

BIBLIOGRAPHY
OF
TECHNICAL AND INDUSTRIAL
MOTION PICTURE FILMS
AND SLIDES



1934

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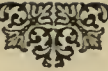
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BIBLIOGRAPHY
OF
TECHNICAL AND INDUSTRIAL
MOTION PICTURE FILMS
AND SLIDES



COMPILED BY
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NEW YORK STATE
DEPARTMENT OF INDUSTRIAL TEACHER-TRAINING



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FOREWORD



IN RECENT YEARS the value of visual aids in education has become a matter of prime importance. Many colleges and universities are maintaining Bureaus of Visual Instruction from which material may be borrowed at small cost. In addition, a large number of manufacturing establishments have prepared motion picture films which have educational value, especially in trade and vocational schools.

This bibliography has been compiled for the convenience of industrial teachers in order that they may have at their command, information regarding the sources of visual materials. This compilation of films will afford teachers the opportunity to vitalize their classroom work by the use of this very interesting supplemental type of instruction.

The detail work of organizing this material was performed by Miss Lucile de Nevers Jones, formerly Executive Secretary of the Russian Student Fund, Inc.

G. G. WEAVER

HOW TO USE THIS BIBLIOGRAPHY

In using this bibliography, it is advisable to keep in mind the following:

- (1) State to the distributor two or three choices and select a date for showing two or three weeks in advance.
- (2) The rental cost given is per day or per showing, unless otherwise indicated.
- (3) The term "Transportation only" indicates that the use of the film is free but that the borrower is expected to defray transportation costs both ways. In a very few cases when the service is local and there is no transportation charge, the word "free" is used.
- (4) Several film libraries are operated on a membership or registration basis. Exhibitors using the film service are required to pay an annual registration or membership fee in advance. For example, "Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation" indicates that if the membership or registration fee is paid, any number of films may be borrowed without additional cost except for transportation. In some instances there is a rental charge for each film borrowed and is so stated in the bibliography. If the amount of the fee is less than one dollar, it is a service charge for handling the film in question and is not an annual membership or registration fee.
- (5) Pages 5 to 155 of this bibliography are devoted to description of motion picture films. Material on slides will be found on pages 156 to 179. The Table of Contents lists the subjects treated and states the number of films or slides described in the bibliography—as, for instance, the first subject, "Aeronautics", has 79 films under six sub-divisions.
- (6) The names and addresses of the sources, from which this visual aid material may be obtained, are given on pages 180 to 182.
- (7) Among the sources there are several state universities which offer special services to schools within the state. The rental cost in this bibliography is given for schools outside the states where the universities are located.

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MOTION PICTURE FILMS

AERONAUTICS

Aerography

1. AIR—1 reel 16mm

This film shows measuring speed of wind, a tornado, how man uses wind; compression and air pressure principles of the airplane and parachute; lighter than air ships; submarines; air and the diver.

Edited Pictures System—Rental \$2.00 plus transportation.
University of California—Rental \$1.00 plus transportation. Lesson 5c.
University of Iowa—Rental \$1.50 plus transportation.
University of Missouri—Rental 35c plus transportation.

2. AVIATION METEOROLOGY—(Sound)—1 reel 16mm 35mm

This film shows the principles of aviation meteorology.

Henry Bollman—Sale

3. BACK OF THE WEATHER FORECAST—2 reels 16mm 35mm

A collection of data on the weather; forecasting; instruments used for determining data; balloons; airplanes; measuring rainfall, wind, velocity, humidity, making weather maps; gathering information.

U. S. Department of Agriculture—Transportation only.
Iowa State College—16mm Rental \$1.00; 35mm Rental \$1.50—plus transportation.

4. CHARTING THE SKIES—½ reel 16mm 35mm

Filmed at the aerological station, U. S. Weather Bureau, Drexel, Nevada. This picture shows how big kites are used for ascertaining atmospheric conditions.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety—213 footage 35mm; to obtain 16mm footage, divide by four-tenths.
Kodascope Library—16mm Sale; Rental \$1.25 plus transportation.

5. EXPLORING THE UPPER AIR—2 reels 16mm 35mm

This film deals with the “upper air” observations of the U. S. Weather Bureau and shows the use of airplanes and other instruments in the sky for making observations of the weather.

U. S. Department of Agriculture—Transportation only.
Iowa State College—35mm Rental \$1.50 plus transportation.
Indiana University—35mm Rental \$2.00 plus transportation.

6. SCIENCE OF WEATHER PREDICTION—½ reel 16mm 35mm

An observer for the U. S. Weather Bureau makes up his prediction sheet; measures amount of rainfall; completes record for an entire district.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety—355 footage 35mm; to obtain 16mm footage, divide by four-tenths.
Kodascope Library—16mm Sale; Rental \$1.25 plus transportation.

7. WATCHING THE WEATHER ABOVE—2 reels 16mm 35mm

This film deals with the upper air observations of the U. S. Weather Bureau, shows different types of government aerial service and the use of the instruments for determining weather conditions.

U. S. Department of Agriculture—Transportation only.
Iowa State College—Rental \$1.50 plus transportation.

8. WEATHER FORECASTING—1 reel 16mm

The action of weather forecasting instruments is demonstrated as well as the plotting of isotherms and isobars on a weather map. The closing scenes suggest services which the weather bureau renders.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.

Flights

9. ACROSS DEATH VALLEY BY AIRPLANE—¼ reel 16mm

This picture shows flying below sea level and over Funeral Range Mountains.

Hollywood Film Enterprises, Inc.—Sale \$3.50.

10. ADMIRAL BYRD OFF TO PARIS AND RETURN FROM THE SOUTH POLE—¼ reel 16mm

Mogull Bros.—Sale \$3.00; Rental 50c plus transportation.

11. AIR RACES ACROSS THE PACIFIC—1 reel 16mm

Hollywood Film Enterprises, Inc.—Sale \$3.50.

12. AMERICA'S POLAR TRIUMPH—2 reels 16mm 35mm

This picture shows all the steps in the perilous and adventurous flight of Commander Byrd to the North Pole—difficulties in getting the big Fokker plane across the ice floe of King's Bay, preparation at Spitzbergen, etc.

Gordon Ellis Productions—Sale \$35.00 per reel, 16mm; \$110.00 per reel, 35mm—on non-inflammable stock less a discount of 25%.

13. AMUNDSEN'S POLAR FLIGHT—3 reels 16mm 35mm

This is a screen record of the first North Pole flight attempted in an aeroplane, from the assembling of the plane and the start from Spitzbergen, through the flight, the accident that prevented Amundsen's party reaching the pole.

Gordon Ellis Productions—Sale—See Number 12.

14. AROUND THE WORLD VIA GRAF ZEPPELIN—(Sound)—2 reels 35mm

Produced under the auspices of the Hearst Newspapers. A talking picture story of the epochal voyage of the Graf Zeppelin.

Excelsior Film Company—\$10.00 per showing.

15. AVIATION—5 reels 35mm

A series of reels which may be shown separately:

1. Scenes of Captain Colyer planning round the world trip.
2. News reels of Bremen crew, flight to Canada, arrival in New York, etc.
- 3 & 4. To be shown together. News reels of Byrd reaching North Pole, arriving home, reception; Amundsen crossing pole in the Norge; New York to Paris plane falls; etc.
5. News reel—Girl flies with aid for Bremen crew; Costes and Lebrich end their journey at Mitchell Field; regular airplane service between United States and Cuba is started; etc.

Iowa State College—Rental \$1.50 each reel, plus transportation.

16. BIRD OF COMMERCE, THE— ½ reel 16mm 35mm

This film shows the delivery of packages in a suburban village by a large New York department store, through aeroplane service.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety—326 footage 35mm; to obtain 16mm footage, divide by four-tenths. Also Rental.

17. BREMEN'S FLIGHT, THE— ½ reel 16mm

Crossing the Atlantic from east to west with Major Fitzmaurice, Baron Huenfeld and Captain Koehl.

Edited Pictures System—Rental \$2.00 plus transportation.

18. CAPTURING LIONS BY AEROPLANE— 1 reel 16mm

Major Jack Allen captures lions which have been attacking some goatherds in Arabia. He attaches chains to the underside of the plane, with anchors at each end, flies low over the desert and drops the chains over the lions.

Kodascope Library—Sale. Rental \$1.25 plus transportation.

19. COAST TO COAST IN 48 HOURS— (Sound) —2 reels 35mm

This film visualizes America's daily rail and air transport service.

Visographic Pictures—Transportation only.

20. CONQUEST OF THE ANTARTICA— 3 reels 16mm

A dramatization of the events of the Byrd Expedition at the South Pole.

Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation.

21. EAGLES OF THE SEA— 1 reel 16mm 35mm

Shows experiments in aviation on American steamships operated by the United States Lines.

Y. M. C. A. Motion Picture Bureau—See Number 20.

22. FITZMAURICE .TRANSATLANTIC FLIGHT— 200 ft. 16mm

Mogull Bros.—Sale \$6.00; Rental \$1.00 plus transportation.

23. FORD AIR SERVICE—CHICAGO TRIP— 1 reel 35mm

This film gives the initial trip of the Ford Airplane from Dearborn to Chicago with a load of Ford parts.

Ford Motor Company—Transportation only.

24. FORD AIR SERVICE—CLEVELAND TRIP— 1 reel 35mm

This film pictures the trip of a Ford airplane from Dearborn to Cleveland with complete Ford car.

Ford Motor Company—Transportation only.

25. FROM LONDON TO PARIS BY AIR— 1 reel 16mm 35mm

The daily trip of one of the huge passenger planes in the English Channel Service. Views from the air of cities, harbors, the English Channel and beautifully laid out farm lands in rural France.

Society for Visual Education—Rental 16mm \$1.50, 35mm \$2.00 plus transportation.
Kodascope Library—16mm Rental \$1.25 plus transportation.

26. GIRDLING THE GLOBE—1 reel 16mm

This reel shows many scenes taken during Graf Zeppelin's around the world flight.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

27. GRAF ZEPPELIN—ROUND THE WORLD FLIGHT—1 reel 35mm

Willoughbys—Rental one coupon—about \$2.00.

28. LINDBERGH FLIES ALONE—2 reels 16mm 35mm

This is a complete and accurate record of "Lindy's" flight across the Atlantic for the first New York to Paris Non-Stop Flight.

Gordon Ellis Productions—Sale 16mm \$35.00 per reel; 35mm \$110.00 per reel on non-inflammable stock, less a discount of 25%.

29. LINDBERGH'S FLIGHT—1 reel—35mm

Willoughbys—Rental—One coupon—about \$2.00.

30. LINDBERGH'S FLIGHTS—2 reels—35mm

F. C. Pictures Corp.—Rental.

31. LINDBERGH'S FLIGHT TO MEXICO CITY—100 ft. 16mm

Mogull Bros.—Sale \$3.00; Rental 50c plus transportation.

32. LOCO-MOTIVE—1 reel 35mm

This reel portrays Felix on a non-stop flight to Germany.

Home Film Libraries—Rental 50c per reel week-days; 75c per reel week-ends; Minimum charge \$1.50. Library membership \$10.00.

33. MT. WHITNEY VIA AIRPLANE—½ reel 16mm

Hollywood Film Enterprises, Inc.—Sale \$3.50.

34. NEW YORK TO LONDON BY AIR—1 reel 16mm 35mm

Through photography and animated drawings this film describes the famous overseas flight of the dirigible ballon R-34.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety—402 footage 35mm; to obtain 16mm footage, divide by four-tenths.

35. ROCKY MOUNTAINS VIA AIRPLANE—½ reel 16mm

Hollywood Film Enterprises, Inc.—Sale \$1.75.

36. SCHNEIDER TROPHY AIR RACES—1 reel 35mm

Willoughbys—Rental one coupon—about \$2.00, plus transportation.

37. STORY OF THE AIRSHIP, THE—1 reel 16mm 35mm

Shows the development from the free balloon to the Graf Zeppelin. Many views of the Graf Zeppelin are shown on its round-the-world tour.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.
University of Kansas & Colorado—Rental 16mm 50c plus transportation.
University of Iowa—16mm Rental \$1.50, plus transportation and registration fee 35c.

38. U. S. NAVY AND AIR FLEET IN ACTION—200 ft. 16mm

Official Picture.

Mogull Bros.—Sale \$6.00; Rental \$1.00 plus transportation.

39. WINGS OF PROGRESS—1 reel 35mm

E. B. Ford commercial airplane reliability tour.

Ford Motor Company—Transportation only.

40. **WITH BYRD AT THE SOUTH POLE**—(Sound)—8 reels 35mm

A record of Rear Admiral Richard E. Byrd's expedition to the South Pole.

Electrical Research Products, Inc.—Rental \$5.00 per reel per day.

Flying and Stunting

41. **AEROPLANE ACROBATICS; BREATH TAKERS; AERIAL TRIP OVER NEW YORK CITY**—1 reel 35mm

A special combination reel.

Willoughbys—Rental—One coupon, about \$2.00.

42. **AEROPLANE STUNTS**—½ reel 16mm

Mogull Bros.—Sale \$3.00; Rental 50c plus transportation.

43. **AIR FLEET, THE**—1 reel 16mm 35mm

This film shows unusual feats performed by blimps—meeting the Leviathan and dropping a message to a passenger on board, landing on the deck of the Bremen, towing surfboats, lifting gliders from the ground, picking up mail from the roof of a postoffice building, etc.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

44. **AIR MAIL PILOT, THE**—5 reels 35mm

A feature picture of a famous stunt flyer who is hired as a regular mail plane pilot. Spectacular stunt flying and parachute drops are thrilling episodes.

Edited Pictures System, Inc.—Sale; Rental \$5.00 plus transportation.

45. **AIRPLANE NAVIGATION**—(Sound)—1 reel 16mm 35mm

The title explains the picture.

Henry Bollman—Sale.

46. **AIR STUNTS**—¼ reel—16mm

Flying upside down and side slipping.

Hollywood Film Enterprises, Inc.—Sale \$3.50.

Eastin Feature Films—Sale \$3.50.

47. **BALLOON RACING**—1 reel 16mm 35mm

This film shows various details in the takeoff of balloons—the first form of lighter-than-air travel.

Goodyear Tire & Rubber Company—Transportation to be paid by borrower one way.

48. **FIRST FLYING MACHINE, THE**—½ reel 16mm

This film pictures the Wright Brothers' actual experimental flights with a glider, the "first" flying machine, one of the Wright's first flights and the first motion pictures ever made from an airplane.

Eastin Feature Films—Sale \$3.95.

49. **FLYING THE MAIL**—¼ reel 16mm

Actual scenes made aboard plane while battling storms.

Hollywood Film Enterprises, Inc.—Sale \$3.50.

Eastin Feature Films—Sale \$3.50.

50. **LEARNING TO FLY**—2 reels 16mm 35mm

This film pictures the methods of ground and flying instruction developed in Boeing School of Aeronautics.

Wholesome Films Service, Inc.—Rental 35mm—\$2.50 per reel.

University of California—Rental 16mm—\$1.00 plus transportation.

51. ONE-POINT LANDINGS—1 reel 16mm 35mm

This picture illustrates landings first on one wheel then on the other, bouncing landings (two-point landings on the front wheels only) ground looping made safely through Goodyear Air-wheel Equipment.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

52. RUDIMENTS OF FLYING—½ reel 16mm 35mm

Animated drawings visualize the principles and essentials of flying. The aeroplane is disassembled and each part of flying apparatus is explained.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 367 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm on special arrangement.

53. THEORY OF FLIGHT—(Sound)—1 reel 16mm 35mm

Principles of aeronautics.

Henry Bollman—Sale.

54. WINGED WARFARE—2 reels 16mm 35mm

This film has been adapted from Harris Dickson's story "A Borgia of the Air." It shows the methods followed in commercial dusting of cotton by airplane for the control of the boll weevil.

U. S. Department of Agriculture—Transportation only.
University of Texas—Rental 35mm 50c plus transportation.

Manufacturing

55. FLYING LUCK—7 reels 35mm

With Lindbergh as his hero, young Monty buys a junked plane, rebuilds it, christens it "The Spirit Plum Center" and studies flying in "Ten Easy Lessons by Mail."

Home Film Libraries—See Number 32.

56. AIRPLANE ENGINES—(Sound)—1 reel 16mm 35mm

This picture illustrates the principles of construction of important types of airplane engines.

Henry Bollman—Sale.

57. AIRPLANE STRUCTURE AND RIGGING—(Sound)—1 reel 16mm 35mm

The title explains the nature of this film.

Henry Bollman—Sale.

58. ERECTION OF GOODYEAR—ZEPPELIN STEEL HANGAR, AKRON, OHIO—1 reel 16mm

American Institute of Steel Construction—Transportation only.

59. PACKARD DIESEL AIRCRAFT MOTOR—1 reel—16mm

Packard Motor Car Company—Transportation only.

60. U. S. S. AKRON, THE—2 reels 16mm 35mm

This picture depicts various stages of the Akron's construction from the time Rear Admiral W. A. Moffett drove the golden rivet into the first main frame on November 7, 1929 until the first trial flight on September 23, 1931.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.
Otis Elevator Company—16mm Transportation only.

61. VISIT TO THE FORD AIRPORT, A—2 reels 16mm 35mm

This picture features the manufacture of the tri-motor plane, scenes in the factory, etc.

Ford Motor Company—Transportation only.

62. FLYING CADETS—2 reels 16mm 35mm

This film shows how the Government trains men for both army and commercial aviation.

Kodascope Library—Sale; Rental \$3.00 plus transportation. 16mm.

Willoughbys—Rental one coupon, about \$2.00. 35mm.

63. TESTING MEN FOR AIR FIGHTING—½ reel 16mm 35mm

This film illustrates the tests given in the Navy to applicants for aviation work; nystagmus, examination for blood pressure, flat feet, etc.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 264 footage 35mm, to obtain 16mm footage, divide by four-tenths.

Miscellaneous

64. ACROSS AMERICA IN TWENTY HOURS—2 reels 16mm 35mm

A comprehensive picture of modern transportation, airplane design and construction. Shows a flight from California to Chicago and New York at three miles a minute.

Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation.

65. AVIATION REGULATIONS—(Sound)—1 reel 16mm 35mm

This film explains the rules of the air.

Henry Bollman—Sale.

66. BUSINESS OF AVIATION, THE—(Sound)—1 reel 16mm 35mm

Aviation business management.

Henry Bollman—Sale.

67. CUSHION LANDINGS—1 reel 16mm 35mm

This picture shows the cushioning effect in landings and the effective traction in snow, sand, mud and ice; how ground looping is eliminated and practically absolute security is given the craft in cross-wind landings or coming in with a flat tire; proves how comfortably planes equipped with Goodyear Airwheels taxi across uneven fields.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

68. FLYING FURNACE, A—½ reel 16mm 35mm

This film shows how the aviator keeps himself warm at high altitudes and during cold weather. Close-ups show the electric mechanism which heats his uniform.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 172 footage 35mm, to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

69. FLYING TELEPHONE, THE—(Sound)—1 reel 35mm

A short story produced on the airfields of California and dedicated to the Aviation Industry of America which explains the important part that the radio telephone plays in air transportation.

Southern Bell Telephone and Telegraph Company—Transportation only. Distributed only in that territory.

Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation.

New York Telephone Company—Free to New York State schools only, through local telephone commercial offices, two weeks notice.

70. GRAF ZEPPELIN IN LOS ANGELES—1 reel 16mm

Hollywood Film Enterprises, Inc.—Sale \$3.50.

71. GREATEST AIRSHIP DOCK—1 reel 16mm 35mm

This film tells the story of a remarkable feat of engineering.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

72. HAPPY LANDINGS—2 reels 35mm

This film shows why the parachute is the most scientific contribution to the cause of "safety first" in aeronautics.

Wholesome Films Service, Inc.—Rental \$2.50 per reel.

73. LIGHTNING-PROOF—1 reel 16mm 35mm

This picture shows laboratory tests of a lightning arrestor—a contrivance to protect balloons from lightning while in flight, thereby insuring safety of occupants during thunder storms.

Goodyear Tire and Rubber Company—See Number 71.

74. MAGELLAN OF THE AIR—1 reel 16mm 35mm

This picture deals with the activities of Dr. Eckener while in America, immediately following his circumnavigation of the globe. Scenes include his inspection of the Goodyear airship dock, views of the Graf Zeppelin, the Los Angeles and the fleet of Goodyear ships.

Goodyear Tire and Rubber Company—See Number 71.

75. PUTTING THE GYROSCOPE TO WORK—½ reel 16mm 35mm

The principle of the gyroscope explained by the inventor, Elmer A. Sperry. Practical application of gyro-stabilizer to airplanes and ships at sea.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 141 footage 35mm; to obtain 16mm footage, divide by four-tenths.

76. SKY HARBOR—(Sound)—1 reel 35mm

By photography and animated drawings the operation of the radio telephone communication system between airports and ships is shown. Synchronized to a running narrative with full sound effects and orchestra.

Southern Bell Telephone and Telegraph Company—Transportation only. Distributed only in that territory.

Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation.

77. TRANSPORTATION—1 reel 16mm

This film traces the history of transportation from the Indian's mode to the tri-motored plane.

University of California—Rental \$1.00 plus transportation. Teaching Lesson 5c.
University of Iowa—Rental \$1.50 plus transportation.

78. WINGS OF TOMORROW—(Sound)—1 reel 35 mm

This film tells the story of the autogiro.

Visugraphic Pictures—Transportation only.

79. STORY OF GOODYEAR, THE—1 reel 16mm 35mm

A panorama of the activities of the Goodyear Company in the manufacture of tires, tubes, mechanical goods, etc., scenes include clearing Sumatra's jungles, planting and growing rubber trees; turning Arizona's waste into fertile cotton fields, gathering the crops and following the product through the textile mills; operations in lighter than aircraft building, flying of ships, building an airship factory and dock, work on the U. S. S. AKRON, etc.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

AUTOMOTIVE AND GAS ENGINE MECHANICS

History and Development

80. CENTURY OF CYCLES— $\frac{1}{2}$ reel 16mm 35mm

This film traces transportation from the Dandy Horse of 1819 to the speedy motorcycles of today, showing historic types of bicycles in actual use.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 266 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

81. CENTURY OF PROGRESS, A—Part I and Part II—2 reels 35mm

Ford Motor Company—Sale \$12.00 a reel. May be borrowed by paying transportation.

82. GOODBYE, DOBBIN— $\frac{1}{2}$ reel 16mm 35mm

This film shows the horse-drawn vehicles of yesterday as compared with the motor traffic of a great throughfare today.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 295 footage 35mm; to obtain 16mm footage, divide by four-tenths.

83. HORSELESS CARRIAGE TO A HORSELESS AGE, A—1 reel 16mm 35mm

This film portrays the changes in transportation during the last 25 years. Scenes are shown in one of the largest and most modern automobile plants in the world.

Iowa State College—Rental 16mm \$1.00; 35mm \$1.50, plus transportation.

84. TRANSPORTATION—1 reel 16mm 35mm

This film traces the progress of man's effort to overcome time and distance from the primitive methods of transportation to present day use of steam, electricity and aircraft.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 720 footage, 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

85. TRANSPORTATION— $\frac{1}{2}$ reel 16mm 35mm

This film pictures the development of private transportation from saddle horses, surrey, bicycle, horseless carriage to the modern motor car, motorcycle, and modern water transportation.

Iowa State College—Rental 16mm 50c; 35mm 75c plus transportation.

86. WHEELS OF PROGRESS—1 reel 16mm 35mm

This film gives the history of transportation in America with emphasis on the part the gasoline engine and the motor car and truck have contributed to modern progress.

U. S. Department of Agriculture—Transportation only.
Iowa State College—Rental 16mm \$1.00; 35mm \$1.50, plus transportation.
Indiana University—Rental 35mm \$1.00 plus transportation.
Portland Cement Association—Transportation only.

Manufacturing

87. ALONG THE FIRING LINE—Also called THE STORY OF A SPARK PLUG— 2 reels 16mm 35mm

Illustrates operation and use of spark plugs in gasoline engines, fire trucks, airplanes, motor boats and tractors; mining and preparation of sillimanite; making and testing spark plugs.

U. S. Bureau of Mines—Transportation only.

University of Texas—\$1.00 fee plus transportation.

University of Kansas & Colorado—16mm Rental 50c plus transportation.

American Museum of Natural History—Free to New York City schools only. 16mm

Indiana University—Rental 16mm \$2.00 plus transportation

University of Iowa—Rental \$3.00 plus transportation and fee 70c. 16mm

University of Missouri—Rental 16mm 70c plus transportation.

88. AMBER SOUL, THE—1 reel 35mm

A trip through huge storage battery plant.

University of California—Rental 50c plus transportation.

89. AUTOMOBILE, THE—1 reel 16mm

This film traces the production and use of iron, rubber, glass and gasoline in the automobile, presenting a striking picture of the interdependence of industries.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.

University of Kansas and Colorado—Rental \$1.50 plus transportation.

Indiana University—Rental \$1.00 per day plus transportation.

90. AUTOMOBILE BODY, MAKING AN ALL-STEEL—2 reels 16mm 35mm

Reel 1—Mining, smelting, conversion of iron ore into steel, pouring ingots and rolling ingots into sheets; men shaping wooden patterns for metal dies, casting, shaping and polishing dies for presses.

Reel 2—Stamping entire side panel of auto pressed from a single sheet; conveying of panels to assembly jigs; re-enforcing with steel; making of steel doors and assembly of entire body; flash and arc welding.

U. S. Bureau of Mines—Pittsburgh, Pa. Transportation only.

American Museum of Natural History—Free to New York City schools only. 16mm

91. CORK IN THE AUTOMOTIVE INDUSTRY—1 reel 16mm 35mm

This film shows how gaskets are made and sold, and how cork is used in the automobile industry.

Armstrong Cork Company—Free

92. DYNAMIC DETROIT—1 reel 35mm

Ford Motor Company—Sale \$12.00. May be borrowed by paying transportation.

93. ENDLESS CHANNELS—(Sound)—Films and Disc—5 reels 16mm

This film shows how piston rings are developed and how they work inside the engine.

Perfect Circle Company—Transportation only.

94. FOURTH NECESSITY, THE—(Sound) 2 reels 35mm

Western Electric Recording. Produced by Jam Handy for Erpi Picture Consultants, Inc. This film illustrates the interdependence of modern life and depicts industrial operations. Scenes include the modern factory, the up-to-date assembly lines, the variety of cars, the widespread gasoline stations, magnificent highways, etc.

General Motors Corporation—Transportation only.

**95. HIDDEN QUALITY IN THE NEW FORD CAR AND WHAT IS BEHIND IT—(Sound)
—on disc, 2 records—2 reels 35mm**

This film reveals the manufacturing methods and accuracy required in making Ford parts; depicts the performance of many different trucks in handling excavations, long transportation, stone hauling, coal delivery, etc.

Ford Motor Company—Transportation only.

96. HORSELESS CARRIAGE, A—1 reel 35mm

This film is a trip through the Studebaker factory from the foundry and machine shop to the assembly room where the various parts are fitted together and the cars are ready to be shipped.

University of Texas—Transportation plus fee of \$1.00.

97. INTERNATIONAL TRAIL—4 reels 35mm

This film pictures the operations in the construction of motor trucks. Scenes include the forge shop, the engine manufacture from the making of the parts to the final assembly, the differential and transmission construction, the heat-treating ovens, the cab assembly, and assembly line where the complete truck is driven off under its own power.

International Harvester Company—Transportation only.

98. MAGIC CIRCLE, THE—(Sound)—films and discs—3 reels 16mm

This film pictures manufacturing, the laboratories, merchandising and advertising of piston rings.

Perfect Circle Company—Transportation only.

99. MAKING AN AUTOMOBILE—1 reel

State College of Washington—Transportation plus registration fee \$1.00.

100. MAN'S CONQUEST OF TIME—2 reels 35mm

This film traces briefly the evolution of land transportation and shows in detail the manufacture of automobiles.

University of Missouri—Rental \$1.00 plus transportation.

101. MANUFACTURE OF PACKARD CARS—8 reels 16mm 35mm

Shows how the Packard car is made.

Packard Motor Car Co.—Transportation only.

102. MECHANICAL MARVEL, A—3 reels 16mm

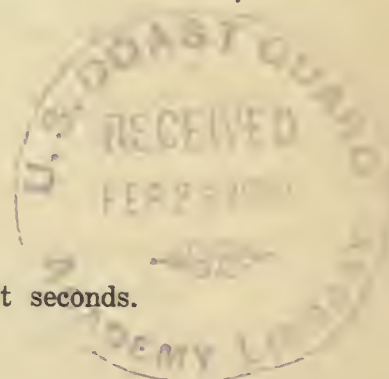
This film shows how an automobile frame is turned out every eight seconds.

Ray-Bell Films, Inc.—Transportation only.

103. MEN AND MOTORS—(Sound)—2 reels 35mm

Craftsmanship and precision methods of manufacture in the General Motors factories.

Y. M. C. A. Motion Picture Bureau—Membership Fee \$2.00 plus transportation.



104. METALS OF A MOTOR CAR, THE—2 reels 16mm 35mm

This film visualizes the necessity of constructing various parts of the automobile with a combination of metals which will withstand heat, oppose wear, resist shock and explains why numerous parts are made to withstand strain and twist, while others give qualities of hardness and toughness or resistance to shock and corrosion.

U. S. Bureau of Mines—Pittsburgh, Pa.—Transportation only.

105. PACKARD MOTORS—6 reels 16mm 35mm

This film gives the complete story of the manufacture of a motor car from the raw material to the finished product.

University of California—\$3.00 per week plus transportation.

106. PART OF THE CAR THAT'S VELVET, THE—2 reels 16mm 35mm

The complete story of pile fabrics of the mohair velvet type used for automobile and furniture upholstery. The history of velvets from the early days of their inception to modern times. Scenes from Texas ranches where Angora goats, the source of mohair are raised. The manufacture and care of mohair velvet upholstery.

Y. M. C. A. Motion Picture Bureau—See Number 103.

107. SOURCE OF THE FORD CAR, THE—(Sound-On-Disc)—2 records. 2 reels 35mm

This picture, for use principally in Service Schools, shows scenes in the plant, manufacture and assembly of the new Ford trucks and V-8 passenger cars, dealer's service room and satisfied customer leaving.

Ford Motor Company—Transportation only.

108. STORY OF A GASOLINE MOTOR, A—3 reels 16mm 35mm

Reel 1—Animated drawings depict the action of gasoline in cylinder and of each working part; casting and machining of each cylinder block; tests for accuracy.

Reel 2—Machining of crank case; forging and machining of crank shaft; machining of pistons and connecting rods; testing of these parts and their operation in motor.

Reel 3—Working of inlet and exhaust valves; timing of action, making of cam shaft, inlet, and exhaust manifold, distribution of lubricating oil to motor, final test for smooth running.

U. S. Bureau of Mines—Pittsburgh, Pa.—Transportation only.

University of Texas—Transportation plus registration fee \$1.00 35mm.

109. STORY OF A LITTLE RIVER, THE—(Sound-On Disc)—1 record—1 reel 35mm

This film depicts the manufacturing activities in a rural center, showing how small model "A" parts are made, illustrating taps for cutting internal threads and all kinds of gages and plugs used for checking precision work.

Ford Motor Company—Transportation only.

110. STORY OF THE CADILLAC CAR—4 reels 35mm

This film explains in detail the manufacture of an automobile.

University of Texas—Transportation plus registration fee \$1.00.

111. TOUR THROUGH THE ROUGE PLANTS, A—(Sound-On-Discs)—3 records. 3 reels 35mm

This film illustrates the impressions that the visitor receives from a conducted tour through the Rouge Plants.

Ford Motor Company—Transportation only.

112. TOUR THROUGH THE ROUGE PLANTS, A—4 reels 16mm 35mm

This film is a conducted tour of visitors through the Rouge Plants.

Ford Motor Company—Transportation only.

113. TRIUMPH OF AMERICA, THE—3 reels 35mm

An illustration of the contribution of the world to the building of a Chevrolet Motor Car and what the Chevrolet contributes to the people of the world.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

114. TWENTY MILLIONTH FORD—(Sound-On-Disc)—1 record 1 reel 35mm

This film traces the development of the Ford Motor Company from the time of the completion of the first car to the 20,000,000th.

Ford Motor Company—Transportation only.

Principles

115. AUTOMOBILE, ELEMENTS OF THE—14 reels 16mm 35mm

This film is a complete short course in automotive engineering, presented so that the uninitiated may understand the details. Subjects with number of reels follow:

Running Gear and Differential	3 reels	The Engine	2 reels
The Carburetor	1 reel	Fuel and Ignition	3 reels
Cooling System and Clutch	1 reel	Transmission	3 reels
Brakes		1 reel	

Iowa State College—Rental 16mm 1 or 2 reels \$1.00, 35mm \$1.50; 3 reels 16mm \$1.50, 35mm \$2.00, plus transportation.

University of California—Rental \$10.00 for set or \$1.00 per reel plus transportation.

Bray Film Library—Sale. \$100.00 per reel 35mm; \$50.00 per reel 16mm. Rental 35mm on special arrangement.

116. AUTO STARTING AND LIGHTING—2 reels 16mm

This film shows by animated diagrams the operations of modern methods of lighting and starting automobiles by electricity.

State College of Washington—Transportation plus registration fee \$1.00.

117. ELECTRICITY IN THE MOTOR CAR—1 reel 35mm

This film gives a brief outline of the progress of electrical development and its special application to the motor car.

University of Texas—Transportation plus \$1.00 registration fee.

118. ELECTRICITY IN THE MOTOR CAR—6 reels 35mm

A series of motion pictures illustrating by animated drawings and actual models the application of electricity to the motor car. The following subjects are covered:

Electrical Units of the Motor Car	1 reel	The Starter Generator	1 reel
How the Generator Works	2 reels	Ignition	2 reels

University of California—\$1.00 per reel.

119. FOUR-STROKE CYCLE GAS ENGINE—1 reel 16mm

Animated drawings show the four strokes of each cycle; intake, compression, power, and exhaust; the fuel system of a gas engine is traced; the principle of the spark coil is illustrated and the air-cooled system is compared with circulatory water-cooling.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.
University of Iowa—Rental \$1.50 plus transportation.

120. GASOLINE ENGINE, THE—½ reel 16mm 35mm

Animated technical drawings explain the workings of the gasoline engine.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety: 360 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

121. IGNITION—1 reel 35mm

This film presents a simplified explanation of how the ignition system operates.

University of Texas—Transportation plus \$1.00 registration fee.

122. POWER WITHIN, THE—3 reels 16mm 35mm

Reel 1—shows uses of power produced by internal combustion engine in lighting homes, pumping water, plowing fields, operating automobiles, boats, and airplanes.

Reel 2—presents principal features of automobile engine; explains how power is transmitted; shows result of improper lubrication and how it can be corrected.

Reel 3—shows purpose of carburetor; waste of gasoline; cause of knocking, proper use of choke.

U. S. Bureau of Mines—Pittsburgh, Pa.—Transportation only.
University of Texas—Transportation plus registration fee \$1.00 35mm.

