

15/4/21  
 Liberal Arts and Sciences  
 Botany  
 Charles F. Hottes Papers, 1891-1912, 1923-40, 1951-65

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  
 Society of Plant Physiology  
 American Genetic Association  
 Illinois Academy of Science  
 Acacia  
 Alpha Zeta

Sigma Xi  
 Gamma Delta Sigma  
 Mason k and 32  
 Red Cross of Constantine  
 University  
 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  
 1926-27, Wheat Germination with Reference to temperature and moisture//Lab exercises in plant physiology, JAS of Agronomy, 18:2  
 1927-28, Sweet corn seed, constant rate aspirator, wheat germination//three shared articles  
 1928-29, Studies on experimental cytology, Plant Physiology, 4:1:1-29  
 1929-30, Resistance of wheat to High Temperatures, JAS of Agronomy, 22:2  
 1931-32, American Deciduous Cypress, Home Geographical Monthly, 1:13-19  
 1932-33, American Deciduous Cypress, Home Geographical Monthly, 1:13-19  
 1934-35, changing Emphasis in General Botany, Iowa State College Journal of Science, 9:2

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
	2:131-136
	2:147-175
	3:410-465
Dunlap, Henry	1:622-647
Faculty Under Peabody	3:371-386

Faculty under James and Kinley	2:282-289
Fechet, Edmond G.	4:302-322
Forbes, Stephen A.	1:194-245
Forestry	4:835-837
Football	1:312-319
Fraternities, Student vs. Peabody	3:175-195
	3:246
	3:318
German University Systems	3:492-671
Gleason, Henry	2:668-690
Goss, William F. M.	4:323-336
Harris, Ben F.	1:613-621
Holden, Perry G.	4:209-230
Hottes' University education 1887-91	1:50-56
Hottes' German Examinations	3:672-770
Hottes' Lecture Technique	2:230-259
Hottes' work in cytology-corn germination	3:72-160
Huff, George	3:350-370
	4:231-241
Human Physiology class ca. 1891	1:1-49
James, Edmund J.	1:403-494
	2:137-146
	2:290-388
	3:771-810
	4:130-189
Kaufman, J. M.	1:648-674
Kemp, George T.	1:495-569
Kinley, David	1:704-710
	2:1-9
	3:811-845
	4:83-124
Kofoid, Charles A.	1:246-261
Mattis, George	1:605-612
McKinley, William B.	1:586-598
Military Training	1:100-129
	1:320-329
Microscopes	2:705-815
Morey, Lloyd	4:37-82
Palmer, Arthur	1:262-269
Parks	1:684-703
Peabody, Selim H.	1:57-70
	1:270-311

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Railroad Connections	1:150-159
Ricker, Nathan C.	4:1-36
Rolfe, Charles	2:17-25
Shattuck, Charles U.	2:26-46
Snyder, Edward	3:10-15
	4:366-393
Stevens, Frank L.	
	4:440-650
Student Rebellions	1:93-99
	3:196-234
Talbot, Arthur N.	3:340-349
Trelease, William	1:570-585
Urbana-Champaign influence	1:570-585
Ward, Henry B.	2:176-214
Willard and Stoddard	4:684-741

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

<u>16 mm Films</u>	<u>Inches</u>	<u>Feet</u>
1. Brookfield Zoo #1	1 5/8"	
Monkey		
Baboon with baby on back		
Baboon group with young		
African Goat		
Elephant		
Giraffe Cut		
Polar Bear		
Fallow Deer		
Badger		
Rocky Mt. Goat		

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 handkerchief 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 Arctic Circle, 23 1/2 N Midnight Sun Port Yukon Eskimo Village U.S. Post Office Church	1/2"
11.	Canada, Prince Rupert, Totems	1/2"
12.	Kicking Horse, Emerald Lake	1/2"
13.	Old and New Klondike Mining Equipment Mines and Mining Pioneer ore crusher Miners Essentials Town Marshal Ore Crusher Sacramento Pit Dredge Gold Mining Abandoned Cabin	1 7/8"
14.	Mt. Robson	1 1/2"

15/4/21

11

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	2"	500'
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	2 3/8"	
17.	St. Mary's Lake, Canada Walls Glacier Lower Falls Lake Joseph Canoe	1"	150'
18.	New Madrid, Fishing Sherberg Lake	1 1/8"	200'

- Inland Passage  
Fishing Boats  
Halibut, windless  
Washing boats
19. New Madrid, Fishing 7/8" 130'  
Salmon boat on Fraser River  
Halibut boats  
Wrangell Fog  
Canadian Fishing Co.  
Repairing Nets  
Fire Boat
20. Northwest Forests and Milling 1 7/8"  
#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 2 1/4"

