & St. Paul railroad by the earthquake shocks of last Saturday night, between Maudlow and Lombard, will take a month to six weeks to repair, with a loss estimated now as high as \$1,000,000. Between 600 to 700 men, recruited from the Butte mines and wherever available, are working day and night shifts in clearing away the huge boulders and stones that have covered the right-of-way in Sixteen Mile canyon, and which destroyed the tunnel at that point.

The damage was completed by the collapsing of the rocky cliff, through a part of which the tunnel was built, and covering the right-of-way with the debris for a considerable distance. The fallen rocks and earth formed a dam in Sixteen Mile creek, and backed the water up to the mouth of the tunnel, forming a miniature lake at this point, between 40 and 50 feet deep. The area covered by the dammed waters it not more than a block in extent, but it interferes with the work.

The crews of men are working at each end of the tunnel, and tons of dynamite are being used to break up the largest of the stones and boulders so they may be removed. A charge of 2,500 pounds of the explosive was touched off Tuesday noon, with little effect on the immense rocks, and again at 6 p.m., Tuesday, a charge of 3,500 pounds was set off. At stated times during yesterday, these dynamite charges were exploded, and this will continue till the obstructions are removed.

As soon as the worst of the fallen rock can be removed, the Milwaukee will build a "shoefly" around the main right-of-way, and this will be used for the moving of trains around the obstruction until the entire work is completed. In the meantime, all Milwaukee passenger trains are routed from Miles City over the Northern Pacific and through Bozeman to Butte. The freight traffic of the road will go over the Great Northern from Miles City to Butte.

Wobbly on the Job

The officials of the road and the foreman in charge of the gangs of men are having some trouble with the appearance of Wobbly sympathizers, according to the report brought back from the scene of the disaster by L. E. Hathaway, secretary of the Bozeman Chamber of Commerce. One of the agitators took advantage of the trouble by making speeches wherever he found the workmen in groups and urged them to lay down their tools and quit the job. "Make the white-collared fellows do this work, men," he cried. "Come, all you fellows, quit the job and let the other fellows sweat and blister their hands." Little attention was being paid to the disturber.

[Bozeman Daily Chronicle; July 2, 1925]

NEW LAKE AT LOMBARD

Helena, July 1--Montana, since it recent earthquake, has a new lake, says R. H. Johnston, superintendent of schools at Logan. When part of a mountain slid over the Northern Pacific tracks into Sixteen Mile creek, he says, it dammed the stream so that east of Lombard a new lake is forming.

[Bozeman Daily Chronicle; July 2, 1925]

DAMAGE TO ASYLUM

Helena, July 1--Thirty five hundred dollars, in the opinion of Dr. H. A. Bolton, superintendent of the Montana Insane hospital at Warm Springs, will cover the damage caused there by the recent earthquake. Brick veneering must be replaced where it fell from some of the buildings and there are some small cracks in the walls, not sufficient to seriously weaken the buildings but which must be plastered over, he says. Patients at the hospital were somewhat nervous but not greatly affected by the shakeup, he said.

[Bozeman Daily Chronicle; July 2, 1925]

REPAIRING EARTHQUAKE DAMAGE

Montana has a right to be more than thankful that the earthquake shocks of last Saturday claimed no toll of life or rendered any large number of her citizens homeless. This is better fortune than has come to many places visited by such disturbances.

A considerable amount of property damage, however, has been done and Montana is still counting the cost. The communities which have suffered most in the state are our own sister communities of Gallatin county, Manhattan, Logan and Three Forks. In all of these towns the school buildings have been practically wrecked. All of these towns had school buildings which were justly a source of pride to their citizens. They were monuments to the civic enterprise of the towns and had been erected at an expense that envolved not a little sacrifice on the part of their people.

From inspections thus far made it would appear that some of these structures will be almost a total loss, while in other cases extensive repairs may serve to make them again serviceable. In all of these cases the burden of debt incurred by the communities for the erection of the buildings destroyed is still being carried by their people. To increase that burden at the present time to the extent that would be necessary to replace the buildings again would be almost out of the question.

Yesterday's news report from Helena states that Governor Erickson is soon to issue a proclamation calling on the people of the state who escaped injury from the temblor to come to the relief of these more unfortunate communities. Committees will also be named to have in charge the work of collecting the funds.

Montana has always been liberal in contributing to the relief of any who have suffered from disaster. Money from this state has often gone to far off lands to alleviate the burdens arising out of a great misfortune. It is safe therefore to say that the people of Montana will not turn a deaf ear to the call of the governor in behalf of the school children of Manhattan, Logan and Three Forks, who unless aid comes from some quarter, will be deprived of school facilities for years to come.

To Bozeman and the other parts of Gallatin county, which escaped without material damage, the call will reach even closer to the heart, for these communities are made up of our neighbors and our friends, in fact, they are our own people. We have no question of doubt but that the response from this community will be both spontaneous and generous. And mingled with the sympathy that will go out to those who have sustained serious losses will be the great thankfulness that it is only a material loss and that we may help in making it up to them.

[Editorial]

[Bozeman Daily Chronicle; July 3, 1925]

DYNAMITE EXPLOSIONS MAKE EARTH TREMBLE

Livingston, July 2.--(AP)--Available information concerning earth tremors at Lombard during today reports two slight shocks one at 8:15 a.m. and one at 12:15 p.m. It is the belief of local railway men that the shocks reported are nothing more than the result of huge charges of dynamite being exploded by the Milwaukee railroad. The high explosive is being used in clearing the Lombard tunnel and according to those experienced in handling dynamite, shakes such as were reported at Lombard at the time the charges were set off, would easily result.

[Bozeman Daily Chronicle; July 3, 1925]

EARTHQUAKE ROCKS ENTIRE TREASURE STATE THOUSANDS FLEE IN TERROR FROM BUILDINGS

Three distinct earthquake shocks were felt in Missoula last night, two at 6:23 and one at 7:06 o'clock. Buildings from the largest business blocks of Missoula to the smaller residence properties shook to their foundations and in many instances occupants of buildings and homes of the city fled to the street.

At a late hour last night there were no reports here of any damage although it was said a window on the south side was broken and there was a report last night that a girl working on a telephone switchboard in the downtown district received a shock.

A report from the Bitter Root valley was that the plaster was knocked from the wall of a business block and that a large dairy barn was reported damaged. At Frenchtown when the first tremor came, occupants of a house became alarmed and rushed to the street thinking there was some one prowling in the attic.

PEOPLE ALARMED

Hundreds of telephone calls were received at The Missoulian editorial rooms during the evening by persons anxious to learn the extent of the earthquake and further information about it.

In nearly every instance the story as told to Missoulian reporters by people over the town was the same, that the first tremors were of a north and south rocking motion. Dishes, chairs, and tables rattled. In some cases it was reported that the walls of houses crackled. Reports were common of clocks having stopped around the hours of from 6:20 to 6:30 o'clock. The Western Union received a number of reports of their clocks having stopped at 6:23 and clocks in the courthouse also stopped.

Hospital Patients Affected

Women especially complained of a sickening feeling which followed the temblors, while patients in hospitals were made uncomfortable by the rocking of the earth which shook the walls of the three institutions in the city.

There were some sections in the residence district where the shaking of the earth was not felt by the occupants of the houses, and pedestrians on the streets did not seem to notice the motions as greatly as those who were in buildings. One man who was crossing the Higgins avenue bridge said he thought it was going to drop into the river. However, the worst shaking was apparent in the larger business blocks of the city.

Electric light and other hanging fixtures in business blocks continued to sway back and forth for several minutes after the first motions.

Second Shock Comes

The first tremors had hardly died away when the first calls started pouring into The Missoulian by telephone and they continued until late. At the time the third shock was felt here at 7:06 o'clock a woman was on The Missoulian phone asking about the first. Before it was felt in the office she said, "Oh, dear, there is another one," and hung up before she was through talking.

Reports were received by The Missoulian from every part of the city and from miles around. Some reported rumbling noises and that water in vases containing flowers, gold fish or for drinking, splashed over onto tables and floors.

The first tremor felt here not only rocked houses-- it also moved automobiles.

C. W. Smith, taxi-driver, who was sitting in his big sedan which was packed on West Spruce street, reported that all of a sudden the car began to rock back and forth.

"I thought the car was going to turn completely over," he said. "After I got out I looked at

the tire tracks and found that the machine had been moved about 6 inches." Residents at the Rozale apartment, uncertain as to just what was wrong, rushed into the street, fearing that the building was coming down. Calls to The Missoulian office elicited the information that it was a temblor and nothing wrong with the building, and most of the tenants returned to hastily left dinners.