123. TRANSPORTATION—1 reel 16mm

Application of some of the basic mechanic principles of steam and gas to problems of modern transportation.

Edited Pictures System—Transportation plus registration fee \$2.00.

124. WHAT EVERY CAR OWNER SHOULD KNOW—1 reel 35mm

This reel illustrates the value of a motometer in the proper care of an automobile.

University of Texas—Transportation plus registration fee \$1.00.

Rubber Tires

125. INNER TUBE, THE—1 reel 16mm 35mm

This film depicts the stages of construction of the Goodyear inner tube, the tire's holder of compressed air.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.

126. MAKING RUBBER TIRES—1 reel 16mm

State College of Washington—Registration fee \$1.00.

127. MANUFACTURE OF INNER TUBES—1 reel 16mm 35mm

This film shows how inner tubes are made.

Ray-Bell Films, Inc.—Transportation only.

128. RUBBER—1 reel 16mm

Shows the production and uses of rubber from the plantation in Sumatra through the manufacture of tires, tennis shoes and fountain pens in the U. S. A.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.
University of Kansas & Colorado—Rental \$1.50 plus transportation.
Iowa State College—Rental \$1.50 plus transportation.
Indiana University—Rental \$1.00 plus transportation.
University of California—Rental \$1.00 plus transportation.
Edited Pictures System—Rental \$2.00 plus transportation.

129. RUBBER INDUSTRY, THE—1 reel 35mm

This picture traces the rubber industry from the plantation through a modern plant where automobile tires are made.

Indiana University—Rental \$1.00 plus transportation.

130. STORY OF A TIRE, THE—2 reels 35mm

This film depicts the process of making crude rubber in Sumatra, shows a cotton plantation in Arizona, the making of fabric and illustrates the final processes of making tires.

University of California—Rental \$1.00 plus transportation.

131. STORY OF THE TIRE, THE—1 reel 16mm 35mm

A study of the manufacture of automobile tires from the rubber and cotton plantations through the manufacturing operations.

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.
University of Iowa—Rental \$1.50 plus transportation and 35c fee.

Servicing

132. AUTOMOBILE LUBRICATION, STORY OF—1 reel 16mm 35mm

A customer at a greasing station is shown detail of auto-lubrication. Special lubricants for different parts and for special operating conditions are explained.

U. S. Bureau of Mines—Pittsburgh, Pa.—Transportation only.
American Museum of Natural History—16mm Free to New York City schools only.
University of Kansas & Colorado—16mm Rental 50c plus transportation.
U. S. Bureau of Mines—Bartlesville, Okla.—Transportation only.
U. S. Bureau of Mines—San Francisco, Calif.—Transportation only.

133. BRAKES—(Sound-On-Film)—8 reels 16mm

This picture shows the proper methods of operating a Brake Service Station. It starts with merchandising of the service and includes the equipment necessary, and shows the actual re-lining and adjusting of all internal types of brakes, the available advertising helps, closing with about a ten minute trip through the factory.

Thermoid Rubber Company—Transportation only.

134. ENDURANCE—1 reel 35mm

This is a picture of an automobile trip through the oil region, showing some of the difficulties experienced by oil men.

Iowa State College—Rental \$1.50 plus transportation.

135. SQUEAKS—1 reel 16mm 35mm

Traces the development of lubricants and shows modern application.

Iowa State College—Rental \$1.50 plus transportation 35mm; \$1.00 plus transportation 16mm.

University of Texas—Transportation plus \$1.00 registration fee 16mm.

136. STORY OF LUBRICATING OIL, THE—2 reels 16mm 35mm

Reel 1—Stresses importance of lubrication to machinery; explains theory of operation of still; pictures treatment of crude lubricating oil to remove impurities; illustrates separation of oil into various grades.

Reel 2—Blending of grades and types of oil to make lubricants; flash and viscosity tests in laboratory; application of correct lubricants to automobile, airplane and Diesel engines.

U. S. Bureau of Mines—Pittsburgh, Pa.—Transportation only.

U. S. Bureau of Mines—Bartlesville, Okla.—Transportation only.

U. S. Bureau of Mines—Birmingham, Ala.—Transportation only.

U. S. Bureau of Mines—San Francisco, Calif.—Transportation only.

Testing

137. CLIMBING MT. BEN NEVIS—1 reel 16mm 35mm

This picture features the Ford Model A Car climbing a mountain.

Ford Motor Company—Transportation only.

138. DEPENDABILITY—1 reel 16mm

This film illustrates the dependability of the Dodge Motor Car in oil fields, sheep ranch in Colorado, the World War, Gobi Desert expedition and gives tests on durability of car—36 complete somersaults; a mileage marathon.

Iowa State College—Transportation only.

University of Texas—Transportation plus registration fee \$1.00.

139. NEW V-8 FORD, THE—(Sound-On-Disc)—3 records—3 reels 35mm

This picture introduces the new V-8 Ford Car, shows mechanical and body features, Mr. Henry Ford stamping No. 1 on the first V-8 motor, performances on test track and the various body types.

Ford Motor Company—Transportation only.

140. PROVED—2 reels 35mm

This film shows how General Motors proves and tries out the various motors on their own proving grounds.

University of Texas—Transportation plus registration fee \$1.00.

141. STUDEBAKER SAFETY—(Sound-On-Film)—1 reel 16mm 35mm

This film was taken at a "field-day" at the Studebaker Proving Grounds, showing stock passenger cars put through every conceivable test such as tumbling a car down a hill, blowing a tire at 60 miles per hour, shooting a car over an extremely bumpy roadway, a head-on-collision between two cars, each of which is traveling 55 miles per hour.

Studebaker Sales Corporation—Transportation only.

142. THOROUGHBREDS — (Sound-On-Disc) — 1 reel 16mm

This film depicts various tests made with a Dodge car, proving that the Dodge can withstand the rough treatment to which it has been placed in a manner typical of a thoroughbred.

Dodge Bros. Corporation—Transportation only.

143. TOURING IN PRIVATE—2 reels 35mm

Describing the journey of a party of visitors through the General Motors proving ground.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

Tractors

144. CASE INDUSTRIAL TRACTORS—1 reel 16mm 35mm

This reel illustrates the adaptability of tractors to practically all kinds of industrial work.

J. I. Case Company—Transportation only.

145. DAY WITH THE TRACTOR BUILDER, A—2 reels 35mm

This film shows every step in tractor construction from the foundry where castings are made to the shipping platform.

International Harvester Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

146. FARM PROGRESS—3 reels 35mm

Powerized farming

Ford Motor Company—Transportation only.

147. FORDSON ANALYZED—3 reels 35mm

This film is a thorough analysis of the complete tractor.

148. FOUR SEASONS WITH THE FORDSON—2 reels 35mm

The Fordson a year 'round.

Ford Motor Company—Transportation only.

149. FROM THE WOODS TO THE MILL—1 reel 16mm

University of Texas—Transportation plus registration fee \$1.00.

150. HOME BUILDERS—3 reels 35mm

This film compares the advantages and economy of tractor farming over horse farming

International Harvester Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

151. INDUSTRIAL POWER—2 reels 35mm

This film shows the industrial tractor at work in the oil fields, at the docks, in forests, and on other jobs.

Indiana University—Rental \$2.00 plus transportation.

152. LAND BATTLESHIPS IN PRIVATE LIFE—½ reel 16mm 35mm

This film shows the use of caterpillar tractors and power shovels in modern farming; drainage canals, clearing stumps, harvesting and hauling crops.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 141 footage 35mm; to obtain 16mm footage, divide by four-tenths.

153. LUMBERING—THE FORDSON—1 reel 35mm

This film shows the Ford tractor in the lumber industry.

Ford Motor Company—Transportation only.

154. MANUFACTURING—THE FORDSON—1 reel 35mm

This film pictures the use of Fordson tractors in large manufacturing plants.

Ford Motor Company—Transportation only.

155. McCORMICK-DEERING INDUSTRIAL POWER—2 reels 35mm

This film shows the wide application of tractor power to many industrial operations in oil fields, at docks, etc.

International Harvester Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

156. POWER FARMER, THE—1 reel 16mm 35mm

This reel illustrates the use of the tractor in various ways about the farm.

International Harvester Company—Transportation only.

Iowa State College—Rental \$1.50 plus transportation, 35mm; \$1.00 plus transportation 16mm.

University of Texas—35mm Transportation plus registration fee \$1.00.

157. POWERFUL FRIEND, A—1 reel 35mm

The Fordson Tractor in Industrial Activities.

Ford Motor Company—Transportation only.

158. POWER THOUGHT BUILT—3 reels 35mm

Evolution of the Fordson tractor.

Ford Motor Company—Transportation only.

159. PROGRESS OF POWER, THE—1 reel 16mm 35mm

The use of the tractor in sawing logs, in the lumber yard, on docks, as a switch engine; horse vs. tractor, hoisting gravel, etc.

Iowa State College—Rental 35mm \$1.50 plus transportation; 16mm \$1.00 plus transportation.

Indiana University—Rental 35mm \$1.00 plus transportation.

University of Texas—Transportation plus registration fee \$1.00.

160. TRANSPORTATION—THE FORDSON—1 reel 35mm

This picture shows the Fordson helping factory transportation.

Ford Motor Company—Transportation only.

Trucks

161. HARVESTER NEWS REEL—1 reel 35mm

This reel shows International Trucks in everyday operations, such as the use by the Chicago Fire Department as a part of ambulance equipment; transportation of two and one-half billion dollars from one bank to another; operation tests at the Fort Wayne works.

International Harvester Company—Transportation only.

162. NEW FORD TRUCK, THE — (Sound-On-Disc) — 2 records — 2 reels 35mm

This picture presents the outstanding features of the new Ford Truck, dealing chiefly with the engine and chassis construction, and improved mechanical features. Ease of operation on the road and in traffic are illustrated, and views of all truck and light commercial car body types are shown.

Ford Motor Company—Transportation only.

163. ON JOBS LIKE THESE — 1 reel 35mm

This picture portrays road construction and maintenance through the use of International trucks; building a thousand miles of pipe line from the Texas Panhandle to Chicago; overland freight hauling tests the stamina of the trucks.

International Harvester Company—Transportation only.

Miscellaneous

164. ANNUAL 500-MILE INDIANAPOLIS MOTOR SPEEDWAY RACE, THE — (Sound) — 1 reel 35mm

The greatest spectacle of motordom from start to finish including intimate scenes of motor tires and men.

Y. M. C. A. Motion Picture Bureau—Transportation plus registration fee \$2.00.

165. AUTO FASHION PLATE, THE — (Sound) — 2 reels 35mm

Describes the journey of a party of visitors through the General Motors Research Laboratory.

Y. M. C. A. Motion Picture Bureau—See Number 164.

166. CAT AND THE KIT, THE — 1 reel 16mm 35mm

An animated picture promoting the use of G-E Edison MAZDA automobile lamps and to encourage the carrying of spare lamps.

General Electric Company—Transportation only.

167. FAMOUS FACES — 1 reel 16mm 35mm

This film shows movie stars with their Model A Cars.

Ford Motor Company—Transportation only.

168. FRONT PAGE NEWS, THE — (Sound-On-Disc) 1 reel 16mm

This film is a comedy starring Jack Pearl as the owner of a barber shop and a Dodge Associate Salesman. The "Baron" in his own inimitable way tries to explain the features of the Dodge Six to his customers and to "Sharlie".

Dodge Brothers Corporation—Transportation.

169. WHAT IS A NEW CAR — (Sound) — 2 reels 35mm

Describes the journey of a party of visitors through the General Motors Research Laboratory.

Y. M. C. A. Motion Picture Bureau—See Number 164.

170. WILDFLOWERS — (Sound-On-Disc) — 1 reel 35mm

This film features the Studebaker Champions Radio Orchestra in a setting at the Studebaker Proving Ground where there is a roadster large enough to accommodate the entire orchestra in the front seat. The advertising is subdued.

CONSTRUCTION

Concrete

171. CONCRETE AND ITS USES—1 reel 16mm

How concrete is employed in construction, including Panama Canal, bridges, highways, railroad beds, farm buildings, swimming pools, residences.

University of Kansas & Colorado—Rental 50c plus transportation.

172. CONCRETE EXAMPLE, A—2 reels 35mm

A kaleidoscopic record of men and machinery as exemplified in the construction of big concrete structures.

Western Electric Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

173. CONSTRUCTION OF SUBWAY TUBES— $\frac{1}{2}$ reel 16mm 35mm

Animated drawings clearly explain construction of the New York subway tubes beneath the Harlem River.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 221 footage 35mm, to obtain 16mm footage, divide by four-tenths.

174. CONSTRUCTION THAT ENDURES—1 reel 16mm 35mm

Shows a boy writing a theme on concrete. A manikin appears and demonstrates various ways in which concrete is used in construction, including Panama Canal, bridges, highways, railroad beds, farm buildings, irrigation pipes, walls, tennis courts, stadia, swimming pools, etc.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

American Museum of Natural History—Free to New York City Schools only. 16mm

Y. M. C. A. Motion Picture Bureau—See Number 172.

Indiana University—Rental \$1.00 plus transportation. 16mm

University of Texas—Registration fee \$1.00 plus transportation. 35mm

175. LA CROZE SUBWAY—2 reels 16mm

This film gives views of the construction of the Buenos Aires Subway, operation of the trains and the use of the standard Otis escalators.

Otis Elevator Company—Transportation only.

176. NATIONAL PARKS AND EAST RIVER TUNNELS—1 reel 35mm

Contrast between works of nature and mechanical achievements of today.

Wholesome Films Company—Sale.

177. VISIT TO HOOVER DAM, A—BOULDER DAM—1 reel 16mm 35mm

This picture brings out the difficulties encountered in the construction of the Dam at Boulder Canyon on the Colorado River.

International Harvester Company—Transportation only. 35mm

Iowa State College—16mm Rental \$1.00; 35mm Rental \$1.50; plus transportation.

Excavation—Blasting

178. BLASTING THE WATER HIGHWAYS OF AMERICA—1 reel 16mm 35mm

This film shows how dynamite serves the demands of modern progress in maintaining navigable waterways under the supervision of the Federal Government.

E. I. DuPont de Nemours & Co.—Transportation only.
University of Kansas & Colorado—Rental 50c plus transportation. 16mm

179. BUILDING NEW YORK'S NEWEST SUBWAY—1 reel 16mm 35mm

Shows how many construction problems were solved by the use of explosives and illustrates the method of building a subway without disturbing the city's activities.

E. I. DuPont de Nemours & Co.—Transportation only.
University of Kansas & Colorado—Rental 50c plus transportation. 16mm

180. DRIVING THE LONGEST RAILROAD TUNNEL IN THE WESTERN HEMISPHERE—1 reel 16mm 35mm

This film is the story of driving the tunnel through the heart of the Cascade Mountains for the Great Northern Railroad and shows how the correct use of explosives speeded up the driving so that the world's record was broken several times.

E. I. DuPont de Nemours & Co.—Transportation only.

181. DYNAMITE IN QUARRY WORK—1 reel 35mm

This film shows various methods of blasting in quarries such as well-drill, coyote hole and bench.

E. I. Dupont de Nemours & Co.—Transportation only.

182. DYNAMITE—THE MODERN DITCH DIGGER—1 reel 35mm

This reel shows how dynamite is used for blasting ditches in various parts of the country to secure drainage for agricultural and sanitary purposes and illustrates the methods employed by landowners as well as engineers directing state and municipal drainage projects.

E. I. DuPont de Nemours & Company—Transportation only.

183. ELECTRIC BLASTING CAPS—1 reel 16mm 35mm

This film shows all the processes in the manufacture of electric blasting caps from the shaping of the copper shell to the insertion of the delicate firing-bridge.

Hercules Powder Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation. 35mm.

184. EXPLOSIVES ENGINEER, THE—2 reel 16mm 35mm

Reel 1—Shows how explosives engineers continually check the suitability of explosives for different types of work.

Reel 2—Illustrates the use of explosives in expediting the building of hydroelectric projects, moving mountains, blasting out foundations for towering skyscrapers, and wresting the precious metals and essential ores from the earth.

Hercules Powder Company—Transportation only.
Iowa State College—35mm Rental \$1.50 plus transportation.
U. S. Bureau of Mines, Pittsburgh, Pa.—35mm Transportation only.

185. FROM FORESTS TO FARMS—1 reel 35mm

This film presents the methods used in clearing the cut-over acres of the Pacific Northwest.

E. I. DuPont de Nemours & Co.—Transportation only.

186. LETTING DYNAMITE DO IT—1 reel 16mm 35mm

This film illustrates the uses of dynamite in industry—blasting a mountain for railroad ballast; removing a reef in a Florida harbor; topping spar trees in the Pacific Northwest; improving a swimming hole at an eastern camp; building roads in the Rockies, etc.

E. I. DuPont de Nemours & Co.—Transportation only.

Iowa State College—Rental 16mm \$1.00; 35mm \$1.50 plus transportation.

187. MODERN HERCULES, A—1 reel 16mm 35mm

This reel gives the history of cutting rock and shows safety area for dynamite plot, making nitroglycerine, manufacture of dynamite, packing, gelatine and ammonia dynamite.

Hercules Powder Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

Iowa State College—Rental \$1.50 plus transportation. 35mm

Indiana University—Rental \$1.00 plus transportation. 35mm

University of California—Rental 50c plus transportation. 35mm

188. MODERN QUARRY BLASTING—1 reel 16mm 35mm

This film shows that the explosive engineer knows which explosive or method of blasting will produce the desired effect in all kinds of rock. A large tunnel blast, fired by Thomas A. Edison is shown.

Hercules Powder Company—Transportation only.

Indiana University—35mm Transportation only.

University of California—Rental 50c plus transportation. 35mm

189. RUBBING THE NEW ALADDIN'S LAMP—1 reel 16mm 35mm

This film is devoted to the manufacture and use of blasting caps, beginning with the construction of the copper shell and including the operation of the delicate machines which apportion to each shell an exact amount of the detonating compound.

Hercules Powder Company—Transportation only.

190. STORY OF DYNAMITE, THE—2 reels 35mm

Reel 1—Actual production of dynamite from raw materials to finished product—including use of wood pulp and nitrate of ammonia manufacture of nitroglycerin, etc.

Reel 2—Tests to show strength of explosives; transportation of dynamite and its use in Pennsylvania coal mine, in open-pit iron mines in Minnesota, in railroad construction, in demolition work and in submarine blasting as well as in tunneling and quarrying.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

U. S. Bureau of Mines, Bartlesville, Okla.—Transportation only.

U. S. Bureau of Mines, San Francisco, Calif.—Transportation only.

University of Texas—Registration fee \$1.00 plus transportation.

Excavation—Dredging**191. CONSTRUCTION METHODS COURSE 6—1 reel 16mm**

Construction methods used on Course 6, West Neebish Channel at Sault Ste. Marie.

Great Lakes Dredge and Dock Company—Transportation only.

192. DIESEL TUG "J. F. CUSHING"—1 reel 35mm

This picture shows the launching and the tug in operation. This is the largest Diesel tug on the Great Lakes.

Great Lakes Dredge and Dock Company—Transportation only.

193. DIESEL TUG "WM. A. LYDON"—1 reel 35mm

This picture shows the launching and the tug in operation at various locations. This is the first Diesel tug built for service on the Great Lakes.

Great Lakes Dredge and Dock Company—Transportation only.

194. DREDGE MOGUL—1 reel 35mm

This picture shows the development of the Dipper Dredge from the primitive dredge of the fifteenth century to the Modern Diesel Electric Dredge of today.

Great Lakes Dredge and Dock Company—Transportation only.

195. DREDGING NEW YORK HARBOR—1 reel 16mm

This reel shows how marine engineering is responsible for the broadening of channels and adding new acreage to maritime areas.

Edited Pictures System—Rental \$2.00 plus transportation.

196. DUMP SCOWS NOS. 55 and 56—1 reel 35mm

This picture shows the launching of these scows—one launching in slow motion—Diesel Electric Derrick No. 56 Tug "Lydon"—Dredge "Illinois" Undergoing Repairs—Channel Scows.

Great Lakes Dredge and Dock Company—Transportation only.

197. HOPPER DREDGE "MICHIGAN"—1 reel 35mm

This picture shows christening ceremony and vessel under reconstruction—completed vessel in operation.

Great Lakes Dredge and Dock Company—Transportation only.

198. S O O ROCK—1 reel 35mm

This picture shows Dredge L. S. No. 3 and Derrick No. 24—Drill Boat No. 5 removing rock from St. Mary's River at Sault Ste. Marie, Ontario—diver at work—operation of special stone grab on Durocher Derrick. This picture is an enlargement from 16mm film and is not very clear.

Great Lakes Dredge and Dock Company—Transportation only.

199. STORY OF LAND RECLAMATION, THE—2 reels 35mm

This is a story of Land Reclamation for Park Purposes and shows Pile Pier Bulkhead Construction, operation of stone plant and quarry at Lemont, Illinois, dipper dredges, hydraulic dredges, derricks, etc.

Great Lakes Dredge and Dock Company—Transportation only.

200. STRAIGHTENING OF THE CHICAGO RIVER—2 reels 35mm

This picture shows naval parade and commencement ceremony, various dredge, pile drivers, derricks, scows and tugs in parade and along Chicago River, methods of construction and completed job.

Great Lakes Dredge and Dock Company—Transportation only.

Excavation—Machinery

201. MODERN GOLIATH, THE or THE STORY of HEAVY EXCAVATING MACHINERY— 4 reels 35mm

Reel 1—Huge shovel stripping overburden from ore deposits at Hibbing, Minn; Bucyrus spreader plow; hauling, loading, dumping, separation and washing of ore at Harrison mine, Pengilly, Minn.

Reel 2—Spreader plow at work and track moved in sections with crabs; limestone quarry at Thornton, Illinois; drilling and loading shot holes; hauling, crushing, and loading rock into cars; shovel loading coal, hauling coal to tipples, dumping over shaker screens, and loading into railroad cars; open-pit mining with shovels stripping overburden.

Reel 3—Shows drag-line excavator working on St. Louis levee; principles of operation of moving excavator and gasoline shovel.

Reel 4—Depicts tractor shovel, caterpillar shovel, electric shovel removing overburdens; drag-line excavator handling material 800 feet away.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

202. STORY OF ROCK DRILLING, THE—2 reels 35mm

Reel 1—Shows use of diamond core drill, “rotator”, hammer drill, water-jet stopers, and “augur” rotators in augur mining.

Reel 2—Illustrates use of drill in granite quarries and of drills and channelers on 10-mile power canal of Hydro-Electric Power Commission of Ontario; includes views of Niagara Falls.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of Texas—Transportation plus registration fee \$1.00.

Excavation—Highways

203. BATES ROAD TESTS, THE—1 reel 16mm 35mm

This reel pictures the most important road test designed to show conclusively a good type of highway.

U. S. Department of Agriculture—Transportation only.

204. BETTER ROADS—1 reel 16mm 35mm

This reel illustrates the advantages of using Case Power Units in graders for maintaining roads, also for “oil” treating earth and gravel roads and shows how independent tractor units furnish handy power for operating pull type, power takeoff, belt and tractor mounted equipment.

J. I. Case Company—Transportation only.

205. BUILDING FOREST ROADS—1 reel 16mm 35mm

An illustration of men and machinery in the National Forests building highways.

U. S. Department of Agriculture—Transportation only.

Iowa State College—35mm Rental \$1.50 plus transportation.

206. CONCRETE ROAD CONSTRUCTION—2 reels 16mm 35mm

Illustrates the essential requirements in the design of concrete pavements to provide the necessary stability to resist the destructive action caused by the volume, weight, and speed of modern motor traffic and shows the principal operations in the most advanced methods of concrete pavement construction.

U. S. Department of Agriculture—Transportation only.
Portland Cement Association—Transportation only.

207. CROSSING THE GREAT SALT DESERT—1 reel 16mm 35mm

Shows unusual road engineering in building the Wendover Road, a short cut across the Great Salt Desert in Utah.

U. S. Department of Agriculture—Transportation only.

208. HOT-MIXED BITUMINOUS PAVEMENTS—1 reel 16mm 35mm

The essential features in the design and construction of "hot-mixed" bituminous surfaces, including coarse aggregate asphaltic concrete, fine-aggregate asphaltic concrete, and sheet asphalt.

U. S. Department of Agriculture—Transportation only.

209. IMPACT OF TRAFFIC ON ROADS—1 reel 16mm 35mm

This reel shows the tests that have been made to determine the effect on highways of the pounding tendencies of motor-vehicle wheels.

U. S. Department of Agriculture—Transportation only.

210. INTERNATIONAL STUDY OF AMERICAN ROADS, AN—(Sound)—6 reels 16mm 35mm

Scored to music by the U. S. Marine Band. Illustrates the types of highways in the U. S. A., their use and service to the country; shows highway construction, types of automobile traffic, and the significance of our extensive highway system.

U. S. Department of Agriculture—Transportation only.

211. LOW-COST ROAD SURFACES—FIRST STAGE—2 reels 16mm 35mm

This film indicates the savings in motor-vehicle operating costs made possible by low-cost road surfaces and outlines the essential operations in the construction of the three representative types of untreated surfaces—gravel, sand-clay, and topsoil.

U. S. Department of Agriculture—Transportation only.

212. LOW-COST ROAD SURFACES—SECOND STAGE—1 reel 16mm 35mm

This film shows that some form of surface treatment is necessary on low-cost surfaces where traffic exceeds 500 vehicles per day.

U. S. Department of Agriculture—Transportation only.

213. MASTER ROAD BUILDER—2 reels 35mm

This film illustrates the maintenance and building of roads in all sections of the U. S. A.

International Harvester Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

214. MEN WHO BUILD THE ROADS, THE—1 reel 16mm 35mm

This film is a tribute to the courage and ingenuity of the builders of our mountain highways.

U. S. Department of Agriculture—Transportation only.
Iowa State College—Rental \$1.50 plus transportation.

215. MIXED-IN PLACE BITUMINOUS SURFACES—2 reels 16mm 35mm

The methods employed in the construction of the mixed-in-place bituminous surfaces in the far Western States, the alternate "plant-mixed" type as used in California, and the retread surface as developed in Indiana and other Middle Western States.

U. S. Department of Agriculture—Transportation only.

216. MODERN CONCRETE ROAD CONSTRUCTION—1 reel 16mm 35mm

This film shows the approved methods of highway building by the use of concrete; some of the modern machinery and practices used; a contrast between old fashioned mud roads and modern highways.

U. S. Department of Agriculture—Transportation only.

Iowa State College—Rental \$1.50 plus transportation. 35mm

Society for Visual Education—Rental \$2.00 plus transportation, 35mm; \$1.50 plus transportation, 16mm.

University of Texas—Rental \$2.00 plus transportation. 35mm

217. PENETRATION BITUMINOUS MACADAM—1 reel 16mm 35mm

Methods and equipment used in the construction of penetration bituminous macadam surfaces which have been perfected in the New England States.

U. S. Department of Agriculture—Transportation only.

218. ROAD BUILDING IN THE UNITED STATES—2 reels 16mm 35mm

This film shows the methods of building important types of highway in the United States as seen by the Pan American Highway Commission on a tour of the country.

U. S. Department of Agriculture—Transportation only.

219. ROAD OUT OF ROCKS—1 reel 16mm 35mm

This reel shows how engineers and road builders overcome huge obstacles to construct a modern highway through Glacier National Park.

U. S. Department of Agriculture—Transportation only.

Iowa State College—35mm Transportation only.

220. TESTS FOR BETTER ROADS—1 reel 16mm 35mm

This reel shows tests of materials and road-building methods carried out by the Bureau of Public Roads and some of the unusual mechanical aids.

U. S. Department of Agriculture—Transportation only.

Iowa State College—35mm Rental \$1.50 plus transportation.

221. TRAVELERS' TOLL—3 reels 16mm 35mm

Shows how the public pays for good roads; how the gasoline tax serves the same purpose as the turnpike toll.

U. S. Department of Agriculture—Transportation only.

222. WHAT ABOUT MACADAM?—1 reel 16mm 35mm

Scenes show how macadam roads may be made satisfactory for automobile traffic and illustrates the methods of building macadam roads on Federal-aid projects.

U. S. Department of Agriculture—Transportation only.

Iowa State College—Rental 35mm \$1.50 plus transportation.

Panama Canal

223. PANAMA CANAL—1 reel 35mm

Map of Canal Zone shows location of town and locks, scenes show how a ship is taken through the locks, et cetera.

University of Missouri—Rental 50c plus transportation.

224. PANAMA CANAL—1 reel 16mm 35mm

This film explains the operation of the locks and pictures a ship passing through the Canal.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 473 footage 35mm, to obtain 16mm footage, divide by four-tenths.

225. PANAMA CANAL—1 reel 16mm 35mm

This film tells the story of a great engineering feat and illustrates the method by which the canal is operated.

General Electric Company—Transportation only.

University of Kansas & Colorado—Rental \$1.50 plus transportation.

Iowa State College—Rental 16mm \$1.00; 35mm \$1.50, plus transportation.

American Museum of Natural History—16mm free to New York City schools only.

Indiana University—16mm Rental \$1.00 per day plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

University of California—Rental 16mm 50c; 35mm \$1.00, plus transportation.

University of Missouri—Rental 35mm 50c plus transportation.

226. PANAMA CANAL, THE—1 reel 16mm 35mm

Shows location of the Panama Canal; comparison of routes; sanitation of the Canal Zone; views taken during the construction of the canal; the course of a boat through the canal; operation of the locks; et cetera.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied. 16mm

Iowa State College—Rental 16mm \$1.00 plus transportation.

Indiana University—Rental 35mm \$1.00 plus transportation.

University of California—Rental 16mm \$1.00 plus transportation. Manual 15c

University of Iowa—Rental 16mm \$1.50 plus transportation.

227. PANAMA CANAL AND ITS HISTORICAL SIGNIFICANCE—1 reel 16mm 35mm

This reel gives the results of the big engineering feat of Goethals; scenes show the locks in operation, et cetera.

Society for Visual Education—Rental 16mm \$1.50 plus transportation; 35mm \$2.00 plus transportation.

University of Texas—Rental 35mm \$2.00 plus transportation.

Structural Steel—Bridges

228. AMERICA'S GREAT BRIDGE TEST—1 reel 16mm 35mm

A technical study of the tests made to determine the strength of a modern reinforced arch bridge—made on the Swift Island Bridge over the Peedee River in North Carolina.

U. S. Department of Agriculture—Transportation only.

229. BUILDERS OF BRIDGES—1 reel 16mm

Bruce Outdoor Sketch. The perilous work of bridge construction over the Cascade Rapids.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

230. ERECTION OF LEES FERRY BRIDGE OVER MARBLE CANYON—COLORADO—
3 reels 16mm

American Institute of Steel Construction—Transportation and insurance to be paid by borrower one way.

231. HOW BROOKLYN BRIDGE WAS BUILT— ½ reel 16mm 35mm

This film is a combination of photography and animated drawings showing exactly how this famous structure was erected.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 458 footage 35mm, to obtain 16mm footage, divide by four-tenths. Rental by special arrangement, 35mm.
Kodascope Library—Rental \$1.00 plus transportation.

232. KILL VAN KULL BRIDGE, THE— 3 reels 35mm

Building of bridge between Bayonne, New Jersey and Staten Island, New York Harbor.

U. S. Steel Corporation—Transportation only.

233. OGDEN AVENUE IMPROVEMENT— 1 reel 35mm

Shows construction methods used in constructing Ogden Avenue bridges and viaduct.

Great Lakes Dredge & Dock Company—Transportation only.

234. RIVETER, THE— ½ reel 16mm 35mm

This film explains how the pneumatic riveter is operated and presents views of the great bridges and other structures built with this riveter.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 416 footage 35mm, to obtain 16mm footage, divide by four-tenths.

235. SPAN SUPREME, THE— 4 reels 16mm 35mm

A pictorial account of operations in the construction of the new Hudson River suspension bridge showing details of construction of the tower, sinking anchorages, making wire, spinning cables across river, and suspension of bridge.

American Institute of Steel Construction—Transportation and insurance to be paid by borrower one way.

Otis Elevator Company—Transportation only. 16mm

University of California—7 reels Rental \$3.00 plus transportation.

236. THINGS WORTH KNOWING— ½ reel 16mm 35mm

Construction of Hell Gate Bridge. Through animated technical drawings this film presents the details of the construction of Hell Gate Bridge, New York; shows the construction of great back stays, use of hydraulic jacks for raising the ponderous arms; closing the arch; the completed bridge.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 247 footage 35mm, to obtain 16mm footage, divide by four-tenths.

Structural Steel—Buildings

237. AGE OF RIVETED STEEL, THE— 2 reels 35mm

This film weaves the story of the production of rivets, fabrication of steel bridges and buildings, riveting of automobile frames, manufacture of boilers and buildings of battleships, and dramatizes the contribution made by riveted steel to the progress and safety of mankind.

Hanna Engineering Works—Free.

American Institute of Steel Construction—Transportation and insurance to be paid by borrower one way.

238. BUILDING A SKYSCRAPER—1 reel 35mm

This reel shows the processes in the construction of the new Wrigley Building in Chicago, illustrating destruction of old structure excavations.

Iowa State College—Rental \$1.50 plus transportation.

239. CHRYSLER BUILDING, THE—1 reel 16mm

This film shows the construction of the second highest building in the world. It also shows the lobby, elevators, observation tower and day and night views of the city from the tower.

Otis Elevator Company—Transportation only.

240. DEVELOPMENT OF THE BATTLEDECK STEEL PLATE FLOOR—1 reel 16mm 35mm

American Institute of Steel Construction—Transportation and insurance to be paid by borrower one way.

241. EMPIRES OF STEEL—4 reels 16mm 35mm

This film portrays the rolling, fabrication and erection of steel for a modern skyscraper, the Empire State Building of New York City; also views of the elevator equipment.

Otis Elevator Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

242. ERECTION OF GOODYEAR—ZEPPELIN STEEL HANGAR—1 reel 16mm

Goodyear Tire and Rubber Company—Transportation to be paid by borrower one way.
American Institute of Steel Construction—See Number 237.

243. FABRICATION AND ERECTION OF THE BANK OF MANHATTAN BUILDING, NEW YORK CITY—2 reels 16mm 35mm

American Institute of Steel Construction—See Number 237.

244. FROM SWAMPS TO WORKSHOPS—1 reel 35mm

This is the week-by-week story of the building of Western Electric's new cable and switch-board works at Kearny, New Jersey, this center was created out of 65 acres of mucky river bottom where divers helped lay the bulkhead foundations.

Western Electric Company—Transportation only.

Iowa State College—Rental \$1.50 plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00 plus transportation.

245. NEW LIGHTS ON BUSINESS—1 reel 16mm

This film shows the construction and operation of a large terminal warehouse of a new type, which includes not only warehouse facilities, but provision for what is known as loft or light manufacturing facilities on the upper floors.

Otis Elevator Company—Transportation only.

246. PLAYGROUND THAT WENT TO WORK, THE—(Sound-On-Film)—1 reel 35mm

This reel presents highlights on the unusual land and water problems that had to be overcome in building a great workshop on the banks of the historic Patapsco River at Baltimore. Synchronized narrative, novel sound effects and an effective musical setting.

