Biographical Sketch:

Hottes, Charles Frederick
Born: July 8, 1870, Mascoutah, Illinois.
Son of Frederick and Barbara (Dathan) Hottes.
Bachelor of Science, University of Illinois, 1894, 1891
Master of Science, University of Illinois, 1895
Ph.D., Bonn, 1901
Married Flora Guth, August 25, 1895.
Daughter: Flora Emily
Assistant in Botany, 1895-1898
Instructor in Botany, 1901-1902
Assistant Professor in Plant Physiology, 1913-1938
Consulting Plant Pathologist, 1923-
Head of Department of Botany, 1928-1938
Professor Emeritus, 1938-
Unitarian
Fellow - AAAS, Botanical Society of America Sigma Xi
Society of Plant Physiology Gamma Delta Sigma
American Genetic Association Mason k and 32
Illinois Academy of Science Red Cross of Constantine
Acacia University
Alpha Zeta Kiwanis
Chaos

406 West Iowa, Urbana, Illinois.

Notes of a November, 1963 interview with Professor Hottes:

Remembers Peabody, small, bald-headed; taught philosophy. Opposed fraternities, student riots.
Burrill used to line up in University Hall for morning roll call.
Stafford took students' pictures.
Kinley had the hottest temper of anyone he knew. Student in trouble went to President Kinley who kicked wastebasket around room. Hottes told Babcock he would resign and Babcock apologized to Hottes for Kinley.
Lecturer. Hottes had a loud voice or prediger stimme, large classes
Traveled, took pictures, Hebothe was a fruit man at Grand Junction, Colorado.
Prepared pear blight exhibit in Natural History Building.
Publications:

1925-26, Cooperative Research in Plant Physiology and Agronomy, *JAS of Agronomy*, 18:1:60-68
1927-28, Sweet corn seed, constant rote aspirator, wheat germination //three shared articles

Box 1:

Class Photo, Commencement Programs, 1891
Professor Strasburger’s microscopy notes, 1894-95
German Academic Notices; Professor Strausburger, Bonn University; Student Party Photos, 1898-99
Correspondence, Framed Notices, 1900-01, 1905, 1907, 1910-12, 1919-23
Correspondence, 1924-30
Correspondence Notices and Clippings, 1932-34, 1936-38, 1940, 1951, 1957-58, 1962, 1965
Departmental Correspondence, 1934-43
AAAS Member and Fellow Certificates, 1905, 1908
Mesa Verde and Sequoia National Parks, 1932
Retirement Congratulatory Letters, May 1938

Box 2:

Oral History Interview Tapes (4 reels), Jan. 24 and April 28, 1964

(Reel 1)

Professor Hottes identifies people in a picture of human physiology class
Yaeckel
Miss Brown
Professor Summers.
He gave us the bones of a cat in a box - threw a bone at us, had to locate and name it. Students went mostly into medicine. This was an advanced class for graduate students.
I graduated in 1891. I started in 1887 as a freshman.
Regent Peabody was a man weighing over 200 pounds. He laid out your courses when you came. Everything was iron clad. There was no choice. Grace Peabody was called the bearded woman.
Chapel - military - 9 a.m. bell rang. We met in military formation on the first floor of University Hall. Record of attendance taken. All wore grey uniforms with caps.

Burrill - met him the first day I came in 1887. He was the most kindly individual I ever met. I was a youngster who had never been away from home. I came via Mascoutah and Mount Vernon.

Burrill had a beard below his waist. He was interested in hog cholera. When he dissected a pig with cholera, he tucked beard into his vest. Clipped beard short when he was president.

Stephen A. Forbes was my professor in zoology. He was the director of the state laboratory of natural history. He was the better lecturer of the two. Burrill was rather slow and hesitant. Burrill was interested in the details of the science he was teaching. Forbes would wander a good deal if you didn't watch him. But he gave to you, for an advanced student many contacts with philosophy. Forbes was beyond the elementary student.

Kofoid - Illinois River work; a man experienced in plankton.

Palmer - we have very little to do with him.

Peabody - taught philosophy for the seniors. He sat in the parlor of the University Hall, two steps up at a marble table. Phillips - a nephew of Peabody, was always suspected of the tricks.

A kicking game - like rugby was played.

Military drill - you had to take it.

Compulsory chapel - they didn't like it.

They placed stink bombs under the woven mats and slipped them under, stepped on them, they would break and stink them out. I used to make them in laboratory.

Draper - a good thing and a bad thing. Came from New York and knew New York politics. He knew how to handle the legislature.

James - "was the best university president we ever had." Had trouble with the trustees - Trevett. It came to such a degree that James called a general faculty meeting. He distributed blanks for ballots. Meeting supported James. When James went out of the room to leave us to vote as we saw fit, he had pointed parting word - oblivion - it meant everything to him.

Kemp - was a rich man, wore boots all the time, was a physiologist. In the old Natural History Building there are long transoms. The students liked to play tricks on Kemp, but he usually got the better of them. They locked him out, so he got a four-legged table and lectured to the students over the transom.

Williams B. McKinley - student friend, a politician - the friend of everyone.

Buseys - no contact with them.

George Mattis - connected with the Champaign bank.

Henry Dunlap - orchardist near Savoy, a friend of the university.

Joseph Blair - opinion not on tape.

(Reel #2)

David Kinley - came from the East. The day he came here, I happened to be in Forbes' office when the dean brought him in to introduce him to Forbes. When they left, Forbes said to me, "Another man from the East and I think they had better kept him there." Forbes and Burrill
had offices at opposite ends of Natural History Hall.

Rolfe
Snyder - Civil War, German, excellent teacher of German. He threw me out the first day.
Bonn - I suggested Bonn as that is where I got the particular thing I wanted for my thesis. Cytology - the world authority on the cell was there - Strassburger. Six or eight finished their work each year, e.g. Rosenberg (Swede), Berlin man, Czechoslovakian.
Draper broke his leg.
James - an administrator and a scholar.
German Department applied for new library books. They mentioned Faust. To show you that Draper was not a scholar, he said "put on the library list all the books on Faust."

Henry B. Ward - He was a shyster just the same. I talked German altogether with Ward. In parasitology he was the best - although this is not my field.

William Trelease - made a name in Missouri, but wasn't much of a success here. He was too old a man when he came here.
Hottes - I had a voice that filled the lecture room. I was the popular lecturer. Used lantern slides in botany. Ward used charts. He hired an artist to make his charts.
Kinley - was a hot head. He was a hard worker. He couldn't control his temper.

James brought in a superior faculty.