E. K. Taylor, manager, and W. A. Simons, proprietor of the Wilma theater, got a severe scare and shaking up in the first tremors. They were sitting in Mr. Simon's office on the second floor of the Wilma building when it occurred. Pictures on the wall swung back and forth, the windows rattled, and then with a bang two doors connecting the room on either side with other rooms, slammed shut.

"We moved out then in a hurry," said Mr. Taylor. "And we didn't wait for the elevator either. We walked--no, ran, down the stairs. The chandelier in front of the elevator was swinging back and forth like a pendulum."

Fire Engine Rocked

At the fire station the big LaFrance pumper engine rocked back and forth on its wheels for about 5 seconds during the first shock, Clare Kern, assistant fire chief, reported. At the apartment of Mrs. Will Cave in the Hamomnd block, the quake almost had fatal results. The water in a huge gold-fish bowl, which was on the broad window ledge, sloshed out in big splashes, leaving the fish gasping. A new supply was hastily poured in from the water-pitcher on the table and the fish were saved.

[The Missoulian; June 28, 1925]

WYOMING VALLEY AGAIN SCENE OF MOUNTAIN SLIDE Recurrence Of Avalanche Into Gros Ventre River Takes Place When Earthquake Shakes Whole Area

Jackson, Wyo., June 27--A.P.--A recurrence of the avalanche in the Gros Ventre river valley of early this week took place tonight, when another vast section of Sheep mountain rolled into the valley and dammed the river three miles above the lake caused by the first big slide. Earthquake shocks accompanied the moving of the mountain into the valley.

Slide Not Serious

Pocatello, Idaho, June 27--A.P.--The Pocatello Tribune late tonight received information from Victor, Idaho, that the recurrence of the landslide in Jackson Hole was not serious. The slide is said to have been about a quarter of a mile wide and about a half mile long. Earthquake shocks accompanied the land movement.

Communication between Victor and Jackson Hole is disrupted and information from the territory is meager.

[The Missoulian; June 28, 1925]

PREVIOUS QUAKES FELT IN MONTANA

1897--Distinct earthquake shock at Butte, which rocked city and did some extensive material damage. Remembered as most distinct shock ever felt there.

DECEMBER 18, 1922-- Slight earthquake shock felt in Missoula, Butte, Great Falls, Spokane, which lasted less than a minute. First shock was recorded at 9:40 in Great Falls, where dishes rattled and lights swung. No damage was reported. Missoula felt the shock next, a few minutes before 10 o'clock. It lasted about one minute, causing much excitement, but no damage. The shock was not felt at Butte until 11:10 o'clock, but it was distinct and awakened several families.

FEBRUARY 20, 1923--Slight earthquake shocks reported by N. P. railroad dispatchers at Townsend, Lombard and Winston, stations on the Helena line, north of Logan. Lots of window glass was broken, but no real damage done.

MAY 31, 1925--Heavy earth shock felt at White Sulphur Springs, 75 miles south of Great Falls. Surrounding communities also reported temblor. Buildings badly shaken, dishes shaken, people rushed into the streets. Loud rumbling accompanied quake. No material damage.

[The Missoulian; June 28, 1925]

AUTO TAKES PLUNGE DUE TO EARTHQUAKE

Butte, June 27--A.P.--When Virginia City hill in Madison county oscillated as the earthquake struck that section of the state, the automobile occupied by Paul Hultzer of Butte, and Percy Ross of Anaconda, was caught in the waves and carried over an embankment, according to reports received in Butte tonight. Mr. Hultzer was reported to have sustained three broken ribs in addition to other injuries. Mr. Ross, it was reported, received minor bruises and lacerations. According to reports, Mr. Hultzer, who was driving, had no control over his machine when the earth began to tremble.

[The Missoulian; June 28, 1925]

MUCH DAMAGE IS REPORTED DONE AT MANHATTAN, SULPHUR SPRINGS; GARDEN CITY IS SEVERELY SHAKEN

Business Blocks Tumble Into Streets And One Town Is Reported To Be In Flames
As Series Of Temblors Shake Four Western States--Quake Is Felt From Seattle East
To The South Dakota Line And From Spokane South To Casper, Wyoming-No Loss Of Life Occurred Throughout The Wide Area Visited

Billings, June 27--A.P.--Sections of four western states, representing the nation's summer playground, were harassed by earthquakes for three hours tonight. Panic resulted in practically every city in western Montana. Just north of Yellowstone park, at Three Forks, three landslides were reported to have hemmed in as many passenger trains loaded with vacationists.

Pavements and buildings were cracked in many cities, a half dozen buildings were reported to have been demolished, an electric railroad line was temporarily crippled and there was a recurrence of the recent avalanche at Jackson, Wyo., but nowhere was any loss of life reported.

The Olympian, fast train of the Chicago, Milwaukee & St. Paul railroad between Chicago and Seattle, is believed to be stalled between two of the avalanches in the vicinity of Three Forks, and two other trains, one a Milwaukee train and the other a Northern Pacific, are reported hemmed in by the slides.

A special train made up at Livingston is racing to the rescue, but there is reported to be little danger.

Reports of damage late tonight began creeping in. The Meagher courthouse at White Sulphur Springs, collapsed and the damage is estimated at \$100,000.

The quake was felt from Seattle east to the South Dakota line; from Spokane south to Thermopolis and Casper, Wyo. It left its trademark in northern Idaho and telephone company officials at Jackson, shortly after 11 o'clock tonight, declared that the recurrence of the avalanche across the Gros Ventre valley near there evidently was a part of the general disturbance.

MANHATTAN WRECKED

Bozeman, June 27--A.P.--Reports from Manhattan, 26 miles from Bozeman are that the new community school building, brick and stone, and another school building, brick, were practically demolished by the quakes which shook up the entire Gallatin valley this evening. The "Kid" theater, the Manhattan State bank and other business blocks in the city were also badly shaken and injured. The loss is estimated at \$200,000.

ANOTHER SHOCK FELT

Butte, June 27--A.P.--At 9:30 o'clock tonight another slight earthquake shock occurred here, residents of outlying localities however, reporting it to have been very noticeable.

FIFTH ONE IN LIVINGSTON

Livingston, June 27--A.P.-- A fifth earthquake shock was felt here at 10:39 tonight. It was slight, however, but strong enough to set the electric lights a-swinging.

ANACONDA RECORDS FIFTH

Anaconda, June 27--A.P.--The fifth temblor was felt here at 9:41. Its motion was of shorter duration than the second, but its action was more violent. A jerky earth movement from north to south again shook buildings.

THREE FORKS HIT HARD

Bozeman, June 27--A.P.--Practically every business building in Three Forks was more or less injured by the quakes which struck the city the same time as recorded in other parts of

the country. The brick structures suffered the most and most of the fronts fell into the main street, interfering with all traffic. The brick school building was demolished and the Methodist church was badly damaged. The patients from the hospital were moved on to the lawn and some minor injuries were reported.

The bridge over the Jefferson river on the Helena road is reported dangerous and the abutments of the bridges on the Yellowstone trail into Three Forks are also sprung. They are being patrolled and caution is necessary in going across. The damage to Three Forks is estimated around \$200,000.

BIG DAMAGE IS DONE

Livingston, June 27--A.P.--Livingston and the territory surrounding was shaken four distinct times Saturday night and the residents were panic stricken by the first shock which lasted 40 seconds and was more severe.

White Sulphur Springs will be compelled to erect a new courthouse as a result of the quake. E. B. Hubbard telephoning from that city to The Enterprise said the courthouse was completely wrecked and that the schoolhouse, a pool hall and county jail were also put entirely out of commission. Damage is estimated at close to \$100,000, figuring the replacement value.

Reporting from Yellowstone national park, Superintendent Horace M. Albright is relieved of any fears that damage had resulted in the park and said Old Faithful geyser spouted as usual after the first shock and again after the second shock. The quake diminished in intensity after the Upper Geyser basin reported its shaking and was barely felt at the south border.

No Relation to Slide

The authorities stated that the quake apparently had no relation with the sliding mountain a few days ago in the Gros Ventre valley south of the park.

Every section of Park county reported the shocks and in Jardine, Gardiner, Mammoth, Livingston, Clyde Park, and Wilsall the buildings, both business and residences, were emptied as if by magic as terror stricken people rushed to the street in search of a place of safety. A telephone call from Jardine stated that the shock was very severe and fear was entertained that damage to the mines of the Jardine Mining company may have resulted. Manager H. C. Bacorn ordered an immediate inspection.