Y. M. C. A. Motion Picture Bureau—See Number 244.

Southern Bell Telephone and Telegraph Company—Free in that territory only.

247. SWAPPING FOUNDATIONS UNDER SKYSCRAPERS— $\frac{1}{2}$ reel 16mm 35mm

This film pictures the underpinning operations necessitated by the building of the Seventh Avenue Subway in New York.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 285 footage 35mm, to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

248. USICAST ROOF, THE—1 reel 16mm

This film illustrates the installation of the "Usicast" Roof on an industrial plant. The "Usicast" Roof consists of plates of Cast Iron which are locked to the roof structure giving the most permanent type of installation available.

United States Pipe and Foundry Company—Free Loan.

249. WELDED STEEL HOUSE, THE—1 reel 16mm

This film covers the description of a steel home in which the frame is of steel, and because of this certain other structural and architectural advantages are obtained.

Lincoln Electric Company—Transportation to be paid by borrower one way.

ELECTRICITY

Appliances and Uses

250. BACK OF THE BUTTON—1 reel 16mm 35mm

This film portrays the progress made in the use of electricity with the attendant benefits to human beings.

Douglas D. Rothacker—Transportation only.
University of Texas—Registration fee \$1.00, plus transportation. 35mm.

251. CONDUCTOR, THE—1 reel 16mm 35mm

This picture illustrates the manufacture of lamp cord. It shows the transformation of raw copper from the Rocky Mountains, cotton from the South, rubber from Brazil, and silk from Japan into the finished product.

General Electric Company—Transportation only.
University of California—Rental 50c plus transportation.

252. DAIRY DUCHESS, THE—½ reel 16mm 35mm

The electrical milker as seen at a New York dairy show.

Bray Film Library—Sale, 10c ft. nitrate, 11c ft. safety: 146 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

253. DIESEL ELECTRIC DIPPER DREDGE "CREST"—1 reel 35mm

This picture shows the launching and the dredge in operation in Newtown Creek for the Brooklyn Union Gas Company, also shows Clamshell Dredge, et cetera. This is the first Diesel electric dipper dredge ever built.

Great Lakes Dredge and Dock Co.—Transportation only.

254. DIESEL ELECTRIC HYDRAULIC DREDGE "NEW JERSEY"—4 reels 35mm

This picture shows the complete mechanical operation of the dredge and a very good record of how filling is placed for the South Park Commissioners. This dredge has been described as the largest and most expensive contractor's tool ever built.

Great Lakes Dredge and Dock Co.—Transportation only.

255. ELECTRIC HEAT IN INDUSTRY—3 reels 16mm 35mm

The application of heat in the treatment of automobile parts, in the manufacture of steel and glass, in bakeries, in the manufacture of shoes, is shown in this film.

General Electric Company—Transportation only.

256. ENAMELING BY ELECTRIC HEAT—1 reel 16mm 35mm

This film shows a new type of electric enameling furnace built U shape; the end containing the heating elements is raised, the furnace is sealed by air; the work enters and leaves continuously, the work leaving giving up its heat to preheat the air for the entering work.

General Electric Company—Transportation only.

257. GIANT OF INDUSTRY, A (Electric Crane)— $\frac{1}{2}$ reel 16mm 35mm

Dramatic scenes showing lifting power of giant electric crane at Hog Island, Philadelphia Ship Yards.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety: 132 footage 35mm; to obtain 16mm footage, divide by four-tenths.

258. HIGH FREQUENCY INDUCTION FURNACES—1 reel 16mm

Actual operation of several high frequency induction furnaces including sectional views of furnace, action of "lines of force" and direction of stirring.

Ajax Electrothermic Corporation—Transportation only.

259. REVELATIONS BY X-RAY—1 reel 16mm 35mm

A record of the revolution effected in medicine and surgery and some branches of industry by the discovery and application of X-Ray.

General Electric Company—Transportation only.

University of California—Rental 50c plus transportation.

American Museum of Natural History—16mm Free to New York City schools only.

University of Missouri—Rental 35c plus transportation. 16mm.

Communications—Radio

260. EARTH'S FOUR CORNERS, THE—1 reel—16mm silent 35mm silent and sound

Represents the story of a journey to the far corners of the earth in search of materials used in making the R. C. A. Radiotron.

American Museum of Natural History—16mm Free to New York City schools only.

R. C. A. Radiotron Company, Inc.—Transportation only.

261. ENGINEERING THE SOUND FILM—(Sound-On-Film)—1 reel 35mm

A photographic trip through the Bell Telephone Laboratories where sound reproducing devices are viewed and stimulating glimpses obtained of the men who engineered this modern miracle.

Southern Bell Telephone and Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—Free in New York State only—two weeks' notice, through local telephone commercial offices.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

262. FINDING HIS VOICE—(Sound-On-Film)—1 reel 16mm 35mm

Animated cartoon figures and diagrammatic sketches explain how a sound film is recorded in the studio and reproduced on the screen.

Electrical Research Products, Inc.—Rental \$10.00—one or two days—35mm. On outright purchase basis 16mm.

Southern Bell Telephone and Telegraph Co.—Transportation only. Distributed in that territory only. 35mm.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

263. HIS MASTER'S VOICE—(Sound)—3 reels 35mm

History of transmission of music from bard through opera and talking machine to greatest advances in radio and sound movies. Behind the scenes in movie and broadcasting studios. How sound film looks and acts. Other developments of radio headquarters—the transceiver and the color organ in natural color film.

Y. M. C. A. Motion Picture Bureau—See Number 262.

264. LISTENING IN—1 reel 35mm

This reel tells the detailed story of the manufacture of radio equipment.

University of California—Rental 50c plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

265. LIVING FOR TWO, A—2 reels 35mm

How radiograms and photograms are sent across the ocean; shows a race against time.

Frank R. Church—Sale.

266. MAN-MADE MIRACLES—1 reel 16mm silent; 35mm silent and sound.

The story of radio tube manufacture, with unusual camera studies of testing apparatus.

R. C. A. Radiotron Company—Transportation only.

American Museum of Natural History—16mm Free to New York City schools only.

University of Texas—35mm silent—Registration fee \$1.00, plus transportation.

267. MYSTERY BOX, THE—(Radio)—1½ reels 16mm 35mm

This film portrays the basic principles of radio in actual photographs and animated drawings; radio wave; receiving and broadcasting; vacuum tube; crystal sets; etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 1042 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

268. OUT WHERE THE SOUND BEGINS—(Sound-On-Film)—1reel 35mm

Shows how the complex mechanism, which is required to enable celluloid film to talk and sing, is built.

Southern Bell Telephone and Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—Free to New York State only—two weeks' notice, through local telephone commercial offices.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

269. RADIO MAGIC—(Sound)—1 reel 35mm

A fascinating visual presentation of modern world-wide radio reception.

Y. M. C. A. Motion Picture Bureau—See Number 268.

270. SEEING MUSIC—1 reel 35mm

Dr. Walter Damrosch explains the process of photography of sound.

F. C. Pictures Corporation—Sale. Rental.

271. WIRELESS TELEPHONY—1 reel 16mm 35mm

This film shows the sending and receiving apparatus; sound waves carried by electric waves, transmitted through space and re-converted into sound waves.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 547 footage 35mm, to obtain 16mm footage, divide by four-tenths.

University of California—Rental 50c plus transportation.

272. WIZARDRY OF WIRELESS—2 reels 16mm 35mm

The history of signal communication—the beacon fire, smoke signal, heliograph, semaphore, electric telegraph, and telephone. Animated drawings explain the operation of the vacuum tube and other apparatus used in radio transmission and reception.

General Electric Company—Transportation only.

University of Kansas & Colorado—16mm Rental 50c, plus transportation.

Indiana University—35mm Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

Iowa State College—35mm Rental \$1.50, plus transportation.

Communications—Telephone and Telegraph

273. ALICE IN THE NEW WONDERLAND—1 reel 35mm

This film portrays Alice's adventures among the new and amazing wonders of the modern telephone land.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

274. AUXILIARY PRODUCTS OF TELEPHONE RESEARCH—1 reel 35mm

This film records the devices developed as a result of the invention of the telephone and explains such equipment as the electrical stethoscope, the audiphone, the public address system, etc.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

275. BEHIND THE LINES—(Sound-On-Film)—Also Silent—1 reel 35mm 16mm

This reel portrays a cartoon character that exemplifies the spirit of telephone maintenance in its constant war against the villain of the picture, "Old Man Trouble."

New York Telephone Company—See Number 274. 35mm.

Southern Bell Telephone & Telegraph Company—Transportation—Distributed in that territory only. 35mm.

University of Iowa—16mm silent—Rental \$1.50, plus transportation and service charge 35c.

276. BUILDING FOR SERVICE—1 reel 35mm

This film reviews some of the present development projects being completed for the national and international telephone service and includes views of telephone construction work, including the laying of cable between Florida and the West Indies.

New York Telephone Company—See Number 274.

277. BUSINESS IN GREAT WATERS—(Sound-On-Film)—2 reels 35mm

This film portrays the process of laying the high speed ocean telegraph of 1928 between Newfoundland and the Azores with the C. S. DOMINIA, largest submarine cable ship afloat.

Western Electric Company—Sale.

Southern Bell Telephone and Telegraph Co.—See Number 275.

Y. M. C. A. Motion Picture Bureau—See Number 268.

278. CALL OF THE EAST, THE—(Sound-On-Film)—1 reel 35mm

This picture centers around a switchboard in San Francisco's Chinatown. A call is put in by a local merchant to his branch in London and the audience follows the call across the continent and the Atlantic to the famous Limehouse district of London. An accompaniment of characteristic Oriental music.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—Free to New York State only, through local telephone offices, two weeks' notice.

279. COMMUNICATION BY ELECTRICITY—1 reel 16mm

This film shows the early methods of communication—the electric bell and telegraph, the under-sea cable, the telephone, how we hear, the ear and the telephone.

Edited Pictures System—Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

280. COMMUNICATION—1 reel 16mm

This is a non-technical film showing the methods by which electricity is used as a means of communication—the electric bell; the telegraph; telephone; wireless telephony.

University of Kansas & Colorado—Rental \$1.50, plus transportation.

281. CROSSWORDS OF CONVERSATION—1 reel 35mm

This reel shows many types of switchboards and machine switching equipment.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

282. DESERT SPAN, A—1 reel 35mm—(Sound-On-Film)—Also Silent

This picture shows the machinery of modern telephone line building in operation and depicts the construction of lines through the heart of the American desert.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Co.—Free to New York State only, through local telephone commercial offices, two weeks' notice.

283. DIGGING IN FOR SERVICE—1 reel 35mm

This film describes the methods used to dig pole holes in rock, mud, sand, shale, water, etc.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—See Number 282.

284. ELECTRICAL TRANSMISSION OF SPEECH, THE—1 reel 35mm

The fundamentals involved in transmitting and receiving the voice over wire circuits are presented in animated drawings.

Western Electric Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee, \$2.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

Southern Bell Telephone & Telegraph Co.—Rental \$1.50, plus transportation, in that territory only.

285. EVERY DAY IN EVERY WAY—1 reel 35mm

Unusual uses of the telephone are shown in newsreel style—forest wardens atop lofty towers in the western woods, a glimpse of the air mail service, talking across the Atlantic, a busy newspaper office, the business of running an ocean liner, etc.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

286. FAMILY ALBUM, THE—1 reel 35mm—(Sound-On-Film)

Old Father Tel E. Phone introduces his sons, Mike and Loud Speaker, Public Address, Electrical Stethoscope and Talkie.

Southern Bell Telephone & Telegraph Co.—See Number 285.

New York Telephone Company—See Number 285.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

287. FAR SPEAKING—1 reel 35mm—(Sound-On-Film)—Also Silent

This picture shows the faith of one of the earliest telephone subscribers and unfolds the development of the telephone from primitive crudity to the present high rate of efficiency.

Southern Bell Telephone & Telegraph Co.—See Number 285.

New York Telephone Company—See Number 285.—Silent.

Y. M. C. A. Motion Picture Bureau—See Number 286.

University of Iowa—Rental \$1.50, plus transportation, and service charge 35c.

288. FEATURES OF HIGH-VOLTAGE CABLE—(Sound)—1 reel 35mm

By synchronized dialogue scenes depicting work in connection with recent cable developments are explained.

General Electric Company—Transportation only.

289. FIFTY YEARS OF TELEPHONE PROGRESS—4 reels or 1 reel 35mm

This film shows Alexander Graham Bell, the inventor, and Thomas A. Watson, the first man to receive a telephone message and follows the progress of telephony through the year.

Southern Bell Telephone & Telegraph Co.—4 reels—Transportation—Distributed in that territory only.

University of Kansas & Colorado—Rental 50c, plus transportation.—1 reel.

290. FIRST CALL, THE—(Sound-On-Film)—1 reel 35mm

Thomas A. Watson, who heard the first complete sentence to be transmitted over wire by electricity in 1876, describes the birth of the telephone; the historic scene of the first sentence and other early episodes are re-enacted.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

291. HELLO EUROPE—(Sound-On-Film)—Also Silent—1 reel 35mm

This reel depicts telephone central offices, personnel quarters and construction work in the Old World, showing with animated maps the submarine cables under the English Channel and the North Sea that link London with the Continent.

Southern Bell Telephone & Telegraph Co.—See Number 290.

New York Telephone Company—See Number 290.

Y. M. C. A. Motion Picture Bureau—Registration Fee \$2.00, plus transportation.

292. HERE'S YOUR PARTY—1 reel 35mm

An argument of a couple regarding the number of telephones they should have in their new home.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

293. HISTORY OF THE TELEPHONE—1 reel 35mm

This reel visualizes some of the actual accomplishments of this marvelous invention.

University of Texas—Registration fee \$1.00, plus transportation.

294. HOME TEAM THE—(Sound-On-Film)—1 reel 35mm

A father demonstrates to his children that the lineman and the operator are both essential to satisfactory telephone service.

Southern Bell Telephone & Telegraph Co.—See Number 292.

New York Telephone Company—See Number 290.

Y. M. C. A. Motion Picture Bureau—See Number 291.

295. HONOR OF THE JOB, THE—1 reel 35mm

This is a story involving emergencies that telephone people are called upon to meet every day—Christmas Eve—a sick child—a telephone call for aid—a storm and the wires down, etc.

New York Telephone Company—See Number 290.
Southern Bell Telephone & Telegraph Co.—See Number 292.

296. HOW THE TELEPHONE TALKS—½ reel 16mm 35mm

This film illustrates the principles of communication by telephone and shows close-ups of the details of the transmitter and receiver.

Bray Film Library—Sale. 10c ft. nitrate, 11c ft. safety; 394 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.
Iowa State College—35mm Transportation only.
Kodascope Library—Rental \$1.25 16mm; also sale.

297. I SEE YOU CALLING ME—1 reel 35mm

Scenes from the first public demonstration of television, when President Gifford of the American Telephone & Telegraph Company in New York City talked with and saw Herbert Hoover, Secretary of Commerce in Washington, D. C.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.
New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.
University of Kansas & Colorado—Rental 50c, plus transportation.

298. INDUSTRIOUS DIAMONDS—1 reel 35mm

This film shows the part these jewels play in the production of copper wire for the telephone system.

Southern Bell Telephone & Telegraph Co.—See Number 297.
Western Electric Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration Fee \$2.00, plus transportation.

299. INSIDE STORY OF YOUR TELEPHONE, THE—2 reels 16mm 35mm

This picture is based upon the book "From the Far Corners of the Earth", and traces back to the raw products the various materials used in making the telephone. The romance of modern business is made plain.

Western Electric Company—Transportation only. Also sale. 35mm
Southern Bell Telephone & Telegraph Co.—See Number 297. 35mm
University of Kansas & Colorado—Rental 50c, plus transportation. 16mm
Y. M. C. A. Motion Picture Bureau—See Number 298. 35mm
Indiana University—Rental \$2.00, plus transportation. 35mm
New York Telephone Company—See Number 297. 35mm

300. LAYING THE ELECTRIC CABLE ACROSS SAN FRANCISCO BAY—1 reel 35mm

Incidents in connection with laying electric cable across the Bay at San Francisco.

American Steel & Wire Company—Transportation only.

301. LAYING THE WORLD'S FASTEST OCEAN CABLE OFF NEWFOUNDLAND—2 reels 35mm

This was filmed during the work of connecting England and America with the new permalloy submarine telegraph cable.

Western Electric Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.

302. LOOKING BACKWARD— (Sound-On-Film) —1 reel 35mm

A Supreme Court Judge tells of his experiences with the early history of the telephone, while men are installing the most modern telephone equipment in his home.

Southern Bell Telephone & Telegraph Co.—Transportation only—Distributed in that territory only.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

303. MAGIC OF COMMUNICATION, THE—1 reel 35mm

By animated graphs the spoken word is converted into a dance of electrons along the wires which carry to the listener's ear all of the shades of tone and meaning.

Western Electric Company—Transportation only.

Iowa State College—Rental \$1.50, plus transportation.

University of Missouri—Rental 50c, plus transportation.

304. MAKING THE GRADE— (Sound-On-Film) —2 reels 35mm

This film tells the story of a motion picture actor who, in order to play convincingly, the role of a telephone lineman, spends a few days on the job with a line construction crew.

Southern Bell Telephone & Telegraph Co.—See Number 302.

New York Telephone Company—See Number 302.

305. MAKING TELEPHONE HISTORY—1 reel 35mm

This picture takes the audience back to the workshop of Dr. Bell and traces the highlights of telephone history to the present.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

306. MODERN KNIGHT, A— (Sound-On-Film) —2 reels 35mm

This film features the work of the police in using the telephotograph, teletypewriter, transatlantic and ship-to-shore services, which result in the capture of an international gang.

Southern Bell Telephone & Telegraph Co.—see Number 305.

New York Telephone Company—See Number 302.

307. MODERN MAGIC—2 reels 35mm

A picturization of the workings of a dial telephone system, combining animated cartoons and regular photography.

Southern Bell Telephone & Telegraph Co.—See Number 305.

New York Telephone Company—See Number 302.

308. MY HERO—1 reel 35mm

An animated cartoon subject whose theme is the considerate use of the telephone.

Southern Bell Telephone & Telegraph Co.—See Number 305.

New York Telephone Company—See Number 302.

309. NAME GOES THE ROUNDS, A—1 reel 35mm

This picture traces the service order routine when an application is signed for a telephone and shows the installation of a main telephone and an up-stairs hand-set extension.

Southern Bell Telephone & Telegraph Co.—See Number 305.

310. NEIGHBORS ALL—1 reel 35mm

This picture features views of telephone line building, taken under actual working conditions and traces the growth of a nation from the days of log cabins and lonely isolation to a country made into one great neighborhood by millions of telephones.

Southern Bell Telephone & Telegraph Co.—See Number 305.
New York Telephone Company—See Number 302.

311. NEW VOICE HIGHWAYS—(Sound-On-Film)—1 reel 35mm

Contrasts between the old methods of stringing city telephone wires on poles to the detriment of the skyline and the modern manner in which the lead-covered speech carriers are now run underground. Music and sound effects enhance the popular appeal.

Southern Bell Telephone & Telegraph Co.—See Number 305.
New York Telephone Company—See Number 302.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

312. NOW YOU'RE TALKING—1 reel 16mm 35mm

This film, in cartoon form, shows the proper use and care for the telephone in order to secure the maximum of service from it.

Southern Bell Telephone & Telegraph Co.—See Number 305.
New York Telephone Company—See Number 302.
Y. M. C. A. Motion Picture Bureau—See Number 311.
University of Kansas & Colorado—Rental 50c, plus transportation.

313. NUMBER PLEASE—1 reel 35mm

This film takes the spectator behind the scenes in a large city telephone exchange; shows connecting central switchboard, etc., assembly of a desk type telephone.

Ford Motor Company—Transportation only. Also sale \$8.00, plus transportation.
Iowa State College—Rental \$1.50, plus transportation.

314. PICTURES BY WIRE—1 reel 35mm

This film gives an explanation of the sending of pictures over telephone wires and shows the functioning of all equipment used.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

315. PICTURES BY WIRE—1 reel 16mm 35mm

This film demonstrates the practical uses of telephotography, showing specimens of photographs, checks and Parisian styles, etc., which have been sent by wire.

Southern Bell Telephone & Telegraph Co.—Transportation only—Distributed in that territory only. 35mm
University of Kansas & Colorado—Rental 50c, plus transportation. 16mm
University of Missouri—Rental 50c, plus transportation. 35mm

316. PICTURE THAT—1 reel 35mm

An animated cartoon which takes the spectator behind the telephone scenes.

New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

317. PRINCIPLE BECOMES A PRACTICAL ART, A—1 reel 35mm

This film portrays the incidents in the development of telephone communications, from the time of the first telephone communication to the present time.

New York Telephone Company—See Number 316.

318. PROPHECY FULFILLED, A—1 reel 35mm

This picture shows the early days of the telephone industry and how Alexander Bell's prophecy that cables could be laid underground or suspended overhead, making a nation-wide network possible, has been fulfilled.

Southern Bell Telephone & Telegraph Co.—See Number 315.
New York Telephone Company—See Number 316.

319. PUTTING A TELEPHONE TOGETHER WITH TRICK PHOTOGRAPHY—1 reel 35mm

The telephone assembles itself before the spectator's eyes.

Western Electric Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.

320. REPAIRING A SUB-SEA CABLE—½ reel 16mm 35mm

This film shows raising a trans-Atlantic cable for repairs, then submerging it again.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety—189 footage 35mm, to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

321. ROMANCE HUNTER, THE—1 reel 35mm—(Sound-On-Film)

This film is the story of a young newspaper reporter whose imagination is fired by the romantic aspects of the feature of industry represented in the pages of the 2300 different telephone directories in the United States.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.
New York Telephone Company—Free to New York State only, through local telephone commercial offices, two weeks' notice.

322. SERVICE OF PREPAREDNESS, THE—1 reel 16mm 35mm

Scenes from actual catastrophes illustrate how the telephone men keep the lines of communication open in tornadoes, fires, blizzards, etc.

Southern Bell Telephone & Telegraph Co.—See Number 321. 35mm
New York Telephone Company—See Number 321. 35mm
University of Kansas & Colorado—Rental 50c, plus transportation. 16mm

323. SHORT-CUTS TO QUANTITY—1 reel 35mm

This film shows the success achieved in mass production of telephones without sacrificing quality.

Western Electric Company—Transportation only.
Y. M. C. A. Motion Picture Bureau—See Number 319.

324. SOME FOLKS AND THE TELEPHONE—1 reel 35mm

A story of an impetuous telephone user who wishes that all the telephone wires in the country would go down and the unpleasant results occurring when the wish comes true. The cast for this film are all movie professionals.

Southern Bell Telephone & Telegraph Co.—See Number 321.
New York Telephone Company—See Number 321.

325. SOMETHING ABOUT SWITCHBOARDS—1 reel 35mm

This film shows the unusual process in fabricating and installing the telephone equipment necessary to conduct modern business.

Western Electric Company—Transportation only.

326. SPEEDING THE SPOKEN WORD—1 reel 16mm 35mm

This film visualizes the operation of the telephone system from the erection of poles to the intricacies of central exchanges.

Society for Visual Education—Rental \$2.00, plus transportation, 35mm; \$1.50, plus transportation, 16mm.

University of Texas—35mm Rental \$2.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

327. TELEPHONE CALL, A—1 reel 35mm

This reel follows the voice through the different pieces of apparatus and electrical current carriers which speed it from lip to ear.

Western Electric Company—Transportation only.

Indiana University—Rental \$1.00, plus transportation.

328. TELEPHONE REPEATER, THE—1 reel 35mm

This reel shows how a nationwide telephone service is possible by developing the operation of the vacuum tube into a telephone repeater.

Western Electric Company—Transportation only.

329. THAT LITTLE BIG FELLOW—1 reel 16mm 35mm

An animated cartoon showing the functions of the electric current in completing a telephone call.

University of Kansas & Colorado—Rental 50c, plus transportation. 16mm

Y. M. C. A. Motion Picture Bureau—Registration fee, plus transportation, 35mm

University of Missouri—Rental 50c, plus transportation, 35mm.

New York Telephone Company—Free to New York State schools only, through local telephone commercial offices, two weeks' notice.

330. THERE WERE TWO TREES—(Sound-On-Film)—1 reel 35mm

This reel tells a Christmas story about a fir and a pine tree who wish to become Christmas trees, but a band of woodmen cut the tall and ugly pine and make him into a telephone pole, the wires of which carry many messages of good cheer all over the world.

Southern Bell Telephone & Telegraph Co.—See Number 321.

New York Telephone Company—See Number 329.

331. THROUGH THE SWITCHBOARD—2 reels 35mm

This film demonstrates all the steps in making a telephone call.

Western Electric Company—Transportation only.

332. SPEEDING UP OUR DEEP SEA CABLES—2 reels 35mm

Laying the permalloy cable between New York and the Azores.

Western Electric Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

333. TIME SAVERS IN MODERN BUSINESS—1 reel 35mm

A survey of the scientific methods and time saving machinery used in the rendering of modern telephone service.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only.

334. TREAT 'EM RIGHT—1 reel 35mm

An animated cartoon in which two telephones come to life and tell of their every day troubles resulting from the careless use of the telephone.

Southern Bell Telephone & Telegraph Company—See Number 333.

New York Telephone Company—Free to New York State schools only, through local telephone commercial offices, two weeks' notice.

335. UNDER COVER—1 reel 35mm

This film is a story of a group of American boys who try to hook up a toy telephone in their log cabin, but they have trouble with the overhead line. They become the heroes of the neighborhood when their underground telephone plays a leading role in the saving of the life of Bill's little sister.

New York Telephone Company—See Number 334.

Southern Bell Telephone & Telegraph Company—See Number 333.

336. UNDER THE SEVEN SEAS—1 reel 35mm

This picture shows the laying and the repair of the submarine cables under the Atlantic Ocean.

Postal Telegraph-Cable Company—Transportation only.

337. UNDERWATER SPEECHWAYS—(Sound-On Film)—1 reel 35mm

This picture shows three of the most interesting submarine cable installations—Cape Cod to Martha's Vineyard cable, the Golden Gate cable at San Francisco, and the Mississippi River cable in Louisiana. Special musical score with vocal interludes by a male quartette.

Southern Bell Telephone & Telegraph Company—See Number 333.

Y. M. C. A. Motion Picture Bureau—See Number 332.

338. VOICES ACROSS THE SEA—1 reel 16mm 35mm

Animated drawings give a non-technical explanation of how the voice is carried from San Francisco to Plymouth, England and return using telephone lines and radio.

Southern Bell Telephone & Telegraph Co.—Transportation—Distributed in that territory only. 35mm

University of Kansas and Colorado—Rental 50c, plus transportation. 16mm

University of Missouri—Rental 50c, plus transportation.

New York Telephone Company—Free to New York State schools only, through local telephone commercial offices, two weeks' notice.

339. VOICE HIGHWAYS IN THE MAKING—1 reel 35mm

In showing the fabrication of the lead-covered cable which carries the messages, animated drawings are used to picture what happens inside one of the big cable-sheathing presses.

Western Electric Company—Transportation only.

Southern Bell Telephone & Telegraph Co.—See Number 338.

340. WHAT COUNTRY PLEASE?—(Sound-On-Film)—1 reel 16mm 35mm (Also Silent)

This reel takes the audience to the lands of our telephone neighbors—Germany, Sweden, Holland, etc.

Southern Bell Telephone and Telegraph Co.—See Number 338. 35mm

New York Telephone Company—See Number 338. 35mm

Y. M. C. A. Motion Picture Bureau—Registration Fee \$2.00, plus transportation. 35mm

American Museum of Natural History—16mm silent—Free to New York City schools only.

University of Iowa—16mm silent—Rental \$1.50, plus transportation and service charge 35c.

341. WHEN THE TELEPHONE WAS YOUNG—1 reel 35mm

This film tells the story of the birth and babyhood of the telephone and its growth during the past half-century.

New York Telephone Company—See Number 338.

342. WINNING THE RACE AGAINST DEMAND—1 reel 35mm

This film illustrates the conditions under which the telephone has developed into a means of communication.

State College of Washington—Registration fee \$1.00, plus transportation.

343. WIRES AND WINGS—(Sound-On-Film)—(Also Silent) 35mm

This film is the story of saving the life of a small child by the use of the telephone and the airplane.

Southern Bell Telephone & Telegraph Co.—See Number 338.

New York Telephone Company—See Number 338.

344. WORLD'S TELEPHONE WORKSHOP, THE—1 reel 35mm

Sidelights on manufacturing processes connected with telephone system.

Western Electric Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Indiana University—Rental Cost \$2.00, plus transportation.

Lighting

345. BRIGHTER TIMES AHEAD—1 reel 35mm

This is an animated picture portraying the progress brought by improved street light installation in the imaginary City of Insomnia.

General Electric Company—Transportation only.

346. FROM CANDLES TO ELECTRICITY—½ reel 16mm 35mm

This film reviews the history of lighting from the making of hand-dipped candles to electrical systems of today.

Bray Film Library—Sale 10c ft. safety, 11c ft. nitrate; 144 footage 35mm, to obtain 16mm footage, divide by four-tenths. Rental 35mm.

347. G-E NOVALUX SUSPENSION UNITS—3 units 35mm (Sound)

In this sound picture a new line of G-E Novalux street lighting fixtures is demonstrated. Made for use by salesmen in presenting to prospective customers.

General Electric Company—Transportation only.

348. HEAT AND LIGHT FROM ELECTRICITY—1 reel 16mm

This film shows series and parallel lighting circuits; conductors and insulators; light from electricity and application; heat from electricity with application, etc.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Iowa State College—Rental \$1.50, plus transportation.

349. ILLUMINATION—1 reel 16mm

This film shows some of the principal methods of lighting, illustrates measurement of illumination by the use of the photometer and foot-candle meter, shows the cause and correction of glare in home and factory, and demonstrates the character of direct and indirect lighting.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

350. LIGHT'S GOLDEN ANNIVERSARY—2 reels 16mm 35mm

This film visualizes the celebration held for Thomas A. Edison on the fiftieth anniversary of the incandescent lamp—October 21, 1929.

Ford Motor Company—Transportation only.

351. LIGHT OF A RACE—1 reel 16mm 35mm

A historical account of artificial illumination from the use of the flint to the incandescent lamp.

General Electric Company—Transportation only.

American Museum of Natural History—16mm Free to New York City schools only.

University of Kansas & Colorado—Rental 16mm 50c, plus transportation.

University of California—Rental 50c, plus transportation.

University of Missouri—16mm Rental 35c, plus transportation.

352. MAKING MAZDA LAMPS, OR MAZDA LAMP MANUFACTURING —1 reel 16mm 35mm

This picture presents the development of artificial illumination and shows the successive processes in the manufacture of Mazda lamps, special emphasis being placed on the advantages of standardization and mass production.

General Electric Company—Transportation only.

Indiana University—Rental \$1.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

Manufacturing Equipment

353. ALL IN THE DAY'S WORK—2 reels 35mm

A record of the activities of a business day in a distributing house of a large manufacturing company.

Western Electric Company—Transportation only.

354. BEHIND THE PYRAMIDS—3 reels 35mm

This film illustrates the making of carbon brushes for electric motors.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

355. BIG DEEDS—2 reels 16mm 35mm

The manufacture of electric equipment from delicate laboratory apparatus to great turbine generator sets is portrayed in this film.

General Electric Company—Transportation only.

University of California—Rental 50c, plus transportation.

356. BUSYBODY, THE—1 reel 16mm 35mm

The 175 parts in the smallest motor build themselves on the screen into a machine. A number of practical applications are illustrated.

General Electric Company—Transportation only.

University of California—Rental 50c, plus transportation.

357. CHEMICAL EFFECTS OF ELECTRICITY—1 reel 16mm

This film traces the action of two electrodes in an electrolyte from crude beginnings by Volta, through modern battery manufacture and use, electrolysis, electroplating, electrotyping, to the metallurgy of copper and aluminum.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

358. CURRENT OCCURENCES—1 reel 35mm

Making electric flat irons and percolators.

Ford Motor Company—Transportation only. Also sale \$8.00.

359. DE LIGHT—1 reel 35mm

This film shows how an electric light bulb is made.

Ford Motor Company—Transportation only. Also sale \$8.00.

360. JUPITER'S THUNDERBOLTS—1 reel 35mm

This film traces the history of electricity and shows how a storage battery is made.

University of Missouri—Rental 50c, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

361. LONG DRAWN OUT—1 reel 35mm

The history of a copper billet from the mill through the process of transformation into copper wire.

Western Electric Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of Kansas & Colorado—Rental 50c, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

Southern Telephone & Telegraph Company—Transportation only.—Distributed in that territory only.

Indiana University—Rental \$1.00, plus transportation.

362. MAKING THE EDISON STORAGE BATTERY—2 reels 35mm

Indiana University—Rental \$2.00, plus transportation.

363. MANUFACTURE OF PAPER INSULATED POWER CABLES—3 reels 35mm

Depicts the process involved in manufacturing paper insulated power cables.

American Steel & Wire Company—Transportation only.

364. MATERIAL-HANDLING CONVEYOR—1 reel 35mm

This film shows the installation of a conveyor system which collects and delivers the different parts of an electric refrigerator.

General Electric Company—Transportation only.

365. OTIS ALTERNATING CURRENT—3 reels 16mm

This is a film which shows the detail operations in the manufacture of an Otis Alternating Current Motor.

Otis Elevator Company—Transportation only.

366. POTTER'S WHEEL, THE—1 reel 16mm 35mm

This film illustrates the manufacture of porcelain for electric apparatus—the mixing of ingredients, molding, turning, glazing, and final firing in huge kilns.

General Electric Company—Transportation only.

University of Kansas & Colorado—Rental 50c, plus transportation. 16mm

American Museum of Natural History—16mm Free to New York City schools only.

University of California—Rental 50c, plus transportation.

367. SERVICE TO INDUSTRY—2 reels 35mm

In this film the audience is taken on an interesting inspection trip through the G. E. Service shop at Philadelphia, where the facilities and methods for doing electric repair work are shown.

General Electric Company—Transportation only.

368. STORY OF AN ELECTRIC DETONATOR, THE—1 reel 35mm

This reel shows the process of manufacturing electric detonator and emphasizes the care used in inspecting and testing completed detonator.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

369. STORY OF STORAGE BATTERY—2 reels 16mm 35mm

Reel 1—Early experiments which led to the invention of modern storage batteries, such as mixing and testing oxides, coating and drying plates, preparing and placing insulators.

Reel 2—Inspection and testing of component parts and assembling of batteries.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

U. S. Bureau of Mines, Bartlesville, Okla.—Transportation only.

U. S. Bureau of Mines, University of Minn.—Transportation only.

U. S. Bureau of Mines, San Francisco, Calif.—Transportation only.

American Museum of Natural History—16mm Free to New York City schools only.

University of Iowa—16mm Rental \$3.00, plus transportation and service charge 70c.

University of Texas—35mm Registration fee \$1.00, plus transportation.