James married the daughter of a preacher. My wife was a German. My wife knew how to prepare two soups that Mrs. James was particularly fond of. When the phone rang and I heard "This is James" I knew what was coming - Mrs. James wanted one of two soups. Mrs. James was a mother to everyone she met.

After James retired, I and my brother and my father went to the southwest. On a narrow gauge train we met President James and talked.

Professor Goebel - anti-German feeling. Professor Emch, a mathematician, Urbana High School wanted to throw out German during the war. I spoke against this. Emch bawled them out - adding two years to the graduate student's life. They drew in their horns.

Botany. In the 1890's, experimental physiology was not taught here. When I came back, I opened courses in plant physiology.

William Crocker - took his thesis under me. Discovery led him to go to Chicago University. His work was done here. Germination of the cockleburr in successive years. Germans tried everything. Crocker found that they germinated in oxygen.

Henry Gleason - now in New York at the Botanical Gardens. Next to Britton, he is the most famous eastern botanist at the Gardens.

Microscopes are on exhibition on the second floor of the Natural History Museum. We were the first university that equipped a whole class with microscopes. Burrill was responsible for this. The microscopes were built at the shops; the lenses were imported from Europe. Asa Gray had a microscope at Boston. Only an advanced student was allowed to peep through it.

(Reel #3)
Publishing - Dean Babcock put volume by F. L. Stevens up for Hottes. It was mostly weight. The university would be better off if F. L. Stevens had never published a word.

Somewhere on campus there is a find that I would like to make. Beal was at Michigan. He buried seeds in glass globes and buried them in the peach orchard. He studied germination.

I worked on corn germination. We treated corn with sulfuric acid and weaker acids.

hydrochloric acid
hydrocyanic acid
sulfuric acid

which is the most fatal to germination.

List of topics covered on 4 magnetic tapes. Numbers indicate tape number and position on tape as shown by numbers on Wollensak recorder player.

Altgeld, John P. 3:466-491
Agriculture, College of 3:16-40, 377-393
Anti-German Feeling in Urbana 2:389-472
Athletic Association 3:235-245
Babcock, Kendric C. 4:347-365
4:394-439
4:651-683

Beal, Alvin C. 3:41-71
Blair, Joseph 1:675-683
Bonn University graduate work in cytology and physiology 2:47-130
Botany and Experimental plant physiology 2:473-537
4:766-811

Burrill, Thomas J. 1:130-149, 160-193
Burrill and Forbes 2:10-14
Buseys 1:599-604
Carmichael, Robert D. 4:743-765
Chapel, compulsory 1:330-362
Chase, Harry W. 4:242-301
Clark, Thomas A. 4:242-301
Crocker, William 2:538-653
Curriculum, 1887-88 1:71-92
3:319-339

Davenport, Eugene 4:190-208
Draper, Andrew S. 1:262-402
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2:147-175
3:410-465

Dunlap, Henry 1:622-647
Faculty Under Peabody 3:371-36
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<td>Holden, Perry G.</td>
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<td>Hottes' University education 1887-91</td>
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<td>Human Physiology class ca. 1891</td>
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<td>James, Edmund J.</td>
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<td>Kofoid, Charles A.</td>
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<td>Mattis, George</td>
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Publishing
Railroad Connections
Ricker, Nathan C.
Rolfe, Charles
Shattuck, Charles U.
Snyder, Edward

Stevens, Frank L.
Student Rebellions
Talbot, Arthur N.
Trelease, William
Urbana-Champaign influence
Ward, Henry B.
Willard and Stoddard

Studies in Experimental Cytology by C.F. Holtes
Notes and Manuscripts
Photographs, 1890-1936
   Alumni, Buildings and Laboratories
   T.J. Burrill and Microscopes
Science Reports, 1906-20
Publications, 1926-27, 1929, 1932, 1934

Box 3:

Alaska, Canada, Brookfield Zoo Films, 1-24

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<thead>
<tr>
<th>16 mm Films</th>
<th>Inches</th>
<th>Feet</th>
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<tbody>
<tr>
<td>1. Brookfield Zoo #1</td>
<td>1 5/8&quot;</td>
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<tr>
<td>Monkey</td>
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<tr>
<td>Baboon with baby on back</td>
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<td>Baboon group with young</td>
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<tr>
<td>African Goat</td>
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<td>Elephant</td>
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<td>Giraffe Cut</td>
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<td>Polar Bear</td>
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<td>Fallow Deer</td>
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<td>Badger</td>
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<tr>
<td>Rocky Mt. Goat</td>
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</tbody>
</table>
African Sheep on tower
Bear Cut
Chicago Bear Cubs
Bear drinking pop
Tortoise eating
Lizard (spliced in upside down)
Penguins
Flamingos
Other water fowl

2. Brookfield Zoo #2 2 5/8"
Bear drinking
Bear drinking pop
Deer
Young Moose
Gazelle
Brookfield Zoo

3. Migrating Caribou of Alaska 3/4" 100'
Yukon trip to Dawson by steamer
Tundra and woodlands caribou
Annual migration crosses the Yukon River at Carcross
"Moss" Lichens
Inquisitive caribou are attracted by a red handkenheif on a pole
700' wide Yukon crossing
Mother and calf
Dredges in gold mining (12)

4. Homes 7/8"
Alaska #4 - Reindeer
Railroad transportation
Miners' huts
Sled
Tanana River
Pipes and water pressure in mining
Rampart, Alaska

5. #1 Land of the Midnight Sun 1 3/4"
Winding through Range
Sled dogs
Packing company
Salmon
Rear of train for McKinley National Park
Entering the Park
Travel through the park
Confined dogs
Pups are pups, Alaskan or U.S.
Foxes visit camp morning or evening
A Malamute
Barking at morning
Marmots
The Alaskan Range
Aug. 8, 1961
Fiords
Aug. 13, 1960
Inland Passage
Ketchikan
Freezing Fish
Fish boats
Chief Kyam's Totem
Kyam's Totem Reads
Chief Koch, Ketchikan
Native dress of Chief
Chief Johnson's Totem
Juneau
Northland Transportation Co.
Muir Glacier
Menden Hall Glacier
Iceberg

6. Mt. McKinley National Park 1"

7. 1 to 5 Cable, Yukon 1" 100'

8. 5 Points Cable 1/2" 100'

9. #6 Dredges 8 Boulder Field 2 1/2" 400'
   Alaska #6
   Dredge
   Boulder Field
   Rear of Dredge Field
   Near View
   Placer mining
   Dredge #2 - Boulder Field
Panning for Gold
Waste water from washing gravel for placer
Discovery of Gold in Klondike
Rapids of the Whitehorse
Lake Atlin
Boundary of U.S. and Canada
Flags of U.S. and Canada
Church
Skagway
Falls & Monument
Wrangell Narrows
"Prince David" enters Wrangell Harbor
Totem
Graveyard
The Home
Prince Rupert
Halibut Fishing Fleet