In the Yellowstone national park, the shock was sufficient to create a panic and there, as here, people rushed from their homes. Superintendent Horace M. Albright instructed his ranger force to inspect the various active formations within the park to determine what damage, if any, had resulted.

In Livingston several cases where women fainted have been reported and at Clyde Park, the stock of tinware in the Jack O'Leary store was shaken from the shelves to the floor.

BUTTE SEVERELY SHAKEN

Butte, June 27--The worst earthquake ever experienced by Butte occurred here at 6:23 o'clock this evening when two shocks of a combined period of more than a minute rocked the city, the second one being of about 45 seconds duration.

Some brick chimneys toppled, and there were cases of brick veneered structures being damaged, sections of brick work being jarred loose.

A third quake, of mild character occurred at 8:39 o'clock and a fourth one at 9:30 o'clock the latter being mild in the city, but residents in outlying localities reported it was very noticeable there.

First Thought of Mines

Butte's first thought, after the excitement caused by the first heavy shock, had subsided, was of its great mines. Mining company reports were that not a person of the thousands of men employed underground was hurt, and there was not even a fall of rock in any of the great many miles of open stopes and drifts in the mines.

The heaviest shock caused people by the hundreds to rush out into the streets from office buildings, theaters and homes. The fact that the first shock came after business hours prevented less congestion in the streets than otherwise would have been the case.

TOWN IS REPORTED AFIRE

Great Falls, June 27--A.P.--All Montana rocked Saturday evening under a series of earthquake shocks which began at 6:22 o'clock and continued at intervals in places until 10:40. No lives were lost, but much property damage was done in several cities and trains on two transcontinental lines are blockaded by resultant landslides. The area affected by the quake extends into Wyoming, Idaho and eastern Washington.

Telephone reports received here indicate that White Sulphur Springs, county seat of Meagher county was the worst sufferer in the quake. The county courthouse, the county jail, a schoolhouse and a pool hall were reduced to heaps of ruins. The Methodist church and a large bank building in Three Forks were wrecked and not an unbroken window pane remained in the town.

Willow Creek, a town of 300 population a few miles west of Three Forks, is on fire and the entire town is in danger of burning.

Two sections of Milwaukee train No. 16, electrified, are stalled near Maudlow, in Sixteen Mile canyon north of Lombard, between two mountain slides.

CHIMNEYS FALL IN HELENA

Helena, June 27--A.P.--Chimneys were shaken down, bricks loosened from copings of buildings, dishes and other household effects rattled, office effects danced on floors, window glass was broken and practically the whole of the population rushed from dinner tables into streets and other open spaces, when earth tremors were felt here tonight. Four shocks came. No great property damage was done.

The shocks were felt at East Helena about as here.

Chimneys were shaken down and windows cracked in buildings of the Veterans' hospital at Fort Harrison. The patients were given a severe scare, but it was not necessary to remove the bed patients from the wards, it is said.

COAL CARS WRECKED

Livingston, June 27--A.P.--Two cars were shaken from the overhead coal dock at Bozeman, according to reports received at local railway offices and two coal cars, loaded, ran down the steep incline wrecking at the bottom and blocking the roundhouse sufficiently that no power can be taken out for the regular trains.

ANACONDA GETS DOUBLE DOSE

Anaconda, June 27--A.P.--Six earthquake shocks ranging in intensity from the first which violently shook buildings and caused occupants to flee in panic to the streets, to one which was barely perceptible visited Anaconda between 6:20 o'clock and 10:25 o'clock this evening.

The first two shocks followed each other in quick succession and lasted about 45 seconds. A third one at 7:05 lasted 30 seconds, the fourth at 8:37 of three seconds duration was barely perceptible. The one felt at 9:41 was more violent and the last at 10:25 appeared to have gained in intensity. The first four and the last appeared to move from west to east, but the fifth was from north to south. Previous to the temblors a lightning storm raged, six

persons being knocked to the ground and stunned by bolts that struck in various parts of the city. Damage from the quake was confined to the destruction of small and fragile objects.

NO DAMAGE AT BILLINGS

Billings, June 27--A.P.-- Three distinct series of earthquake shocks at intervals of from 40 minutes to an hour and a half were felt here tonight. The tremors lasting from 10 to 20 seconds in the case of the first and second series of shocks and for but few seconds in the case of the last one drove people from their homes and made them apprehensive for the remainder of the night.

Beyond the opening of cracks in several older brick buildings and buckling of some antiquated wooden block paving, no damage was done.

Scores of towns and cities as far south as Thermopolis, Wyo. and as far east as Rosebud, 117 miles from here, reported shocks, but no damage.

The first series of tremors started at 6:22, the second at 7:07 and the third at 8:37.

Stopping of sensitive clocks in the downtown district fixed the hours accurately.

ROSEBUD FARTHEST EAST POINT

Billings, June 27--A.P.--A third shock of comparatively light intensity was felt here at 8:39 o'clock.

Red Lodge, a coal mining town 60 miles southwest, reported three series of tremors. No damage was done there.

Stephen T. Mather, superintendent of national parks, arrived here during the second series of quakes and was vainly endeavoring to get in telegraphic communication with Superintendent Albright of Yellowstone national park.

Hardin, 52 miles east of here reports three distinct series of quakes at the same hours as they were felt here. Rosebud, 114 miles east of Billings, is the farthest point east to report quakes.

NOT SERIOUS AT TWIN BRIDGES

Butte, June 27--A.P.--Telephonic report to The Miner from Twin Bridges stated that the shock was felt there, but was not of a serious character, though there was some slight wall cracks and chandeliers were swayed.

MILES CITY REPORTS QUAKE

Miles City, June 27--A.P.--Earth shocks were plainly felt here tonight at 6:25 and 7:07 p.m. Pictures were shaken from walls and chandeliers moved with the tremors. In the larger apartment houses some families left the buildings. No one was injured and no damage was done.

POWER LINES OUT

Lewistown, June 27--A.P.--Lewistown experienced two distinct earthquake shocks tonight, one at 6:22 and one at 7:07. The tremors shook the large business blocks and in residences caused windows to rattle and electric light fixtures to swing. Denton, Forest Grove and other points felt the tremors.

Harlowton reports trolley wires on the Chicago, Milwaukee and St. Paul railway west, out of commission as well as the sub-stations between Harlowton and Three Forks. A landslide of unknown proportions was reported near Lombard.

NO DAMAGE IN PARK

Yellowstone Park, Wyo., June 27--A.P.-- No material damage occurred in the Yellowstone national park, according to reports tabulated from all sections by Superintendent Horace M. Albright. As the quake proceeded to the south boundary of the park, according to the superintendent, the quake diminished its intensity. Superintendent Albright's report from

the vicinity of the Gros Ventre river is in effect that the quake was but slightly felt there and the belief is that the falling mountain has no bearing in earthquake general throughout Montana.

EXTENDS INTO WYOMING

Casper, Wyo., June 27--A.P.--Two distinct earth shocks, the first sufficiently severe to rattle windows and furniture, were felt in Thermopolis, Wyo., at 6:15 and 6:35 p.m., according to reports from there. No damage was done.

SLIGHT AT SHERIDAN

Sheridan, Wyo., June 27--A.P.--An earthquake shock of small proportion was felt here tonight at 6:23 o'clock in widely scattered districts.

SEISMOGRAPH STOPPED

Spokane, June 27--A.P.--A severe earthquake disturbance, felt distinctly in all parts of the city were registered on the seismograph at Gonzaga university here this afternoon at 5:25 o'clock. Bonner's Ferry, Sandpoint and St. Maries, Idaho, each reported temblors lasting an average of two minutes. No damage was reported.

The center of disturbance was evidently near by, A. M. Jung, observer at the Gonzaga university station declared. The instrument failed to register after the first shock. The disturbances were felt in many homes and downtown office buildings. Persons on the upper floors of a 15-story office building declared they distinctly felt the building sway.

FELT IN BOISE, IDAHO

Boise, Idaho, June 27--A.P.-- A slight earth tremor lasting about a minute and a half was distinctly felt here tonight at 6:23 o'clock. The shake was felt in a few homes and caused slight alarm among persons in high hotel rooms.

[The Missoulian; June 28, 1925]

JURY IS QUICK TO AGREE WHEN BUILDING ROCKS

The earthquake shocks here last evening found a district court jury, out on the George Kolvick liquor case, locked up in a jury room on the third floor of the county courthouse. The first temblor aroused no openly expressed qualms, but when the shock came again at a few minutes after 7 o'clock, the jurors pounded on the door and demanded in no uncertain tones and words to be released from the jury room.