370. SWITCHBOARDS—TRUCK TYPE PANELS—1 reel 16mm 35mm

The manufacture, installation, and operation of the safety-enclosed, truck-type panel are presented in this film.

General Electric Company—Transportation only.

371. UNSEEN VALUES IN G-E D-C MOTORS—(Sound)—2 reels 35mm

This film shows the more important stages in the manufacture of General Electric direct-current motors and describes the exact mechanical standards adhered to in producing smooth running motors.

General Electric Company—Transportation only.

372. UNSEEN VALUES IN G-E A-C MOTORS—(Sound)—3 reels 35mm

This film presents the manufacture of alternating-current motors at the River Works of the General Electric Co., West Lynn, Mass. The scenes are explained by synchronized dialogue.

General Electric Company—Transportation only.

373. WILLIAM STANLEY AND THE TRANSFORMER—(Sound)—2 reels 35mm

This picture tells the story of William Stanley's transformers for alternating-current operation and demonstrates the practicality of Stanley's theories by laboratory experiments.

General Electric Company—Transportation only.

Power

374. AUTOMATIC SUBSTATION, THE GENERAL APPLICATION—1 reel 16mm 35mm

This picture is an illustration of the operation of an automatically controlled, double-unit, converter station for three-wire service. Animated diagrams and actual scenes show general applications of the equipment and indicate its outstanding advantages.

General Electric Company—Transportation only.

375. AUTOMATIC SUBSTATION, THE MINING AND INDUSTRIAL—1 reel 16mm 35mm

This film illustrates the operation of a 300-kw., 275-volt, automatically controlled, motor-generator set for coal-mining service. The reclosing feeder and control devices are explained by animated diagrams.

General Electric Company—Transportation only.

376. AUTOMATIC SUBSTATION, THE RAILWAY—1 reel 16mm 35mm

Through animated diagrams a typical 1000-kw, 600-volt, railway, automatic, synchronous—converter station is illustrated in operation.

General Electric Company—Transportation only.

377. BEHIND THE SWITCH—1 reel 35mm

How electricity is produced; a trip through a large power plant.

Andlauer Film Company—Transportation only.

378. CAPTURED ELECTRICITY—1 reel 16mm 35mm

This film shows the practical way of developing electricity; scenes of Niagara Falls with a study of methods used to extract power from the Falls; a machine to extract power from the Ocean waves; steel bellows sent skyward to gather electricity not alone from electrical storms, but from static electricity in the air, etc.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 972 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

379. CONOWINGO—2 reels 16mm 35mm

Construction of one of the most important hydro-electric developments in the United States. During construction a great flood sweeps down the Susquehanna River and adds interest to the drama.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

380. CROPS AND KILOWATTS—1 reel 16mm 35mm

A hydro-electric development in the Sierra National Forest, water power and irrigation uses of the water conserved in the National Forests are featured in this reel.

U. S. Department of Agriculture—Transportation only. Also sale.
Iowa State College—Rental \$1.50, plus transportation.

381. ELECTRIC POWER IN THE SOUTHERN APPALACHIANS—1 reel 16mm

This film illustrates the progress in industry and the changes in living conditions due to the development of hydro-electric power. Various views are: country sawmill, baking in an open fireplace, dynamos in a power house, the use of electricity in the cotton mill, furniture factory, etc.

Eastman Teaching Film—Sale \$24.00; Teaching Manual Supplied.

382. FROM COAL TO ELECTRICITY—2 reels 35mm

Animated drawings show the process of converting coal to electricity.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

383. HYDRO-ELECTRIC POWER—1 reel 16mm 35mm

A picture of the world's largest automatically controlled hydro-electric generating station on the Ohio River at Louisville, Ky.

General Electric Company—Transportation only.

384. HYDROELECTRIC POWER PRODUCTION IN THE NEW SOUTH—2 reels 16mm 35mm

This film shows the development of a great hydro-electric project in the heart of the Great Smoky Mountains of North Carolina. Animated drawings explain the project and show the proper use of explosives.

E. I. DuPont de Nemours & Co.—Transportation only.
University of Kansas & Colorado —16mm, Rental 50c, plus transportation.

385. NATURE'S FROZEN CREDITS—3 reel 16mm 35mm

The building of a great water plant in the Sierra Nevada Mountains of California.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

386. NIAGARA IN HARNESS—½ reel 16mm 35mm

This film shows the power plants which light the cities of Buffalo and Niagara Falls; generators and turbines.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 145 footage 35mm; to obtain 16mm footage, divide by four-tenths.

387. OIL CIRCUIT BREAKERS—1 reel 16mm 35mm

This reel shows the design and operation of the Type FH oil circuit breaker and reviews the changes that have been made in breakers of this type.

General Electric Company—Transportation only.

388. POWER—2 reels 16mm 35mm

This film traces the development of power from the earliest uses of steam to the great power stations of today.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

389. POWER OF FALLING WATERS—1 reel 35mm

How power is generated from great falls and distributed.

Wholesome Films Service—Sale.

390. POWER OF THE CLOUDS—1 reel 35mm

This film pictures the cycle of water from raindrop to dynamo.

University of California—Rental 50c, plus transportation.

391. POWER TRANSFORMERS—2 reels 16mm 35mm

The earliest transformer, weighing 20 pounds, is contrasted with the latest, weighing 100 tons.

General Electric Company—Transportation only.

392. ROMANCE OF POWER, THE—(Sound)—2 reel 35mm

This film shows many examples of working methods in all parts of the world and tells of the romance which lies in the adaptations of electric power to the needs of man.

General Electric Company—Transportation only.

393. STORY OF POWER, THE—3 reels 35mm

Reel 1—Pictures early development of steam engine, street scenes in London, and Stephenson's locomotive, "The Rocket," and demonstrates modern uses of electricity, giant electromagnets, street and sign lighting, and electric locomotive.

Reel 2—Compares Niagara Falls with fall of water at Big Creek, gives view of plant at Big Creek and of power plant and dam on Mississippi River at Keokuk, Iowa, improvements made in steam engine, operation of steam turbine.

Reel 3—Shows erection of power plant for Edison Electric Illuminating Co. of Boston, and units of power obtained per pound of coal from 1885 to 1925.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

394. VACUUM-TUBE SYNCHRONIZING EQUIPMENT—1 reel 16mm 35mm

A comparison between the vacuum-tube synchronizing equipment in "tying-in" interconnecting power systems and potential transformer equipment formerly used.

General Electric Company—Transportation only.

395. WATER POWER—2 reels 35mm

This film describes the early primitive methods of utilizing energy of falling water and shows by animated photography how the tremendous power of Niagara is changed into electrical energy. Modern uses of electricity in industry are illustrated as well as the use of melting snow in mountains, small brooks and streams.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

U. S. Bureau of Mines, Bartlesville, Okla.—Transportation only.

U. S. Bureau of Mines, Minneapolis, Minn.—Transportation only.

U. S. Bureau of Mines, Salt Lake City, Utah—Transportation only.

U. S. Bureau of Mines, University of Washington—Transportation only.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$2.00, plus transportation.

University of Missouri—Rental \$1.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

396. WATER POWER—1 reel 16mm

This film shows the importance of water power in generating electricity and traces Niagara Falls power development in the United States and Canada. Scenes show the appearance of a Pelton wheel, the Keokuk development on the Mississippi, installation on the Susquehanna, etc.

Eastman Teaching Film—Sale \$24.00; Teaching Manual Supplied.

University of Iowa—Rental \$1.50, plus transportation.

397. YOURS TO COMMAND—1 reel 16mm 35mm

Animated diagram shows method of distributing electricity and how it is produced.

Douglas D. Rothacker—Transportation only.

Iowa State College—35mm, rental \$1.50, plus transportation.

University of Texas—35mm, Registration fee \$1.00, plus transportation.

Principles

398. ELECTRIC BELL, THE—½ reel 16mm 35mm

Animated technical drawings explain the operation of the electric bell.

Bray Film Library—Sale, 10c ft. nitrate; 11c ft. safety. 251 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.

ELECTRICITY—A special course in electricity for the advanced student:

399. PRINCIPLES OF MAGNETISM—2 reels 16mm 35mm

Magnetic phenomena; polarity; lines of force; reluctance and permeability; magnetic induction; uses of magnets; molecular theory of magnetization; terrestrial magnetism.

Y. M. C. A. Motion Picture Bureau—Rental, 35mm \$3.50 per day; 16mm \$2.00 per day.

University of Iowa—16mm; rental \$3.00, plus transportation.

University of California—16mm; lesson 5c; rental \$2.00, plus transportation.

Edited Pictures System—16mm; Rental \$3.00, plus transportation.

400. PRINCIPLES OF ELECTROSTATICS—2 reels 16mm 35mm

Electrostatic phenomena; polarity; conductors and insulators; electrostatic induction; the electron theory; distribution of charges; electric machines; condensers; gaseous discharges; lightning.

Y. M. C. A. Motion Picture Bureau—Rental, 35mm, \$3.00 per day; 16mm \$2.00 per day.

University of Iowa—16mm; rental \$3.00, plus transportation.

University of California—16mm; rental \$2.00, plus transportation. Lesson 5c.

Edited Pictures System—16mm; rental \$3.00, plus transportation.

401. PRINCIPLES OF CURRENT ELECTRICITY—2 reels or 3 reels, 16mm 35mm

The electron theory; electrical potential; the electric current; hydraulic analogy; resistance; units of electrical measurement; Ohm's law; types of circuit; electric power.

Y. M. C. A. Motion Picture Bureau—Rental, 35mm, \$3.50 per day; 16mm, \$2.00 per day. 2 reels.

University of California—16mm; lesson 5c; rental \$2.00, plus transportation. 2 reels.

University of Iowa—16mm; rental \$3.00, plus transportation. 3 reels.

Edited Pictures System—16mm; rental \$3.00, plus transportation. 3 reels.

402. PRINCIPLES OF ELECTROMAGNETISM—2 reels 16mm 35mm

Electromagnetic phenomena; relation between current and magnetic fields; coils and solenoids; practical applications; electromagnetic induction; transformers.

Y. M. C. A. Motion Picture Bureau—Rental, 35mm, \$3.50 per day; 16mm, \$2.00 per day.

University of California—16mm; lesson 5c; rental \$2.00, plus transportation.

University of Iowa—16mm; rental \$3.00, plus transportation.

Edited Pictures System—16mm; rental \$3.00, plus transportation.

403. PRINCIPLES OF CURRENT GENERATION—2 reels 16mm 35mm

The theory and construction of A. C. and D. C. generators.

Y. M. C. A. Motion Picture Bureau—Rental, 16mm, \$2.00 per day; 35mm, \$3.50 per day.

University of California—16mm; lesson 5c; rental \$2.00, plus transportation.

University of Iowa—16mm; rental \$3.00, plus transportation.

Edited Pictures System—16mm; rental \$3.00, plus transportation.

404. PRINCIPLES OF ELECTRICAL MEASUREMENT—4 reels 16mm 35mm

Fundamental measurements; electrical standards; theory and construction of electrical measuring instruments; voltmeters; ammeters; wattmeters; power-factor meters; synchroscopes; frequency meters; thermometers.

Y. M. C. A. Motion Picture Bureau—Rental, 35mm, \$3.50 per day; 16mm, \$2.00 per day.

University of California—16mm. Lesson 5c; rental \$4.00, plus transportation.

University of Iowa—16mm. Rental \$6.00, plus transportation.

Edited Pictures System—16mm. Rental \$5.00, plus transportation.

405. ELECTRICITY AND MAGNETISM—6 reels 16mm 35mm

Produced under the direction of Dr. Harvey B. Lemon at Ryerson Physical Laboratory, University of Chicago. This series illustrates elementary and advanced experiments in the following subjects:

Magnetism	Electrostatics
Electromagnetism (2 reels)	Electromagnetic Induction
High Frequency Currents	

Society for Visual Education—Rental \$2.00 per reel, plus transportation, 35mm; 16mm, \$1.50 per reel, plus transportation.

406. ENERGY AND WORK—1 reel 16mm

This reel illustrates the principles of work and energy connected with the operation of an electric power plant.

University of Kansas & Colorado—Rental \$1.50, plus transportation.

University of California—Lesson 5c; Rental \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

Edited Pictures System—Rental \$2.00, plus transportation.

University of Texas—Rental \$3.50 per day, \$5.00 2 days, plus transportation.

407. ENERGY FROM SUNLIGHT—1 reel 16mm

This film illustrates the production of electricity by concentrating sunlight on a solar engine, shows how energy from the sun is recovered as mechanical and electrical energy, how expended in heating air, energy from sunlight reappears as wind, etc.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.

408. FRICTION BALL, THE—1 reel 35mm

The story of Otto von Guericke and the friction ball which was the first electric light; development into the modern automobile generator; proper care of the storage battery.

Iowa State College—Rental \$1.50, plus transportation.

409. HARNESSING THE WAVES—½ reel 16mm 35mm

This film shows an invention which utilizes the backward sweep of ocean waves for charging storage batteries.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 270 footage 35mm; to obtain 16mm footage, divide by four-tenths.

410. HOW THE GENERAL ELECTRIC ICING UNIT WORKS—2 reels 16mm 35mm

Animated film which shows how the icing unit of the G-E refrigerator works.

General Electric Company—Transportation only.

411. INDUCED CURRENTS—1 reel 16mm

Through graphic animations this film depicts a current being induced in a conductor passing through a magnetic field and the induction of alternating current in a revolving loop; contrasts A. C. and D. C. generators; builds up a diagrammatic representation of an A. C. distribution system; shows a complete telephone circuit.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.

412. INDUCTION VOLTAGE REGULATOR, THE—2 reels 16mm 35mm

A pictorial presentation of the features and functions of this very important apparatus in the alternating-current system.

General Electric Company—Transportation only.

University of California—35mm. Rental \$1.00, plus transportation.

413. MAGNETIC EFFECTS OF ELECTRICITY—1 reel 16mm

This film explains magnetism and magnetic induction; illustrates terrestrial magnetism and the meaning of "declination" and "dip"; traces electromagnetism; shows the rotary reaction of a current-bearing coil in a magnetic field and applies these principles to meters and motors.

Eastman Teaching Film—Sale \$24.00. Teaching Manual Supplied.

414. MAGNETISM—1 reel 16mm 35mm

This reel illustrates the fundamental properties of magnetism, illustrates experiments.

University of Missouri—Rental \$1.00, plus transportation.

415. MAGNETISM AND ELECTROMAGNETS—6 reels 35mm

THE PRINCIPLES OF ELECTRICITY—A series of motion pictures covering the entire field of electrical study, produced by the Carpenter-Goldman Laboratories, Inc., in cooperation with, and under the supervision of the U. S. Navy Department. Each subject is complete in itself, but use in the following order is recommended, when practicable:

University of California—Rental \$7.50 per week or 1 reel at a time.

416. THE PRINCIPLES OF MAGNETISM—2 reels 16mm 35mm

Audio-Cinema, Inc.—Sale \$60.00 per reel, 16mm; \$100.00 per reel, 35mm, plus transportation. Prices quoted are for prints on Eastman safety stock. Prints on standard 35mm nitrate (inflammable) stock may be purchased at a reduction of \$15.00 from price quoted above. Where a complete set is purchased at one time a discount of 10% is allowed on the above prices. Rental, 16mm, \$4.00 per reel; 35mm, \$5.00 per reel, plus transportation.

417. THE PRINCIPLES OF ELECTROSTATICS—2 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

418. THE PRINCIPLES OF CURRENT ELECTRICITY—2 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

419. THE PRINCIPLES OF ELECTROMAGNETISM—2 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

420. THE PRINCIPLES OF CURRENT GENERATION—2 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

421. THE PRINCIPLES OF ELECTRICAL MEASUREMENT—4 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

422. THE PRINCIPLES OF ELECTRIC MOTORS—7 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

423. THE PRINCIPLES OF OPERATION AND MAINTENANCE—3 reels 16mm 35mm

Audio-Cinema, Inc.—Sale, rental, etc. See Number 416.

424. STUDIES IN MAGNETISM—1 reel 16mm 35mm

This film shows the natural magnet, permanent magnet of steel, uses of electro magnet, and the sensitiveness of the compass needle to magnetic influence.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 523 footage 35mm; to obtain 16mm footage, divide by four-tenths.

425. THOMAS A. EDISON—1 reel, 3 reels 16mm 35mm

This picture shows the inventor inspecting the methods employed in the development of his greatest contribution to modern life.

General Electric Company—Transportation only. 1 reel.

University of Kansas—Rental 50c, plus transportation. 1 reel.

Iowa State College—16mm, rental \$1.50, plus transportation; 35mm, \$2.00, plus transportation. 3 reels.

American Museum of Natural History—16mm. Free to New York City Schools only. 1 reel.

University of California—Rental 50c, plus transportation. 1 reel.

426. ELECTRIC TRANSMISSION OF SPEECH, THE—1 reel 35mm

A graphic presentation of the fundamentals involved in the transmission and reception of the voice over wire circuits.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Transportation

427. CONQUEST OF THE CASCADES, THE—(Sound); (Also Silent) 1 reel 16mm 35mm

By picture and synchronized dialogue this film illustrates and explains some of the features of the Cascade Tunnel and its contribution to improved transportation facilities between the East and the Pacific Northwest.

General Electric Company—Transportation only. 16mm silent; 35mm sound.

University of Kansas and Colorado—Rental 50c, plus transportation. 16mm, silent.

University of California—Rental 50c, plus transportation.

Ray-Bell Films, Inc.—Transportation only.

428. ELECTRIC SHIP, THE—1 reel, 16mm Silent; 35mm Silent and Sound; also 2 reels.

A trip from New York to San Francisco aboard the all-electric liner, VIRGINIA of the Panama Pacific Line. Many features of electric ship equipment are shown. The film carries a synchronized music score.

General Electric Company—16mm silent; 35mm silent and sound. Transportation only. 1 reel.

University of California—16mm silent. Rental \$1.00, plus transportation. 2 reels.

429. G-R-S DISPATCHING SYSTEM—4 reels 35mm

This film shows the automatic dispatching system in actual operation.

General Railway Signal Company—Transportation only.

430. ILLINOIS CENTRAL LOCOMOTIVE NO. 11000—1 reel 16mm 35mm

An illustration of the efficient operation of an electric locomotive in maneuvering a string of 98 cars through the Illinois Central yards at Chicago.

General Electric Company—Transportation only.

431. IMPROVED COMMUNITY TRANSPORTATION—TROLLEY BUSES—1 reel 35mm—(Sound)

This reel illustrates the advantages of the trolley bus as a means of solving community transportation problems.

General Electric Company—Transportation only.

432. IMPROVED COMMUNITY TRANSPORTATION—TROLLEY CAR—(Sound) 1 reel 35mm

The advantages of a rapid acceleration, efficient braking system and other new developments on trolley cars are demonstrated by pictures of both old and new equipment under actual service conditions.

General Electric Company—Transportation only.

433. KING OF THE RAILS, THE—1 reel 16mm 35mm

This film shows great electric locomotives under construction and in operation over mountain divisions and illustrates the development of land transportation from the most primitive methods to modern railroad electrification.

General Electric Company—Transportation only.

University of Iowa—Rental \$1.50, plus transportation, and service charge 35c.

Indiana University—35mm. Rental \$1.00, plus transportation.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

University of California—Rental 50c, plus transportation.

434. LOCOMOTIVE CAR FABRICATION—1 reel 16mm 35mm

This film shows various steps in assembling giant electric locomotives, testing them and demonstrates their smooth, powerful operation over difficult mountain passes.

General Electric Company—Transportation only.

435. OVER THE ROCKIES BY ELECTRICITY—½ reel 16mm 35mm

This film illustrates one of the greatest engineering feats ever accomplished—hauling express and freight trains over three ranges of the Rocky Mountains by electricity.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 120 footage 35mm; to obtain 16mm footage divide by four-tenths.

436. PUBLIC SERVANT OF NEW JERSEY, THE—7 reels 35mm

Reel 1—Location of electric railway lines between New York and Philadelphia and New Jersey.

Reel 2—Transportation by railway, bus and ferry.

Reel 3—Light and power, manufacture of enamel ware, razor blades, operating a printing press.

Reel 4—Manufacture of tissue paper, ice, batteries, license plates, machines printing linoleum, views at poultry farm.

Reel 5—Manufacture of Simmons bed springs, high speed wires, track signals, caulk, etc.

Reel 6—Manufacturing china, milling rubber, baking bread, milking, testing mercury vapor lamps.

Reel 7—Blowing glass, making light bulbs, cables factory, etc.

University of Texas—Registration fee \$1.00, plus transportation.

437. QUEEN OF THE WAVES—1 reel 16mm 35mm

A historical review and chronicle of technical achievement; this picture shows floating logs and crude rafts of the primitive natives in comparison with the massive, electrically propelled battleship of today.

General Electric Company—Transportation only.

University of Iowa—Rental \$1.50, plus transportation, and service charge 35c.

University of Kansas and Colorado—Rental 50c, plus transportation. 16mm.

Iowa State College—35mm. Rental \$1.50, plus transportation.

American Museum of Natural History—16mm. Free to New York City Schools only.

University of California—Rental 50c, plus transportation.

Indiana University—35mm. Rental \$2.00, plus transportation.

438. REMOTE SUPERVISORY SELECTOR SYSTEM—1 reel 16mm 35mm

This film shows the operation of the remote supervisory selector system and its uses in controlling automatic station equipment of a modern electrified railway.

General Electric Company—Transportation only.

439. SYNCHRONOUS SELECTOR SUPERVISORY SYSTEM—1 reel 16mm 35mm

The operating principle by which the G-E supervisory system of the Cincinnati Street Railway controls 19 substations from a centrally located dispatcher's station is illustrated in this film.

General Electric Company—Transportation only.

440. TRANSPORTATION—2 reels 16mm 35mm

This film shows the early methods of transportation, first use of wheels on a vehicle, the first steam locomotive, discovery and harnessing of electricity, assembling of a modern electric locomotive, electrification of railroads and different types of electric locomotives.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Indiana University—35mm. Rental \$2.00, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

U. S. Bureau of Mines, Petroleum Station, Bartlesville, Okla.—Transportation only.

U. S. Bureau of Mines, Petroleum Field Office, San Francisco, Calif.—Transportation only.

441. WELDING BATTERED RAIL ENDS—1 reel 16mm 35mm

This film illustrates the processes employed by the Southern Pacific Railroad in welding rail ends, showing the efficient operation of a large gasoline-engine-driven electric generator in repairing damages to the tracks and smoothing off and finishing them to a true, even surface.

General Electric Company—Transportation only.

FORGING

442. HEAT TREATMENT OF STEEL—2 reels—16mm 35mm

Reel 1—Shows blacksmith at work in old-time shop and present method of heat treatment in furnaces where temperature is regulated automatically and checked by pyrometers and signal lights.

Reel 2—Depicts forging of front axles; analyzing of steel to determine carbon content; bending test of untreated and treated axles; forging of steering knuckles with method of hardening and tempering; case-hardening, cyaniding, and testing various parts.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

443. MAKING OF WROUGHT IRON—1 reel 16mm 35mm

This reel shows each step in the process of making hand wrought iron.

Metropolitan Museum of Art—To New York City Schools only—other schools, 35mm \$5.00; 16mm \$2.50, plus transportation.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

University of Texas—Rental \$5.00, plus transportation.

FOUNDRY

444. THE MOULDER—1 reel 16mm 35mm

This film shows mass production of small gray-iron castings by means of the most modern pouring and conveying system known to foundry practice.

General Electric Company—Transportation only.

University of California—Rental 50c, plus transportation.

FUR INDUSTRY

445. FARMING FOR FUR— $\frac{1}{2}$ reel 16mm 35mm

Breeding black or silver-tip foxes in Canada; close-ups of specimens and methods of operating the farm.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 85 footage 35mm; to obtain 16mm footage divide by four-tenths.

Kodascope Library—16mm. Rental \$1.25, plus transportation.

446. FUR INDUSTRY OF THE U. S.—3 reels 16mm 35mm

This film gives a comprehensive survey of the fur resources of the United States, shows the different types of fur farms, and explains the utilization of fur.

U. S. Department of Agriculture—Transportation only.

447. FURRY TALE, A—1 reel 16mm 35mm

This is a study of the animals from which we obtain our furs; sea otter, marmot, raccoon, skunk, squirrel, kangaroo and silver fox.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. Footage 680 35mm; to obtain 16mm footage divide by four-tenths.

448. MAKING MEN'S HATS—1 reel 16mm

This film shows making hats from fur.

State College of Washington—Registration fee \$1.00, plus transportation.

449. MUSKRAT INDUSTRY—1 reel 16mm 35mm

This film was made on the marshes of Maryland during the trapping season and gives a graphic picture of the muskrat industry.

Game Division, State of Maryland—Transportation only.

450. RABBIT FARMING—1 reel 16mm 35mm

This film shows breeds of rabbits and possibilities for meat and fur.

U. S. Department of Agriculture—Transportation only.

451. TREASURE OF THE WILDERNESS—2 reels 16mm 35mm

A photoplay which traces the history of the fur-trade from the earliest days of New York to the present time.

Educational Film Exchanges, Inc.—Sale \$24.00 each reel 16mm; \$60.00 each reel 35mm.

HEATING, VENTILATION AND PLUMBING

Heating

452. HOT AIR HEATING—1 reel 16mm

This reel traces the development of heating methods from fireplace and stove to a modern hot air system in a large building.

Eastman Teaching Film—Sale \$24.00; teaching manual supplied.

453. SAVING COAL AT HOME—1 reel 35mm

This reel by animated drawings shows the origin of coal and emphasizes the advantages and money-saving possibilities of insulating househeating and certain industrial pipes.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
University of Missouri—Rental 50c, plus transportation.

Manufacturing Supplies

454. CAST IRON PIPE—3 reels 16mm 35mm

This film shows in complete detail the manufacture of cast iron pipe.

Society for Visual Education—3 reels, 35mm—Rental \$2.00, plus transportation;
3 reels, 16mm—\$1.50, plus transportation.
University of Texas—3 reels, 35mm. Registration fee \$1.00, plus transportation.

455. CRANE ENAMELWARE—1 reel 35mm

This reel shows the manufacture and use of enamelware.

University of Indiana—Rental \$1.00, plus transportation.

456. CRANE PLUMBERS' BRASS—3 reels 16mm 35mm

This film shows the manufacturing processes involved in making plumbers' brass.

Crane Co.—Transportation only.

457. EAGLE PRODUCTS IN THE PLUMBING TRADE—1 reel 16mm 35mm

This reel depicts modern lead pipe in the process of manufacture.

Eagle-Picher Lead Co.—Free Loan.

458. ENAMELWARE—2 reels 16mm

This film portrays the operations in manufacturing bathroom equipment and fixtures.

University of Kansas & Colorado—Rental 50c, plus transportation.

459. MAKING OF CRANE ENAMELWARE, THE—2 reels 16mm 35mm

This film depicts the manufacturing processes involved in making Crane enamelware, with special reference to the bathtub.

Crane Co.—Transportation only.

460. MANUFACTURING CAST IRON PIPE BY THE DELAUDAUD PROCESS—1 reel 16mm

This film illustrates in detail the manufacturing of Cast Iron Pipe in 18' lengths up to 24" in diameter by the use of centrifugal force. Pipes are cast in revolving metal moulds.

U. S. Pipe and Foundry Co.—Free loan.

461. OPEN AND SHUT—3 reels 16mm 35mm

Shows the manufacture and use of valves in automobile, street car, steam engine, boats, submarines, airplanes, dirigibles, etc.

Crane Co.—Transportation only.

Atlas Educational Film Co.—Transportation only.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

American Museum of Natural History—16mm. To New York City Schools only.

Indiana University—35mm. Rental \$3.00, plus transportation.

University of Missouri—35mm. Rental \$1.50, plus transportation.

462. WALLS WITHOUT WELDS—3 reels 35mm

Reel 1—Shows how iron ore is mined by the open-cut method and transported to the blast furnaces; animated drawings demonstrate the action within the blast furnace; refining into steel ingots by the Open Hearth Process; rolling of ingots into square blooms of different sizes.

Reel 2—Depicts processes in the rolling mill, piercing, reeling, sizing to Hot Finished Tubes, largely used for casing, pipes, boiler tubes, etc.

Reel 3—Depicts cold drawing operations; physical tests applied to both Hot Finished and Cold Drawn Tubes.

National Tube Company—Transportation only.

Sanitation

463. FOUNTAIN OF YOUTH, THE—2 reels 16mm 35mm

An historical presentation of the Roman period about 200 B. C. showing how water was heated and controlled in the elaborate baths and contrasted with modern methods of bathing as presented in the bathrooms of transatlantic liners, trains, and homes.

Crane Company—Transportation only.

Atlas Educational Film Co.—Transportation only.

Iowa State College—35mm. Rental \$1.50, plus transportation.

University of Missouri—35mm. Rental \$1.00, plus transportation.

464. SEWAGE DISPOSAL—1 reel 16mm

This film depicts direct disposal into the ocean from a coast city; sewage purification by Imhoff Tank and sprinkling filter; purification by sand filtration.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

465. SEWAGE TREATMENT PLANT, A MODERN—1 reel 35mm

Presents the method of disposing of city sewage in an Illinois city.

Chicago Film Laboratory—Transportation only.

466. WASTE DISPOSAL IN CITIES—1 reel 16mm 35mm

This picture follows the progress of city waste from pumping station to "trickling filter," "settling tank" and "sand filter." The two principal methods for disposing waste by cities are illustrated—storing in tanks until the tide goes out, and discharging in ocean; purification through bacteriological action.

Society for Visual Education—16mm, rental \$1.50, plus transportation; 35mm, \$2.00, plus transportation.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Indiana University—35mm. Rental \$1.00, plus transportation.

Edited Pictures System—16mm. Rental \$2.00, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

Water Supply

467. AQUA—1 reel 35mm

A city water system.

Ford Motor Company—Transportation only. Also sale \$8.00.

468. BIG CITY'S WATER SUPPLY, A—½ reel 16mm 35mm

This film pictures Ashokan Dam in the Catskill Mountains, a part of New York City's water supply.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 125 footage 35mm; to obtain 16mm footage, divide by four-tenths.

469. N. Y. WATER SUPPLY—1 reel 16mm

Shows various bodies of water—from Staten Island to the Schoharie Reservoir in the Catskills—that provide water for New York City and the distribution throughout the city.

American Museum of Natural History—Free to N. Y. City Schools only.

University of California—Rental \$1.00, plus transportation. Also manual 5c.

470. N. Y. WATER SUPPLY—1 reel 16mm

This film emphasizes the necessity of a water supply adequate to the needs of New York's population and industries.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

471. PURIFYING WATER—1 reel 16mm

This film shows the aeration of water, the action of aluminum sulphate on muddy water, interior views of a chlorination plant and visualizes the technique employed in the bacteriological testing of water.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Edited Pictures System—Rental \$2.00, plus registration fee.

472. WATER—1 reel 16mm

This film shows deflection of water, a watershed, how springs and wells are formed, pollution, city water supply, aerating, power plant, transporting water to city, mining gold with hydraulic water power, and methods of irrigating.

University of California—Rental \$1.00, plus transportation; lesson 5c.

Edited Pictures System—Rental \$2.00, plus transportation.

473. WATER SUPPLY OF A GREAT CITY—1 reel 35mm

This reel shows all of the steps of supplying any large modern city with water and illustrates one of the great problems of sanitary engineering.

Indiana University—Rental \$1.00, plus transportation.

INDUSTRIAL ARTS

474. AMERICANIZING AN ORIENTAL ART (BATIK)— $\frac{1}{2}$ reel 16mm 35mm

This film demonstrates batik dyeing; sketches the design in melted wax and shows dissolving this design in naphtha.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. Footage 35mm 186 ft.; to obtain 16mm footage, divide by four-tenths.

475. AN EAST INDIAN ISLAND—1 reel 16mm

In addition to scenes of home life in the tropics this film depicts the art of weaving, making pottery, and the observance of native Balinese customs.

Eastman Teaching Film—Sale \$24.00. Teaching Manual supplied.

476. DRY POINT—A DEMONSTRATION—2 reels 16mm 35mm

This film illustrates the process of etching by means of tools. The artist, Mr. Frederick G. Hall, makes a small plate illustrating the specialized uses of the individual tools, then on a larger plate, with drypoint needle, diamond point, graver, and roulette he builds up the portrait by a minute ploughing of the copper, he then inks the plate and puts it through the hand press.

University Film Foundation—Sale, \$75.00 per reel safety 35mm; nitrate \$65.00 per reel. 16mm safety \$24.00 per reel. Rental \$3.50 per reel.

477. ETCHER AND HIS ART, THE— $\frac{1}{2}$ reel 16mm 35mm

A complete demonstration of etching, from the sketching of the first "cartoon" to the "pulling" of the artist's proof from the finished copper plate. Posed by Walter Raymond Duff, etcher of the famous Harvard Campus pictures.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; footage 324 ft. 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

478. ETCHER'S ART, THE—2 reels 16mm 35mm

This film shows all the steps in making an etching by the acid process. Made through the cooperation of the internationally famous artist, Frank W. Benson.

University Film Foundation—Sale, \$75.00 per reel 35mm safety, \$65.00 per reel nitrate; \$24.00 per reel 16mm safety. Rental \$3.50 per reel.

University of Iowa—Rental \$3.00, plus transportation.

479. FINE ARTS IN METAL—3 reels 35mm

This film shows the making of bronze statuary and decorative materials.

Indiana University—Rental \$3.00, plus transportation.

University of California—Rental \$1.50, plus transportation.

University of Missouri—Rental \$1.50, plus transportation.

480. GIRL POTTERY MAKERS OF THE CARIBBEAN— $\frac{1}{2}$ reel, 16mm 35mm

This film shows native potters digging their clay, moulding, firing and glazing original works of art.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 363 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—16mm. Rental \$1.25, plus transportation; also sale.

481. IN BATIK LAND—1 reel 16mm 35mm

This film pictures a rail journey from Batavia to Bandoeng and illustrates each detail in the art of making batik.

University of California—Rental \$1.00, plus transportation. 35mm.
Eastin Feature Films—16mm. Sale \$17.50.

482. INDUSTRIAL PARADISE, AN—½ reel 16mm 35mm

The Roycroft community shops established at East Aurora, New York, by the late Elbert Hubbard. Typesetting, leather tooling and bookbinding by hand; art metal work and furniture making.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety. 195 footage 35mm; to obtain 16mm footage, divide by four-tenths.

483. LAST OF THE WOOD ENGRAVERS, THE—2 reels 16mm 35mm

This picture was commissioned by the Boston Museum of Fine Arts to preserve and make available for posterity the extraordinary technique of Mr. Timothy Cole, the last of the great wood engravers.

University Film Foundation—Sale 35mm, \$75.00 per reel safety; nitrate \$65.00: 16mm safety \$24.00 per reel. Rental \$3.50 per reel per day, 35mm.
University of Iowa—16mm. Rental \$3.00, plus transportation.

484. LENOX POTTERY—1 reel 35mm 16mm

Crushing feldspar; analysis; making plaster molds; how cups are made; handles; spouts; knobs; firing ware; glazing; decoration; examples of Lenox products.