10. Arctic Circle #15, Sept. 6, 1961 1/2"
   Arctic Circle, 23 1/2 N
   Midnight Sun
   Port Yukon
   Eskimo Village
   U.S. Post Office
   Church

11. Canada, Prince Rupert, Totems 1/2"

12. Kicking Horse, Emerald Lake 1/2"

13. Old and New Klondike Mining Equipment 1 7/8"
   Mines and Mining
   Pioneer ore crusher
   Miners Essentials
   Town Marshal
   Ore Crusher
   Sacramento Pit
   Dredge
   Gold Mining
   Abandoned Cabin

14. Mt. Robson 1 1/2"
15. Columbia Ice Field, 12
   Ice Falls
   Ice Dome
   Moraine Dome
   Corsold...
   Consolation Lake
   Lake Reflection
   Pika
   Beaver
   Beaver Dam
   Beaver in Pond
   Selkirk
   Lake Louise
   Hotel Room

16. Lake Louise, Consolation Lake
   Lake and Valley
   Falls on trail to Twin Falls
   Mountains and reflection
   Lake Louise
   Victoria
   Linnaria
   Takakkow Falls and Valley
   Point Falls
   Twin Falls
   Takakkow Falls
   Lodge Falls
   Vancouver Polar Bear Zoo
   Bird Paradise
   Victoria Hotel and Glacier
   Angel's Stairs

17. St. Mary's Lake, Canada
   Walls
   Glacier
   Lower Falls
   Lake Joseph
   Canoe

18. New Madrid, Fishing
   Sherberg Lake
Inland Passage
Fishing Boats
Halibut, windless
Washing boats

19. New Madrid, Fishing
Salmon boat on Fraser River
Halibut boats
Wrangell Fog
Canadian Fishing Co.
Repairing Nets
Fire Boat

20. Northwest Forests and Milling
#1 Fellers, Topper and Bunyan
Paul Bunyan
Scouter
Fellers making undercut & change to opposite side
Oiling saw
Sawing
Examining for direction of fall
Falling giant
Sawing - standing on boards
Undercut complete
Falling
Stump
Falling
Stump and but
Fellers standing on fallen tree
High topper climbing future high rigger tree
At 100 ft he encounters first limb
With spurs firmly set, and supported by belt, he begins topping. Note water bottle on hip.
Tree still 20" in diameter
Top falling
Topper with paraphernalia
Topper climbing. Note water bottle
At intervals, because the diameter of the tree decreases, he takes up the slack in his belt.
Cutting first limbs
Begins to make the cut to remove the top
When the top falls, the thrust is such as to make the tree gyrate.
The topper takes a drink and salutes me
Topper descends
Paraphernalia
Topper

21. Northwest Forests and Milling
   #2 High Rigger, Yarding    13m"

22. Northwest Forests and Milling
   #3 Unloading logs, washing 2 1/2"
   Unloading logs at Mill Pond
   Inclined tracks
   Train load of logs from forest
   Are unloaded by wire loop or boom
   Sorting logs in pond for milling
   Low tide
   Mills
   Rafts by river
   Logs on skid at mill
   Log washed as pulled into mill
   Log on carriage
   Sawyer rides with log
   Niggers (levers) used to turn log
   Cants are edged and distributed to gang saws
   A small mill
   Mills in distance
   Rafts by River
   Timbers cut to length
   Saws are sharpened, set, & planed.
   The high rigger complete with pulleys and cables
   The logs cut to carriage length are yarded for future pickup
   Notice huge pulley that raises them at one end and drops them to yarding place
   Bulldozers pick them up
   Like drunken sailors they move to place
   The rigger tree fully racked
   The donkey engine furnishes power
   At yarding place one end of a truckload is pulled up and the powerful truck is backed up to them.
   Flat cars are loaded by powerful caterpillars for transport to the mill
   They stop for nothing, small trees are crushed.
   On the load to the mill over
   Temporary roads and dropped into the mill pond
2 ways of dropping trees from cars, wire ropes & booms

23. Northwest Forests and Milling
   #4 Sawn timber, sorting, stacking  1 7/8" stacking

24. Redwood Empire Forest Ranges  1 1/4"

Box 4:

Arizona, California, Colorado, Florida Films, 25-47

25. Death Valley  1 1/2"
   Old Harmony Borax
   Sand Dunes and desert vegetation
   Cornfield
   Salt bed from Dante's Point
   Entrance to Golden Canyon
   Project and Edit
   Jarisha Point
   Bad Water
   Bridge
   Artists Drive
   Devil's Golf Course
   Date Pollination
   Adjusting bag over Plants
   Dropping bag to shed
   Holding male infl.
   Climber with bag going up palm
   Adjusting bag over male infl.
   In date grove this is done mechanically from sled
   Death Valley DV-47
   27 - Devil's Golf Course and salt flats beyond
   28 - Devil's Golf Course and salt flats near view
   29-30 - Devil's Golf Course near view
   31 - Devil's Golf Course near view showing
   32 - Cracks and upburst of salt as above
   33-35 - Salt well blasted every year
   36 - Salt well blasted every year showing salt creeping up
   37 - Devil's Golf Course showing salt creeping up
   38-39 - Devil's Golf Course showing salt pillars
   40 - Bad Water
41 - Natural Bridge
42 - Mushroom Rock
43 - Borax wagon and water tank for mules
44 - Attempt to use tractor - a failure
45 - Borax wagon - twenty mule team
46 - Feed wagon for mules
47 - Supplies wagon
48 - Ore wagon
49 - Limbs drag
50 - Garden at Inn
51-52 - Garden at Inn Palm date with male infl.
53 - Garden at Inn Palm date with female infl.
54-58 - Scenes along the road
59-64 - Zabriski Point
65 - Scenes along the road
66 - Entrance to Golden Canyon
67-70 - Golden Canyon
71 - Golden Canyon opposite of Zabriski Point
72-78 - Artists' Drive
79 - P. Telescopic Peak
80 - Terrain near Ryon
81 - Terrain near Ryon
82 - Ryon
83 - Ryon School
84 - Coke Oven

26. Peabody Grand Canyon 1/4"

Down the Bright Angel Trail
Indian Gardens & Tonti Terrace
Starting down Bright Angel Trail
Zigzags
Angel's Gate, Woteris Throne, Vishnu Temple, Tonti Terrace
Zoroaster Temple
Colorado River
Climbing out Granite
Jacob’s Ladder
Hopi Point S. Rim
Navajo Child
Erosion