Deputy Sheriff James Corbett and Assistant Clerk of the Court C. C. Chaffin, who were in the building at the time, unlocked the jury room, but with the shock subsiding, the jurors returned to their deliberations. It was freely admitted, however, when the verdict was reached a few moments later, that the wish to make a quick exit from the building had had an effect on the speed with which a verdict was agreed on.

"We sure didn't waste any time agreeing on a verdict after that second tremor," a juror is reported to have said. "We were all in too big a hurry to get out of the building before it came down on us. We thought it was going to fall from the shaking up we got." It may have no bearing on the story, but the verdict happened to be "guilty." The clock in Judge Duncan's courtroom, department No. 1, stopped at exactly 6:25 o'clock, it was reported. The courthouse clock itself was not affected by the tremors.

[The Missoulian; June 28, 1925]

CITIES IN VALLEYS AROUND MISSOULA ARE BADLY SHAKEN Plaster Falls From Walls As Earthquake Rocks Buildings At Darby And Upper Bitter Root

Quake Felt At Flathead Lake Polson Reports Slight Shock, Alarming Citizens, But No Damage Reported; Alberton Feels Temblor

Darby, June 27--Special--Two distinct earthquake shocks were felt in Darby and throughout the upper Bitter Root valley this evening. Plaster was broken from the walls of a store in the first shock at 6:28 o'clock and it is reported that the large barn on the Ford-Hollister ranch south of here was damaged, but this could not be verified. Old residents of the valley state a similar quake was felt in Darby in October, 1899. It occurred about 7:30 o'clock in the evening.

The first shock at Darby tonight alarmed the people who rushed from their homes and from business houses into the streets. Reports are that the shock was felt distinctly at Conner and Sula.

MERCHANDISE SHAKEN DOWN

Hamilton, June 27-- A decided earthquake shock was felt in Hamilton at 6:25 o'clock this evening. Buildings rocked, and electric light fixtures swung back and forth. The shock was general over the business and residential district of the town and in the tributary country. Merchandise was shaken from the shelves of stores.

FELT AT FLORENCE

Florence, June 27--Special--Two tremors were felt here at 6:32 and 7:05 this evening. Buildings were shaken and clocks were stopped. No damage was reported.

QUAKES FELT WEST OF MISSOULA

Alberton, June 27--Special--Two earthquake shocks were felt here this evening, the first and most distinct at 6:24 and the other at 7:05.

FRENCHTOWN IS SHAKEN

Frenchtown, July 27--Special--Store buildings surged and crackled here at 6:25 o'clock this evening when an earthquake shock was felt in Frenchtown, although no damage was done. Windows and dishes rattled and residents of the town were alarmed for a time.

FLATHEAD CITY FEELS SHOCK

Polson, June 27--Special--A slight earthquake shock was felt generally over the north end of Lake county at 6:20 o'clock this evening. It also extended miles out on the shores of Flathead lake, according to reports received here. Buildings shook and for a time the population was alarmed.

KALISPELL REPORTS TEMBLOR

Kalispell, June 27--A.P.--Earthquake shocks lasting 10 seconds were felt at 6:20 and 7:10 tonight. No damage was reported.

Mrs. John Mills reported that the shock was felt at the Lolo Inn, eight miles up the Bitter Root valley. The house swayed alarmingly, she said, and a heavy rumbling accompanied the shock. Two temblors were felt at 6:25 and one at a few minutes after 7 o'clock, she said.

The first shock was not felt at Grass Valley, it was reported by Mrs. Roberts of the Dairy farm. The shock at 7:06 was felt. however.

At Cold Springs, four and a half miles south of here, both shocks were felt, Mrs. C. S. Marsh reported.

[The Missoulian; June 28, 1925]

EARTH'S MOVEMENTS EXPLAINED BY CLAPP Tells How Earthquakes Are Due To Slipping Along Fault Lines

"Although some earthquakes may be due to large landslides and in violent volcanic eruptions most earthquakes are undoubtedly due to slipping along great fractures or faults in the earth's crust," said President C. H. Clapp of the State University, who is an authority on geology, last night.

"Movements along faults are rarely or never of a slow continuous nature but are sudden and intermittent, taking place after a period of quiet during which earth strains accumulate to such an extent that the resistance to movement is overcome and a sudden slip takes place. The intensity of an earthquake depends upon the amount of slip, the size of the area affected, and the depth, below the surface of the slip."

"The effect of a sudden slip along a fault," said Dr. Clapp, "is to send out vibrations in all directions and these vibrations are the earthquake as it is felt at a distance from the place of origin. That is, earthquakes are vibrations of the earth's crust which is set in motion by the slip, as a jelly is set in motion by the breaking off and slipping of a small piece.

Speed Depends Upon Medium

"The waves travel at a speed depending upon the elasticity and density of the medium through which they move. One set of earthquake waves travel in a straight or nearly straight line through the earth at a rate of six to eight miles per second and a second set of waves travel around the earth near the surface at a rate of about two to four miles per second."

In speaking of the size of earthquake waves, Dr. Clapp stated that the earthquake wave is very small, rarely more than one-sixteenth of an inch, but their destructiveness is due to their extremely rapid motion so that the effect of the wave is like a blur. The destructiveness also depends upon the freedom of motion possessed by the body affected; thus bodies like chimneys, loose objects, and hanging light fixtures are most greatly affected.

Two Principal Zones

"Although earthquakes occur most frequently and violent in two principal zones, one following the shores of the Pacific ocean and the other surrounding the earth not far from the equator, all portions of the world are affected by earthquakes. During historic times no major earthquake has occurred in the Rocky Mountain region, although more or less minor ones have been felt in all the Rocky Mountain states except Montana and Idaho. From the reports received the earthquake felt last night is perhaps the most severe that has ever been recorded in Montana.

"In spite of our records in the matter of earthquakes, there are plenty of indications of prehistoric earthquakes in the state. Nearly all of our mountain ranges are the results of faults and the movement along some of these faults has been very recent geographically, and a few of the movements have been recent humanly speaking. Dr. Roy Wilson found an old mine tunnel in the Flathead range closed by recent displacement along one of the major faults which outline the range.

"Judging by the reports from various parts of Montana the earthquake last night was the result of a slip along one of the major faults in the eastern part of the mountain region of Montana, probably some distance east of a line between Butte and Helena. There is little

to fear from such an earthquake and it is probable that this slip has relieved the stress to such an extent that another earthquake will not occur for several years."

[The Missoulian; June 28, 1925]

THREE PASSENGER TRAINS ARE LOST IN QUAKE SLIDES IN VICINITY OF THREE FORKS

No Word Has Been Received From Two Milwaukee Trains And One Northern Pacific Local Believed To Be Hemmed In By Three Big Avalanches Of Rock. Relief Train Is Sent

Livingston, June 27--A.P.--Through an Enterprise reporter sent to cover the slide on the Northern Pacific and Chicago, Milwaukee & St. Paul lines, it was learned tonight that the Milwaukee tunnel near Lombard, had collapsed, blocking all traffic on that line. According to the telephone report, train No. 235 of the Northern Pacific is hemmed in by two landslides and crews will not be able to open the way until some time Sunday, more than 20 boulders each weighing more than a ton, blocking the railroad. The crews sent to clear the track has ordered dynamite to use in removing the boulders. Another slide of unknown extent about seven miles farther on is barring the progress of the marooned trains to the westward.

The reporter also states that Logan has been hard hit by the quake, one school building being a total loss. Chimneys on practically all the houses have been shaken down and the lunchroom there was forced to close because of trouble in the flues, caused when the chimney in the building was demolished.

THREE SLIDES REPORTED

Lewistown, June 27--A.P.--While full corroboration of landslides on the Milwaukee tracks are lacking, due to wire trouble, reports from local officials indicate that there have been three landslides near Lombard. One between Three Forks and Eustic, another near Deer Park and the third at Josephine, the latter two stations being 15 and 20 miles east of Lombard in Sixteen Mile canyon. Olympian No. 15, westbound may be stalled between two of the rock slides, local railway officials said, or it is possible that it might have been detoured over the Northern Pacific tracks.

THREE TRAINS HEMMED IN

Livingston, June 27--A.P.--Two Milwaukee passenger trains and Northern Pacific passenger train No. 235 are hemmed in by a huge rock slide near Lombard, according to a report of the Northern Pacific here. A special train was made up here and has just left for the scene of the slide.

Both the Milwaukee trains and the Northern Pacific trains are safe according to the Northern Pacific's report. The trains in each instance are hemmed in on all sides by the rock and land slide which occurred as a result of the earthquake.