Iowa State College—35mm. Rental \$1.50, plus transportation; 16mm \$1.00, plus transportation.
University of California—Rental 50c, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.

485. LESSON IN WOOD-CARVING, A—¼ reel 16mm 35mm

Frieda Van Emden of Holland executes a difficult piece of carving before the camera.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 156 footage 35mm; to obtain 16mm footage, divide by four-tenths.

486. OLDEST OF THE ARTS, THE—½ reel 16mm 35mm

(Pottery). This film depicts the process of pottery-making—throwing, turning, glazing, firing, etc.

Bray Film Library—10c ft. nitrate, 11c ft. safety. 359 footage 35mm; to obtain 16mm footage, divide by four-tenths.

487. PINE-NEEDLE WEAVING—½ reel 16mm 35mm

This film shows women in Southern Georgia using twelve-inch pine needles, combined with raffia for weaving mats, baskets and vases.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 177 footage 35mm; to obtain 16mm footage, divide by four-tenths.

488. PLAYTHINGS OF CHILDHOOD—1 reel 35 mm

This film shows how toys are manufactured.

Iowa State College—Rental \$1.50, plus transportation.
Wholesome Films Service, Inc.—Sale \$20.00.
Ford Motor Co.—Transportation only. Sale \$8.00.

489. PORCELAIN INDUSTRY IN CZECHO-SLOVAKIA—1 reel 16mm 35mm

This reel shows the process from common clay to the finished handpainted lustrous china—
together with a trip to the northern coast of France.

Society for Visual Education—35mm, rental \$2.00, plus transportation; 16mm, rental
\$1.50, plus transportation.

490. POTTERY—1 reel 16mm 35mm

A cliff dweller's bowl; primitive potter's wheel; material in modern pottery clay; grinding and
mixing clays; forming the base; surfacing; decorating; firing.

Iowa State College—35mm; Rental \$1.50, plus transportation; 16mm rental \$1.00,
plus transportation.

Indiana University—35mm; Rental \$1.00, plus transportation.

491. POTTERY MAKER, THE—1 reel 16mm 35mm

The age-old process of making pottery is shown in this film.

Metropolitan Museum of Art—Free loan to New York City Schools only; other schools
pay rental fee \$5.00 35mm; \$2.50 16mm.

University of Kansas & Colorado—Rental \$1.50, plus transportation. 16mm.

Iowa State College—16mm. Rental \$1.50, plus transportation.

University of Texas—Rental \$5.00, plus transportation.

492. SCULPTOR'S ART, THE—½ reel 16mm 35mm

This film tells the story of the sculptor's work from the artist's first sketch to the reproduc-
tion of the plaster cast in marble by electrically operated chisels.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety. 352 footage 35mm; to obtain
16mm footage, divide by four-tenths.

493. STORY OF THE WILLOW PLATE, THE—1 reel 35mm

The story of the old legend which explains the figures in the pattern of the quaint blue plates
of Nankin Ware known as "The Willow Pattern."

Iowa State College—Rental \$2.00, plus transportation.

University of Texas—Rental \$2.00, plus transportation.

494. SWISS WOOD CARVER, THE LITTLE—1 reel 16mm 35mm

This picture shows interesting mountain scenes and life of woodcarvers in Switzerland.

American Museum of Natural History—16mm. Free loan to New York City Schools
only.

Edited Pictures System—16mm. Rental \$2.00, plus transportation.

Gordon Ellis Productions—16mm \$35.00; 35mm \$110.00 less a discount of 25%.

495. TABLEWARE—1 reel 16mm

This film shows preparation of clays for modeling, shaping cups, trimming and fitting with
handles; firing, glazing, and decorating.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

496. WICKERWARE—1 reel 35mm

Making wicker and reed furniture.

Ford Motor Co.—Sale \$8.00, plus transportation.

497. WEAVING IN WOOD— $\frac{1}{4}$ reel 16mm 35mm

This film depicts the making of reed furniture, shows how reeds are made pliable for weaving, how clamped to form a frame, and how woven.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 170 footage 35mm; to obtain 16mm footage, divide by four-tenths.

498. HOW BATIK IS MADE IN JAVA—1 reel 16mm

This is a Burton Holmes subject illustrating the methods used by Javanese maidens in weaving cloth on crude looms; decorating it by the batik process, painting on the design with hot wax, dyeing it, melting away the wax and dipping the fabric in dye of another color.

Eastin Feature Films—Sale \$5.00.

INDUSTRIAL CHEMISTRY

499. CHEMICAL ETHYL ALCOHOL—2 reels 16mm 35mm

This film shows how industrial alcohol is made—cutting of sugar cane, making yeast cultures, fermentation process, etc., and deals with carbonic acid gas and the making of dry ice.

De Frenes & Co.—Rental \$3.00 per booking, 1-3 days; \$5.00 for one week; plus transportation.

500. CHEMIST MAKES WAR, THE—½ reel 16mm 35mm

This film shows the composition of a highly explosive bomb; the devastation created by its explosion.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety. 165 footage 35mm; to obtain 16mm footage, divide by four-tenths.

501. CHEMISTRY OF COMBUSTION, THE—1 reel 16mm 35mm

Experiments with various chemical methods of producing flame, as, for instance, the action of Metallic Potassium and water. "How it feels to be blown up"—"the first gas works" and other interesting bits of chemical action are shown.

Educational Film Exchanges, Inc.—16mm, Sale \$24.00; 35mm, \$60.00.

F. C. Pictures Corporation—Rental.

Mogull Bros.—Sale \$9.00; Rental \$2.00, plus transportation.

502. COAL AND BY-PRODUCTS—2 reels 35mm

This film shows South African coal mines and gives in detail the process of screening coal, extracting tar and ammonia, making sulphate ammonia from the liquid form through evaporation to sacking ready for use.

University of Texas—Registration fee \$1.00, plus transportation.

503. FROM LICORICE ROOT TO MAFTEX—2 reels 16mm

This film shows the gathering of licorice roots, removal of licorice extract and manufacture from fibre residue of fire extinguisher, box-board, wall-board and insulating board.

MacAndrews & Forbes Co.—Transportation only.

504. MANUFACTURE AND USES OF SULPHATE AMMONIA—2 reels 35mm

This reel shows how sulphate ammonia is manufactured and how, when used as a fertilizer, it increases crop yield.

University of Texas—Registration fee \$1.00, plus transportation.

INDUSTRIAL ECONOMICS AND GEOGRAPHY

505. BOLIVIA—1 reel 16mm

This film shows the progress of development of resources of Bolivia under difficult conditions of communication. Scenes show the cultivation of native products, making adobe and pottery, spinning and weaving wool; animated drawings of the Corocoro copper center and the silver and tin districts near Oruro and Potosi; mining scenes.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

506. CARRYING AMERICAN PRODUCTS TO FOREIGN LANDS—1 reel 16mm 35mm

Shows diagram of a steel ship; placing cargo for export; details of running ship; unloading imports—rubber, hemp, tin, etc.

U. S. Steel Corporation—Transportation only.

American Museum of Natural History—Free loan to New York City Schools only.

507. CENTRAL AMERICA—1 reel 16mm

This picture presents a study of the peoples, cities, industries and resources of Central America. The scenes include mahogany forests and logging, banana growing, cacao and coffee industry.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Missouri—Rental 35c, plus transportation.

508. CENTRAL PLAINS—2 reels 35mm 16mm

Besides views of agriculture this film presents intimate glimpses of coal and copper mines; huge ore boats; logs from the forests of Wisconsin, Michigan and Minnesota reaching the lumber mills; limestone quarries of Indiana; dam and power-house at Niagara, etc.

Society for Visual Education—Rental 35mm \$2.00 per reel, plus transportation; 16mm, \$1.50 per reel, plus transportation.

509. DEVELOPMENT OF INDUSTRY, THE—(In preparation)—(Sound)—1 reel 16mm 35mm

This reel contrasts industry in the colonial home with modern industry. There are scenes of specialized occupations, standardized parts, quantity production and constant improvement of machinery.

Electrical Research Products, Inc.—Sale, \$100.00 sound-on-film, 35mm; rental \$5.00.

Sale \$40.00 sound-on-disc, 16mm; rental \$3.50.

510. DEVELOPMENT OF TRANSPORTATION, THE—(Sound-On-Film)—1 reel 16mm 35mm

This reel traces the development of the locomotive and automobile together with their effect on the progress of our industrial civilization; modern transportation devices are shown in relation to their potentialities and our dependence upon them; the contribution of the airplane is presented.

Electrical Research Products, Inc.—35mm Sale also available 16mm with sound discs or films on outright purchase basis. Rental 35mm \$5.00 per day.

511. DUTCH EAST INDIES, THE—1 reel 16mm

This film illustrates the skill of Javanese craftsmen in metal and leather work, collecting rubber latex, loading of spices and rattan for export, and shows scenes of rural and family life.

Eastman Teaching Film—Sale \$24.00; teaching manual supplied.
Indiana University—Rental \$1.00 per day, plus transportation.
University of Iowa—Rental \$1.50, plus transportation.

512. FAIR OF THE IRON HORSE, THE—2 reels 16mm 35mm

Depicting the evolution of transportation. Indians and pack horses, early river transport, canal boats, tobacco rollers, stage coach, first railway, horse car, treadmill car, sail car, development of steam locomotive.

Chicago Film Laboratory—Transportation only.

513. FORD WAY OF RAILROADING, THE—2 reels 16mm 35mm

This film shows the methods employed by Mr. Henry Ford in developing transportation.

Ford Motor Company—Transportation only.
Indiana University—35mm. Rental \$2.00, plus transportation.

514. HOW GOODS ARE CARRIED—1 reel 35mm

This reel shows how goods are transported from primitive to modern times—including railroads, steamships, aeroplanes.

Indiana University—Rental \$1.00, plus transportation.

515. INDUSTRIAL WORKING CONDITIONS—1 reel 35mm

Ford Motor Company—Transportation only.

516. INTERDEPENDENCE—2 reels 16mm

This film illustrates interdependence in work and play familiar to children, then are shown examples of specialization and cooperation on the farm, in the village, the city, the nation, and among nations.

University Film Foundation—Sale \$75.00 per reel safety; \$65.00 per reel nitrate:
Rental \$3.50 per reel per day.
Iowa State College—Rental \$1.00, plus transportation.
University of California—Rental \$1.00, plus transportation.
University of Missouri—Rental 70c, plus transportation.

517. INTERDEPENDENCE OF MODERN LIFE, THE—(In preparation)—(Sound)—16mm sound-on-disc; 35mm sound-on-film. 1 reel.

This reel shows the highly complex interdependence that characterizes the modern world. In animated drawings it depicts the interchange of raw materials, commodities, and services among the countries of the world.

Electrical Research Products, Inc.—Sale, 16mm \$40.00; 35mm \$100.00. Rental \$3.50
16mm; \$5.00, 35mm.

518. IRRIGATION—1 reel 16mm

This film illustrates the methods of making arid lands fertile. Views show the power house and dam which control irrigation of the Salt River Project, the Imperial Valley project, etc.

Eastman Teaching Film—\$24.00 sale price. Teaching manual supplied.

519. MEXICO—1 reel 16mm

This film traces the march of civilization in the tropics. Scenes include oil fields, the drilling, storage, and shipment of oil, sugar cane industry, silver mining and the utilization of mountain streams for power development.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Missouri—Rental 35c, plus transportation.

520. MIDDLE ATLANTIC STATES—2 reels 16mm 35mm

These reels picture the resources which have made the Atlantic Coastal Plain and Appalachian Highlands Region the busiest on earth, with great lumbering, manufacturing, mining and farming industries with unrivaled trade and commerce.

Society for Visual Education—16mm, rental \$1.50 per reel, plus transportation; 35mm \$2.00 per reel, plus transportation.
Iowa State College—Rental, 16mm \$1.00, plus transportation; 35mm, \$1.50, plus transportation.

521. MILLS OF THE GODS—(Sound)—2 reels 35mm

This film carries the spectator to the northern regions with Byrd, across vast ice fields, through hydroelectric power plants, amid roaring electric furnaces, through steel mills, etc. All the agencies of speed are shown.

Norton Company—Transportation only.

522. MOHAWK VALLEY, THE—1 reel 16mm

Industrial activity in this famous valley is shown by the passing of trains, barges, motor trucks and automobiles at Canajoharie, generator construction at Schenectady, glove-making at Gloversville, textile weaving at Utica, and the manufacture of copper articles at Rome.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Iowa—Rental \$1.50, plus transportation.
Edited Pictures System—Rental \$2.00, plus transportation.

523. NEW ENGLAND STATES—2 reels 16mm 35mm

This film illustrates the relation of the physical features of New England to the industrial and commercial activities—lumbering, quarrying, pasturing sheep and cattle, shipping apples, fishing, etc.

Society for Visual Education—Rental, 16mm \$1.50 per reel, plus transportation; 35mm \$2.00 per reel, plus transportation.

524. NEW ENGLAND STATES—RESOURCES AND INDUSTRIES—1 reel 16mm 35mm

This film pictures all the industries of New England—forestry; ship-building; maple sugar; paper pulp wood; writing paper manufacture; agriculture; textile; shoemaking; waterpower; factories.

Iowa State College—Rental, 35mm \$1.50, plus transportation; 16mm, \$1.00, plus transportation.

525. NEW SOUTH, THE—1 reel 16mm

This reel traces the rapid growth of the New South, its agricultural products—cotton, etc.; raw materials—marble, aluminum ore (bauxite) coal, limestone, iron; and water power for the paper, cotton-goods, and other industries.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

526. PACIFIC MOUNTAINS AND LOWLANDS—1 reel 16mm 35mm

This film shows how this region has developed important activities, such as great lumbering centers, fishing industry, a large commercial and industrial life, etc.

Society for Visual Education—Rental, 35mm \$2.00, plus transportation; 16mm \$1.50, plus transportation.

University of Texas—35mm. Rental \$2.00, plus transportation.

527. PEOPLE WHO LIVE THROUGH INDUSTRY—1 reel 16mm 35mm

The causes and effects of a change from an agricultural to an industrial type of life are illustrated, with special emphasis on conditions in Germany.

University of Kansas & Colorado—Rental 16mm \$1.50, plus transportation.

University of California—Rental \$1.00, plus transportation, 16mm.

Edited Pictures System—Rental, 16mm \$2.00, plus transportation.

Y. M. C. A. Motion Picture Bureau—Rental, 16mm \$2.00 per day; \$3.00 2 days. 35mm, \$3.50 per day; \$5.00 2 days.

528. PERU—1 reel 16mm

This film shows the rich natural resources, transportation difficulties and living conditions of Peru; pictures the sources of guano, crude oil, cotton, copper, vanadium, gold, etc.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

529. POWER FARMING IN THE SOUTH—3 reels 35mm

This film shows the revolutionizing of farm methods in the South after the flood of 1927.

International Harvester Company—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

530. ROCKY MOUNTAINS—1 reel 16mm 35mm

This film visualizes the rich deposits of ore, vast areas of forest, abundant pasturage for sheep, etc., and shows how this region has made use of the rich resources.

Society for Visual Education—Rental 35mm \$2.00, plus transportation; 16mm \$1.50, plus transportation.

531. SOUTHERN STATES—2 reels 16mm 35mm

This film shows coal-mining in the Birmingham district; the cultivation of cotton, rice, etc.; lumbering in the cypress forests; the manufacture of turpentine, etc.

Society for Visual Education—Rental 35mm \$2.00 per reel, plus transportation; 16mm, \$1.50 per reel, plus transportation.

532. STORY OF THE CENSUS, THE—2 reels 35mm

This film picturizes the scope and value of a United States Census, explaining how the data is tabulated and various applications of modern accounting and statistics to general business.

International Business Machines Corp.—Free loan, plus transportation.

533. THROUGH OIL LANDS OF EUROPE AND AFRICA—GERMANY, FRANCE, SPAIN, MOROCCO, ALGERIA—2 reels 35mm

Reel 1—Shows oil field at Wietze, Germany; Celle oil field; Pechelbronn field near Strassburg, Alsace, with drill in action, and production of oil by mining oil sands; docks at Havre, France, with view of tankers and storage tanks; shipping of oil in Paris by barge on Seine and by truck.

Reel 2—Scenes in Madrid and irrigation water wheel outside city, with peasants washing clothes; ancient gates at Toledo, panorama of city and views of natives—methods of stripping bark from cork oaks and its transportation by carts and donkeys to manufacturing centers are shown. Views of oil fields, etc., in Morocco and Algeria.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of Texas—Registration fee \$1.00, plus transportation.

534. THROUGH OIL LANDS OF EUROPE AND AFRICA—ITALY, HUNGARY, THE DANUBE, AND RUMANIA—3 reels 35mm

Reel 1—Panorama of wells and oil storage tanks at Salsomaggiore; scenes in various countries; floating mills in Danube River below Budapest with machine driven by current; transportation of oil from Rumania on Danube by barge, etc.

Reel 2—Shows army encampment in Rumania; Rumanian village wedding; making of mats and baskets from reeds grown in Danube swamps.

Reel 3—Pictures transportation of supplies to oil fields by bullock wagons; field storage tanks of wood reinforced with reeds; gypsies; modern steel derricks at Balcoi field; hand-dug wells at Bustenari; women raising and lowering pipe by hand.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of Texas—Registration fee \$1.00.

535. THROUGH OIL LANDS OF EUROPE AND AFRICA—POLAND, GREECE, AND EGYPT—4 reels 35mm

Reel 1—Shows Schodnica field in western Galicia; St. Jacob's well; transportation by steel tank cars and cans and wooden tanks on carts; life and scenes of various countries.

Reel 2—Pictures Erectheion and Parthenon; ruins and Hall of Initiations at Eleusis; various Egyptian views.

Reel 3—Camel train starting across desert; graveyard in desert; Pyramids and Sphinx; Egyptian wedding procession; manufacture and transportation of pottery; oxen and camels plowing.

Reel 4—Scenes of Valley of Kings and entrance to tomb of King Tut-ankh-amen, etc.; tankers laden with oil produced near Red Sea, refined at Suez and passing through Suez Canal; transportation of oil to interior in tank cars; delivery of gasoline and kerosene in Cairo.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of Texas—Registration fee \$1.00.

536. TWO ENDS OF A ROPE—1 reel 16mm 35mm

A Burton Holmes Travelog featuring the hemp industry of the Philippines; cutting "abaca"; stripping hemp; drying; inspection and shipping.

Iowa State College—16mm, Rental \$1.00, plus transportation; 35mm, \$1.50, plus transportation.

537. WATERWAYS AND AGRICULTURE—1 reel 16mm

Shows the movement of grain, cotton and other items by waterways and the economy of shipment in that manner.

Atlas Educational Film Co.—Transportation only.

538. WESTERN PLATEAUS—1 reel 16mm 35mm

This reel shows that the industrial achievement of the people of this region is due to a realization of geographic law. Scenes portray methods of irrigation, growth of mining centers, railroad expansion, the effect of harnessing the waters to furnish manufacturing energy, etc.

Society for Visual Education—16mm Rental \$1.50, plus transportation; 35mm \$2.00, plus transportation.

JEWELRY

539. BEHIND THE SCENES IN A JEWELRY STORE—2 reels 35mm

This film depicts the manufacturing of jewelry, silversmithing, diamond cutting, recutting and resetting diamonds, rolling platinum and making platinum jewelry; watch repairing.

University of California—Rental \$1.00, plus transportation.

540. GEM CUTTING AND POLISHING—½ reel 16mm 35mm

Scenes in the workshop of a famous gem cutter show the slitting of precious crystals; blocking, faceting, polishing and mounting.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 357 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental 35mm by special arrangement.
Kodascope Library—16mm, rental \$1.00.

541. GOLD—1 reel 16mm

The story of gold from the time it leaves the mine until refined and purified; it is made up into various articles—dental crowns, fine wire, jewelry, gold leaf, and minting gold coins.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Kansas & Colorado—Rental \$1.50, plus transportation.
Indiana University—Rental \$1.00, plus transportation.
University of California—Rental \$1.00, plus transportation. Manual 15c.
University of Iowa—Rental \$1.50, plus transportation.

542. JEWELRY AND PERSONALITY—½ reel 16mm 35mm

This film taken in the studio of a woman who makes jewelry to suit the personal taste of each patron, shows goldsmithing, platinum work, designing and jewel-setting.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 285 footage 35mm; to obtain 16mm footage, divide by four-tenths.

MACHINE SHOP—(Equipment and Tools)

543. CINCINNATI NO: 4&5 HIGH POWER MILLING MACHINES—

A detailed illustration of the type of milling machines used in railroad shops, oil well fields and wherever heavy metals are removed with accuracy.

Cincinnati Milling Machine & Cincinnati Grinders—Transportation only.

544. COLTON CLOSURE, THE—

Explains the superiorities of factory machinery too heavy to be carried.

Jam Handy Pictures Service.

545. ENGINE LATHE: ITS CARE AND OPERATION—7 reels 35mm

The complete assembly of the lathe, showing principal parts: preparing the lathe for operation (oiling the different parts, starting, stopping, reversing, countershift operation, straight and cross belts, etc.) machining a shaft on centres; care of the spindle; thread cutting; machining a pulley and a pair of lathe centers.

Society for Visual Education—Rental \$2.00 per reel, plus transportation.

University of California—Rental \$3.50, plus transportation.

University of Missouri—Rental \$3.50, plus transportation.

546. FUNDAMENTAL REQUIREMENTS OF EFFICIENT MILLING MACHINE EQUIPMENT

A description of the five fundamental types of milling practice—index base milling, rotary milling, string milling, etc.

Cincinnati Milling Machine & Cincinnati Grinders, Inc.—Transportation only.

547. HOW TO SQUARE UP STOCK—1 reel 16mm

This film deals with the six steps involved, giving several acceptable methods. It was taken in the shop and the operations were performed by a skilled teacher and workman.

Junior-Senior High School, Newton, Iowa—Transportation only.

548. PERFORMANCE TELLS THE STORY—

A description of a series of performance stories showing how the Hydromatic Milling Machine (hydraulic feed, production type of Milling Machine) has been successfully applied.

Cincinnati Milling Machine & Cincinnati Grinders—Transportation only.

549. SEE SAW—1 reel 35mm

This film shows how saws are made.

Ford Motor Company—Transportation only; also sale \$8.00.

550. SOMETHING NEW UNDER THE SUN—1 reel 16mm 35mm

This film shows the superiority of Carboloy over ordinary high-speed steel.

General Electric Co.—Transportation only.

551. UNIVERSAL MILLING MACHINE AND ITS OPERATION, THE—8 reels 35mm

This film explains the principle of rotary cutter and how work is fed to it, principle of action of cutting tooth and uniformity of automatic feed; assembly of milling machine, showing the principal parts and their functions; various phases of operations.

Society for Visual Education—Rental \$2.00, plus transportation.

552. USES AND ABUSES OF TWIST DRILLS, THE—2 reels 16mm 35mm

This film shows the different parts of a drill and demonstrates the method of grinding it properly and ways of using it or not to use it.

Cleveland Twist Drill Co.—Transportation only.

MATERIALS

Asbestos

553. ASBESTOS, THE MAGIC FIBER—1 reel 16mm 35mm

Sources of asbestos in Arizona and Asbestos, Quebec; blasting rock, cobbing, crushing and shipment of fibres; making of textiles, packing, gaskets, paper, pipe covering, fire-proof shingles, etc.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

American Museum of Natural History—16mm. Free loan to New York City schools only.

Iowa State College—35mm. Rental \$1.50, plus transportation.

University of Kansas & Colorado—16mm. Rental \$1.50, plus transportation.

554. ASBESTOS QUARRY, THE—½ reel 35mm

This film takes the audience on a trip through the world's largest quarry in Canada, illustrating drilling, blasting, crushing, removing asbestos from rock, shredding, washing, and shipping.

University of California—Rental 50c, plus transportation.

555. STORY OF ASBESTOS, THE—1 reel 16mm 35mm

Shows mining and cobbing of asbestos fiber; separating fiber from rock; crushing, drying, sorting; making fiber into yarn; spinning; weaving automobile brake linings; manufacture of other products.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Indiana University—35mm. Rental \$1.00, plus transportation.

University of Missouri—35mm. Rental 50c, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

Asphalt

556. EIGHTH WONDER, THE—½ reel 16mm 35mm

In British West Indies; surface mining, transportation by cable and ship, refining for road making, roofing, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 154 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

Brick, Clay, Stone, Etc.

557. BRICK—FROM CLAY TO PAVEMENT—1 reel 16mm 35mm

This film illustrates the processes of clay through the plant until it is laid on the road as vitrified paving brick; also scenes of finished roads.

U. S. Department of Agriculture—Transportation only.

Iowa State College—35mm, rental \$1.50, plus transportation; 16mm, \$1.00, plus transportation.

558. FACE BRICK, THE MANUFACTURE OF—1 reel 16mm 35mm

Portrays the manufacture and use of face brick.

Edited Pictures System—16mm, rental \$2.00, plus transportation.
Chicago Film Laboratory—Transportation only.

559. MAKING BRICKS—½ reel 16mm 35mm

This film depicts making and burning bricks by both hand and machinery.

Bray Film Library—Sale, 10c ft. nitrate, 11c ft. safety; 183 footage 35mm; to obtain 16mm footage, divide by four-tenths.

560. MANUFACTURE OF BRICK—1 reel 35mm

The processes of brick manufacture are portrayed in this film.

University of Texas—Registration fee \$1.00, plus transportation.

561. MANUFACTURING BRICK—2 reels 16mm 35mm

This film illustrates the old and new methods of manufacturing brick.

Mechanical Brickhandling Corporation—Transportation only.

562. CEMENT—1 reel 35mm

This film depicts the production and uses of cement.

University of Missouri—Rental 50c, plus transportation.

563. CEMENTING THE CENTURIES—2 reels 16mm 35mm

This film traces the history of Portland cement, shows location of cement plants in the U. S., materials employed in the manufacture and all processes in detail; packing; shipping; testing.

Alpha Portland Cement Co.—Transportation only. 35mm.
Y. M. C. A. Motion Picture Bureau—35mm. Registration fee \$2.00, plus transportation.
Iowa State College—35mm. Rental \$1.50, plus transportation.
Indiana University—35mm. Rental \$2.00, plus transportation.
University of Missouri—35mm. Rental \$1.00, plus transportation.

564. CRAFTSMANSHIP OF STUCCO TEXTURE—1 reel 16mm 35mm

This film shows the method of applying different stucco textures and tools used in creating them; among the textures shown are English Cottage, French Trowel, Spanish, Italian travertine, Moorish and Colonial.

Portland Cement Association—Transportation only.
Chicago Film Laboratory—Transportation only.

565. FROM MOUNTAIN TO CEMENT SACK—1 reel 16mm 35mm

Pictures the most important of 80 processes involved in cement manufacture and preparation for market as explained to a boy by a manikin who steps from encyclopedia.

U. S. Bureau of Mines—Transportation only.
American Museum of Natural History—16mm. Free loan to New York City schools only.
Y. M. C. A. Motion Picture Bureau—35mm. Registration fee \$2.00, plus transportation.
Indiana University—35mm. Rental \$1.00, plus transportation.
University of Texas—16mm. Registration fee \$1.00, plus transportation.

566. MAKING PORTLAND CEMENT—1 reel 35mm

Indiana University—Rental \$1.00, plus transportation.

567. MANUFACTURE OF ATLAS PORTLAND CEMENT—1 reel 35mm

This film shows the making of cement and the various uses to which it is put.

University of Texas—Registration fee \$1.00, plus transportation.

568. NORTH ORE YARD EXTENSION—1 reel 35mm

This picture shows the special concrete plant in operation on the ore yard extension for the Illinois Steel Company at South Chicago, Illinois.

Great Lakes Dredge & Dock Co.—Transportation only.

569. PORTLAND CEMENT, THE STORY OF—1 reel 16mm 35mm

Shows detailed manufacturing process from the quarry to the finished product.

Portland Cement Association—Transportation only.

University of California—35mm. Rental 50c, plus transportation.

Chicago Film Laboratory—Transportation only.

570. FIRE-CLAY REFRACTORIES—4 reels 16mm 35mm

Depicts the manufactory of refractories by three common methods—dry press, stiff-mud process, and hand moulded products; use of fire clay in iron blast furnaces.

U. S. Bureau of Mines-Pittsburgh—Transportation only.

U. S. Bureau of Mines-Bartlesville—Transportation only.

U. S. Bureau of Mines-Minneapolis—Transportation only.

U. S. Bureau of Mines-San Francisco—Transportation only.

571. FROM MINES TO WALL—2 reels 35mm

This film illustrates mining gypsum rock, producing gypsum plaster, casting gypsum, etc.

University of Texas—Registration fee \$1.00, plus transportation.

572. GRANITE BLOCK PAVING—1 reel 16mm 35mm

This reel tells the story of the granite block from the quarry to the finished pavement in large cities.

U. S. Department of Agriculture—Transportation only.

573. GYPSUM MINING—1 reel 35mm

This reel illustrates processes of mining as carried on in the province of Ontario, Canada.

Iowa State College—Rental \$1.50, plus transportation.

574. INDIANA LIMESTONE—3 reels 35mm

A visualization of the limestone industry from the quarrying, milling, and planing to the use of it as building material.

Indiana University—Rental \$3.00, plus transportation.

575. LIMESTONE AND MARBLE—1 reel 16mm

Tells the relationship between limestone, chalk, and marble; quarrying, carving, and use of natural limestone; manufacture of artificial limestone; cement; quarrying and use of marble.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

576. QUARRYING—1 reel 35mm

This film pictures quarrying Carrara marble in Italy, granite in Massachusetts, and asbestos near Thetford, Canada.

University of California—Rental 50c, plus transportation.

577. ROCK OF AGES—1 reel 35mm

This picture shows the quarries in Georgia at Stone Mountain, breaking granite, making granite paved blocks, sawing granite, grinding, polishing.

Iowa State College—Rental \$1.50, plus transportation.

578. SAND AND CLAY—1 reel 16mm

Shows the relationship between granite, quartz and sand; artificial and natural sandstone and their uses; making of glass; relationship between feldspar, clay and slate; clay and its uses in the production of brick, tile, and pottery.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

579. STORY OF STONE, THE—1 reel 35mm

This reel shows how stone is secured in Canada.

Rental \$1.50, plus transportation.

580. VERMONT MARBLE INDUSTRY—1 reel 16mm

Quarries, turning, planing and cutting marble; water saw in cutting; polishing; uses in architecture.

American Museum of Natural History—Free loan, to New York City only.

Celotex

581. ANOTHER CELOTEX JOB—1 reel 16mm

This picture shows the application of Celotex in a house, giving complete details as to how it should be applied.

The Celotex Company—Transportation only.

582. FROM BAGASSE TO BUILDER—1 reel 16mm

This film tells the story of the manufacture of Celotex Cane Fibre Insulating Wallboard and shows each step in the manufacture, from the cutting of the cane on the sugar plantations through the entire Celotex Company's mill at Marrero, Louisiana, to the finished product.

The Celotex Company—Transportation only.

Coal

583. ANTHRACITE—2 reels 16mm

This film presents a geological study of anthracite coal followed by various methods employed today in shaft, slope and drift mining.

Edited Pictures System—Rental \$3.00, plus transportation.

584. ANTHRACITE COAL—1 reel 16mm

This film used in conjunction with "Bituminous Coal" gives the child a clear conception of the differences in the production of hard and soft coal. The importance of proper timbering is emphasized and scenes show blasting and removing coal from mine, cleaning and grading.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Iowa—Rental \$1.50, plus transportation.

585. ANTHRACITE COAL—1 reel 16mm 35mm

Shows methods of anthracite mining a century ago and modern efficient methods.

General Electric Co.—Transportation only.
American Museum of Natural History—16mm. Free loan; to New York City Schools only.
Iowa State College—Rental \$1.50, plus transportation.
Indiana University—Rental \$1.00, plus transportation.
University of California—Rental 50c, plus transportation.
University of Missouri—35mm—rental 50c, plus transportation.

586. ANTHRACITE COAL MINING—1 reel 35mm

A pictorial story of anthracite mining showing the life of the miner, the use of machinery in mining, construction of the mines, and methods of marketing coal.

Indiana University—Rental \$1.00, plus transportation.

587. BITUMINOUS COAL—1 reel 16mm

This film may be used alone or with the film on anthracite coal to give a comprehensive knowledge of the methods by which man obtains one of the most important fuels; after scenes of coal mining, the making of coke is portrayed.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

588. BITUMINOUS COAL—1 reel 16mm 35mm

Portrayal of the mining and preparation of bituminous coal with special contrast between primitive and modern methods according to location and type of mine.

General Electric Co.—Transportation only.
American Museum of Natural History—16mm. Free loan to New York City Schools only.
University of Kansas and Colorado—16mm. Rental 50c, plus transportation.
Indiana University—Rental \$1.00, plus transportation.
University of California—Rental 50c, plus transportation.

589. BLACK MAGIC—2 reels 16mm 35mm

This film illustrates how coal was formed and the workings of strip coal mining.

Ray-Bell Films, Inc.—Transportation only.

590. BLACK SUNLIGHT—1 reel 16mm 35mm

This film tells the story of anthracite coal, in animated drawings, and pictures a coal mine in operation.

Bray Film Library—Sale, 10c ft. nitrate, 11c ft. safety; 979 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

591. BURNING QUESTION, THE—2 reels 16mm 35mm

Description of anthracite mining, preparation, and transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

592. COAL MINING— $\frac{1}{2}$ reel 16mm 35mm

This film portrays by photography and animated technical drawings the processes of sub-surface coal mining.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 398 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

593. FORD WAY OF COAL MINING—2 reels 35mm

This film presents industrial and social conditions of a Ford mine.

Ford Motor Company—Transportation only.

594. LONG STEP FORWARD, A—1 reel 16mm 35mm

This film shows lump-producing HERCOAL-F in use underground in a bituminous coal mine of West Virginia.

Hercules Powder Co.—Transportation only.

595. MINING ANTHRACITE COAL—1 reel 16mm

State College of Washington—Rental \$1.00, plus transportation.

596. MINING ANTHRACITE COAL—1 reel 35mm

Eastern coal fields; mine exteriors; tippie; sheds; cars; unloading; breakers; washers; miners; in the pit; blasting; loading; transportation.

Iowa State College—Rental \$1.50, plus transportation.

597. MODERN COAL MINING—2 reels 16mm 35mm

This picture shows how labor-saving machinery, electrically driven, has replaced the methods used in coal mining for hundreds of years.

Goodyear Tire & Rubber Co.—Transportation to be paid by borrower one way.

598. ORIGIN OF COAL & COAL MINING—1 reel 35mm

This film traces the origin of coal mines of today and shows by animated drawings, process of sub-surface mining.

Wholesome Films—Sale.

599. STORY OF A ROCK-DUSTED COAL MINE, THE—2 reels 35mm

Reel 1—Illustrates the fact that in addition to preventing coal-dust explosions rock-dusting increases illumination.