27. Gallup Ceremonial Indian Dances, #16
28. Monument Valley

September 6, 1961
Monument Valley
Panorama of monument of the valley
Desert floor of valley
Guide rounding up horses
Sheep at water hole
Monuments
Desert
Winter Hogan built of logs and adobe
Door always faces east
Cliff caves
Cliff cave within top hole
Nevers drives auto in
Cave with double entrance
Cattle in valley
Reflection in water hole
Rounding up horses
Our guide
Totem pole
3 graces
R. H. Millen
Chieftain seat
Castle
Mitchell Butte
R. H. Miltens
R. & L. H. Miltens
Sheep grazing in desert
Summer Hogan
Desert folk
Chieftain's Horse
Back broken after death of chief, no one shall ride the Chief's horse again
Chief's cooking dishes are destroyed by driving fork through them
Totem pole
Chieftain seat
Sunset on little Colorado

29. Arizona Desert Vegetation #18

View of desert
Giant cactus
In flower and desert owls nest
Close up flower
Crested giant
Opuntia in flower yellow
Mesquite
Mesquite close up
Mesquite follows subterranean water
Palo Alto in flower close up
White spined red Cholla
Note spacing of vegetation
Desert Wren's nest
Barrel Cactus
Barrel cactus leaning
Barrel cactus view
Cactus thorns & fruit
Indian tobacco in flower
Red tip fence
Fence
Flower near view


Indian homelife
Monument Valley squaw and children herding sheep in desert
Horses rounded up
Sheep flock at water
Monuments rose
Caves in sandstone Buttes
Nevens driving in
Cattle
Guide through ruins
Totemic pole and ruins
R. H. Miltens
Mitchell Butte, Chieftain's Castle
R. H. M.
R. & L. Miltens
Sheep
Herding
Chieftain seat
Miltens
Butte
Family at home
Totem
Sunset on Colorado

31. Indian Home Life

September 3, 1961
Squaws herding sheep on the desert
Navajo boy in native costume
Wedding
Santa Fe Church note heavy construction as a fort
Father Wagoner Priest
Kiva Ceremonial chamber
Kivas are usually built below ground. Here because of solid rock formation, it is
built above ground and the Indians for ceremonial attendance, use a ladder
to enter.
The Indians here are of the Pueblo tribe and live in mud or concrete homes.
Here the arrow maker is offering toy bows and arrows to the council.
The home of Marie, the pottery maker.
The mother of Marie carrying a basket of sundried pottery
Her costume is that of her native tribe
She has not adapted herself to a more modern method of starting the fire with
kerosene
The daughter is preparing the kiln
The mother fears to come too close to the kerosene
The pottery is finished burning and the kiln is opened
With a wooden stick she removes the burnt pottery
A vase and bowl that I purchased
A typical Navajo hogan (home) constructed of logs and mud
The fire is in the center of the hogan and the smoke escapes through a hole in the
roof.
On entering the hogan it is the Custom of the visitor to turn to the right.
A Navajo mother and her children.
Note the baby is strapped to the board, has a sun shade above her head, and
frequently some bright objects are hung from the curved edge.
I bought a bag of peanuts and she is enjoying them.
A squaw is herding sheep.
An adopted child is walking.
A winter hogan home.
A summer hogan.
Interior of a summer hogan.
Woman and child weaving.
Grinding corn on a rough volcanic flat rock.
A sheep skin, the wooly side down in place on the earth, the grinding plate placed on it and with the handrock maize is ground to meal.
Squaw is kneading dough.
Fire in front is for baking it.
In a Dutch oven she is baking the bread.
A baking oven of Spanish origin.
A child weaver.
Summer hogan. Monument Valley. Baby is getting a bath by its mother dipping her fingers into the water and rubbing the body of the baby.
The nearest spring is about 10 miles.
Carding wool.
A loom.
Weaving & spinning blanket.
A corn field.
Corn
Mesocotyl
Bones of buffalo that Indians drove over a cliff above to obtain the meat for jerked and dryed meat.
Bones were ground up for fertilizer.
Potato Johnny
Calamity Jane
Chief and Squaw
Buffalo Dance

32. San Diego Seals, Navahos, Arches Monument 7/8"
San Diego trained seals
Flamingos
Penguins
Fisher Towers
Road to Arches
Ham Monument
Kodachrome Delicate Arch
Trail to Bridge
Triple Arches
Turret Arch
Twin Arch
Navajo Twins
Tower Rock on Colorado River
Title "In Navajo Land"
Navajo Squaw herding her flock
Monument Valley
Buttes
Mitchel Butte
Sheep Dip
Cecropia spinning cocoon
Mexican embrace
Merry Christmas

33. Mesa Verde, Frijole Rito, Bandelier National Park

34. Deadwood Camp, Pageant Rodeo 1 1/8"

35. Yosemite #1 2"

March, 1959
Yosemite Falls
Vernal Falls
Merced River
Vernal Falls
Silver Apron
Vernal Falls
Vernal Falls - close up
Nevada Falls
Silver Apron
Nevada Falls
Nevada Falls - close up
Tuolome Falls
Valley
Panorama
Domes
Half Dome
Half Dome - snow storm
Sierra Point
Half Dome - clouds
Sierra Point in mist
Sierra Point - clouds
Burning bark for Fire Fall
Glowing coals
Fire Fall

36. Yosemite #2 1 1/4"
Falls
Yosemite Falls - Upper and Lower
Three Brothers
El Capitan
Nevada Falls
El Capitan
Cathedral spires
Deer
Offering crackers to brown animal
Lichens on tree trunks
Pollen shower
Half Dome
Half Dome and Merced
Sequoia
Grizzly giant
Clouds and Storm

37. Summit and Emerald Lake 5/8"

38. Colorado Red Mountain Highway

39. Black Hills, Sioux Camp, Dances, Rodeo 1 1/4"

Black Hills
Parade
Marshal
Prospector
Potato Johnny - discoverer of largest nugget ever found in Black Hills.
Concord Stage Coach
Indians
Old French travois
Prospector
Stage Coach
Sign Language directing Indians
Youngsters
Rodeo at Fruita, Co
Boys from Utah and Colorado compete
Roping calves
Riding the Bucking Bronco
Watch him lasso a calf
Tying the calf for branding
Milking the range cow
Black Hills Scenic Route
The Camping ground of the Indian
An old squaw that as a child was present at the Custer massacre
Buffalo Dancer
Tents - notice wing at top for escape of smoke from fire in center of tent.
The wing is in accordance to wind direction.
Sylvan Lake
Borglum Monument on Mt. Rushmore
Monument telephoto
Monument in process of carving.