Train No. 235 is two miles west of Lombard. Milwaukee trains are two miles west and four miles east. Train 235 carries the Enterprise reporter.

Early this morning it was announced at the Northern Pacific headquarters here that all Northern Pacific trains are being directed by way of Butte on account of the slides east of Helena.

All of the through trains which operate from Garrison by way of Helena to Logan will now go by way of Butte between Garrison and Logan until the line is cleared.

Two Northern Pacific trains which went through Missoula yesterday were detoured from Garrison by way of Butte on their eastward trips on account of the slides which resulted from the earthquake and tied up traffic on both the Northern Pacific and Milwaukee lines at Lombard.

One of the trains was the Master Plumbers' special train, returning eastward from Portland from the convention. The train made a 10-minute stop in Missoula. The other train which

was routed by way of Butte was a train of 11 car loads of berries.

Reports late last night at the Milwaukee headquarters here were that the west bound Olympian due here at 12:30 this morning would be about 10 minutes late.

[The Missoulian; June 28, 1925]

FURTHER TREMORS ROCK CENTRAL PART OF STATE

MOST DAMAGE IS AT THREE FORKS AND AT WHITE SULPHUR SPRINGS Loss To Property At Each Of These Places Is Estimated At \$100,000; Buildings Wrecked; Center Of Disturbance In Lower Gallatin Valley; Damage In Northern Counties Almost Negligible; Late News From Area

By The Associated Press

Anaconda, June 28--A slight earth tremor was felt here at 3:16 this afternoon. Another slight tremor was felt at 3:45 o'clock this afternoon, the seventh in 20 hours. No damage was caused. Two buildings at the Montana state hospital for the insane, eight miles from here, were damaged by the first of yesterday's shocks. A wall in one of the buildings for women patients fell in, but no one was injured. The coping at the hospital was so badly damaged that it had to be pried loose as a matter of safety.

NO DAMAGE BY SUNDAY'S SHOCKS

By The Associated Press

Helena, June 28--A slight earthquake shock was felt in White Sulphur Springs at 3:40 o'clock this afternoon.

Reports were that a slight tremor was felt in southern Montana at 4 o'clock this morning. The White Sulphur Springs temblor was the second reported since that time, the first occurring in Three Forks at 10:45 a.m. No damage was caused by either of the shocks.

PEOPLE IN MANY PLACES TERROR STRICKEN

By The Associated Press

Helena, June 28--Mother Earth became nervous again late today in central Montana and suffered more convulsions.

Temblors occurred at Three Forks, White Sulphur Springs and Anaconda. All of them were slight.

After spending a night fraught with terror over the hidden dangers of an earthquake disaster, the population was preparing in several small towns to vacate their homes in case a new disturbance occurred.

No loss of life has occurred, according to definite advices reaching here from cities and towns in the affected area. Only three persons have been injured, it is reported.

The tremors today were confined to the south central region of Montana, whereas last night's shocks covered sections of four states, in the northern half of the Rocky mountain range.

In the three other states, Idaho, Washington and Wyoming, the temblors were slight and no material damage was recorded.

Property damage estimates in the stricken area of Montana have soared to the \$500,000 mark tonight with reports of heavy damage coming in from the smaller towns and cities.

Two Towns Suffer Very Heavy Loss

Two isolated towns are reported to be seriously damaged by the temblors, incomplete reports stated. At White Sulphur Springs, which reported a new shock today, virtually all of the county buildings of Meagher county and many of the business structures have been demolished with an estimated loss of \$100,000. A property damage toll of \$100,000 was also exacted at Three Forks, it was reported.

The center of the disturbance, all authoritative information here tonight indicates, was in the lower Gallatin valley and the major smaller towns bore the brunt of the earthquake's damaging effects. Northern Montana last night felt a series of light earth shocks, none of which caused material damage.

Prisoners in the county jail at Billings were panic-stricken, when the second tremor last night split the floor of the courtroom.

A score of patients in a Billings hospital were badly frightened, when the shocks occurred and some pleaded to be removed from the building.

Near-panicky conditions that prevailed in virtually every city of western Montana when the temblors bespoke their fury last night had subsided late today before the new shocks occurred, and work of estimating the damage was begun.

Little Damage at Butte

Damage in Butte was negligible, consisting of bricks being stripped from the facades of buildings and chimneys being toppled over. The quakes left no marks on the more than 1,000 miles of underground workings of the Butte copper mines. Thousands of men labored in the slopes and drifts while the temblor was most severe.

The earth movements last night were of an oscillatory character, a back and forward wave-like swaying. Today thunder and lightning played in the heavens above Butte. Indications that there had been marked underground disturbances during the earthquake were evident in the vicinity of Three Forks, where huge fissures, several feet deep, appeared in the earth's surface. The water level of the Jefferson river a mile above where it joins with the Gallatin and Madison rivers was reported to have dropped two feet.

Tremors Slight in Idaho

Only slight earth shocks occurred in Lewiston, Idaho, last night. No property damage resulted, the tremors only swaying light fixtures and pictures on the walls of buildings.

\$300,000 LOSS IN GALLATIN

Livingston, June 28--A.P.--Gallatin county tonight was taking count of its \$300,000 property loss, caused by last night's earthquakes.

This district of Montana, from all surveys of the earthquake situation, bore all the brunt of the tremors. Three Forks and Manhattan reported the destruction of seven buildings. Two of the structures were schools, while the others were the largest business buildings of the two towns.

With a reported toll of 41 distinct tremors, Three Forks unofficially appears to have the "quake record" for the state.

While the populace of the two towns has not shown any panic over the temblors, the severity of the earthquake in the section has led to greater precautions against disastrous effects of the new shocks reported in the state. Residents of both towns deserted their homes last night to sleep outdoors and today the housewives of the towns prepared their meals over camp fires. Danger of fires has caused the police authorities of Manhattan to ban the building of fires in any of the houses of the town.

ONLY THREE PERSONS INJURED

Livingston, June 28--A.P.--Incomplete reports from the earthquake zone in Montana today told of but three persons suffering injury in the upheaval. Mrs. Ernie Gray, at Three Forks, received a broken hip, when the porch of her house collapsed during a temblor as she was leaving the building. Two motorists near Butte received injuries, when their car was caught in the "waves" of the earth shocks and careened over an embankment.

Fear that the earth upheaval might be continued with disastrous effects prompted the residents of Three Forks and Manhattan to vacate their homes and sleep in the streets. They also moved their household effects from the houses and today prepared their Sunday repasts outdoors.

Patrols of police and volunteer citizens were thrown about buildings in Three Forks to guard weakened structures where danger of falling walls existed. Plans to raze with dynamite several of the shattered structures were under consideration, the authorities stated.

LITTLE DAMAGE IN NORTH

Great Falls, June 28--A.P.--Little damage was reported today in northern Montana from the series of light earth shocks Saturday night. The disturbance, general over the entire state, appeared to center in the south central section where three towns reported heavy damage but no loss of life.

The Chicago, Milwaukee & St. Paul railway officials announced today that all transcontinental trains would be routed over the Harlowton-Great Falls-Butte lines, pending the repair of a tunnel near Lombard, which collapsed following the quakes. Officials estimated a week would be necessary to repair the tunnel and remove slides now blocking the tracks.

NEAR-PANIC AT BILLINGS

Billings, June 28--A.P.--Uneasiness over five earth tremors here Saturday evening had abated today. There was no loss of life and no injuries have been reported. The second series of quakes split the floor in the county courthouse and caused a near-panic among the prisoners. The shakes caused the patients in the local hospital to ring for assistance. Some demanded to be taken from the institution.

[The Missoulian; June 29, 1925]

MAROONED PASSENGERS ARE REROUTED MILWAUKEE WILL BE 30 DAYS RECOVERING FROM QUAKE SLIDES Road Will Use Northern Pacific Line Until Damage Has Been Repaired; N. P. Will Be Cleared Today Helena Cut Off For Time Being New Poles And Wiring Will Be Required For Electrified Line

At Lombard Before Trains Can Operate

By The Associated Press

Bozeman, June 28--Railroad travelers marooned near Lombard on the Northern Pacific and Chicago, Milwaukee & St. Paul railroads by track blockades resulting from last night's earthquake have been relieved and are continuing their journeys under a rerouting plan, it was announced late today.

Northern Pacific train No. 235 tonight was still held up by landslides near Lombard but its passengers were transferred to another train at Logan and continued their travel by way of Butte.