Reel 2—Pictures coal-dust explosion. Dust samples are taken and analyzed, rock-dust is found insufficient and entry is re-dusted.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

600. TURNING KANSAS UPSIDE DOWN— $\frac{1}{2}$ reel 16mm 35mm

This film shows how surface coal is mined, hoisted, loaded and transported in Kansas.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 261 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—16mm. Rental \$1.25, plus transportation; also sale.

601. WHAT IS COAL? OR ORIGIN OF COAL— $\frac{1}{2}$ reel 16mm 35mm

By animated technical drawings this film shows how the coal mines of today were provided by the forests of the Pleistocene Age centuries ago.

Bray Film Library—Sale 10c ft nitrate, 11c ft. safety; 276 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—16mm; $\frac{1}{2}$ reel. Rental \$1.25, plus transportation; also sale.

602. "WILDWOOD", A 100 PER CENT MECHANIZED MINE—3 reels 35mm

Reel 1—Pictures fire boss testing for explosive gas and testing rock for weak places; miners going into mine to work after obtaining electric cap lamps; rock dusting entry to prevent explosion of coal dust; drilling, undercutting and shooting coal.

Reel 2—Shows loading of coal; rotary dump slope conveyor transporting coal to tippie; coal passing over screens, etc.

Reel 3—Views of air-cleaning plant equipped with two 300-ton tables and one 100-ton table; conveyors for carrying cleaned coal to storage bins for sizing and remixing; retail bins; loading coal onto railroad cars; sampling and analysis in laboratory; material and machinery hoist; views showing shops and first aid instructions being given to employees.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Copper

603. FROM MINE TO CONSUMER—THE STORY OF ANACONDA—2 or 5 reels 35mm

Reel 1—Copper Mining, Smelting and Refining. Shows how copper-bearing rock is mined and transported to the smelter where it is crushed and waste material eliminated; reverberatory furnaces and converters; casting "blister copper" into anodes for electrolytic refining.

Reel 2—Making Sheets, Wire, Rods, Tubes. Copper cakes rolled under heavy pressure, and annealed in order to insure correct temper; finishing, trimming, inspection of sheet metal; making of seamless pipe by the Cast Shell, Piercing and Cupping Methods.

5 Reel Film

Reel 1—Copper Mining and Smelting.

Reel 2—Electrolytic Copper Refining and Brass Casting.

Reel 3—Manufacturing Sheets, Rolls and Strips; Seamless Tubes.

Reel 4—How Copper Rods and Wire Are Made.

Reel 5—The Possibilities of Copper and Brass.

American Brass Co.—2 or 5 reels. Transportation only.

Y. M. C. A. Motion Picture Bureau—2 reels. Registration fee \$2.00, plus transportation.

Indiana University—2 reels. Rental \$2.00, plus transportation.

University of California—2 reels. Rental \$1.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

604. MANUFACTURE OF ANACONDA SHEET COPPER—1 or 2 reels 16mm 35mm

This film portrays the manufacture of Anaconda Sheet Copper from the hot rolling of the refinery cakes to final finishing, trimming, polishing and inspecting operations.

American Brass Co.—35mm 2 reels; transportation only. 16mm 1 reel; Transportation only.

Y. M. C. A. Motion Picture Bureau—35mm 2 reels. Registration fee \$2.00, plus transportation.

Indiana University—16mm 1 reel. Rental \$1.00, plus transportation. 35mm 2 reels; Rental \$2.00, plus transportation.

605. MINING AND SMELTING OF COPPER—1 reel 16mm

This reel illustrates open-pit copper mining, loading and shipping ore; concentrating, crushing, washing, filtering, smelting and shipping.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of California—Rental \$1.00, plus transportation. Manual 5c.

606. MINING NICKEL AND COPPER ORE—1 reel 35mm

Shows mining processes in Canada; open pits; miners entering shaft; elevator traffic; underground scenes; pumps; crushers.

Iowa State College—Rental \$1.50, plus transportation.

607. MOUNTAINS OF COPPER—(Sound and Silent.) 1 reel 16mm 35mm

This film depicts the operations in obtaining copper ore from the Utah Copper Company's Bingham Canyon mine, the world's largest open-pit copper mine.

General Electric Co.—Silent; transportation only. Sound, 35mm; transportation only.
University of California—Silent. Rental 50c, plus transportation.

608. SHEET COPPER—1 reel 16mm

This film shows the manufacture of sheet copper and its various uses.

American Museum of Natural History—Free loan; to New York City Schools only.

609. STORY OF COPPER MILLING, THE—2 reels 35mm

Reel 1—Shows mills and smelters in Nevada, Arizona and Utah; crushing of ore; treatment of ore on concentrating tables; leaching of oxidized ores; precipitation; dredging; ammonia leaching, etc.

Reel 2—Pictures ammonia regenerator; concentration by flotation; gyratory crusher; final grinding; use of classifiers; shipment.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

610. STORY OF COPPER MINING, THE—5 reels 35mm

Reel 1—Shows prospecting along Copper River Valley, Alaska, staking out claim and developing on small scale; modern view of same mine developed with present engineering skill and machinery.

Reel 2—Depicts open-pit mining in Nevada and Arizona and smoldering ore; drilling, loading, collecting cars by motor trains, haulage to ore pockets, and dumping ore into pits, etc.

Reel 3—Pictures glacier mining; illustrates use of drag line; shows scenic route of railroad carrying copper concentrates from mill to smelter-bound boats; caving system of mining at Arizona; hauling of ore to rotary car dump, panorama of village with homes of Mexican employees.

Reel 4—Depicts mining of native copper ore in northern Michigan, where timber posts and rock pillars are used; horizontal cut-and-fill method in Arizona and use of wet drilling to prevent dust in Montana.

Reel 5—Illustrates drill stopping; shaft station; handling cars of ore and waste; use of pumps in wet mines, etc., scenes pertaining to health, sanitation, and social welfare.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

611. STORY OF COPPER REFINING, THE—2 reels 35mm

Reel 1—Shows unloading of blister copper from boat and cars at Baltimore refinery; charging into refining furnace with copper scrap; raking slag off surface; tapping furnace; casting into anodes; cooling.

Reel 2—Depicts refining of anodes by electrolysis; insertion of sheets of pure copper between them to act as cathodes; removal of anodes.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only

612. STORY OF COPPER SMELTING, THE—1 reel 35mm

Presents views of smelters in Nevada, Utah, Arizona, and Montana; unloading in blast furnaces and in reverberatory furnaces; charging converters; pouring slag; pouring blister copper; casting anodes; cooling and shipment of castings.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

613. STORY OF THE FABRICATION OF COPPER, THE—2 reels 35mm

Reel 1—Depicts reducing of copper cakes to thin sheets; processes of annealing, pickling, washing, drying, hardening, polishing, bundling, trimming, etc.

Reel 2—Shows rolling of copper rods and drawing wire, making of trolley wire; winding on drums, twisting into cables; testing.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Glass

614. FROM DESERT SANDS TO SPARKLING GLASS CREATIONS—1 reel 16mm

This reel visualizes the making of glass.

University of Texas—Registration fee, plus transportation.

615. GLASS MAGIC—3 reels 16mm 35mm

This film gives a step-by-step explanation of the process of manufacturing optical glass and lenses.

Bausch & Lomb Optical Co.—Transportation only.

University of Kansas & Colorado—16mm. Rental 50c, plus transportation.

616. MAKING OF A STAINED-GLASS WINDOW, THE—3 reels 16mm 35mm

This film shows each step in the making of a stained glass window from making the colored glass to the cementing and cleaning of the finished panel.

Metropolitan Museum of Art—Free loan to New York City Schools only. Rental, 35mm \$5.00, plus transportation; 16mm \$2.50, plus transportation.

617. ROMANCE OF GLASS, THE—1 reel 16mm 35mm

The history of glass from its accidental discovery by Phoenician sailors and the blowing of glass by Egyptians to present day manufacturing processes and uses are shown in this film.

Atlas Educational Film—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of Kansas & Colorado—16mm. Rental 50c, plus transportation.

Indiana University—35mm. Rental \$1.00, plus transportation.

University of California—Rental 50c, plus transportation.

University of Missouri—35mm. Rental 50c, plus transportation; 16mm rental 35c, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

618. WINDOWS OF ART—16mm 35mm

This film gives a study of the development of the stained-glass window and shows how it is made.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 290 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Gold**619. ALASKA—1 reel 16mm**

Various scenes show hydraulic mining, sluicing and dredging for gold; the crushing and stamp mills at Juneau; salmon, seals and whales; native Eskimo life and American settlers.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Missouri—Rental 35c, plus transportation.

620. ASSAYING THE NATION'S GOLD—½ reel 16mm 35mm

Scenes taken inside the U. S. Assay Office in New York show deposits of bullion valued from \$100 to \$100,000,000; weighing and melting old jewelry; paying of depositors.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 233 footage 35mm; to obtain 16mm footage, divide by four-tenths.

621. GOLD AND COAL—1 reel 35mm

This reel illustrates quartz mining and dredging for gold; gold mining region of Idaho; drilling in shafts; the stamp mill; mining surface coal at Wilkesbarre, Pa.

University of California—Rental 50c, plus transportation.

622. GOLD MINING IN ALASKA—½ reel 16mm 35mm

Scenes about a large gold mine in Juneau; how an individual gold mine is operated.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 205 footage 35mm; to obtain 16mm footage, divide by four-tenths.

623. GOLD MINING IN THE HEART OF A GREAT CITY—½ reel 16mm 35mm

This film shows gold bullion made into ingots in the U. S. Assay Office in New York for transportation to Washington.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 250 footage 35mm; to obtain 16mm footage, divide by four-tenths.

624. GOLD PRODUCTION—2 reels 35mm

This film illustrates Canadian gold mining, showing different levels of the mine, safety measures, drilling, blasting, electric locomotives, processes in obtaining gold from ore.

Iowa State College—Rental \$1.50, plus transportation.

625. MONEY-MAKING INDUSTRY, A—1 reel 35mm

This film shows how Canada mints its coinage.

Indiana University—Rental \$1.00, plus transportation.
University of California—Rental \$1.00, plus transportation.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

626. TURNING OUT SILVER BULLETS—1 reel 16mm 35mm

This film shows the making of gold and silver coins in the U. S. Mint in Washington, D. C.

State College of Washington—Registration fee \$1.00, plus transportation.

University of California—35mm. Rental \$1.75, plus transportation.

University of Texas—Rental \$2.00, plus transportation.

Graphite**627. GRAPHITE MINING—1 reel 35mm**

This film shows graphite as it exists in Ontario, Canada, processes of mining, bagging and preparing for shipment.

Iowa State College—Rental \$1.50, plus transportation.

Iron and Steel**628. ARTERIES OF INDUSTRY—4 or 6 reels 35mm**

Reel 1—Traces the history of tubes from hollow bamboo to the modern wrought pipe industry; shows how ore is mined by the open-cut method; pictures action within the blast furnace; Bessemer Process.

Reel 2—Open Hearth Process; the Blooming Mill.

Reel 3—Shows the rolling operations in connection with the manufacture of butt-weld pipe.

Reel 4—Depicts the Lap-Weld process and finishing operations.

Reel 5—Portrays the seamless process of rolling ingots into square blooms, rolling into round bars, piercing, rolling into tubes, sizing and finishing.

Reel 6—Hammer-weld Process—bending a steel plate into tubular form with edges overlapping.

National Tube Co.—35mm 4 reels, transportation only; 35mm 6 reels, transportation only.

Y. M. C. A. Motion Picture Bureau—4 or 6 reels, registration fee \$2.00, plus transportation.

629. FROM PIG IRON TO STEEL—1 reel 16mm

This film pictures a complete study of how pig iron, the product of the blast furnace, is used in the manufacture of all iron and steel products.

Edited Pictures System—Rental \$2.00, plus transportation.

630. IRON AND STEEL—1 reel 35mm

This reel depicts the processes of converting iron to steel—open hearth, casting ingots, rolling mill, bars made into thin rods, and into skeletons of bridges, buildings and ships.

Ford Motor Company—Sale \$12.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

University of Missouri—Rental 50c, plus transportation.

631. IRON AND STEEL SHEETS, THE NEW CONTINUOUS PROCESS OF MAKING—1 reel 16mm 35mm.

This film deals with the manufacturing and rolling of iron and steel sheets from the time the iron ore leaves the mines until it is a finished product.

American Rolling Mill Co.—Transportation only.

632. IRON ORE TO PIG IRON—1 reel 16mm

An illustration of mining ore in the Mesabi range; transportation to Duluth and to Gary, Indiana, where it is smelted and cast.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 University of Kansas and Colorado—Rental \$1.50, plus transportation.
 Indiana University—Rental \$1.00, plus transportation.
 University of California—Rental \$1.00, plus transportation. Manual 5c.
 University of Iowa—Rental \$1.50, plus transportation.

633. MAKING ILLINOIS ALLOY STEEL—2 reels 16mm 35mm

This film features massive cranes, molten metal and seething furnaces.

Ray-Bell Films, Inc.—Transportation only.

634. MAKING IT TOUGH—3 reels 16mm 35mm

Reel 1—Shows charging and tapping of blast furnace and complete cycle of alloy-steel "heat" in open-hearth furnace.

Reel 2—Illustrates casting of ingots of alloy steel; various stages of rolling ingots into bars; charging of electric furnaces.

Reel 3—Depicts pouring of alloy steel from electric furnace; chipping, rolling, and polishing of stainless steel; tests of special properties of alloy steels; uses in industry and in the home.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

635. MAKING OF STEEL, THE—2 reels 35mm

This film gives a complete story of the production of steel and steel products. Spectacular scenes of an open hearth furnace.

International Harvester Co.—Transportation only.
 University of Missouri—Rental \$1.00, plus transportation.
 Iowa State College—Rental \$1.50, plus transportation.
 Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
 University of California—Rental \$1.00, plus transportation.
 University of Texas—Registration fee \$1.00, plus transportation.

636. METAL OF THE AGES—2 ½ reels 16mm

This film illustrates the production of magnetite ore, the refining of ore in blast furnace, and puddling operation in hand puddling furnaces for the making of Genuine Wrought Iron from Pig Iron. The following operations are also shown: rolling muck bar and pipe skelp, the fabrication of pipe, final inspection and shipping.

Reading Iron Company—Transportation only.

637. STORY OF IRON, THE—5 reels 16mm 35mm

Reel 1—Shows old open-pit mining in New York and modern methods and equipment.

Reel 2—Pictures underground mining; top-slicing method, etc.

Reel 3—Sub-level carving method; sublevel stoping; room and pillar method; open stope mining.

Reel 4—Crushing of ore and conveying to sizing screen; sizing, washing, and loading; sampling.

Reel 5—Shows unloaded ore reloaded to blast furnace; mixing and heating of ore; casting of pig iron; loading.

U. S. Bureau of Mines—Transportation only.

638. STORY OF STEEL, THE—6 reels 16mm 35mm**Making Rails, Rods and Plates—1 reel**

This reel pictures the method of making steel rails, rods, and plates and other hot rolled products from ingots.

Making Steel Pipe—1 reel

Heating and rolling ingots into lengths and suitable widths for pipes; beveling edges and rolling skelp to a circular cross-section; reheating to a welding heat and pushing from the furnace to the lap-welding rolls.

Mining and Metallurgy—2 reels

Location of iron ore deposits; transportation to blast furnace by boat and railway; reduction in blast furnace to pig iron or molten iron for further processing in Bessemer open hearth or electric furnaces; pouring of ingots; making of coke in by-product ovens.

Sheets and Tin Plates—1 reel

Shows manufacture of steel sheets and tin plate; illustrates heating and rolling of bars into sheets, trimming, pickling, annealing, cold rolling, and coating with pure tin.

Wire Products—1 reel

This reel shows the rolling of rods to a smaller diameter, exposure to acid and other baths, drawing through tapering holes of smaller diameters until ready for making wire, rope, nails, or other wire products.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of California—35mm. Rental \$2.50 per week, plus transportation.

Indiana University—35mm. Rental \$1.00 per reel, plus transportation

University of Missouri—35mm. Rental 50c, per reel, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

639. STORY OF STEEL, THE—2 reels 16mm 35mm

This film illustrates the basic processes of making steel.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

640. STORY OF STEEL, THE—18 reels 16mm

Reel 1—Mining and transportation of ore.

Reel 2—Reduction of ore into molten metal in blast furnaces.

Reel 3—Bessemer and open-hearth methods of refining steel.

Reel 4—Blooming mill—Bar and Billet Mills.

Reels 5, 6—Lap-weld Tube Manufacture.

Reels 7, 8, 9, 10—Seamless Tube Manufacture.

Reels 11, 12, 13, 14—Manufacture of Sheets.

Reels 15, 16—Manufacture of Butt-Weld Tube and Rigid Steel Electric Conduit.

Reels 17, 18—Rolling of Billets into Bars and Rods.

Youngstown Sheet and Tube Co.—Transportation only.

Iron and Steel—Wire Rope

641. BLUE CENTER—3 reels 35mm

This film tells the story of the manufacture of wire rope.

University of Texas—Registration fee \$1.00, plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

642. ELEVATOR ROPE—2 reels 16mm

This film shows the manufacture of wire rope.

Otis Elevator Co.—Transportation only.

643. MAKING OF AMERICAN WIRE ROPE—2 reels 35mm

A portrayal of all the processes of making wire rope.

American Steel & Wire Co.—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

644. MAKING WIRE ROPE—3 reels 16mm

This film shows the manufacture of wire rope from steel ingots to the finished product and illustrates the many uses of wire rope.

University of California—Rental \$1.50, plus transportation.

645. MANUFACTURE OF SHEET STEEL & TIN PLATE, THE—5 reels 35mm

This film pictures mining ore, blast furnace, Bessemer and Open Hearth processes, making into sheets and plates.

American Sheet & Tin Plate Co.—Transportation only.

646. PIG IRON TO STEEL—1 reel 16mm

This reel traces the progress of the ore through open-hearth furnace, blooming mill, and finishing mill to the finished product—"I" beams and rails.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Indiana University—Rental \$1.00, plus transportation.

University of California—Rental \$1.00, plus transportation. Manual 15c.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

647. STEEL INDUSTRY—SIX PARTS—6 reels 35mm

Part I—1 reel—Mining of ore, open-pit and below surface mining; homes and working conditions in and around Gary, Ind., changing ore to steel.

Part II—1 reel—Operation of blast furnace, Bessemer process, electric process.

Part III—1 reel—Manufacture of rails, plates, wire products—rolling steel beams.

Part IV—1 reel—Manufacture of steel and tin plates.

Part V—1 reel—Manufacture of wire products.

Part VI—1 reel—Making of steel pipe.

Indiana University—Rental \$1.00 each reel, plus transportation.

648. STORY OF STEEL & WIRE PRODUCTS—4 reels 35mm

This film shows the mining of ore by open pit and underground methods, transportation by rail and water, blast furnaces, by-product coke ovens, Bessemer, Open Hearth, electric furnace operations, pouring of steel ingots, the rolling mills, billets, drawing of wire, cleaning, galvanizing and manufacture of all wire products.

American Steel & Wire Co.—Transportation only.
Atlas Educational Film Co.—Transportation only.

Lead**649. PIGS OF LEAD—1 reel 16mm 35mm**

This reel gives views of lead fields in Oklahoma and Missouri, crushing ore, smelting in a Scotch Hearth Furnace, casting into "pigs" for shipping throughout the country.

Eagle-Picher Lead Co.—Free loan.

650. STORY OF LEAD MINING AND MILLING—3 reels 16mm 35mm

Reel 1—Relative production of lead by countries and states; prospecting with diamond drill; driving of tunnels to new ore bodies; miners being lowered into mines; mining and loading.

Reel 2—Hauling of mine cars to shaft by electric locomotive; emptying cars by rotary dumps; hoisting ore to mill; crushing ore; concentration on tables.

Reel 3—Depicts concentrating tables; dewatering and stacking of tailings; regrinding of middlings; filtering and drying; community scenes.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
Douglas D. Rothacker—Transportation only.

651. STORY OF LEAD SMELTING, THE—2 reels 16mm 35mm

Reel 1—Shows smelter at Herculaneum, Missouri; mixing of concentrates and fluxes; sintering; charging of blast furnace; haulage of crude lead to refinery.

Reel 2—Pictures smelter of Federal Lead Co. at Alton, Illinois, and roasting of concentrates in pots to drive off sulphur; removal of impurities from crude lead; running refined lead into molds; transportation by electric buggies to storage piles or railroad cars; views of change houses and baths provided by the company to conserve health of workers.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
University of Missouri—Rental \$1.00, plus transportation. 35mm.
Douglas D. Rothacker—Transportation only.

Leather**652. A FLORIDA ALLIGATOR FARM—½ reel 16mm 35mm**

This film shows raising alligators for their skins from which various leather articles are made.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 200 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.
Kodascope Library—16mm. Rental \$1.25, plus transportation. Also sale.

653. LEATHER, THE STORY OF—2 or 3 reels 16mm 35mm

An old shoemaker tells the story of leather to two school children. The picture traces the hides of a round-up of cattle through all the tanning processes to the finished article.

Tanners' Council of America—2 reels. Transportation only.

University of California—35mm. 3 reels Rental \$1.50, plus transportation; 16mm, 3 reels. Rental \$1.50, plus transportation.

University of Texas—35mm, 3 reels; registration fee \$1.00, plus transportation.

Oil and Gas

654. AMERICAN VESUVIUS, AN (Oil Well)—½ reel 16mm 35mm

This is a record of the burning of a "gusher" oil well in Texas.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 258 footage 35mm; to obtain 16mm footage, divide by four-tenths.

655. CALIFORNIA OIL GARDENS—½ reel 16mm 35mm

This film shows how one of the suburbs of Los Angeles has been transformed into a forest of oil derricks and how many backyard gardens support a small oil business.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 258 footage 35mm, to obtain 16mm footage, divide by four-tenth.

656. CONTROLLING AN OIL GUSHER—½ reel 16mm 35mm

This picture shows how an oil gusher in Texas is controlled.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 202 footage 35mm; to obtain 16mm footage, divide by four-tenths.

657. CRUDE OIL—1 reel 16mm

This film surveys the oil fields of the U. S. and presents details of drilling, securing, transporting and storing the oil.

Edited Pictures System—Rental \$2.00, plus transportation.

658. EAGLE PRODUCTS IN THE OIL INDUSTRY—1 reel 16mm 35mm

This picture portrays the use of Eagle Lead Wool in shutting out bottom water in an oil well, shows how Rope-Socket Metal (lead alloy) binds the wire rope together, preventing an uneven "pull" and how oil is transported through long pipe-lines, etc.

Eagle-Picher Lead Co.—Free loan.

659. EVOLUTION OF THE OIL INDUSTRY, THE—3 reels 16mm 35mm

This film depicts the development of the petroleum industry from the earliest times to the present and emphasizes the importance of petroleum to modern civilization. Some of the scenes include construction of temples by the disciples of Zoroaster over petroleum seepages where the sacred flames were worshipped; burning of petroleum in the sacrificial rites of the Central American Aztecs; use of petroleum for medicinal purposes by the American Indians; pioneer days of the American oil industry showing production and equipment; drilling and operation of modern oil wells; construction of pipe-lines and refineries; transportation by railway tank car and tank ship.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

660. GASOLINE, THE STORY OF—2 or 3 reels 16mm 35mm

Reel 1—Gives data on annual consumption of gasoline in U. S.; panoramic views of oil fields, storage tanks, pumping stations; shows by animated drawings how naphtha, kerosene, gas, oil, etc. are obtained; steps in manufacture and refining of gasoline are given.

Reel 2—Portrays preparation of gasoline for commercial use; testing of finished product; steps in transportation of gasoline from refinery to consumer.

U. S. Bureau of Mines, Pittsburgh, Pa.—2 reels; transportation only.

U. S. Bureau of Mines, Bartlesville—2 reels; transportation only.

U. S. Bureau of Mines, Minneapolis—2 reels; transportation only.

U. S. Bureau of Mines, San Francisco—2 reels; transportation only.

U. S. Bureau of Mines, Seattle—2 reels; transportation only.

Department of Education, Commonwealth of Massachusetts—2 reels—Transportation only.

New Jersey State Museum—Distributed in New Jersey only. 2 reels

Iowa State College—2 reels. Rental \$1.50, plus transportation.

Indiana University—2 reels. Rental \$2.00, plus transportation.

University of Missouri—2 reels, 35mm. Rental \$1.00, plus transportation.

University of Texas—3 reels, 35mm. Registration fee \$1.00, plus transportation.

American Museum of Natural History—3 reels, 16mm. Free loan; to New York City Schools only.

661. LIQUID GOLD OF TEXAS—1 reel 35mm

This film shows drilling and refining oil in Texas and the process of manufacturing by-products.

University of California—Rental \$1.00, plus transportation.

662. MEXICAN OIL FIELDS—1 reel 16mm 35mm

A Burton Holmes Travelog showing how the oil well is bored, struck, tanked, piped and shipped.

Iowa State College—35mm Rental \$1.50; 16mm, \$1.00, plus transportation.

663. MODERN OIL REFINING—1 reel 35mm

This reel shows the modern oil fields and equipment and illustrates the processes of refining.

Iowa State College—Rental \$1.50, plus transportation.

664. OIL IN CALIFORNIA—1 reel 16mm

This film portrays the complete process of boring for oil, tanking, piping and packing for shipment.

Edited Pictures System—Rental \$2.00, plus transportation.

665. OIL INDUSTRY, THE EVOLUTION OF THE—3 reels 16mm

Development of the petroleum industry from the pitch of the Aztecs and Babylonians to the drilling of modern oil wells, pipe lines and refineries that prepare oil for ocean liners and industrial purposes.

American Museum of Natural History—Free loan; to New York City Schools only.

666. OIL TYDINGS—4 reels 16mm 35mm

This film illustrates the production, transportation, refining and marketing of petroleum.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

667. PRODUCING CRUDE OIL—1 reel 16mm

Erection of the derrick; rotary and cable-tool methods of drilling; striking oil; animations show how drilling is done and trace the oil through various strata to a tank; transportation of oil.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 University of Kansas & Colorado—Rental \$1.50, plus transportation.
 University of California—Rental \$1.00, plus transportation. Manual 15c.
 University of Iowa—Rental \$1.50, plus transportation.

668. REFINING CRUDE OIL—1 reel 16mm

All the steps in distilling which are connected with gasoline, kerosene, oil distillate, paraffin wax, fuel oil, lubricating oil, and asphalt are emphasized in this film.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 Indiana University—Rental \$1.00, plus transportation.

669. REFINING THE CRUDE—4 reels 16mm 35mm

Reel 1—Shows a modern oil refinery and the products obtained by refining petroleum.

Reel 2 and 3—Cracking process, refining of lubricating fractions, manufacture of chemicals used in refining process, preparation of wax.

Reel 4—Safety, first aid and fire-fighting methods used in refinery; building of refinery apparatus and shipment of refinery products to consumer.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
 American Museum of Natural History—16mm. Free loan; to New York City Schools only.
 University of Missouri—Rental \$2.00, plus transportation. 35mm.

670. ROMANCE OF OIL—1 reel 16mm 35mm

This film tells the story of oil from the capture of a whale and the processes of rendering whale oil to the study of petroleum as obtained from American oil fields.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 797 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

671. STORY OF A MEXICAN OIL GUSHER, THE—2 reels 35mm

Reel 1—Illustrates discovery of bubbling seepage of petroleum in Mexican jungle; Mexican workmen cutting down heavy jungle growth with machetes and axes; caterpillar tractors bringing material for erection of derrick; excavation for sump hole to receive bailings from well and for storage tanks; spudding in; stages in drilling well 2,040 feet deep.

Reel 2—Scenes in connection with bringing in of Tierra Blance No. 54 well.

U. S. Bureau of Mines, Pittsburgh, Pa.—35mm. Transportation only.

672. STORY OF ROTARY-DRILLED OIL WELL—2 reels 16mm 35mm

Reel 1—Animated drawings illustrate operation of bit in drill hole and mud-laden fluid pumped downward through drill pipe, jetted out against bottom of hole, and returned outside pipe to surface.

Reel 2—Explains lining hole with casing and cementing to exclude water, placing of casing with strainer at bottom to exclude sand from entering casing with oil, precautions against high gas pressure, and boiling out of mud-laden fluid to permit oil to come up through pipe.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

673. STORY OF PETROLEUM, THE—8 reels 35mm

Reel 1—Exploration party mapping oil-bearing structures, prospecting with diamond drill, and using seismograph.

Reel 2—Use of seismograph and of torsion balance; pictures drilling of "Wildcat" well, etc.

Reel 3—Pictures "shooting" of well with nitroglycerin; use of rotary drill; erection of derrick; drilling in California along beaches and among orange groves.

Reel 4—Covers operation of pumping wells and use of pumping equipment.

Reel 5—Shows gathering system carrying oil to refineries and laying of pipe lines, with animated drawings of extent of pipe-line systems in U. S., and views of shipment of crude by tankers, barges, and tank cars.

Reel 6—Treatment of crude oil in refineries.

Reel 7—Refining processes, treatment of natural gas to obtain gasoline, and modern methods of preventing evaporation of oil from tanks.

Reel 8—Gives views of tankers, barges, tank cars, and other carriers of finished products and summarizes total shipments for one year.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

674. THROUGH THE OIL FIELDS OF MEXICO—3 reels 16mm 35mm

Reel 1—Shows general views around oil fields of Mexico.

Reel 2—Pictures modern camp and type of equipment used in Mexico.

Reel 3—Shows shipping of petroleum products by tank car from Vera Cruz to Mexico City; oil tanker leaving Tampico and arriving at Baltimore where oil is gaged, tested, and pumped into pipe line connected with shore tanks.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

675. WORLD'S STRUGGLE FOR OIL, THE—7 reels 35mm

A complete story of the oil industry from early times to the present.

Indiana University—Rental \$1.00 each reel, plus transportation.

Rubber**676. CONQUERING THE JUNGLE—1 reel 16mm 35mm**

This film illustrates the rubber industry in Sumatra—scenes show road into jungle, natives, germination of rubber tree seeds, etc.

Goodyear Tire & Rubber Co.—Transportation one way.

Iowa State College—35mm. Rental \$1.50, plus transportation.

University of California—Rental 50c, plus transportation. 35mm.

University of Missouri—Rental 50c, plus transportation. 35mm.

677. ISLAND OF YESTERDAY, THE—1 reel 16mm 35mm

This film shows the progress of civilization in the island of Sumatra through the development of the rubber industry.

Goodyear Tire & Rubber Co.—Transportation one way.

University of Missouri—Rental 50c, plus transportation. 35mm.

678. ROMANCE O FRUBBER, THE—2 reels 16mm 35mm

This film illustrates securing the raw product in Sumatra and preparing it for its many uses.

- University of Kansas and Colorado—16mm. Rental 50c, plus transportation.
 American Museum of Natural History—16mm. Free loan; to New York City Schools only.
 Y. M. C. A. Motion Picture Bureau—35mm. Rental \$2.00, plus transportation.
 Indiana University—35mm. Rental \$1.00, plus transportation.
 University of California—16mm 35mm. Rental \$1.00, plus transportation.
 University of Texas—35mm. Registration fee \$1.00, plus transportation.

679. RUBBERING IN SELANGOR—1 reel 16mm 35mm

A Burton Holmes Travelog portraying the rubber industry of the Federated Malay States.

- Iowa State College—Rental, 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.
 Indiana University—35mm. Rental \$1.00, plus transportation.
 University of California—35mm. Rental 50c, plus transportation.
 Eastin Feature Films—16mm. Sale \$15.00.

680. STORY OF RUBBER—1 reel 16mm 35mm

The manufacture and use of rubber goods.

- Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

681. STORY OF RUBBER, THE—2 reels 35mm

This film relates the history of rubber from clearing the jungle and cultivating, planting, bud grafting, collecting latex, to transferring to a tank car and further processes in the central factory.

- University of California—Rental \$1.00, plus transportation.

682. WHERE THEY GO RUBBERING—1 reel 16mm 35mm

The spectator is taken on a trip to a placer gold mine in British Guiana and to rubber plantations; modern and primitive methods of producing crude rubber are pictured.

- Iowa State College—Rental, 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.
 Kodascope Library—16mm. Rental \$1.00, plus transportation.

Salt

683. COMMON SALT—1 reel 16mm

This film illustrates salt mining and hydraulic mining.

- Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 University of Iowa—Rental \$1.50, plus transportation.

684. PILLARS OF SALT—1 reel 16mm 35mm

This film—photographed at one of the largest mines and refineries in the U. S.—depicts the processes by which salt is prepared for the market. Many of the scenes were filmed more than a thousand feet underground.

- General Electric Co.—Transportation only.
 Indiana University—Rental \$1.00, plus transportation. 35mm.
 University of California—35mm. Rental 50c, plus transportation.
 Iowa State College—16mm. Rental \$1.00, plus transportation.

685. TAKEN WITH A GRAIN OF SALT—1 reel 35mm

This film pictures rock salt mining.

Ford Motor Company—Transportation only. Sale \$8.00.

Sulphur**686. SULPHUR, STORY OF—2 reels 16mm 35mm**

Mining operations in Texas; loading for shipment; uses of sulphur in fumigating and bleaching, spraying and dusting fruit and vegetation as protection against insects and scale; in rubber and plant industries; and in the manufacture of explosives and sulphuric acid.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

Iowa State College—16mm. Rental \$1.00, plus transportation; 35mm, \$1.50, plus transportation.

Indiana University—Rental \$2.00, plus transportation.

American Museum of Natural History—16mm. Free loan; to New York City only.

University of California—Rental \$1.00, plus transportation.

University of Iowa—Rental \$3.00, plus transportation. Registration fee 70c. 16mm.

University of Missouri—16mm. Rental 70c, plus transportation; 35mm, \$1.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

Douglas D. Rothacker—Transportation only.

U. S. Bureau of Mines—Pittsburgh, transportation only.

U. S. Bureau of Mines—Minneapolis transportation only.

U. S. Bureau of Mines—Salt Lake City transportation only.

U. S. Bureau of Mines—San Francisco transportation only.

U. S. Bureau of Mines—Seattle transportation only.

U. S. Bureau of Mines—Bartlesville transportation only.

New Jersey State Museum—Transportation only.

Commonwealth of Massachusetts, Department of Education—Transportation only.

Tin**687. LAND OF TIN MILLIONAIRES, THE—1 reel 16mm 35mm**

This reel pictures work in an open cast tin mine in the Federated Malay States; Chinese coolie labor; tin bricks; ancestral celebration of a Chinese tin millionaire. A Burton Holmes Travelog.

Iowa State College—16mm. Rental \$1.00, plus transportation; 35mm, \$1.50, plus transportation.

688. TIN—1 reel 16mm

Traces the flow of tin from the mines in the Federated Malay States to the factories in the U. S. A.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Indiana University—Rental \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

Wood—Forestry and Lumbering**689. ABSORBING STORY OF THIRSTY FIBRE—1 reel 35mm**

This film pictures lumbering in the north woods in winter, shows logs converted into wood pulp, paper and paper towels.

University of Missouri—Rental 50c, plus transportation.

690. BALAHOONG ON THE ANARIKA—1 reel 16mm 35mm

This reel pictures logging in the ironwood forests of South America.