40. San Antonio, Texas 1 1/8"
Mission El Sparda
Mission El Sparda
Old compound
Mission Rose window
Rose window detail
stairs
Mission
Alamo
Governors Palace - Door with Coat of Arms - Patio - fountain
Alamo

41. Rodeo at Fruita, Co 1 7/8"
Procession
Bucking horses
Calf roping
Bucking
Calf roping successful
Bucking
Calf roping fail
Bucking
Calf roping success
Bucking
Jumping fence
Roping
Steer riding
Bucking (2)
Milking Range cattle
Bucking

42. Sheep Dip

The U.S. Government requires that all sheep and goats must be dipped in a poisonous solution to kill parasites.
The Indians for miles around with their flocks gather to await their turn for dipping.
The camp with the flocks on the divide over when the dip
The flocks of the respective owners need constant watch to prevent straying from one to another flock.
A truant sheep is brought back to its flock.
Then the turn of the owner of a flock arrives, his sheep are herded over a board enclosure for dipping.
The government is open to censure for the cruel method of getting the flocks to the pen.
Intent of driving them through a gate, the struggling sheep and goats are driven over the board fence.
The dipping trough of concrete is of such length that a sheep passing from the intake to the end has been exposed sufficiently long to kill the parasites.
Attendants furnished with double hooked poles, use the concave hook to thrust the head under the solution and the convex under the throat of a lamb to hold its head after a dip, above the solution.

At the head end of the trough is a concrete platform on which the dipped sheep rest while the superfluous solution drips from the wood and returns to the trough.

A nominal charge per head is made by the Government.

43. Florida, Seminole 1 1/8"

44. Florida #1 1 3/4"

U.S. Navy Reserve
Moss - (Till and sill) on trees
Wisteria in Bloom
Banyan
Pier
St. Augustine Gates
Globe
Old Spanish treasury
Oldest House
Old Slave Market
Old Darky and one horse shay
Old school house
Wishing mill
Fort Marion
Sentinel's Lookout
Built of Shell Rock
Cannon Placements
Wall of fort and Sentinel's Lookout
Ferns growing luxuriantly on wall and ceiling, walls kept moist by drop.
Rear of Sentinel Tower
Fort & moat
Rear of Sentinel Tower
Gun placements - rear of wall
Cypress Garden and Florida Beaches
Bald Cypress
Reflectors
Glass bottom boat for viewing underwater life
Schools of fishes
Pair of monkeys with baby
Causeway moving to our boat to get bananas
Gov. Grounds Jacksonville
Cypress trees with Till and sill
Banyan (Fig)
Steamer on Bay
Sailboat on bay
Harbor
St. Augustine Wall
Sight seeing cab
Globe
Colonial Treasury
Street scene
Wall
Horse Cab
St. Francis St. 14
Entrance to
House with 2 story canopy and solid wooden shutters
2 story house with porch on second story across building
House of 3 Nations
House with 2 story hanging porch.
Slave market
Good horse cubs
Silk hat driver
The oldest School House
Wishing well
Fort Marion - first national monument
Fort Sentinel Lookout
Built of shell rock
Cannon Placement
Roof
Wall of Fort Sentinel lookout
Ferns growing on moist wall kept wet by leaking roof
Ramps leading to top
Tower toward sea moat
Ramp
Tower toward ocean
Tower rear entrance
Gardens Florida Beauties
Cypress Swamp knees
Large Cypress with moss reflected in water
Vine
Cypress in water very clear
Cypress
Cypress in rapid flowing water
Cypress good knees
Boat on pond reflection
Swimmer in clear water of springs
Glass bottom boat

Florida Sponge Fishing

Diving suit with helmet
Diver ready for placing of helmet
Diver ready for placement of helmet. Note hose to supply air when below water.
Also heavy lead weight for chest and back.
Placing helmet
Adjusting helmet
Ready
Insert plug
Walking on bottom - air being released
Rising to top
Ring to hold sponges on back
Showing hook to dislodge sponges from bottom
Bags well filled
Releasing air
Note air hose
On right living sponge
On left after removing living and dead materials
Showing pores for circulating by means of the sea water.
Sponge will use living organism for food and nourishment
After living and dead water is removed, the sponges are strung on cords and dried on concrete platforms.
Inspecting sponges for dryness
When dry they are strung in wreath form and sold to the wholesale market.
Assorting sponges as to size and quality
The finished wreath goes to market
Boat equipped for sponge fishing
A wild low quality coarse sponge
The sponges grow to large side
Are used for insulation and manufacture of Christmas items
Show trees (Christmas)
47. Life Boats and Drill

Box 5:

50. Bird Paradise

Robin
Mrs. feeding birds
Meadow Lark
Grosbeak
Pheasant
Mr. feeding bird, bird feeds from perch
Sugar birds
Western Jay, camp robber
Pheasant
Within the cage
Long tailed
Scottie
Dog

51. Bird Paradise, Canada, 13

52. Bryce Canyon

Angle F, Red Wall
Lookout Trail
Iris
Thor's Hammer
Wall of Wind

53. Natural Bridges, Zion

Utah Bridges
Through White Canyon
Bridge
Picto
Augusta Bridge
Climbing the wall at Augusta Bridge
Bridge
Fire for Breakfast
Baking biscuits
On the track
Crowing creek bed
Out of canyon

54. Muck and Pipeline, #4  1 1/8"

55. Plywood  1 1/2'

   Mill
   Log
   Clean with steam
   Lathe
   Remove bark remnant
   Log section
   Clean with steam
   Debarking
   Size
   On lathe
   Hoisting from water
   Lathe in operation
   Debark
   Lathe (2)
   Selection cut to width
   Feeding dryer, sheets enter dryer

56. Turpentine  1"

   Turpentine
   Picaninnies at home
   Picaninnies Dancing
   Mammy
   Dressing fowl for dinner
   Boiling clothes
   Putting clean dresses on babies
   Washing
   Dressing fowl
   a clean dress
   Mammy poses for a photo
   Fowl is dressed
   Bleeding tree to provide flow of resin
   Tool used in blazing
   Collecting flow and taking it to still
   The Still
Mammy poses for picture
Still operates with stirring paddle
Testing for turpentine
Opening gate hot resin flows into tank below
Remove turpentine from residue
Gate is opened and boiled resin flows into tank below to solidify as resin