Will Use N. P. Tracks

Chicago, Milwaukee & St. Paul train No. 26 and No. 18, eastbound, and No. 17 westbound, continued their journeys today on the Northern Pacific tracks under an arrangement consummated by the two railroads, which provides for a connection between Harlowton and Sappington, clearing the Milwaukee tracks two miles west of Lombard. A landslide covered the Northern Pacific tracks two miles west of Lombard for a distance of 1200 feet. Railroad officials announced that it can not be cleared before tomorrow. Service on the railroad into Helena will be limited to a connection from Butte until the line is cleared.

Three Slides Reported

The Chicago, Milwaukee & St. Paul has three landslides on its tracks, and a cave-in in its tunnel near Lombard to clear away before normal service can be resumed. Railroad officials estimated today that it might take 30 days to repair the damage wrought by the landslides.

New poles and wiring for the electrified system of the Chicago, Milwaukee & St. Paul railroad will have to be installed on the tracks near Lombard, damaged by landslides, officials of that road announced tonight. Until the electrified system has been restored, steam locomotives will be used. The Northern Pacific railroad will lend its steam engines to the Milwaukee system until the latter railroad sends locomotives from its terminal points.

First Train This Morning

The first westbound passenger train of the Milwaukee railroad since the slides near Lombard Saturday night caused by the earthquake, was scheduled to arrive here at 3:20 o'clock this morning. It was the westbound Olympian No. 15, due here at 12:39 this morning.

It will be followed by one of the sections of the Olympian which was due early yesterday, while the westbound Columbian train which was due here yesterday afternoon was scheduled to arrive here about 5 o'clock this morning. It could not be learned here when the other section of the Olympian of yesterday will arrive.

B. B. Greer of Chicago, chief operating officer of the Milwaukee system who is in the west, and C. O. Bradshaw of Seattle, general manager of the western lines, passed through Missoula last night on the Columbian No. 18 for the scene of the slides.

Helena is Cut Off

On the Northern Pacific line all the trains are going over the Butte line from Garrison to Logan. The slide near Lombard tied up the road on the line by way of Helena from Garrison to Logan. It was announced last night that the trains would all go by way of Butte until the Helena line was cleared. Reports received at the railroad headquarters here are that the wires are down at Lombard.

All of the Northern Pacific trains from the east were slightly behind schedule yesterday, but it is understood it was not on account of the earthquake trouble.

[The Missoulian; June 29, 1925]

MOUNTAIN REGIONS HAVE FELT QUAKES DURING LATE YEARS Region Supposed To Be Immune To Disturbances Is Visited Frequently; Some Recent Shocks Recalled

By The Associated Press

Denver, June 28--Despite claims of some scientists that the Rocky mountain and western regions are protected from earthquake dangers, several notable shocks have been felt over large portions of the western United States in the past 15 years.

One of the most widespread seismic disturbances was that which shook most of Arizona in September 1910. The first shocks started on September 23, with Williams, Winslow, Kingman and Jerome reporting tremors. Flagstaff on September 28, reported that the disturbance was still continuing with considerable minor damage. The center of the Arizona quake was reported to be in the vicinity of the Grand canyon. The shocks were severe enough to send giant boulders tumbling down the mountains and whole Indian villages fled in terror.

Several at San Francisco

San Francisco, on December 31 of the same year reported a severe tremor, but damage was slight.

On July 1, 1911, San Francisco reported earth shocks of 40 minutes duration, almost as long as the fatal San Francisco temblor and fire of 1906, although in the 1911 disturbance little damage was reported. The shocks extended inland, however, Reno, Nev., reporting that hot springs at Steamboat Springs, Nev., quiescent for years, had commenced shooting boiling water high in the air at the moment the earthquake appeared.

Severe at Mexico City

One of the worst shocks felt on the north American continent in recent years was that which rocked Mexico City on June 7, 1911. Seventy-five persons were reported killed and many buildings and homes, including many belonging to Americans, were razed. Numerous other Mexican disturbances have been recorded.

Northern Illinois and southern Wisconsin were jarred by an inland earthquake on January 2. 1912.

An earthquake lasting several seconds was felt at Salt Lake City, April 12, 1913. The shocks were sufficient to rock transmitters in the telephone offices. This shock was reported felt throughout southern Idaho.

[The Missoulian; June 29, 1925]

YELLOWSTONE IS SAFE FOR TRAVELERS; QUAKE DAMAGES PARK LITTLE

Bozeman, June 28--A.P.--Yellowstone national park's natural wonders escaped without damage when the earth's gyrations last night shook most of Montana and sent fear into the hearts of inhabitants of many cities and towns.

Reports from park rangers who inspected the park, according to Superintendent Albright, showed no damages to the formations or to tubes feeding the geysers. Only one road was blocked--a rock slide from a mountain near Mammoth.

[The Missoulian; June 29, 1925]

EARTHQUAKE TOPIC OF DISCUSSION BY MISSOULA PEOPLE Experiences Related When Friends Met On Sunday; Some Get First Information From Missoulian

Everybody in Missoula was talking earthquake yesterday.

With the experiences of Saturday evening still fresh in mind, it was the topic for conversation over backyard fences, in cigar stores and at soda fountains. Each had his or her story to tell--first, surprise; then fright, followed in many cases by a feeling of nausea; then relief when the final tremor had spent its force and the earth and buildings had come again to a state of repose.

For a number of people the shock of the shock was reserved until Sunday when the morning Missoulians were taken in from front porches and yards. These, coming home by auto from neighboring towns or outings in the mountains at the time of the quake, reached town late and had not felt the commotion. The headlines in the paper gave them their first information that anything out of the ordinary had happened.

There were no reports here yesterday of damage. Further inquires made no changes in the first reports.

One feature of the quake is that it was felt generally over the valleys surrounding Missoula, but residents along the foot of the mountains say that they did not notice the tremors at their homes.

The earthquake shocks were severe at Bonner, according to reports received from there yesterday. It was said that tremors were so hard that the big bridge shook and the population of the town was alarmed when the houses creaked and shook.

[The Missoulian; June 29, 1925]

BOSTON FOUNDATION WANTS PHOTOS OF REGION AFFECTED BY TEMBLOR PICTURES MAY BE TAKEN BY PLANE

By The Associated Press.

Boston, June 28--A recommendation that airplane photographs be taken of the area affected by earthquakes in Montana yesterday was made today by the Engineering Economies foundation, engaged in organizing knowledge of earthquake hazards. Officers of the foundation also urged that Montana authorities obtain records on personal experiences of those who felt the shock and forward them either to the foundation or to the Seismological society of America at Stanford University at Palo Alto, Cal.

An airplane photographic survey, taken from a low-flying plane, officers of the foundation said, would afford a basis for the study, pointing out that the Montana quake is the third in the past two months of particular interest to the men studying earthquakes, the foundation, in a statement said:

"Every new quake strengthens the imperative and instant necessity of study of earthquake hazard. Every new quake which occurs provides knowledge for understanding that hazard and for preventing the death, suffering and loss which disastrous earthquake shock brings."

"But," the statement continued, "the opportunity of gaining that knowledge must be taken. The earthquake of June 27 in Montana, according to present reports, had its greatest effect on transportation and communication. It was accompanied by landslides and avalanches. Under the circumstances reports, where exterior changes in the face of the earth occurred, it is most desirable to have immediate airplane photographic surveys to advance the knowledge of earthquake shocks and effect."

[The Missoulian; June 29, 1925]

PAINTER'S NERVE SHAKEN BY QUAKE

Billings, June 28--A.P.--A. C. Gallagher, a painter, was gilding the cross on St. Patrick's Catholic church here working overtime, when the first shocks of the earthquake were felt here Saturday evening. He felt the tremor pass through the building and clung desperately to the cross, which, he said, swayed three feet in a north-south direction. After the first quivers, he took no more chances and descended from the steeple. His nerves were badly shaken.

[The Missoulian; June 29, 1925]

ANOTHER WYOMING MOUNTAIN TUMBLING GREATER AVALANCHE THAN THAT THAT FELL WEEK AGO EXPECTED MOMENTARILY IN TETON FOREST

North End Of Chief Mountain Has Cracked Loose;
Slide Into Gros Ventre River Believed Certain
Result Will Be Second New Lake
Continuation Of Tumbling Rocks Expected To Turn River Into New Channel;
Stream Much Deeper Now

By The Associated Press

Jackson, Wyo., June 29--The north end of Chief mountain in the Teton national forest near here is cracking, probably as a result of the earth tremors which rocked four Rocky mountain states Saturday night and another avalanche, greater than that of last Tuesday, into the Gros Ventre river is feared, forestry officials reported today.

The north end of the mountain on a front of several miles is cracking, the advices stated, and it is slipping down into the river almost perceptibly.