Iowa State College—16mm. Rental \$1.00, plus transportation; 35mm, \$1.50, plus transportation.

691. BIG TIMBER—5 reels 35mm

This film gives a story of life in the land of big forests, replete with the romance to be found in the great northwestern lumber camps, culminating in a spectacular forest fire.

Home Film Libraries—Rental, week days 50c per reel. Week-ends 75c per reel. Minimum rental charge \$1.50. Registration fee \$1.00.

692. BIG TREES IN CALIFORNIA—1 reel 35mm

This film is devoted to the big trees in California, picturing the sublime grandeur of these venerable forest trees.

Ford Motor Co.—Sale \$12.00.
Indiana University—Rental \$1.00, plus transportation.

693. BOARD FEET—1 reel 16mm

This film presents all kinds of wood boring insects and shows methods of destroying them.

Edited Pictures System—Rental \$2.00, plus transportation.

694. BUILDING TRUCK TRAILS IN THE NATIONAL FORESTS—1 reel 16mm 35mm

Shows how modern machinery lowers the cost of constructing truck trails in national forests.

U. S. Department of Agriculture—Transportation only. Also sale.

695. CEDAR CAMPS IN CLOUDLAND—1 reel 35mm

Striking scenes of the polemaking industry amid the mountains of the north Pacific coast.

Western Electric Co.—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
Southern Bell Telephone & Telegraph Co.—Transportation only.

696. CONCERNING CROSSARMS—1 reel 35mm

Pictures showing something about the branches of the trees used for telephone poles, most of which come from the Cascade and Olympic Mountains.

Western Electric Co.—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

697. CONQUERING CYPRESS—¼ reel 16mm

Logging in Florida cypress swamps.

Bell & Howell Co.—Sale \$6.00.

698. CUT AND DRIED—1 reel 35mm

Activities of a lumber camp.

Ford Motor Co.—Transportation only. Sale \$8.00.

699. DRIVE, THE—1 reel 16mm 35mm

A picture of Canadian logging operations.

Iowa State College—Rental \$1.50, plus transportation.

700. DRIVE IS ON, THE—1 reel 16mm 35mm

This film shows the great spring "drive" of millions of logs from the forests of the Canadian northwoods to the mills through the river, lake and stream.

Iowa State College—Rental, 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation. Registration fee 35c; 16mm.

Y. M. C. A. Motion Picture Bureau—16mm. Rental \$2.00, plus transportation.

701. DYNAMITE—THE MASTER LUMBERJACK—½ reel 35mm

This short subject shows the efficiency of explosives in clearing way for logging roads through the forests, in topping the spar trees used in dragging out logs, in breaking log jams, in making holes for getting the chokers under the logs to haul them out, etc.

E. I. DuPont de Nemours & Co.—Transportation only.

702. ENEMIES OF THE SOUTHERN PINE—1 reel 35mm

This film shows the agencies which attack the Southern Pine—fire, seed-eating birds, wild pigs, timber vandals, etc. Studies in wood preservation by Bell Telephone Laboratories' engineers are shown by way of contrast.

Western Electric Co.—Transportation only.

Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.

N. Y. Telephone Co.—Free loan to N. Y. State only, through local telephone commercial offices, two weeks' notice.

University of Texas—Registration fee \$1.00, plus transportation.

703. FAR WESTERN CEDAR TRAILS—1 reel 35mm

Tracing the cedar pole industry through Sunset Land.

Western Electric Co.—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

704. FELLING BIG TREES IN GIANT FORESTS OF CALIFORNIA—1 reel 16mm 35mm

A picture of felling forest giants; sawing; down the flume, etc.

Iowa State College—Rental 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.

705. FELLING FOREST GIANTS—1 reel 16mm 35mm

This picture gives a detailed story of the lumber industry in the mountains of North Carolina and in the great forests of the Northwest.

Gordon Ellis Productions—Sale \$35.00, 16mm; 35mm \$110.00.

Iowa State College—16mm. Rental \$1.00, plus transportation.

Edited Pictures System—16mm. Rental \$2.00, plus transportation.

706. FOREST AND WEALTH—1 reel 16mm 35mm

This film tells the story of the forest's contribution to industry, and the comfort and wealth of mankind.

U. S. Department of Agriculture—Transportation only.

Iowa State College—35mm. Rental \$1.50, plus transportation; 16mm \$1.00, plus transportation.

707. FOREST AXIOM, A—1 reel 35mm

This film shows the need for research in connection with wood utilization methods; statistics of annual consumption and forest growth; loss figures for logging lumber manufacture and utilization, etc.

U. S. Department of Agriculture—Transportation only.

708. FOREST, THE CONQUEST OF THE—1 reel 16mm 35mm

This film shows logging operations in the timber tracts of northern Ontario and Quebec.

Canadian Government—Transportation only.

American Museum of Natural History—16mm. Free loan to New York City schools only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

709. FOREST, CONQUEST OF THE—1 reel 16mm 35mm

A comprehensive picture of the lumber industry, its magnitude, and modern methods of operation.

General Electric Co.—Transportation only.

American Museum of Natural History—16mm. Free loan to New York City schools only.

University of Iowa—Rental \$1.50, plus transportation. Registration fee 50c.

University of Kansas & Colorado—Rental 50c, plus transportation.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee, \$2.00 plus transportation.

University of California—Rental 50c, plus transportation.

710. FROM TREE TO TRADE—2 ½ reels 35mm

This film tells the complete story of manufacturing lumber with special emphasis on dry kiln, creosoting and milling operations.

Long Bell Lumber Co.—Transportation only.

Allen Studios—Transportation only.

711. FROM TREES TO HOME—1 reel 16mm 35mm

This film, photographed in the pine timber land of the South, depicts all the processes of producing lumber for building homes.

J. I. Case Company—Transportation only.

712. FUTURE FOREST GIANTS—1 reel 16mm 35mm

This reel shows the planting of the seed and the development of the seedlings to the mature timber crop.

U. S. Department of Agriculture—Transportation only. Also sale.

713. HARVESTING UNCLE SAM'S TIMBER—2 reels 16mm 35mm

A portrayal of the system used in harvesting timber.

U. S. Department of Agriculture—Transportation only. Also sale.

714. INTO THE BIG CYPRESS—1 reel 35mm

Ford Motor Company—Transportation only. Sale \$8.00.

715. LAND OF SUNSHINE—(Sound-On-Film)—1 reel 35mm

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

716. LAND OF THE WHITE CEDAR, THE—1 reel 35mm

A story of life among the cedarcutters of the Canadian border of Minnesota.

Western Electric Co.—Transportation only.

University of Missouri—Rental 50c, plus transportation.

N. Y. Telephone Co.—Free loan to New York State only, through local telephone commercial offices, two weeks' notice.

717. LOGGING AND MANUFACTURING OF CYPRESS—1 reel 35mm

Southern Cypress Mfg. Assn.—Free loan.

718. LOG TO LUMBER—3 reels 35mm

Each reel is complete. Reel three may be omitted. This film shows logging operations in the southern pine region, gives mill operations and conditions in the mill towns.

N. Y. State College of Forestry—Transportation only.

719. LUMBER INDUSTRY—1 reel 35mm

Ford Motor Company—Transportation only. Sale \$12.00.

720. LUMBERING IN BRITISH COLUMBIA—1 reel 16mm 35mm

Lumbering operations, from the felling of giant trees to export shipping of the finished product, are presented in this film.

Canadian Government—Transportation only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

American Museum of Natural History—16mm. Free loan to New York City schools only.

University of Kansas and Colorado—Rental 50c, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

721. LUMBERING IN EASTERN CANADA—1 reel 35mm

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

722. LUMBERING IN THE NORTH WOODS—1 reel 16mm 35mm

Scenes in a lumber camp; felling of trees; log driving; milling or cutting logs into lumber; lumber production.

Iowa State College—Rental 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.

Indiana University—35mm. Rental \$1.00, plus transportation

723. LUMBERING IN THE PACIFIC NORTHWEST—1 reel 16mm

This reel pictures laying a railroad and dragging logs to it by steel cables, sawing the logs into lumber, drying in tunnel kilns, planing, sorting, and shipping.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Indiana University—Rental \$1.00, plus transportation.

University of California—Rental \$1.00, plus transportation. Manual 15c

724. LUMBERING IN THE PACIFIC NORTHWEST—2 or 4 reels 35mm

This film deals with the logging of the giant Douglas Fir Trees in the Cascade Mountain Region and visualizes the complete story of the manufacture of lumber from the felling of trees, dragging and loading logs by means of an electric skidder and loader to the planing mill and ship dock.

Long-Bell Lumber Co.—Transportation only.

Allen Studios—Transportation only.

725. LUMBERING—MISCELLANEOUS—1 reel 35mm

This film shows the processes connected with lumbering, some of the scenes including dumping logs into pond, boats towing logs to sawmill, a new method of removing tree stumps in cut over area, tree surgery, balso wood, etc.

University of California—Rental 50c, plus transportation.

726. LUMBERJACKS OF THE MAINE WOODS, THE—½ reel 16mm 35mm

This film portrays logging, breaking log jams, traveling downstream on log raft, in the Maine woods.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 355 footage 35mm; to obtain 16mm footage, divide by four-tenths.

727. MAN'S TRIUMPH OVER THE MIGHTY FOREST—1 reel 35mm

This film visualizes life in a lumber camp and shows scenes of log floating.

University of Texas—Rental \$2.00, plus transportation.
State College of Washington—Rental \$1.00, plus transportation
University of California—Rental \$2.00, plus transportation.

728. MARKING TIMBER—2 reels 16mm 35mm

Shows the methods used by the government in marking timber for cutting.

U. S. Department of Agriculture—Transportation only. Also sale.

729. MISSION OF THE PINES, THE—3 reels 35mm

Logging; sawing, sorting, and shipping lumber; building a home; care used to prevent forest fires.

University of Missouri—Rental \$1.50, plus transportation.

730. NEW WOODS FOR OLD—2 reels 16mm 35mm

These scenes were photographed in Maryland and cover marketing, marking and thinning in hardwoods and the marketing of mature trees from the hardwood stand.

U. S. Department of Agriculture—Transportation only. Also sale.

731. OUT OF THE DEEP WOODS OF DIXIE—1 reel 35mm

Shows cutting the Southern pine trees under forestry regulations and converting them into telephone poles and cross-arm timber.

Western Electric Co.—Transportation only. Also sale.
Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
Indiana University—Rental \$1.00, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.
New York Telephone Co.—Transportation to New York State only through local telephone commercial offices, two weeks' notice.

732. OUT OF THE FOREST—1 reel 16mm

This film portrays life in the logging camp and on the river where a jam is dynamited to send the logs to the mill.

Edited Pictures System—Rental \$2.00, plus transportation.

733. OUT OF THE WOODS—1 reel 35mm

This film depicts logging operations in Canada, shows scenes in the lumber camps, railroad and river transportation.

Ford Motor Company—Transportation only. Sale \$8.00.

734. OUT OF THE WOODS—1 reel 16mm 35mm

This film pictures the felling of trees, log hauling, log drive, jams, and shows scenes at the saw mill.

Iowa State College—Rental, 35mm \$1.50, plus transportation; 16mm \$1.00. plus transportation.

735. PILLARS OF THE SKY—1 reel 35mm

Gathering and milling of the raw product for crossarms and conduits. One episode shows the "highlead" cutter sawing the top out of a Mt. Rainier fir giant 200 feet above the ground.

Western Electric Co.—Transportation only.
Southern Bell Tel. & Tel. Co.—Distributed in that territory only.
Indiana University—Rental \$1.00, plus transportation

736. PINES—FROM SEED TO SAWMILL—2 reels 16mm 35mm

This film shows the operation in the timber industry from the fall of the seed, through the growth of the tree, and into the sawmill.

U. S. Department of Agriculture—Transportation only. Also sale.

737. POLE-PUSHERS OF PUGET SOUND—1 reel 35mm

Incidents in the lives of the pole-pushers of the northwestern cedar industry.

Western Electric Co.—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
Southern Bell Tel. & Tel. Co.—Distributed in that territory only.
N. Y. Telephone Co.—Free to New York State only through local telephone commercial offices.

738. RED ENEMY—2 reels 16mm 35mm

The story of a tree which has stood the test of time only to be destroyed by a careless camper. Scenes of lumbering, paper mills, and other industries related to National Forests, mountain scenery, forest fire fighting.

U. S. Department of Agriculture—Transportation only. Also sale.

739. SELECTIVE LOGGING—1 reel 16mm 35mm

This is a story of logging and milling operations from forest to finished lumber, based on studies by the Forest Service in Northern hardwoods of the Lake States.

U. S. Department of Agriculture—Transportation only. Also sale.

740. STORY OF A STICK—1 reel 16mm 35mm

A grandfather tells his grandson the story of wood, explaining how trees are felled and cut to length, and how the logs are sawed into lumber.

Iowa State College—16 or 35mm; transportation only.
University of Missouri—35mm. Rental 50c, plus transportation.
University of Texas—35mm. Registration fee \$1.00, plus transportation.

741. TAKING TO THE TALL TIMBERS—1 reel 35mm

This reel picturizes lumbering and logging on Vancouver Island.

University of California—Rental 50c, plus transportation.
University of Missouri—Rental 50c, plus transportation.
State College of Washington—Registration fee \$1.00.

742. TEAK LOGGING WITH ELEPHANTS IN SIAM—1 reel 35mm

This is a Burton Holmes Release showing elephants a-pilin' teak.

Eastin Feature Films—Sale \$5.00.

743. TERMITES—1 reel 16mm

This film shows parts of the life history of subterranean termites, rotten-wood termites, sound-wood termites, as well as ways of protection against them.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

744. TIMBER-R-R—1 reel 16mm 35m

A pictorial version of timber growing and logging practice in California pine region.

U. S. Department of Agriculture—Transportation only. Also sale.

745. TIMBER INDUSTRY, WESTERN AUSTRALIA, TASMANIA—1 reel 35mm

This reel depicts lumbering operations in the famous hardwood forests of Western Australia and shows interesting scenes in Tasmania.

University of California.—Rental 50c, plus transportation.

746. TRAIL OF THE LONGLEAF PINE, THE—1 reel 35mm

A journey through the yellow pine forests of the far South, showing how these trees are used for telephone timber.

Western Electric Co.—Transportation only. Also sale.

Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation only.

N. Y. Telephone Co.—Transportation to New York State only, through local telephone commercial offices.

747. TREATING A TREE—16mm 35mm

This film shows how partly decayed trees may be saved by tree surgery.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 180 footage 35mm; to obtain 16mm footage, divide by four-tenths.

748. TREATING THE TALL TIMBERS—1 reel 35mm

A film showing the operations required to convert the giants of the forest into useful adjuncts of civilization.

Western Electric Co.—Transportation only. Also sale.

Southern Bell Tel. & Tel. Co.—Distributed in that territory only.

N. Y. Telephone Co.—Transportation to New York State only through local telephone commercial offices.

749. TWO GENERATIONS—4 reels 16mm 35mm

Prepared for use in the hardwood sections of the South and shows the handling and utilization of woodlands.

U. S. Department of Agriculture—Transportation only. Also sale.

750. WHAT THE FOREST MEANS TO YOU—2 reels 16mm 35mm

This picture shows how the forest supplies lumber for the nation's needs and employment for thriving communities and how through proper lumbering methods, the forest will keep the mills running perpetually.

U. S. Department of Agriculture—Transportation only. Also sale.

751. WHEN TREES TALK—1 reel 35mm

This reel illustrates the making of paper from pulp, showing a modern pulp mill, cutting and hauling logs, washing pulp logs, chipping, bleaching pulp, huge paper machines, etc.

University of California—Rental 50c, plus transportation.

752. WILDWOOD WORKERS—1 reel 35mm

A picture of the activities of sawyers, axemen, teamsters and bayou boatmen in the pine forests bordering the Gulf of Mexico.

Western Electric Co.—Transportation only. Also sale.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

N. Y. Telephone Co.—Free to New York State only through local telephone commercial offices.

753. WINTER LOGGING IN THE WHITE MOUNTAINS—1 reel 35mm

An illustration of the utilization of timber in the White Mountain National Forest, N. H.

U. S. Department of Agriculture—Transportation only.

Indiana University—Rental \$1.00, plus transportation.

754. WOOD WISDOM—1 reel 35mm

Shows the structure of various kinds of wood; the qualities of "hardwood" and "softwood"; cell building in growing trees; development of decay through growth of fungi in the pores of the wood.

U. S. Department of Agriculture—Transportation only. Also sale.

Wood—Manufacturing

755. BEHIND THE P. & H. BRAND—2 reels 16mm 35mm

This film depicts pole treating to assure long life.

Ray-Bell Films, Inc.—Transportation only.

756. CREOSOTING—1 reel 35mm

This film pictures a southern creosoting plant, pole, tie and wood block treating, mill yards, treating tanks, paving streets with wood blocks.

N. Y. State College of Forestry—Transportation only.

757. FURNITURE MAKING—1 reel 16mm

The first unit of this film points out that every important period in history has developed a distinctive type of furniture; the second unit demonstrates the operation of a multiple-carving machine, a spindle, automatic lathes, etc.; unit three pictures actual making of fine furniture and upholstery.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

758. HASTING ASPHALT BLOCKS—1 reel 16mm 35mm

Depicts the process of manufacture and the construction of pavements of asphalt blocks.

Hastings Pavement Co.—Transportation only.

759. HOOPING-UP—1 reel 35mm

This reel pictures barrel making and cooperage industries, tight cooperage, manufacture and assembly.

N. Y. State College of Forestry—Transportation only.

760. MEETING THE DEMAND FOR BARREL PARTS— $\frac{1}{2}$ reel 35mm 16mm

This film illustrates the production of parts for making barrels, shows cutting the timber, transportation of logs, cutting blanks for barrel-heads, etc.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 413 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—Rental \$1.25, plus transportation. Also sale. 16mm.

761. OIL—THE WOOD PRESERVER—1 reel 35mm

Shows the disposal of a cargo of creosote oil and forcing it into the yellow pine poles which are a part of the telephone system.

Western Electric Co.—Transportation only.

Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

N. Y. Telephone Co.—Free to New York State only, through local telephone commercial offices, two weeks' notice.

762. ROSIN FOR THE WORLD—1 reel 16mm

This film shows how rosin is obtained.

Bell & Howell Co.—Sale \$6.00.

763. SERPENT'S TOOTH, THE—1 reel 16mm 35mm

A portrayal of the origin and development of the hand saw.

E. C. Atkins & Co.—Transportation one way.

University of California—35mm. Rental 50c, plus transportation. 35mm.

University of Texas—Registration \$1.00, plus transportation. 35mm.

MECHANICAL DRAWING

764. AN INTRODUCTION TO MECHANICAL DRAWING—1 reel 16mm

A brief correlation of drafting to industry; study of drafting showing use of instruments.

Floyd W. Cocking—Sale.

MECHANICAL OPERATING

765. ELEVATOR INSTALLATION IN THE ELBE TUNNEL, HAMBURG, GERMANY—1 reel 16mm

This reel shows in detail the operation and use of the elevators at both ends of this tunnel under the Elbe River. It is an unusual installation in that it is the only tunnel where the sole means of access is by elevators. Thousands of people and vehicles use these elevators daily.

Otis Elevator Company—Transportation only.

766. ELEVATOR, OUR MECHANICAL SERVANT, THE—½ reel 16mm 35mm

Animated technical drawings and actual photography explaining the principle of the hydraulic elevator.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 393 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—16mm. Rental \$1.25, plus transportation. Also sale.

767. ESCALATOR INSTALLATION AT PORTE DES LILAS STATION, PARIS UNDERGROUND RAILWAY—1 reel 16mm.

This film shows in detail the operation of the steps and driving machine and illustrates one of the uses of Otis escalators in foreign countries.

Otis Elevator Co.—Transportation only.

768. MACHINE THAT THINKS, A—1 reel 16mm 35mm

This film presents a history of bookkeeping with highly amusing cartoons, and shows actual photography of the modern adding machines.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 540 footage 35mm; to obtain 16mm footage, divide by four-tenths.

769. MACHINE THAT THINKS, THE—2 reels 35mm

In cartoons and photography, this film illustrates the history of bookkeeping from the time of chiseling records on stone to the present time.

Burroughs Adding Machine Co.—Transportation only.

770. NIAGARA FALLS—1 reel 16mm 35mm

This reel pictures water power developments as well as geological history.

Ford Motor Company—Sale, 16mm \$20.00; 35mm \$50.00.

Iowa State College — Rental, 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.

University of Missouri—35mm. Rental 50c, plus transportation.

771. RAISING THE S 51—2 reels 16mm

Raising this U. S. submarine established an entirely new engineering method in the salvaging of sunken ships.

Edited Pictures System—Rental \$3.00, plus transportation.

772. SPEEDING UP—2 reels 16mm

This film shows the Micro-Leveling operation of handling goods and goes into detail regarding the use of operator-less elevators for warehouses.

Otis Elevator Co.—Transportation only.

773. STEAM—4 reels 35mm

Reel 1—Opens with Hero's engine, the first steam generator, showing the engine at rest and, later, in action. This is followed by a longitudinal section of a Babcock & Wilcox cross drum boiler complete with mechanical stoker, forced draft blower, air pre-heater and super-heater assembled and in detail, boiler in animated form, etc.

The remaining three reels of the film show the manufacture of water-tube boilers in the plant.

Babcock & Wilcox Co.—Transportation only.

774. STEAM POWER—1 reel 16mm

This film illustrates the evolution of the steam engine and shows various types of engines, boilers, and the modern locomotive.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of California—Rental \$1.00, plus transportation.

775. STEAM TURBINE, THE — (Sound) —2 reels 35mm

A popular description of the steam turbine with a demonstration of the operation of a single-stage turbine wheel by means of steam and air jets.

General Electric Co.—Transportation only.

776. TURBINE TUG "H. B. WILLIAMS"—1 reel 35mm

This picture shows the launching of this tug and the tug in operation. This is the first turbine tug on the Great Lakes.

Great Lakes Dredge & Dock Co.—Transportation only.

777. WATER AS POWER—1 reel 35mm

This film shows streams, old mills, modern power plants and gives data on the status of water power today.

Iowa State College—Rental \$1.50, plus transportation.

MISCELLANEOUS MANUFACTURING

778. AGE OF SPEED, THE—4 reels 35mm

In relating the story of grinding this picture takes the spectator into the auto industry, the steel and iron, lumber, and paper industries, modern newspaper plant and into the railroad field. Comparisons are made between previous primitive and modern present day methods. There are beautiful views of Niagara Falls, the hydro-electric power plants and scenes depicting the development of electric furnace abrasives.

Norton Company—Transportation only.

779. AMERICAN MATCHMAKING—½ reel 16mm 35mm

This film shows the entire process of match manufacture from cutting and hauling logs to testing finished matches.

Bray Film Library—Sale 10c ft. nitrate; 11c ft. safety; 312 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

780. BAKELITE RESINOID, THE STORY OF,—2 reels 16mm 35mm

This film portrays the manufacture and application of bakelite material.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
University of Kansas & Colorado—35mm. Rental 50c, plus transportation.
Indiana University—35mm. Rental \$2.00, plus transportation.
University of California—35mm. Rental \$1.00, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.
Douglas D. Rothacker—Transportation only.

781. BETTER WAY, THE—(Sound)—5 reels 16 mm 35mm

This film pictures manufacturing methods and is a trip through the Kelvinator Refrigerator Plant.

Metropolitan Motion Picture Co.—Rental; also sale.

782. BUILDING QUALITY INTO CREAM SEPARATORS—2 reels 35mm

This film shows all the processes of manufacturing ball-bearing cream separators in a modern plant.

International Harvester Company—Transportation only.
Chicago Film Laboratory—Transportation only.
Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

783. DISCOVERY OF THE SHOT TOWER, THE—½ reel 16mm 35mm

The old-time methods of punching shot from sheet lead, and molding, contrasted with the present way of precipitating molten lead from a tall tower, to water vats beneath.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 142 footage 35mm; to obtain 16mm footage, divide by four-tenths.

784. FIGHTING THE CAR SHORTAGE—1 reel 35mm

This film illustrates the making and assembling of railroad cars.

University of Texas—Registration fee \$1.00, plus transportation.

785. FOR THE FEET OF A NATION—1 reel 16mm 35mm

This film shows how Armstrong Linoleum is manufactured.

Armstrong Cork Company—Transportation only.

786. GLIMPSES OF A REMINGTON FACTORY—1 reel 16mm 35mm

A picture of the manufacture and assembly of a Remington typewriter, showing the number of parts required and the care necessary in machining and assembling a writing machine.

Remington Rand, Inc.—Transportation only.

787. HARD AS DIAMONDS—½ reel 16mm 35mm

Producing carborundum from coke, sand, sawdust and salt. Materials subjected to 6,000 degrees Fahrenheit, and the crystallized residue molded into wheels, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 257 footage 35mm; to obtain 16mm footage, divide by four-tenths.

788. HOW A LEAD PENCIL IS MADE—1 reel 16mm 35mm

This reel pictures the detailed processes involved in preparing pencils for market. There are scenes in the graphite mines near Fort Ticonderoga.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

789. INSULATION FILM—1 reel 16mm 35mm.

This film portrays the production of insulation materials.

Armstrong Cork & Insulation Co.—Free.

790. IVORY, CELLULOID. DIAMOND CUTTING—1 reel 35mm

This film illustrates cutting elephant tusks into ornaments with jig-saw; making buttons, buckles from celluloid; cutting and polishing diamonds.

University of California—Rental 50c, plus transportation.

791. JEWELS OF INDUSTRY, THE—2 reels 16mm 35mm

A story of the making of modern abrasives and their uses.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

792. JUST "WRITE"—1 reel 35mm

Making fountain pens.

Ford Motor Co.—Transportation only. Also sale. \$8.00.

793. LOCOMOTIVE SUPERHEATER, MANUFACTURE AND REPAIR, THE—3 reels 16mm

This film shows the technical details of manufacturing superheaters for locomotives and re-manufacturing old units so that they are in a condition equal to new units.

Superheater Co.—Transportation only.

794. MAGIC JAR, THE—1 reel 16mm 35mm

This reel pictures the manufacture of fruit jars and deals with methods of canning.

University of California—Rental 50c, plus transportation. 16mm.

Indiana University—16mm. Rental \$1.00, plus transportation.

University of Missouri—35mm, rental 50c, plus transportation; 16mm 35c, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

795. MAKING WEAR-EVER COOKING UTENSILS—1 reel 16mm 35mm

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

796. MANUFACTURE AND USE OF CASTERS—2 reels 16mm

This film illustrates the uses of casters and the necessity of using casters of high quality and workmanship and shows how casters are manufactured, the testing and application of casters, which consists mainly of punch and die work, and automatic machine work.

Darnell Corp. Ltd.—Free.

797. MANUFACTURED ABRASIVES—3reels 35mm

Shows making abrasive wheels, inspection and testing of wheels, use of manufactured abrasives in various industries.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
Iowa State College—Rental \$2.00, plus transportation.

798. MANUFACTURING WILLOW HAMPERS—½ reel 35mm

This film shows how willow hampers are manufactured in England.

Wholesome Films Service—Sale \$10.00.

799. METEOR, THE—2 reels 16mm 35mm

The story of the origin and development of the cross cut saw from the Bronze Age to the present day.

E. C. Atkins & Co.—Transportation one way.
University of California—35mm. Rental \$1.00, plus transportation.

800. MIRACLE OF THE LOCOMOTIVE, THE—1 reel 35mm

This film shows the history and manufacture of the locomotive.

University of Missouri—Rental 50c, plus transportation.

801. MODERN INDUSTRIAL METHODS—4 reels 35mm

This film is arranged so that each reel may be shown separately or in connection with another. It covers the manufacture of sewing machines from the sources of raw material to the finished products.

Reel 1—Lumbering—from the felling of trees to the finished boards.

Reel 2—Cabinet Making—the manufacture of veneer and parts and the assembly of a piece of fine furniture.

Reel 3—Mass Production of Interchangeable Metal Parts—The manufacture of cast iron and steel parts including foundry scenes and ingenious automatic machines performing multiple operations.

Reel 4—Machine Assembly and Testing—showing “straight line” methods of assembly and testing, packing and shipping.

Singer Sewing Machine Company—Transportation only.

802. MODERN TREND IN TURBINE DESIGN, THE—(Sound)—2 reels 35mm

This film describes the factors and influences entering into the design of modern steam turbines.

General Electric Co.—Transportation only.

803. MONEL METAL, THE STORY OF—2 reels 16mm 35mm

Illustrates the production of monel metal and its uses in industry and the home.

International Nickel Company—Transportation only.

University of Kansas & Colorado—16mm. Rental 50c, plus transportation.

University of California—Rental \$1.00, plus transportation.

Douglas D. Rothacker—Transportation only.

804. ROMANCE OF THE REAPER, THE—(Sound)—Also silent 35mm. 5 reels 16mm 35mm

This picture, filmed at the old McCormick homestead, tells the story of the invention of the first successful grain-reaping machine in 1831 by Cyrus Hall McCormick—the evolution of grain-harvesting machines since that time is shown. Classical musical score.

International Harvester Co.—Transportation only.

Iowa State College—Rental, 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.

Y. M. C. A. Motion Picture Bureau—35mm. Registration fee \$2.00, plus transportation.

805. SERVEL—1 reel 35mm

A trip through the Serval machine shops, showing close-ups of the different processes; unloading pig iron, with magnetic cars, making cores for casting, pouring molten metal, etc.

University of Texas—Registration fee \$1.00, plus transportation.

806. SOME OF UNCLE SAM'S WORKSHOPS—1 reel 35mm

Ford Motor Co.—Transportation only. Also sale \$12.00.

807. STORY OF ABRASIVES, THE—4 reels 35mm

This film shows the generation of power at Niagara Falls, its utilization for the production of carborundum (silicide of carbon) and aloxite (aluminum sesquioxide) and the industrial operations performed with the aid of abrasives.

University of Texas—Registration fee \$1.00, plus transportation.

808. STORY OF REFRIGERATION, THE—2 reels 35mm

This film traces the history of refrigeration from the early Egyptians to the present, illustrating the manufacture of modern refrigerators.

University of California—Rental \$1.00, plus transportation.

809. STORY OF THE LUCIFER MATCH—1 reel 35mm

This reel pictures the Chancel match of 1805, the Congreve match of 1827, Chometean match of 1830, modern type match of 1833, the safety match of 1852 and depicts the manufacture of safety and fancy matches.

University of California—Rental \$1.00, plus transportation.

810. TRIP THROUGH FILMLAND, A—2 reels 16mm 35mm

This film shows the details of film making from the cotton (which forms the base) to the sensitized film on which pictures are made.

Defrenes & Co.—Transportation only.

University of Texas—35mm. Registration fee \$1.00, plus transportation.



PAINTING AND DECORATING

Interior Decoration

811. BACKGROUND, THE—1 reel 35mm

This film portrays the manufacture of Sanitas wall-paper, picturing many beautiful patterns.

University of Texas—Registration fee \$1.00, plus transportation.

812. HOME IS WHAT YOU MAKE IT—3 reels 16mm 35mm

This film deals with exterior painting and repairs, adjustments on the interior and landscaping.

Iowa State College—Rental, 35mm \$2.00, plus transportation; 16mm \$1.50, plus transportation.

U. S. Department of Agriculture—Transportation only.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

813. LAYING FILM—1 reel 16mm 35mm

This film shows how Armstrong Linoleum floors should be laid.

Armstrong Cork Co.—Free.

814. WALLPAPER THE BEAUTIFUL—2 reels 16mm 35mm

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Manufacturing of Materials

815. DOINGS OF TURP AND TINE—1 reel 35mm

The story of turpentine manufacture as discussed by two animated characters, Turp and Tine. Shows first how gum turpentine is made and then steam-distilled wood turpentine.

Iowa State College—Rental \$1.50, plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of California—Rental 50c, plus transportation.

University of Missouri—Rental 50c, plus transportation.

816. DUAL PURPOSE TREES—1 reel 16mm 35mm

This reel shows the importance of the turpentine industry and its dependence on the practice of forestry.

U. S. Department of Agriculture—Transportation only. Also sale.

817. FROM PIGS TO PAINT—2 reels 16mm 35mm

The story of Dutch Boy White Lead.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

818. LEAD—1 reel 16mm

This film depicts the mining and smelting of lead, shows its use for roof flashings, plumbing, electric cables, storage batteries, etc., and covers fully the making of white lead paint.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Iowa—Rental \$1.50, plus transportation.

819. STORY OF EAGLE WHITE LEAD—2 reels 16mm 35mm

This film depicts the "Old Dutch Process" of corrosion through the use of weak acetic acid and spent tan bark. It is pointed out that a white lead paint film expands and contracts with temperature changes, proving itself an effective "all weather" paint.

Eagle-Picher Lead Co.—Free.

820. STORY OF NITROCELLULOSE, THE—1 reel 16mm 35mm

This film depicts the sources, manufacture, and uses of nitrocellulose, the versatile product which is the basis of present-day lacquers, celluloid, and pyroxylin materials.

Hercules Powder Co.—Transportation only.

821. TURNING WASTE INTO DOLLARS—½ reel 16mm 35mm

This film shows how tree stumps are used for the manufacture of turpentine.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 283 footage 35mm; to obtain 16mm footage, divide by four-tenths.

PRINTING

Bookmaking

822. ART IN BOOKBINDING— $\frac{1}{2}$ reel 16mm 35mm

This film demonstrates bookbinding including edge gilding.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 343 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

823. BOOKS—FROM MANUSCRIPT TO CLASSROOM—1 reel 16mm

A schoolteacher visits the publishing company to see how the text-books are made. The text is taken from the manuscript through the typesetting process to the huge presses and the printed material is folded, gathered, bound, trimmed, covered, shaped, packed, shipped and handed to the student in book form.

John C. Winston Co.—Transportation only.
University of Kansas & Colorado—Rental 50c.
University of California—Rental 50c, plus transportation.

824. HISTORY OF THE BOOK TREASURES OF A GREAT CITY— $\frac{1}{2}$ reel 16mm 35mm

This film shows literary antiquities from the Chaldean Flood Tablet on through to superb illuminated manuscripts of the middle ages and rare special editions of today.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 320 footage 35mm; to obtain 16mm footage, divide by four-tenths.

825. MAKING A BOOK—1 reel 16mm

This film illustrates the process of making a book beginning with the manufacture of paper and following with editing of manuscripts, hand and machine composition, electrotyping the text, making halftones to printing, folding, cutting and assembling, sewing of books and trimming, before sending to the binder.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

826. YOUR BOOK—2 reels 35mm

An historical resume of books, showing how the Babylonians, early Egyptians, and Arabians made their books from papyrus, palm leaves, leather, and parchment; early and rare books; modern processes in the manufacture of books.

University of California—Rental \$1.00, plus transportation.

827. YOUR TELEPHONE ADDRESS—1 reel 35mm

This film shows how the telephone directory is compiled, printed and distributed in the metropolitan area.