<table>
<thead>
<tr>
<th>57.</th>
<th>St. Louis Zoo</th>
<th>1 7/8&quot;</th>
<th>275'</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Castle Films - &quot;Circus at the Zoo&quot;, BxW, Silent</td>
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<td></td>
<td>A bit of monkey business</td>
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<td>Monkey plus Donkey</td>
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<td>Baby take a bow</td>
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<td>Family in act</td>
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<td>No rumble seat</td>
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<td>Crazy over horse</td>
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<td>Bicycle rider</td>
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<td>Getting up in the world</td>
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<td>Super monk</td>
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<td></td>
<td>Big concert</td>
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<td>The Band</td>
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<td>Rhythm</td>
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<td>Shall we dance</td>
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<td>Mad about music</td>
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<thead>
<tr>
<th>58.</th>
<th>Food for Dog &amp; Man, Salmon</th>
<th>1/2&quot;</th>
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<tbody>
<tr>
<td>90'</td>
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<thead>
<tr>
<th>59.</th>
<th>Ohio River Boat Trip</th>
<th>1 1/4&quot;</th>
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<tbody>
<tr>
<td></td>
<td>Approach Boye Greene</td>
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<tr>
<td></td>
<td>Dam</td>
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<td>Enter locks</td>
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<td></td>
<td>Crew</td>
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<td>In locks</td>
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<td></td>
<td>Filling lock</td>
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<td>Opening lock</td>
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<td>Night Dredge</td>
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<td></td>
<td>Barge empty oil</td>
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<td>Loading Bull Dog</td>
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| 60.   | Rivers, #1                    | 2 5/8" |      |
61. Rivers, #2, Rapids, San Juan Shore 2 1/2" 375'

Push in government survey M85
Rapids
Sand waves very good
carrys, rain, improvised shelter
On an uninhabited shore making an observation of the rapid
Rapid
Willows on a sand flat
Boat #1 ahead of use
Rapid
Banking of waves
Camp
Desolate counting
Party for homesick
Rough circle
I am on alcove photographing the boat going through the rapid
Slow motion picture showing churning of the water
Normal speed, the boat seemingly submerged
Drying out clothes after a night of rain
Camp
Loading the boat
Passing through the rapid
Camp
Loading the boat
Last before joining the Colorado River
Glen Canyon of Colorado
Mormon Crossing
Walking up to the top where Mormons entered
The road down which their wagons, household goods, women and children came

62. Rivers, #3, Mormon Crossing, Bridge 2 1/2"

Climbing the steps cut by the Mormon Party to ease the climb for the women and children
The roadway down which the loaded wagons, eased by block and tackle, were covered. Holes on the left side of the rock wall still show where the poles were driven to attach the blocks.
Colorado River
Camp
On the high plateau rise non eroded castles.
Pot hole worm out by a waterfall
Another with outer wall cut.
Hidden creek
Up the high wall with non-eroded cliff
On the sandy areas, the desert lilly is in bloom
Camp
Cone pinnacle on our way to Navajo Bridge
The narrows. In places both walls may be touched by the outstretched arms.
The bridge
The remains of arches of the meandering stream
Nevins climbs to the top
The arroyo slope got too great and he returns
Camp and dinner is in preparation
The chief is making the batter for biscuits.
Molding the biscuit
Placing them into on the hot dutch oven
Heaping lit coals on top
Leaving the river
Pack mule showing hitch
Front view ready to start
Starting on the trail. The white mule is my mount.
Followed by my nephew on the dark mule
The guide and pack mule lead the way.
The trail leads up and down a series of canyons.
Coming over the top of one.
Down another
A steep grade
Rock
The narrows

63. Rivers, #4, Bridge & Return  1 3/4"

Arches
Tapestry wall
Butte on Powell Plateau
Road sign to Mexican Hat
Sunshine at sunset
Goosenecks
Canyon Walls
Mitchell Towers
Post Office near Thompson
LaSalle Mountains
Bridge over Colorado
Delicate Area
Ham Butte
Mitchell Tower
San Juan River at Junction with Colorado River
Goosenecks
Buttes on Plateau
Nevins in boat
Nevins in boat in minor rapids
Rough Water

64.

Rivers

Overland to bridge
The trail leads up & down thru a series of canyons lead by the pack mule & guide.

Entering the narrows
The mules stiff-legged slide down the steep grade
The pack mule is sliding back on the steep grade.
The bridge, Nevins asleep
Gas & Evinrude stored here ready for the trip up Glen Canyon of the Colorado River.

Tower Rock
Camp at a river cave
Assistant Chief getting up - still yawning
Nevins - the chief
Hottes in dress suit a life saver always worn when going through the rapids

Rapids
Navajo Bridge falling rock
Burro Western
Indian agent's home and lodge
Our boats and auto bound for home via Mexican Hat.

Nevins climbing the slick sandstone by means of the ancient Indian foot holds to the water basin at the top.
The Chieftain's seat monument
Pictographs ancient
Sand blasted mounds
prickly pear

Winter hogan of Navajos. The door always faces west. A single room with central fireplace and hole in the top for escape of smoke.

Navajo spinning wool for blankets
Navajo loom and weaving rugs
Navajo woman using metata and mano for grinding corn for meal
The metata rests on a sheepskin - woolly side down
Note necklace present to her by me. I collect the non-salable products to the
women. They felt proud wearing the gold clasp with glidden stones.
Finely woven basket receives the meal.
Mano rests on metata
Butte, Monument Valley castle - Chieftain's head
Glove Butte from edge
Totem Pole 800 feet - at sunset casts a shadow 5 miles long
A thunder shower provides a small pond for photo reflection
Mitchell Tower on Colorado River
Camp
Nevins is waking up
Nevins is eating breakfast
Mt. Garfield, Palisade, Colorado. The home of my parents and their families.
Grand Mesa
Mt. Abbot from valley view
Rapids on San Juan River
Bridge, River, Mt, and grouping of conifers that added to the beauty of the scene.
To me it was a natural painting.

65. Dredge #1 - August 10, 1961 3/4" 125'

Grant pump side view of dredge
Angle view
Frontal view
Side view moving bucket
Grant Pump
Pipe line
Dredge side view
Driving pipe in the front
Dredge angle
Dredge gang moving bucket and depositing
Front moving bucket
Guy making landing with pond shore
Angle depositing gravel and boulders
Vertical project of Dredge
Moving bucket