Will Mean Another Lake

Indications are that, when the landslide does occur, the lake which will be formed by the damming of the river, will be considerably larger than the basin created by last Tuesday's slide.

A recent survey by the forestry officials shows that, if this avalanche occurs, the forest ranger station near the Gros Ventre river in the vicinity will be under water.

Change in Channel Expected

The forestry officials declared that the continuance of landslides from the mountains in the region will probably turn the river into a new outlet.

The landslide last Tuesday has virtually ended all irrigation operations of ranchers of the district for the season, it was indicated.

The lake, formed by the avalanche last week, is estimated to cover an area of 5,000 acres, according to a survey of the forestry officials. The piling up of rocks and earth around the sides of the basin has created cliffs, hundreds of feet high.

The terrific onslaught of the landslide last week into the Gros Ventre river deepened the stream from 120 feet to 500 feet.

[The Missoulian; June 30, 1925]

DAMAGE IN MONTANA FROM TEMBLOR WILL NOT EXCEED \$500,000

Helena, June 29--A.P.--While stricken Santa Barbara prepared to take inventory of its disaster, the task of checking up damage done by earthquakes throughout Montana over the last three days proceeded with indications that total property damage would not exceed \$500,000.

Although shocks were reported today from Helena, Great Falls, Billings, Bozeman, Logan, Three Forks and Manhattan, none was severe enough to cause additional damage.

[The Missoulian; June 30, 1925]

MISSOULA BRIDGE CREW ON WAY TO QUAKE SCENE Will Help Reconstruct Line Near Lombard

Bridge crews on the local division of the Milwaukee railroad are being sent to Lombard and Deer Park to assist in the reconstruction work necessitated there on account of the earthquake of Saturday night.

The bridge crew at Missoula left here early this morning on a train to be run special to the scene of destruction. There were 11 cars containing the equipment of the bridge crews. It is understood that two other crews also will be sent to the district from western Montana. Besides the slides which have buried the railroad tracks under mountains of rock, crevices in the ground left by the guake will be bridged over, it is understood.

[The Missoulian; July 1, 1925]

MONTANANS WILL BE ASKED TO REBUILD SCHOOLS

STATE-WIDE DRIVE FOR FUNDS WILL BE STAGED TO HELP OUT DISTRICTS STRUCK BY QUAKES

Hugenin Authorized To Make Survey Of Wrecked Houses
To Determine Cost Of Reconstruction Work
Proclamation Will Be Issued; Governor Will Take Action Today
Committees Are To Be Named To Supervise; Nearly \$150,000 Estimate

By The Associated Press

Helena, July 1--While the state board of examiners today found that the state government is decidedly limited in its ability to aid in reconstruction of the five schools in northwest Gallatin county which were wrecked by the earthquakes last Saturday night, it will take the lead in a state-wide relief drive.

The board today directed its architect, A. H. Hugenin, immediately to make a survey of the ruins of the schools, and prepare plans and estimates for their construction. His engineering force also will be loaned by the state for engineering work in connection

with the construction.

Proclamation Coming Today

This was the extent to which the board decided it could go in governmental aid. However, Governor Erickson tomorrow will issue a proclamation calling upon the citizens of Montana to finance the reconstruction through a drive and is expected to name a committee to take charge of the campaign.

Preliminary estimates of the reconstruction cost run from \$100,000 to \$150,000, but the figure to be asked of the state will be determined from the result of the state architect's examination, plan and estimates.

A delegation of school officials from the Gallatin valley, led by Lucile Quaw, county superintendent and State Senator W. H. Buttelman of Willow Creek, met today with the Helena Rotary club and later with the board of examiners, and Miss May Trumper, state superintendent. The plan suggested was evolved by Judge Albert J. Galen, supreme court justice.

\$3,500 FOR WARM SPRINGS

Helena, July 1--A. P.--Thirty-five hundred dollars, in the opinion of Dr. H. A. Bolton, superintendent of the Montana insane hospital at Warm Springs, will cover the damage caused there by the recent earthquake. Brick veneering must be replaced where it fell from some of the buildings and there are some small cracks in the walls, not sufficient to seriously weaken the buildings, but which must be plastered over, he says. Patients at the hospital were somewhat nervous, but not greatly affected by the shakeup, he said.

[The Missoulian; July 2, 1925]

OLYMPIAN IS SAVED BY GIANT BOULDER Connecting Wires Severed In Blow, According To Mrs. Bishop

An immense boulder, torn loose by the first tremors of the Montana earthquake at Lombard Saturday night and which struck between the two passenger cars adjoining the observation car of the Milwaukee Olympian westbound train and severed every connecting wire, is thought to have been responsible for the miraculous escape of the train and all its passengers, according to Mrs. Charity Bishop, one of the passengers, who is visiting a few days in the city.

"The first that the passengers knew what had occurred," said Mrs. Bishop, "was about 6:10 that evening when the train which had been traveling at a rate of between 50 and 60 miles an hour gave a sudden jerk, a terrible lunge and then ceased operating."

Passengers Rush From Train

The large number of passengers who had taken advantage of the porter's first call to dinner, came rushing out from the dining car, terror-stricken before knowing what actually had happened. Other passengers from all of the other coaches also fled from their respective cars into an adjoining car. As soon as they knew what had taken place, their first feelings of terror subsided, and they gathered together in groups all over the train. As a result of the tremor the track in front of the train was covered with rocks of all sizes, from the tiniest pebble to the largest boulder. Trees were also torn from their roots and rolled down the mountain side among other debris. Mrs. Bishop said that in places the slide was six feet in depth.

Second Train Just Cleared Tunnel

The second section of the Milwaukee had just come out of the tunnel, directly behind the train in which Mrs. Bishop was traveling, when the tunnel gave way. The power of this section was killed along with that of the preceding train and was brought to the same sudden stop. So the two sections of the train were locked between two slides, instead of being entirely covered as might have been the case had not the power been cut off when it was.

The framework of two of the coaches was somewhat damaged, but the wheels had not been harmed much and the cars were therefore in such condition that they could be taken to Three Forks where they were left on Monday morning. The passengers of these two coaches were moved into the other coaches when the trip was resumed.

Tremors were felt continually until [?] o'clock Sunday morning, according to Mrs. Bishop. With each tremor the mountain would disgorge. The sensation which each of the passengers went through is said to have been simply indescribable. They did not know just what was going to happen next, and could only hope for the best. Everyone on the train held wonderful self-control and there were only a few instances possibly where great fear was shown.

Praise for Officials

Mrs. Bishop was warm in her praise of the Milwaukee officials, and said that they couldn't have been more wonderful than they were to the passengers. They did everything they could to be of service to the people and did all they could towards consoling them. Some soldiers who were on the train en route to Alaska were responsible for sending word for the wrecking crew which came soon after the slide had fallen. They secured a handcar and were able to get into communication with railroad officials along the line. "One of the most consoling features following the avalanche," said Mrs. Bishop, "was the service of thanksgiving held on the train Sunday morning between 11 and 12 o'clock. A

large number of Baptist clergymen were on the train headed for Seattle to attend a convention of their church and took charge of the services. Dr. Barton of Omaha, Neb., seemed to be the leading spirit of the meeting. A very beautiful and inspiring service, consisting of a sermon, prayers and song service was held. Some of the passengers wept. Everyone appreciated the opportunity to give thanks to God for saving them from what could very easily have been a great disaster."

Three Forks Ruins Attract

The train was able to leave the scene, about eight miles east of Three Forks, at 8:15 Monday morning. Reaching Three Forks they were forced to wait for some time while the two coaches which had been damaged were replaced. Nearly all of the passengers looked over the ruins of the city. They found the residents camping out in their yards or on the streets for fear of another quake. The school building is said to be a total loss, the Methodist church is completely wrecked, nothing being left but the salvage, and a large garage was also damaged considerably. Nearly every chimney in the place had toppled over. The hotel, a large frame building, was not damaged by the rocking.

The train which was due to arrive in Missoula Sunday morning at 12:35 did not reach the city until Monday afternoon at 4:30.

Mrs. Bishop, a former Missoula resident, who is now located in New York, is visiting for a few days in the home of Mr. and Mrs. Dan Ross on Hilda avenue. She expects to leave Missoula Sunday evening for San Francisco where she will spend the summer with her daughter, Miss Claire Bishop.