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 1 3/8"

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

30. Monument Valley, Chief's Grave, Aug. 30, 1961 3/8"

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 2"

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 dried 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 form 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

2"

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

45. Florida Sponge Fishing 1"

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 size  
 Are used for insulation and manufacture of Christmas items  
 Show trees (Christmas)

46. U.S. Life Saving Crew #13 3/4"

15/4/21

27

47. Life Boats and Drill 1"

Box 5:

50. Bird Paradise 1 1/8" 125'

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 3/4" 125'

52. Bryce Canyon 1 1/8"

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

53. Natural Bridges, Zion 1 1/2" 250'

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

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

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<br>Angle view<br>Frontal view<br>Side view moving bucket<br>Grant Pump<br>Pipe line<br>Dredge side view<br>Driving pipe in the front<br>Dredge angle<br>Dredge gang moving bucket and depositing<br>Front moving bucket<br>Guy making landing with pond shore<br>Angle depositing gravel and boulders<br>Vertical project of Dredge<br>Moving bucket |        |      |
| 66. | Plant Movements #1  | 2 1/8" | 425' |
|     | Germinating radish seeds<br>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 pollinated  
 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. It's 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.			158"

Palladium 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	1 1/4"	

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 2 1/4"  
 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 2" 300'  
 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.<br>10' | Mexico, Pulque, New Madrid               |        | 1/8" |
| 80.<br>25' | Mexico, Tortio                           |        | 1/4" |
| 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 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	2 1/2"	

	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.			138"
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

Asclepias cornut; (20), August 1913

#s 830-847, 1533

Pilobolus, (5)

#s 6, 10, 12-13

Passion Flower (5)

#s 274-276, 739-740

Tree Wound Healing (6)

Milkweed and fly, 3 prints and (12)

Boise irrigating wheel, 314,410, 713, (3)

Columbia River, Locks (2)

Agave (5)

Pines (3)

Hopi (3)

Iris (2)

Horse chestnut (2)

Gen. Sherman Tree, CA

Yellowstone Park, Riverside Geyser

Lumber, Memphis, TN

Plants and Trees (12)

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  
     Bean Embryo, long section  
     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  
 Tree Section  
 Flowering Tree  
 Travel Literature, 1953-57  
     Florida, Idaho, New Mexico, Oregon, Mexico and Latin America

<u>Photographs</u>	<u>Prints</u>	<u>Negatives</u>	
Alaska, Wrangell Narrows	14		
Arizona	6		
Cactus & Pine, Southwest Vegetation	15		
California, Trees, Camps, Yosemite	45	8	
Canada, Vancouver	3		
Colorado, Trees on Mountains	14	25	
Colorado, Mesa Verde	9 packs		
Cypress Trees, Swamps, Bayous	39		
Flowers	6	12	
Idaho, Press	2		
Illinois, Campaign, Urbana	9	19	
Illinois, Hottes House		13	18
Montana	5	7	
New Mexico	40		
Oregon		3	
Pine Cones	1	4	
Salvia	12	2	
Tree Sections	6	1	
Unidentified	16	2	
Utah		2	
Washington, Bellingham	3	9	

## Wyoming

4

Box 10:

Notebooks and Notes, 1938-62

VolumeContents

- 1 Mexico-- 1951 -- Red "Plan Book"
  - January 1 - New Orleans, Houston, Mexico City
  - January 10 - April 18 - Touring
- 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
  - Yucatan, Guatemala
- 6 Memorandum (black)
  - Colorado, Utah, Monument Valley, June 20, 1942
- 7 BPB Central America Lectures, 1956
  - Lecture #1 - El Salvador, Managua, back via Vera Cruz
- 8 BPB Guatemala Lecture, 1951, 1952, 1953, 1954
  - Antigua
- 9 Brown Book, Slide Record 51-54 - i.e. 1951-54
  - 1951 - Guatemala and Yucatan, Nov.
    - 1-129, Merida
    - 130-34, Guatemala
  - 1952 - 1-143, Santiago, Cholula, Chichi
    - 144-, Campeche
    - 164-, Merida
    - 194-210, Guatemala - Mexico flight
    - 232-243, to Houston flight
    - 261-412, Mexico
  - 1953 - 1-, Campeche
    - 58-, Uxmal
    - 64-, Chichen Itza
    - 88-, Mexico City