66. Plant Movements #1 2 1/8" 425'

Germinating radish seeds
Blackberry Lily winds itself into a roll
Opening bud of night blooming Cereus
Simultaneous of two opening buds - one front view, the other lateral view
Next morning the flower closes and drops off - not pollenated
Regal lily
Visited at dusk by sphinx moth - with short proboscis
Visited by tomato worm moth - long proboscis
Opening bud of Ruby lily
Honey bee pollinating rose - collecting pollen - bee bread
Insert leg of honey bee with hairs and pollen markers
Crocus and poppy
Opening bud of Mexican Aztec flower
Moonflower bud
Snake root and bumble bee collecting pollen
Single peony and bees
Sarcoids on forest floor in giant sequoia forest
Protection Person guilty of collecting is arrested and excluded from forest
Honeybee collecting pollen (bee bred) and pollination.
Tip of passion flower showing tendril winding about to find support. The slightest touch will cause it to wrap itself lightly to object.
Front view of flower
Bees sipping nectar
The mature bud opens about noon.
Upright stigma
Bent over stigma
Lateral view
Plant movements
Germinating Radish seeds - root hairs
Blackberry Lilly - the flower wraps itself up
Phyllo cactus flower opening
Enlarged - near view of open flowers
Next morning flower closes and either - if pollinated - produces seed or withers
Regal Lily - Its pollination by sphinx moth - the imago of the tomato worm
Another species - Dicerin liniata rests on petals. Its proboscis is not sufficiently long to draw the nectar
The Ruby lily
Crocus
Bees gathering pollen - Bee bread
Moon flower
Next morning closing
Poppy and bees gathering pollen
Opening of Aztec flower
Bees collecting pollen from Snake root
Bees collecting pollen from single Peony
Redwood forest snowflower (sarcoid a parasite on the root of plants of the forest floor.
Bees collecting pollen from Rose
Passion flower
Movement of tendrils
Mutating growing tip
Flower of and its symbolic interpretation
Bees visiting
Opening of flower
The bud. Note the enlarging opening at its tip as the flower opens.

67. Plant Movements #2 1 3/8" 290'
68. Pollination, German Field Sage 2 3/8" 410'
69. Pallindium Poppy
Smoke Mt.
Crocus Koda
Salvia Kod
Salvia

70. Pups, Chipmunk, Bear Cub 1 7/8"
71. Peacock, Flamingoes 1"
72. Small Animals, Feeding 3/8" 70'
73. Roadrunner, Rattlesnakes 1 7/8"

Box 6:

74. Crocodile Thrills 2"
75. New Orleans, Unloading bananas
Banana steamer
Banana steamer unloading
Banana on endless conveyor
Banana steamer to dock
Banana inspection
Banana loading cars
Banana counting
Banana train pulling out
Banana Steamer arrives at Port of New Orleans with cargo of bananas from Cent
America.
Note continues belt of bags carrying bananas from hold to wharf
In action note belt with bags coming from hold and unloading at wharf
Bunches coming from hold and resting securely in hammock bag
Colored paper is placed on each bunch indicating quality
Workman carries the bunches to long cavernous tube runs endlessly. He steps on
scale and record of weight is made before loading on RR freight car.

76. Mexico, Native Dances - November 20
Color
Market place
Parade
  gymnasts, military vehicle
"Native Dances" containing native dances performed in stadium, children in
public arcade, masked dancers in streets, canoes, boats on lake, fishing
nets, woman weaving palm, man sewing hat, men sawing log, man
making clay pot/vase, women making clay pig; people on decorated boats
(film backwards) flower vendor on boat.

77. Mexico, Bull Fight, Juarez
Bullfight Juarez. Better than those I saw at Mexico City
Bull ring
Bulls in pen awaiting slaughter in ring
The ring filling just before 4 P.M.
The procession entering ring
Very imposing
Bull entering ring
Matador
Red blanket work
Bull turning on assistants who dart behind protection for safety.
Picadors enter on horseback - note protection of horse by heavy padded blanket
Note bull is getting tired
Bull throwing horse
Bandelero entering and thrusting the barbed band
This to infuriate bull to new endeavor
Tired Matador retreating to protection
Tired bull
Getting ready to stab the bull. This can be done only when the bull is attacking.

- Stabbed but not killed
- Killed by cutting spinal cord.
- Dragged from ring
- Killed

Bulls in reserve in pen

78. Mexico, Primitive Threshing 1/8" 10'
79. Mexico, Pulque, New Madrid 1/8" 10'
80. Mexico, Tortio 1/4" 25'
81. Central America 2 5/8"
82. Central America, Tortillas, Oct. 6, 1961 1 1/8"

Corn soaked in lime water over night is washed in water and hulls removed
Ground on a Metate at home or brought to mill for grinding
The soaked and washed corn is brought to mill. The mill is a small affair
something like a large sausage grinder
Women on way to mill for grinding the days supply of maize.
Entering mill
Return from mill to home for making the tortillas.
Soaked and washed corn at mill awaiting its turn for grinding.
Women remove ground maize.
A happy group while I am the butt of jokes that I cannot understand.
At their request I photographed family group
Returning to home to make the tortillas.
Mrs. Martini making tortillas in her home.
She used at my request, the two methods in general use.
Note the three legged table that holds the maize. On the table with a small piece
of banana leaf, she forms the tortilla.

Method #1
On the floor to her left is jar of water to moisten the maize when needed. Next
to it a smooth stone slab for baking over a fire of sticks about two feet in
length - as the end under the slab burn off, she pushes the burnt end
farther into the coals.
The torts are not baked to a crisp. They are eaten while pliable and when looped,
serve as spoon.
When the meal is over, they serve as napkins and are eaten

Method #2
A piece of the dough is taken and between the palms of the hands is molded.
At Kabal - The mother is busy making and frying the tortillas while the family of
children are eating.
She uses a banana leaf on which she forms it.

Tortillas by express from oaxaca & Mexico City.
Bring in or cut wood for public and family use.

83. Guatemala, Lake Agnes 3/8"
84. 1/2" 60'
85. Guatemala, Weaving 7/8"
86. Guatemala, Feb. 1, 1959 2 1/2"
Barbershop
Steps
Pagan Altar
Rockets
Boy with rockets
Incense
Canopi
St. Seba
Drink
Idol
Shaman
Dance
Carving mask
To make it small
Corn
Flowers
Produce and baby
Oranges
Baby
Hewing head board
Little boy Flu
Market
Ox Cart
Pigs
Pig exam
Combining
Outdoor Restaurant
Beads
Washing child
Washing baby back
Baby Bath
Older boy
Cut out intervals
Clean all

87. Guatemala #2, Plowing 3/8"
88. Coffee Processing 3/4"
89. Chimps, Vacation 2"
90. San Salvador Erupting 1/4" 50'
91. 1 3/8"
92. Balem, Railroad Fair 1/2"
93. U.S.A. 3 1/2 cm
94. Lumbering 3 1/2 cm
95. Ships 3 1/2 cm
96. Jimez, Adobe bricks 1/2"
97. Totems 1/4"

Box 7:

Glass Plates - HEAVY. Handle With Care

4x5 Glass Plate Negatives
Box 1: Pueblo Homes (11)
Box 2: Mesa Verde and Southwest Scenes (10)
Box 3: Mesa Verde (12)