[The Missoulian; July 2, 1925]

MILWAUKEE SLIDES WILL COST RAILWAY MILLION TO REMOVE Company Recruits Laborers Wherever Available; Lake Formed By Damming Creek Retards Work

By The Associated Press

Bozeman, July 1--The damage done to the Chicago, Milwaukee & St. Paul railroad by the quake shocks of last Saturday night, between Maudlow and Lombard will take from a month to six weeks to repair with a loss estimated now was high as a million dollars. Between six and seven hundred men, recruited from the Butte mines and wherever available, are working day and night shifts in clearing away the huge boulders and stones that have covered the right of way in Sixteen Mile canyon and which destroyed the tunnel at that point.

The damage was completed by the collapsing of the rocky cliff, through a part of which the tunnel was built, and covering the right of way with the debris for a considerable distance. The fallen rocks and earth formed a dam in Sixteen Mile creek and backed the water up to the mouth of the tunnel, forming a miniature lake at this point, between 40 and 50 feet deep. The area covered by the dammed waters is not more than a block in extent, but it interferes with the work.

Tons of Dynamite Being Used

The crews of men are working at each end of the tunnel and tons of dynamite are being used to break up the largest of the stones and boulders so they may be removed. A charge of 2,500 pounds of the explosive was touched off Tuesday noon with but little effect on the immense rocks and again at 6 p.m. Tuesday a charge of 3,500 pounds was set off. At stated times today these dynamite charges were exploded and this will continue till the obstructions are removed.

As soon as the worst of the fallen rock can be removed, the Milwaukee will build a [?] around the main right of way and this will be used for the moving of trains around the obstructions until the entire work is completed. In the meantime, all Milwaukee passenger trains are routed from Miles City over the Northern Pacific and through Bozeman to Butte. The freight traffic of the road will go over the Great Northern from Miles City to Butte.

[The Missoulian; July 2, 1925]

MAY INSURE HERE FOR EARTHQUAKES Policy May Be Taken Today For Business Block Insurance Man Says

Probably the first earthquake insurance policy for Missoula will be written today, according to a local insurance agent. He said that he has a prospect for a \$215,000 policy on a business block.

Earthquake insurance is a new form of protection in western Montana. According to insurance men the rates vary in accordance with the classes of buildings. The rates for brick or stone buildings reinforced with steel and with steel roofs get the lowest rate, while frame buildings have the highest rate.

Also the premiums on earthquake insurance policies vary. When the building material is insured for the full amount of its value the rate is said to be about 18 cents per \$100. However, when insurance is carried on only a part of the value of the building the rate is said to be about 60 cents per \$100.

The marked difference in the premiums, insurance men say, is because a building that is cracked severely in an earthquake shock will result in a heavy claim for the owner. Even if a building is not entirely wrecked, on account of the hazardous work of repairing it, the costs will mount high.

Some of the insurance men of the city are prepared to write policies now, while others feel that writing such risks will not be a lasting business here, as policies will not be carried indefinitely, but will be canceled at their expiration. Others say that in California cities where earthquakes have occurred frequently are fertile fields for new business.

Fire, life, accident, automobile, burglary and hail insurance are all well known forms of risk here, but there are many other forms written elsewhere.

Although dry seasons occur frequently in the west it is said that little or no drouth insurance is sought in this section. Another form of insurance handled here, but for which there is no demand, is insurance against rain. Although the country is free from tornadoes, there are a few policies here where parties want to guard against destruction of buildings by falling trees during windstorms.

Use and occupancy is another form of insurance which gets but little attention here. According to insurance men, the policies guard the owner against loss of rent on account of the vacancy of buildings because of temporary destruction.

[The Missoulian; July 3, 1925]

HOT WATER SUPPLY AT SPRINGS IS INCREASED

The hot water supply at Medicine Springs and Sleeping Child springs in the upper Bitter Root valley has increased from 50 to 75 per cent this week, following the earthquake of Saturday night. Visitors who have returned from the valley brought word to Missoula of the increase in the supply.

It is said that the Fourth of July holiday vacation visitors have already started arriving at the springs for the outing over Sunday.

[The Missoulian; July 3, 1925]

THE MYSTERIOUS EARTHQUAKE

Everybody is still talking earthquake, wondering when and where the next one will hit, or picking up a new story about the last one. This was really a brand new experience for Montana because it was a real earthquake, not one of the little baby quakes that we have had in the past.

And everybody, we fancy, is eager for information about earthquakes, though unfortunately, the sources of real knowledge are few while the theories are many. Seismology, or the science of earthquakes, has accepted the theory of the Japanese that a succession of little quakes release earth strains and act as an insurance against big ones.

Some time ago Dr. Bailey Willis said that the little quakes relieved the earth strains in northern California but that in the southern part of the state these strains were accumulating, and might some day cause a pretty big earthquake. That prediction came true at Santa Barbara.

A "fault" is a break in the rock strata of the earth and the entire California coast is a territory or region of gigantic faults. That much appears to be definitely known. On one side of the break the rocks are thrust up and on the other down. Thus, as these faults are weak places in the earth's crust, the slipping once started tends to continue. People who live in California have learned to expect these things and gamble on the chances that they will not be serious.

[The Missoulian; July 4, 1925]

EARTHQUAKE INSURANCE POLICY WRITTEN HERE \$115,000 Taken Out On First National Bank Building

An earthquake insurance policy for \$115,000 was written yesterday on the First National bank building in Missoula. According to Ira C. Watson of the Watson agency, who wrote the policy, this is the first earthquake insurance policy ever written in Montana. Mr. Watson says there are other business blocks in the city upon which the owners are considering earthquake insurance and that other policies may be written next week.

The policy written on the First National bank is for only a part of the value of the building, it is said.

A number of insurance agencies in Missoula are prepared to write earthquake insurance but in the past have not had the necessary papers here to write the policies because it was felt that there was no field here for earthquake insurance.

[The Missoulian; July 4, 1925]

MILWAUKEE ROAD MAY BE OPENED TOMORROW Hope To Have Temporary Line Built In Quake District

That through traffic on the Milwaukee railroad will be resumed by Saturday, is the hope of officials of the railroad, according to word received by O. G. Buerkle, Missoula agent of the company.

A "shoo-fly" track or loop is being built for temporary use around the area blockaded in Sixteen mile canyon, near Lombard. This was tied up when the earthquake of June 27 caused the main line to be blocked by rock that came down the mountain sides. Officials of the railway expect to complete this late today so that trains will be able to pass through the next day. The "shoo-fly" is 800 feet long, with a 400 foot bridge being necessary for the crossing of the stream. Only further interference by nature will prevent the completion of this temporary structure so as to permit the passage of trains by this weekend.

Since the blockade, the Milwaukee has been operating its Olympian trains, Nos. 15 and 16, over the Northern Pacific between Sappington and Miles City. Other passenger trains have been run out of Three Forks west and out of Harlowton east, with connecting shuttle trains helping in the transfer of passengers.

The tunnel will be blocked for some time, it is understood, and the work of reconstructing the road in the Sixteen-Mile canyon on a permanent basis will take months.

[The Missoulian; July 10, 1925]

LAKE COUNTY BUREAU CHIMNEY SETTLED BY QUAKE; FIRE STARTS

Ronan, July 11--Special--On the morning of July 4th a fire broke out in the upper story of the Worden home while the family were absent. The fire was put out before the house was destroyed, but considerable damage was done. It was caused by the chimney having become dislocated during the recent earthquake.

[The Missoulian; July 12, 1925]

MONTANANS HAVE A CHANCE TO HELP OWN PEOPLE, GOZA SAYS IN PLEA FOR AID FOR REBUILDING SCHOOLS

By The Associated Press

Helena, July 11--Upon his return Monday from the bankers' convention at Glacier park, Governor Erickson is expected to name the remaining members of the executive committee to handle subscriptions toward the fund to restore the five Gallatin county schoolhouses wrecked by the earthquake of June 27.

Chairman Sam D. Goza today conferred with representatives of the school districts with reference to the situation there and the state board of examiners accepted an offer of W. S. Plew, head of the department of architectural engineering at Montana State College to take active charge of the reconstruction. Mr. Plew was directed to commence operation as soon as possible that there would be no question but the schools could be in shape for occupancy at the beginning of the fall term. State Architect R. C. Hugenin will assist in the supervisory capacity.

"The loss is as great in proportion in Manhattan, Three Forks, Logan and Willow Creek as in Santa Barbara," declared Mr. Goza today. Fortunately, neither Butte, Great Falls, Helena, Billings, Lewistown, Bozeman, Havre, Kalispell nor Glendive was the sufferer. "This is not a drive in any sense but merely an opportunity for voluntary subscription to help fellow Montanans, principally children of school age.

"Will the people respond? Of course they will, even more promptly."

[The Missoulian; July 12, 1925]