- 206-, Merida  
 252-328, Guatemala  
 1954 - 1-, Mexico City  
 75-, Patzcuaro  
 150-2650, Oaxaca
- 10 Photo Mexico - Log Nov 20  
 Oaxaca, Patzcuaro Merida, Guatemala, Chichen Itza, Flowers, Death Valley
- 11 Bryce Canyon, 1-250, 1938  
 San Francisco Exposition and Yosemite, ca. 1939  
 Thompson Arboretum, TA 1-8, 1948  
 Death Valley, 1-84, 1959  
 Plants and Flowers, F1-24
- 12 Phoenix, AZ  
 Jacksonville, FL  
 St. Augustine, FL  
 Ocala, St. Petersburg, Sarasota  
 Fort Lauderdale, Indian River
- 13 Hats  
 Mescal  
 Nicaragua  
 Pulque  
 Tasco  
 3 Listing Board
- Roll #1 Central America slide sequences, New Orleans to Guatemala  
 Slide 52, 56, 57, 59  
 Izalco, Nicaragua, Costa Rica
- 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  
 New Orleans to Guatemala  
 El Salvador, slide, Oct. 1958  
 Movie, Nov. 10, 1958

- Movie, Jan. 14, 1958  
 San Salvador, Nicaragua, 1950
- Roll #8 - Eskimos, Arctic Circle, Alaska, Fort Yukon
- Roll #9 - Guatemala Lecture, July 28, 1959
- Roll #10 - Central America, July 6, 1958
- Roll #11 - Central America, Lecture, Feb. 8
- Roll #12 - Navaho Indians, Jan 20, 1962  
 42 - M7 to M53
- Roll #13 - July 6, 1958  
 Mexico City, Nov 20, 1956
- Roll #14 - Alaska, August 6, 1960
- Roll #15 - Alaska, #1A
- Roll #16 - Central America, May 1959
- Roll #17 - Gallup, NM, Ceremonial Slides  
 47 - G 1-1 to 60
- Roll #18 - Central America, April 10, 1958
- Roll #19 - Central America, Final Order, 1957
- Roll #20 - Seattle
- Roll #21 - Guatemala Lecture, March 8
- Roll #22 - Guatemala Lecture
- Roll #23 - Guatemala Lecture
- Roll #24 - Guatemala
- Roll #25 - Central America #3 and #5
- Roll #26 - Central America, 1956
- Roll #27 - Central America, 1956
- Roll #28 - Guatemala Lecture
- Roll #29 - Yucatan #s 1-4
- Roll #30 - Guatemala 1
- Roll #31 - Alaska #1, August 13, 1960
- Roll #32 - Alaska
- Roll #33 - Alaska, August 10, 1960
- Roll #34 - Alaska
- Roll #35 - Alaska
- Roll #36 - Alaska
- Roll #37 - Arizona
- Roll #38 - Arizona Desert
- Roll #39 - Arizona
- Roll #40 - Monument Valley

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

Carya porcina (3), Carya sulcata (7), Fraxinus (3), juglans cinerea (5), maclura (3), negundo (3), ulmus fulva (3), nyssa, tsuga canadensis (3), larix (2), quercus rubia (3), amelanchier, carpinus carolinana (3)

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

#### Glacier National Park

Appistoki Falls, Avalanche Lake (2), Belly River and Mt. Cleveland, Belton Chalet, Blackfoot Glacier (3), Blackfoot Mountain, Castle Mountain, Chief Mountain (2), Crater Cracker Lake and Canyon (2), Cut Bank Chalet, Cut Bank River, Flync Peak, Garden Wall, Glacier Park Auto Road, Glacier Park Hotel and Station (2), Going to the Sun Mountain (3), Granite Park Chalets (2), Grinnell Lake, Gunsight Lake and Pass (3), Iceberg Lake (2), Indian Pass (2), Josephine Lake (2), Kipp's Peak, Lake Ellen (2), Lake McDermott, Lake McDonald (3), Lewis Hotel, Logan Pass (2), Many Glacier Hotel (8), Margaret Lake, McDermott Falls, Million Acre Garden, Morning Eagle Falls, Mt. Cleveland, Mt. Jackson

#### Drawer 66:

#### Glacier National Park

Mt. Wilbur (3), Piegan Pass (6), Ptarmigan Lake (2), Pumpelly Glacier, Rising Wolf Mt. (2), St. Mary Lake and Chalet (11), Sperry Glacier (4), Split Mountain, Sue and Glen Lake, Sun Chalet and Mountain (5), Swift Current Pass (7), Trick Falls, Triple Divide Mt., Two Medicine Chalet and Lake (3), Fishing (4), Goats (2), Hikers, Indians (4), Airplane map, Railroad Engine, Unidentified scenes (21)

Wood - Hough sections (9), Horses, Beethoven's birthplace, laboratory, Bryce Canyon (22)y