Cypress, Bayou Meto near Stuttgart, Arkansas (22)
  #s 200-1, 203-4, 206-7, 211-221, 223, 226-7, 249, 251
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  #s 830-847, 1533
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  #s 6, 10, 12-13
Passion Flower (5)
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Pines (3)
Hopi (3)
Iris (2)
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Gen. Sherman Tree, CA
Yellowstone Park, Riverside Geyser
Lumber, Memphis, TN
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Box 8:

Glass Plates - HEAVY, Handle With Care

4 1/4 x 5 1/4, 5 x 7, 8 larger glass plate negatives (GPN)
Coconuts, 15 GPN, 5 prints
Trees, 11 GPN
Corn Genetics, 8 GPN
Misc, ca. 20 GPN
Misc 8 1/2 x 16, 24 GPN

Box 9:

Glass Plates, Prints and Negatives

Germinating Coconuts, 8 prints, 3-5 x 7 Glass Plate Negatives (GPN)
5 x 7 GPN
Corn, Flower, Rose, India Rubber Tree (2), Koln Cathedral
Milkweed
  3 prints
  2 GPN of fruit and pods
Night blooming cereus, 2 GPN
5 x 7 GPNs
  Cramer's ISO Med., Fungus Tree Wound
  Bean Embryo Section
  Taxodian Knees
  Birdseye Maple Board Section
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  Radial Section of Pine
  Coffee Tree in Storm, #1071
  Flora in Garden, (partial), 1899
Milkweed Flower, #1152-a&5 (2)
Taxodium Trees, St. Francis and Bertig, Ark. #1069
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Flowering Tree
Travel Literature, 1953-57
  Florida, Idaho, New Mexico, Oregon, Mexico and Latin America

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| 2      | 1952 -- Red "Plan Book"  
January 1 - Guatemala City (1/1-31), Quezaltenango (3/4), Copan (3/10), Tegulacigalpa, Honduras Chichen Itza (3/16), Yucatan (3/19), Uxmal (3/31), Merida (4/19-22), Nov-Dec Addresses and Accts, "Nov 1952" |
| 3      | Green Spiral Book  
List of 120 sheets. Carle Park, Colorado Aspens, Tetons, Guatemala #71-120 |
| 4      | Blue Phone Book - Slide Records, Central America, 1956  
56 - Costa Rica (19-38, 114-174)  
56 - Nicaragua (56-90)  
56 - El Salvador (1-16, 39-86)  
56 - Merida (52, 59) |
| 5      | Blue Phone Book (BPB) - Central America, Nov 24, 1954  
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| 6      | Memorandum (black)  
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| 7      | BPB Central America Lectures, 1956  
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| 9      | Brown Book, Slide Record 51-54 - i.e. 1951-54  
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1953 - 1-, Campeche  
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64-, Chichen Itza  
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252-328, Guatemala
1954 - 1-, Mexico City
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11 Bryce Canyon, 1-250, 1938
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Black Memorandum Book - June 20, 1942
Montrose, Durango, Moab, Tonolea, AZ
Quote from J.B. Priestley, "Rainbow in the Desert", Sat. Evening Post, 1938

Roll #2 - Painted Desert, Arches, 1940
Roll #3 - Yosemite
Roll #4 - Yosemite, Birds, 1939
Roll #5 - NM., AZ, Yosemite, 1939
Roll #6 - Glacier National Park #2, Clipped, 1934, Feb. 1, 1959
Roll #7 - in envelope "Central America", Slide Record and Sequence
Central America, 1957
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Roll #10 - Central America, July 6, 1958
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Drawer 62: (.2 cu. ft.)

1 - "Botany"
Cactus, Western river valley (2), Waterwheel, (2), Cacti, desert flower, Yellowstone text drawing (2), Mountain Pond, Galen Clark, U.S. National Parks Map, glacial boulder, Vegetation (2), David Douglas, dredge, inclined railway, Swift Current Lake, camp well, waterfall, big tree, cottonwood regeneration, May 1913 (2), Darling Iona (2), swamp, tree rings, dead trees, Hans Sachs Mon. in Nurnberg, trees drawing, rock formations (2), logs, cows in color, Navaho weaver in Canyon de Chelly, Reelfoot Lake, pine (2), rigging tree, Joshua tree (12), tree ring weather predictions (13), San Juan Mountains, Mt. Evans, Co. timber-line, Big Cypress, cone, porcupine damaged pine, Rock house, Shoshone Falls, ID, Monterey map, pit, Precolumbian painting, Aura tree, carved rock, North Pole map, Crosses on Wood, Nurnberg Burghof, weaving, Medullary ray, Cypress Swamp (7), wood sections (3), Birdseye wood, flower drawing, Canyon, Mesa Verde (6), Acoma pueblo (12), Southwest Indian women and missions (5), Santa Fe map, Sioux Dance at Mandan (3), Cliff dwellings (3), Canyon (2), Pueblo, rock path, tall trees

Drawer 63:

2 - Alpine Timberlines
   Long's Peak, CO (2), Timberline trees (6), Mt. Evans, CO, 1930 (4), Mt. Hood, OR, Montana, Il Supt Public Instr. Letter 1909, Climatic changes, wood sections (3)
Mesa Verde
   Mesa Verde dwellings (28), Pottery (5), tools (1), maps (2), burial, rock exploration (3), Bryce Canyon
Wood Sections
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Drawer 64:

Logging, Milling and Paper
   Logging (37), lumber mills (49) and paper mills (12) in CA, OR, WA and WI, ca 1933
Yellowstone National Park
   Black Sand Spring, Beryl Spring, Castle Geyser (3), Christmas trees, Chittenden Bridge, Cody Road, Eagle Nest, Emerald Pool, Excelsior Geyser, Geyser eggs, Gibbon Fall, Golden Gate Canyon, Great Fountain Geyser (2), Grotto geyser, Jupiter Terrace (3), Liberty Cap

Drawer 65:

Yellowstone
Mammoth Hot Springs (4), Minerva Terrace (3), Morning Glory Spring, National Bridge, Norris Geyser Basin, Oblong Geyser, Obsidian Cliffs, Old Faithful Geyser (6), Prismatic Lake, Pulpit Terrace (2), Punch Bowl Springs (2), Riverside Geyser, Roaring Mountain, Sapphire Pool, Shoshone Canyon, Silver Gate and Hoodoos (2), Sponge Geyser, Sylvan Lake, Summit Basin, Yellowstone Falls and Grand Canyon (12), Yellowstone Maps (2), Yellowstone Snowshoe Rangers (2), Yellowstone Trees (4), Black Sand Spring, Giant Geyser, Jackson Lake and Tetons (2), Kepler Cascades

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Drawer 66:

Glacier National Park
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