N. Y. Telephone Co.—Free to N. Y. State only; through local telephone commercial offices, two weeks' notice.
Southern Bell Telephone & Telegraph Co.—Transportation only. Distributed in that territory only.

Newspaper

828. DAY WITH THE SUN, A—3 reels 16mm 35mm

A picture of the newspaper industry in general and the making of the NEW YORK SUN in particular.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

829. FROM FOREST TO FIRESIDE—1 reel 35mm

This reel pictures the making of a large magazine.

Indiana University—Rental \$1.00, plus transportation.

830. FROM TREE TO NEWSPAPER—1 reel 16mm

This film shows all the processes of making paper from trees; printing and distributing a large metropolitan newspaper.

American Museum of Natural History—Free to New York City only.

Indiana University—Rental \$1.00, plus transportation.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

831. FROM TREES TO TRIBUNES—3 reels 35mm

This film shows how paper is made and how a newspaper is put together.

Chicago Tribune—Free to Chicago schools, to others transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Iowa State College—Rental \$2.00, plus transportation.

832. JOURNALIST, THE—1 reel 16mm

This reel illustrates the work of reporters, correspondents, and editors and the organization of staff and office in connection with a newspaper, magazine, and book.

University of Texas—Rental \$3.50 per day; \$5.00-2 days, plus transportation.

Edited Pictures System—Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation. Lesson 5c.

University of Iowa—Rental \$1.50, plus transportation.

833. MAKING OF A GREAT NEWSPAPER, THE—3 reels 35mm

This film shows step by step the making of the "New York Times"—scenes include the news room in action, sports news staff on a busy night, compositors setting type, the fastest newspaper press in the world in action, etching rotogravure pictures on copper cylinders, etc.

New York Times—Transportation only.

834. MAKING A MODERN NEWSPAPER—4 reels 35mm

Shows the Detroit News of 1873, also the new buildings of 1817 with the modern printing presses, linotype machines, and all that goes to make up a big city paper.

University of Texas—Registration fee \$1.00, plus transportation.

835. NEWSPAPER IN THE MAKING, A—½ reel 16mm 35mm

This film depicts the process of getting out a daily newspaper, from the time the reportorial staff receives its assignments to the final work of the presses in printing, folding and discharging the edition.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 374 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Paper Making

836. CONVERTING WOOD INTO PAPER—½ reel 16mm 35mm

This film presents the process of making wood-pulp paper.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 126 footage 35mm; to obtain 16mm footage, divide by four-tenths.

837. COPIES—(Sound and Silent)—2 reels 16mm 35mm

This film shows the manufacture of long fibred stencil paper in Japan and its use in the mimeograph process. Hand operated and automatic machines are illustrated.

Atlas Educational Film Co.—Transportation only.

838. FROM FOREST TO NEWSBOY—1 reel 16mm 35mm

Shows how news print paper is made from wood pulp; felling big logs; transportation; processes in pulp making; processes in paper making; finished rolls of paper.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Indiana University—16mm. Rental \$1.00, plus transportation.

839. HOW WRITING PAPER IS MADE—2 reels 16mm

This film tells the story of writing paper from the time the rags and other pulps enter the mill until the finished product has been placed in boxes ready for sale.

University of Iowa—Rental \$3.00, plus transportation. Registration fee 70c.

840. NEWSPRINT PAPER—1 reel 16mm 35mm

This film tells the story of manufacturing newsprint paper from forest to finished product.

Wholesome Films Service, Inc.—Sale \$20.00.

841. PAPER—6 reels 35mm

A complete description of the paper making process through its various stages from the logging camps until the finished product is loaded for shipment.

International Paper Co.—Transportation only.

842. PAPER MAKING—3 reels 16mm 35mm

Reel 1—Takes in the general view of the mills and shows how rags enter into the manufacture of paper as well as wood pulp.

Reel 2—Gives a trip through the pulp section to the paper machines proper.

Reel 3—Shows work in the research laboratory, printing department, finishing department and other sections of the mill that have to do with the finished product.

Kalamazoo Vegetable Parchment Co.—Transportation only.

Indiana University—35mm. Rental \$1.00, plus transportation.

Edited Pictures System—16mm. Rental \$2.00, plus transportation.

843. PAPER-MAKING—1 reel 35mm

This film depicts the complete process of making paper from the log to the finished product.

Ford Motor Co.—Transportation only.

N. Y. State College of Forestry—Transportation only.

844. STORY OF WRITING PAPER, THE—2 reels 35mm

This film tells the story of the ancient industry of paper-making and shows the activities in connection with the plants-manufacturing stationery from linen and cotton rags.

University of California—Rental \$1.00, plus transportation.

Indiana University—Rental \$2.00, plus transportation.

845. STYLED STATIONERY—2 reels 16mm 35mm

This film traces the early development of paper making in the U. S., illustrates the processes in making rag paper; finishing; packing fine writing paper.

Iowa State College—35mm. Rental \$1.50, plus transportation.

American Museum of Natural History—16mm. Free to New York City only.

University of Missouri—35mm. Rental \$1.00, plus transportation.

846. VOICE OF BUSINESS, THE—2 or 3 reels 16mm 35mm

This film depicts a complete trip through Hammermill's modern paper mill and shows the paper making process in detail; the operations that are not visible to the eye are shown by ment of animated drawings.

Hammermill Paper Co.—Transportation only. 3 reels 16mm 35mm; 2 reels 16mm.

847. WHEN TREES TALK—1 reel 35mm

A story of the manufacture of paper and the problem of forest conservation. Endorsed by the American Forestry Association and the U. S. Department of Agriculture.

Indiana University—Rental \$1.00, plus transportation.

848. WORLD OF PAPER, THE—2 reels 16mm 35mm

This film gives a history of the arts of writing, printing, and paper making. It shows primitive races cutting records on stone, Egyptians preparing papyrus, and Chinese making the first paper ever used by man. The last part of the picture shows the largest modern paper mill.

General Electric Company,—Transportation only.

University of Kansas & Colorado—16mm. Rental \$1.50, plus transportation.

Iowa State College—35mm. Rental \$1.50, plus transportation.

American Museum of Natural History—16mm. Free to New York City only.

Indiana University—35mm. Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

Miscellaneous

849. LITHOGRAPHING—2 reels 16mm

This describes the lithographing process, tying up the various operations with scenes in various lithographing plants and also shows a number of outstanding installations throughout the country.

Harris Seybold Potter Co.—Transportation only.

850. PHOTO ENGRAVING—2 reels 16mm

This film portrays the processes involved in making modern photo-engraving from photograph to finished cut.

University of California—Rental \$1.00, plus transportation.

SAFETY

Fire

851. DANGER THAT NEVER SLEEPS—1 reel 35mm

A film showing the most common fire dangers, ways of being careful and reducing fire loss.

Iowa State College—Rental, \$1.50, plus transportation.

852. FIRE—1 reel 35mm

Illustrates the seriousness of the annual fire loss in the U. S.; various types of fires; how fires are started; modern and oldtime fire fighting equipment; fire prevention in the home, etc.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

853. FIRE PREVENTION—1 reel 35mm

Ford Motor Company—Transportation only.

854. FIRE PREVENTION—1 reel 16mm 35mm

Shows that 65 per cent of fires have a careless beginning; dangers of lighted cigarettes; bonfires; hot ashes; the fire alarm in a big city; fire fighting equipment, etc.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Indiana University—16mm. Rental \$1.00 per day, plus transportation.

855. FOREST FIRE FIGHTERS OF THE AIR—2 reels 35mm

University of Missouri—Rental \$1.00, plus transportation.

856. FORTIFY FOR FIRE FIGHTING—2 reels 35mm

In exciting fire scenes the importance of safeguarding property and conserving lives is shown. The latest firefighting equipment is illustrated.

Pyrene Manufacturing Co.—Transportation only.

857. IN HUMANITY'S SERVICE—1 reel 35mm

This film depicts the organization and operation of a clean-up and paint-up committee and campaign in the interest of community fire prevention.

National Safety Council—Registration fee \$5.00.

858. MENACE, THE—2 reels 35mm

A story on the theme of personal responsibility for prevention and control of fire.

National Automatic Sprinkler Association—Transportation only.

859. RED ROBBER—2 reels 16mm 35mm

Pyrene Manufacturing Co.

860. WIDE AWAKE—1 reel 35mm

A call is sent to the fire station but no address is given. The call is traced and a modern volunteer fire company springs into action.

Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.

First Aid

861. ARTIFICIAL RESPIRATION—1 reel 16mm 35mm

This reel shows how to revive persons from drowning and from asphyxiation by gas and electric shock.

National Safety Council—Rental \$5.00.

862. BEFORE THE DOCTOR COMES—1 reel 16mm 35mm

Portraying first aid in coal mines, steel mills, railroad yards, machine shops, lumber camps and other places.

Society for Visual Education—Rental 35mm \$2.00, plus transportation; 16mm \$1.50, plus transportation.

University of Texas—35mm. Rental \$2.00, plus transportation.

863. CARBON MONOXIDE, THE UNSEEN DANGER—1 reel 16mm 35mm

Shows dangers of carbon monoxide gas from an auto engine running in closed garage and proper First Aid treatment. Scenes portray sources of danger in home; adequate ventilation of bathrooms and sleeping quarters, proper flue connections and safety suggestions.

Bureau of Mines, Pittsburgh, Pa.—Transportation only.

American Museum of Natural History—16mm. Free to New York City Schools only.

Iowa State College—35mm. Rental \$1.50, plus transportation.

Indiana University—35mm. Rental \$1.00, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

864. EVERY SWIMMER A LIFE-SAVER—1 reel 35mm

Shows the most approved and latest methods of rescue and resuscitation, including first aid methods as practiced by Boy Scouts.

Society for Visual Education—Rental \$2.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

865. FIRST AID, OR THE CARE OF AN INJURED MINER BY A MINER—1 reel 35mm

Illustrates proper methods of emergency treatment for shock-giving stimulants, application of prone pressure method of artificial respiration; dressing of wounds, control of bleeding, methods of improvising stretcher.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

866. FIRST AID—LIFE SAVING AND RESUSCITATION—1 reel 16mm

This film gives demonstrations in water and out of water of various approaches and holds used in rescuing the endangered swimmer. Methods of resuscitation shown include use of the inhalator.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Iowa State College—Rental \$1.50, plus transportation.

867. LEARN TO LIVE (Value of First Aid)—1 reel 16mm 35mm

First-aid class is shown safe and unsafe attitudes, methods, and practices.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

University of Texas—16mm. Registration fee \$1.00, plus transportation. 16mm.

U. S. Bureau of Mines, Petroleum Station, Bartlesville, Okla.

North Central Exp. Station, University of Minnesota, Minneapolis, Minn. Petroleum

Field Office, 506 Customhouse, San Francisco, Cal.

Northwest Exp. Station, University of Washington, Seattle, Wash.—16mm.

868. OXYGEN BREATHING APPARATUS—1 reel 35mm

Shows details of operation of several types of apparatus used in mine rescue work; mine rescue crew wearing apparatus explores mine and tests atmosphere with flame safety lamps and carbon monoxide detectors.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

869. RESUSCITATION—1 reel 35mm

This picture deals with the importance of everyone knowing the prone pressure method of resuscitation. Also goes under the title "Artificial Respiration."

Southern Bell Telephone & Telegraph Co.—Transportation only. Distributed in that territory only.

870. SAFETY AT SEA—1 reel 16mm

This film portrays the safeguards to navigation and vividly pictures a storm, a sinking ship, coast guard work and a rescue.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
American Museum of Natural History—Free to New York City Schools only.

871. SAFETY AND FIRST AID—1 reel 35mm (In preparation)

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

Industry

872. BLUE FLAG, THE—1 reel 35mm

Depicts hazards to workers in railroad yards and the successful use of "the blue flag."

National Safety Council—Registration fee \$3.00.

873. FALL OF MAN, THE—2 reels 35mm

This film deals with the hazards of unsafe walkway surfaces. Expenditures for safety are voted down by a Board of Directors, one of whom falls and meets with a serious accident.

National Safety Council—Rental \$5.00.

874. HAND OF FATE, THE—1 reel 16mm 35mm

This picture illustrates scenes in an oiler factory and is a vivid portrayal of accident prevention problems.

Liberty Mutual Insurance Co.—Rental \$5.00.

875. HANDICAP, THE—1 reel 35mm

This is a romantic story of a young couple, based on an accident to the young man just before the wedding day—an impressive safety lesson.

National Safety Council—Rental basis to subscribers, council members and non-members—\$2.50, \$5.00, \$7.50.

876. HINDSIGHT VS. FORESIGHT—2 reels 35mm

This film is a broad interpretation of the safety problem and is recommended for use in all industries. Methods of combating hazardous conditions are shown in foundry scenes, etc.

National Safety Council—Rental \$5.00 to subscribers, \$10.00 to council members; \$15.00 to non-members.

877. KEY MAN, THE—1 reel 35mm

This reel pictures some of the principal hazards in telegraph construction and reconstruction work.

National Safety Council—Registration fee \$3.00.

878. MAINTENANCE MAN, THE—2 reels 35mm

This film portrays the principal hazards encountered in the maintenance of plant structures and pictures home scenes of employees.

National Safety Council—Registration fee \$5.00.

879. MAN AT THE THROTTLE, THE—1 reel 16mm 35mm

This film pictures a ride in the locomotive cab of the 20th Century Limited from New York to Albany and presents a study in safety first along the road.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 969 footage, 35mm; to obtain 16mm footage, divide by four-tenths.

880. MEN AND MACHINES—1 reel 35mm

The young son of a shop foreman asks questions regarding the lessons which machines teach about the care of the body.

Federal Mutual Liability Insurance Co., Boston, Mass.

881. OUTLAW, THE—1 reel 16mm 35mm

"King Carelessness" smuggles into a factory a troupe of mischievous imps, "Take-a-Chance," "I-Should-Worry", "Never-Mind", "Don't Think" etc. to prompt workmen to do foolish, dangerous things.

Liberty Mutual Insurance Co.—Rental \$5.00.

882. REASON WHY, THE—2 reels 35mm

This film illustrates the many hazards of industry, showing the right and wrong ways of performing duties as well as safeguards for various machines.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

883. RAILROAD SAFETY—1 reel 16mm

The factors essential to safety are outlined in this film. Scenes show surveyors laying out the road, actual construction, maintenance, and operation. The wayside signals and automatic train controls are explained.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

884. SAFETY IN THE MINE—INDUSTRIAL GEOGRAPHY—1 reel 35mm

Ford Motor Co.—Sale \$12.00. Transportation only.

885. SAFETY IN THE USE OF EXPLOSIVES IN OPEN-PIT IRON MINING—1 reel 16mm 35mm

This film shows the safety practices in use at the open-pit iron mines of Minnesota—a locked blasting machine, steel blasting shelter, screening of stemming material, blaster's equipment box, "Mesabi" splice for blasting cap wires, etc.

Hercules Powder Co.—Transportation only.

886. SAFETY PAYS—2 reels 35mm

A film for railroad transportation department employees and shop employees, showing how a thoughtless worker realizes the hazards of his conduct.

National Safety Council—Rental \$10.00 to council members; \$15.00 rental to non-members.

887. SAFETY SHIRT, THE— ½ reel 16mm 35mm

This film shows the "life-saving shirt" invented by William Denean of the Tenth United State Engineers.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 79 footage 35mm; to obtain 16mm footage, divide by four-tenths.

888. SAFETY WINS— 2 reels 35mm

An industrial safety romance.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

889. TWELVE POINTS OF SAFETY— 1 reel 35mm

Stresses some important safety measures in connection with daily operations of mines.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

890. WHAT IS THE ANSWER?— 3 reels 35mm

This picture illustrates unsafe practices with emphasis on the proper ways of preventing them. The methods used to put safety into actual practice in the Ford plants are shown.

National Safety Council—Rental \$10.00.

891. WHAT PRICE RECKLESSNESS?— 2 reels 35mm

As the result of reckless habits the hero of this story is shown in a series of near tragic situations.

Public Service Corp. of New Jersey—Rental \$10.00.

892. WHEN A MAN'S A MINER— 4 reels 16mm 35mm

A story connected with safety in a mine and carelessness of workers, ventilation of a mine. There are scenes of a great mine disaster.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.
Indiana University—35mm. Rental \$4.00, plus transportation.

893. WHY?— 2 reels 35mm

This film illustrates accident causes and prevention. Safety devices are explained; safety meetings; safe and unsafe practices; danger of practical joking, etc.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

Traffic

894. ASK DADDY— 2 reels 35mm

This film deals with home and street safety and contrasts the hazards of modern life with cave man days.

National Safety Council—Rental \$5.00 to subscribers; \$10.00 to council members; \$15.00 to non-members.

895. AUTOMOBILE SAFETY— 1 reel 35mm

This film shows how accidents occur from careless drivers and how to avoid them.

Wholesome Films Service, Inc.—Sale \$35.00.

896. CROSS-ROAD PUZZLE, THE—2 reels 16mm 35mm

An illustration of the serious conditions confronting the nation through a multiplicity of traffic regulations.

American Auto Association—Rental \$10.00.

897. FOLLY—2 reels 35mm

The adventures of Mr. Folly who at length runs over his own child and is sent to prison.

St. Louis Safety Council—Rental \$5.00.

898. GAMBLING WITH DEATH—1 reel 35mm

This film shows the highway-railroad grade crossing situation from every angle, the principal causes of accidents being portrayed by actual occurrences.

National Safety Council—Rental \$5.00 to council members; \$10.00 to non-members.

899. GOOFS—1 reel 35mm

This film presents a series of automobile accidents which have actually occurred, particularly suitable for safety program in secondary schools and for use by Parent Teacher Association.

Automobile Club of Southern California National Safety Council—Rental \$5.00.

900. HIT THAT SCORED, THAT—1 reel 35mm

This film shows some of the adventures of a good-natured but reckless truck driver who believes in bluffing the other fellow until an accident which almost causes the death of a little girl teaches him the lesson of safe driving.

National Safety Council—Rental \$5.00.

901. PENALTY OF INDIFFERENCE, THE—2 reels 35mm

This film is based upon the realization that the safeness of our streets and highways is dependent in a very large measure upon the thoughtfulness and consideration of each person at the wheel of a machine.

National Motion Pictures Co.—Rental \$5.00 per day; lower price on long runs.

902. READIN', RITIN', AN' 'RITHMETIC—1 reel 16mm 35mm

For use among children to show them how to ride to and from school in safety on buses and electric rail cars.

American Electric Railway Assn.—Rental \$1.00.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of Texas—16mm. Registration fee \$1.00, plus transportation.

903. SAFETY FIRST—STREET ACCIDENTS—½ reel 16mm 35mm

This film pictures the tragic results of carelessness in crowded streets and gives rules for alighting from and boarding cars, for crossing main thoroughfares and regulations for motorists.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 388 footage 35mm; to obtain 16mm footage, divide by four-tenths.

904. SAFETY ON THE HIGHWAYS—1 reel 16mm 35mm

The Minnesota State Highway Patrol sponsors an impressive teaching on safety.

Ray-Bell Films, Inc.—Transportation only.

905. TAKING CHANCES— $\frac{1}{2}$ reel 16mm 35mm

This film illustrates the results of carelessness in crossing a street and in going to the sidewalk after alighting from a street car; driving without anti-skid chains on a rainy day, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 390 footage 35mm; to obtain 16mm footage, divide by four-tenths.

906. VERDICT, THE—2 reels 35mm

A story depicting the speeder, the jaywalker, the lady driver who doesn't believe in signs, the truckman who thinks that kids ought to stay out of the street, and the man who has had a couple of drinks.

National Safety Council—Rental \$5.00 to subscribers; \$10.00 to Council members; \$15.00 to non-members.

907. WHY BE CARELESS—1 reel 16mm 35mm

The responsibility of both the pedestrian and the automobile driver is emphasized for the purpose of preventing highway accidents.

John Hancock Mutual Life Insurance Co.—Transportation only.
University of Kansas—16mm. Rental 50c, plus transportation.
Iowa State College—16mm. Rental \$1.00, plus transportation.

908. WHY HURRY—2 reels 35mm

This film shows a series of accidents that befell the Heedless family, every one of which could have been avoided. Among them are auto and trolley accidents, a home fire, asphyxiation, shock and resuscitation.

National Safety Council—Rental \$10.00.

909. WORKING FOR DEAR LIFE—1 reel 35mm

Through an experience with his automobile, Mr. Jones realizes the need for annual health inspection.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

SCIENCE

910. COMBINATION FILM: DANGEROUS SPORT, A MAGNETISM; FROM EGG TO SILK; THE SEA-HARE AND THE ATLANTA—1 reel 35mm

Willoughbys—Rental 1 coupon about \$2.00, plus transportation.

911. ADVENTURE IN TRIPOLI, AN—½ reel 16mm 35mm

Shows through a microscope the beautiful radiolaria from the ocean floor and illustrates its use by gem cutters and instrument makers for polishing and grinding.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 278 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

912. AIR PRESURE IN WHICH WE LIVE, THE—½ reel 16mm 35mm

Laboratory experiments demonstrate atmospheric pressure.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 278 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

913. ANALYSIS OF MOTION—1 reel 35mm

This reel pictures the details of gyroscopic movement of a ball upon a jet of water, the analysis of movement of bullets in flight, effects of bullets upon solid objects, analysis of human motions in rapid handball game, etc.

University of California—Rental \$1.00, plus transportation.

914. ASTRONOMER'S WORKSHOP, AN—½ reel 16mm 35mm

This picture, filmed at the astronomical observatory at Wesleyan University, shows views of the heavens through the great telescope and gives demonstrations of scientific apparatus.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 197 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

Kodascope Library—Rental \$1.25, plus transportation. Also sale.

915. ATMOSPHERIC PRESSURE—1 reel 16mm

Unbalanced air-pressure; operation of the vacuum cleaner, effect of atmospheric pressure upon a vacuum; Madgeburg hemisphere demonstration; operation of a common lift pump; pressure variations in a valley and on a mountain top; causes of land and sea breezes.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

916. BACTERIA—1 reel 16mm

This film illustrates the process of making agar culture media to be used in growing bacteria for study—photomicrograph shows how bacteria grow and divide, etc.

Iowa State College—Rental \$1.50, plus transportation.

917. BALLOON RAILWAY, THE—½ reel 16mm 35mm

This is a humorous presentation in animated technical drawings of a patented contrivance, by means of which a balloon-suspended car travels on a railway constructed of wire cable.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 272 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

918. BEHAVIOR OF LIGHT, THE—1 reel 16mm

Transmission of light in straight lines, shadows from point sources and from sources of larger area, eclipses; visibility of objects by diffused reflection, formation of images in plane, convex and concave mirrors; cause of refraction; formation of a spectrum by means of a prism.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 University of Kansas and Colorado—Rental \$1.50, plus transportation.
 University of California—Rental \$1.00, plus transportation. Manual 15c.

919. BENEFACTOR, THE—2 reels 16mm 35mm

This film tells the story of the life of Mr. Thomas A. Edison and pictures his scientific triumphs.

General Electric Co.—Transportation only.
 Iowa State College—Rental \$1.50, plus transportation.
 Indiana University—35mm. Rental \$2.00, plus transportation.
 University of Iowa—Rental \$3.00, plus transportation. Registration fee 70c.
 University of California—Rental \$1.00, plus transportation.
 University of Missouri—35mm. Rental \$1.00, plus transportation.

920. BEYOND THE MICROSCOPE—1 reel 16mm 35mm

This reel visualizes and explains the decomposition of water into hydrogen and oxygen, the union of these gases in combustion, their atomic structure, and their combination to form a molecule of water.

General Electric Company—Transportation only.
 University of Kansas and Colorado—Rental 50c, plus transportation. 16mm.
 Iowa State College—Rental 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.
 University of California—Rental 50c, plus transportation.
 University of Missouri—35mm. Rental 50c, plus transportation.

921. CHEMICAL INSPIRATION—½ reel 16mm 35mm

Photomicroscopy of chemicals combined with animated drawings to produce beautiful and novel effects.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 278 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

922. CHEMICAL PROPERTIES OF WATER—(Sound-On-Film)—1 reel 35mm

Shows introduction of electrons and protons; Dr. Coolidge of the General Electric Company demonstrates his cathoderay tube; Dr. Hewlett of the General Electric Company demonstrates the geiger counter; movement of electrons in the atom of oxygen and hydrogen; animated demonstration of the union of oxygen and hydrogen in the formation of water; animated demonstration of the decomposition of water into oxygen and hydrogen.

Electrical Research Products, Inc.—Rental \$5.00 per day.

923. COMPRESSED AIR—1 reel 16mm

An enumeration of the principles which underlie the compression of air, the practical applications to the Bessemer converter, railway air brakes, air-driven tools, and the fire engine.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
 University of Kansas and Colorado—Rental \$1.50, plus transportation.
 University of California—Rental \$1.00, plus transportation. Manual 15c.
 University of Iowa—Rental \$1.50, plus transportation.

924. CRYSTALS AND THEIR FORMATION—1 reel 35mm

This film pictures salt crystals, acetanide and tin crystals, pyrotechnic display of freak crystals formed by cooling, boiling, or an electric current and shows the wonders of sand crystals.

University of California—Rental \$1.75, plus transportation.

925. CRYSTALS IN FORMATION—1 reel 35mm

A scientific exposition of the formation of crystals.

University of Texas—Rental 50c, plus transportation.

926. DRYCLEANING—1 reel 16mm 35mm

Shows scenes of drydocking the huge liner, the Leviathan.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

927. EARTH AND WORLDS BEYOND, THE—1 reel 16mm 35mm

A summary of the cycles of day and night and of the seasons which shows how the movements of the earth and the moon cause these phenomena.

Society for Visual Education—Rental, 35mm \$2.00, plus transportation; 16mm \$1.50, plus transportation.

Iowa State College—35mm. Rental \$1.50, plus transportation.

University of California—35mm. Rental \$1.00, plus transportation.

University of Missouri—35mm. Rental \$1.00, plus transportation.

University of Texas—35mm. Rental \$2.00, plus transportation.

928. EARTHQUAKES—1 reel 16mm

A study of the nature, causes and effects of earthquakes, with special reference to the types of wave motion accompanying a quake and the methods of recording and interpreting seismic phenomena.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

929. EINSTEIN'S THEORY OF RELATIVITY—2 or 4 reels 16mm 35mm

This reel illustrates some of the simpler implications of the theory of relativity—the relativity of motion and direction demonstrated in ordinary experience; relativity of space, time, and speed; absolute speed of light; the four dimensional time-space.

University of California—4 reels Rental \$10.00, plus transportation; 2 reels \$5.00, plus transportation. The 2 reel film is a shorter presentation of the same subject. 35mm.

Kodascope Library—16mm. Rental \$2.50, plus transportation. Also sale.

930. ELECTROLYSIS OF METALS, THE—1 reel 16mm 35mm

This film illustrates the action of an electric current upon various metals shown with all the wealth of detail of an elaborate laboratory experiment. Electroplating, the decomposition of metals and other interesting phases are demonstrated.

Educational Film Exchanges, Inc.—Sale \$24.00, 16mm; 35mm \$60.00.

931. ELECTROSTATICS—(Sound)—1 reel 16mm 35mm

This film treats the distinction between conductors and non-conductors; the principle of the electrometer; study of electrostatic phenomenon; mechanism of circulation of air currents, etc.

Erpi Picture Consultants, Inc.—Rental, 16mm \$3.50, plus transportation; sale \$50.00.

Rental, 35mm \$5.00, plus transportation; sale \$100.00.

University of Chicago Press—Rental, 16mm \$3.50, plus transportation; sale \$50.00.

Rental, 35mm \$5.00, plus transportation; sale \$100.00.

Indiana University—Rental 16mm \$3.50, plus transportation; sale \$50.00. Rental

35mm \$5.00, plus transportation; sale \$100.00.

932. ENERGY AND ITS TRANSFORMATIONS—(Sound)—1 reel 16mm 35mm

Simple mechanical concepts of work and of potential and kinetic energy are shown by the use of illustrative material; pile drivers, hydro-electric plants, explosive phenomena, etc., present sources of industrial power, natural reservoirs of power are traced to their origin.

Erpi Picture Consultants, Inc.—16mm Rental, \$3.50, plus transportation; sale \$50.00.

35mm, Rental \$5.00, plus transportation; sale \$100.00.

University of Chicago Press—16mm Rental \$3.50, plus transportation; sale \$50.00.

35mm Rental \$5.00, plus transportation; sale \$100.00.

Indiana University—16mm Rental \$3.50, plus transportation; sale \$50.00. 35mm Rental \$5.00, plus transportation; sale \$160.00.

933. EXPERIMENTS IN CONDUCTION OF HEAT— $\frac{1}{2}$ reel 16mm 35mm

Laboratory experiments; boiling water in paper tea kettle over flame, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 219 footage 35mm; to obtain 16mm footage, divide by four-tenths.

934. EXPERIMENTS IN PHYSICS, SOUND WAVES— $\frac{1}{2}$ reel 16mm 35mm

This film was photographed at Cornell University and demonstrates the principles underlying wireless telegraphy; measuring the length of sound waves, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 254 footage 35mm. To obtain 16mm footage, divide by four-tenths.

935. EXPERIMENTS WITH LIGHT RAYS— $\frac{1}{2}$ reel 16mm 35mm

This film pictures laboratory experiments which show light and heat reflected by bright surfaces and absorbed by dark ones; demonstrates how light travels, and how light rays are affected by various telephoto and prism lenses.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 158 footage 35mm. To obtain 16mm footage, divide by four-tenths.

936. EYES OF SCIENCE—3 reels 16mm 35mm

This film deals with the theory, manufacture, and the application of modern optical instruments—telescope, microscope, spectroscope, ophthalmoscope.

Bausch & Lomb—Transportation only.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

Y. M. C. A. Motion Picture Bureau—16mm. Registration fee \$2.00, plus transportation.

937. FIRE AND HEAT—1 reel 16mm

This film shows a forest fire, an oil fire, oxidation, the kindling point, blast furnace, purifying steel, radiation, poor and good conductors of heat.

University of Texas—Rental \$3.50 per day, \$5.00 for 2 days, plus transportation.

Edited Pictures System—Rental \$2.00, plus transportation.

University of California—Rental \$1.00. Lesson 5c.

University of Iowa—Rental \$1.50, plus transportation.

938. FIRE MAKING—1 reel 16mm

This film gives a complete history of fire making, showing the dependence of fire upon fuel and oxygen; kindling points; demonstrations of operation of various types of matches and the manufacture of modern matches.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of California—Rental \$1.00, plus transportation. Manual 15c.

939. FREQUENCY CURVES— $\frac{1}{2}$ reel 16mm

This film illustrates some of the fields of application of frequency curves and the application of probability formulas.

Eastman Teaching Film—Sale \$12.00. Teaching manual supplied.

940. FUNDAMENTALS OF ACOUSTICS—(Sound)—1 reel 16mm 35mm

The velocity of sound is discussed and some phenomena of refraction. The advance of modern science in artificial methods of sound reproduction is demonstrated. Applications of reflection and absorption of sound by the walls of a room are shown with applications to acoustics in auditoriums.

Erpi Picture Consultants, Inc.—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

University of Chicago Press—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

Indiana University—Rental 16mm \$3.50, plus transportation; sale \$50.00. Rental 35mm \$5.00, plus transportation; sale \$100.00.

941. GENERAL SCIENCE—12 reels 16mm 35mm

This course brings into the classroom the agencies of modern civilization, analyzing and correlating life forces from amoeba to man, cosmic forces in earth, sun and stars.

Subjects:

Air—2 reels

Fire and Heat—2 reels

Water—1 reel

The Earth—1 reel

Transportation—1 reel

Communication—2 reels

Work and Energy—1 reel

Life—1 reel

Man—1 reel

Y. M. C. A. Motion Picture Bureau—Rental 35mm \$3.50 per day, \$5.00 2 days, \$10.00, 5 days, plus transportation; 16mm, \$2.00 per day, \$3.00 2 days, \$5.00 5 days, plus transportation.

942. GIANT IN FAIRYLAND, A—(Glassblowing) $\frac{1}{2}$ reel 16mm 35mm

This film portrays intricate and delicate modeling in blown glass, reproducing specimens for research and popular study for natural history museums.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 336 footage 35mm. To obtain 16mm footage, divide by four-tenths.

943. GLASS BLOWING TECHNIQUE—1 reel 16mm

Part I—Shows the correct procedures and manipulations for elementary glass blowing with Pyrex Glass.

Part II—Shows the technique employed in joining tubes of unequal diameters, sealing a bulb on a tube, forming a bulb on the end of a tube, and forming a bulb in the middle of a tube.

Eastman Teaching Film—Sale in half reel parts \$12.00 each or complete \$24.00. Teaching Manual supplied.

University of Iowa—Rental \$1.50, plus transportation.

944. GRAVITATION OF LIQUIDS— $\frac{1}{2}$ reel 16mm 35mm

Interesting and spectacular laboratory experiments demonstrate differences in specific gravity of various liquids.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 253 footage 35mm. To obtain 16mm footage, divide by four-tenths. Rental by special arrangement.

945. HOW JIMMY WON THE GAME—1 reel 16mm 35mm

This reel tells a story of how Jimmy prevents the explosion of a blasting cap, avoiding possible harm to the baseball pitcher who was needed to win the game.

Hercules Powder Co.—Transportation only.
U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

946. HOW MOVIES MOVE— $\frac{1}{2}$ reel 16mm 35mm

This film explains by animated technical drawings combined with photography how the motion picture projection machine works.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 410 footage 35mm; to obtain 16mm footage, divide by four-tenths.
Kodascope Library—16mm. Rental \$1.25, plus transportation. Also sale.

947. HOTTEST FLAME IN THE WORLD—(Sound)—4 reels 35mm

Dr. Irving Langmuir tells of his work with vacuum tubes and hydrogen which led to the development of the atomic-hydrogen welding process. Molecular hydrogen, introduced into an electric arc, becomes broken up into hydrogen atoms. When these pass beyond the action of the arc, the atoms reunite with violence and liberate great amounts of heat.

General Electric Co.—Transportation only.

948. HUMAN VOICE, THE—1 reel 16mm 35mm

This film demonstrates the physiological functions of the nasal passage, windpipe, gullet, epiglottis, vocal cords, etc., in producing sound.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 590 footage 35mm; to obtain 16mm footage, divide by four-tenths. Rental by special arrangement.
Kodascope Library—16mm. Rental \$1.25, plus transportation. Also sale.

949. INVISIBLE FORCES—(Cohesion and Surface Tension) 1 reel 16mm

Interesting and entertaining experiments in physics.

Eastin Feature Films—Sale \$6.00.

950. INVISIBLE FORCES—(Magnetism) 1 reel 16mm

An interesting study in elementary physics.

Eastin Feature Films—Sale \$6.00.

951. LIQUID AIR—1 reel 16mm 35mm

This shows the production of liquid air and illustrates some laboratory experiments, including the operation of an engine whose boiler uses a liquid at more than 300 degrees below zero F.

General Electric Co.—Transportation only.
University of Kansas & Colorado—35mm. Rental 50c, plus transportation.
Iowa State College—35mm. Rental \$1.50, plus transportation.
University of California—Rental 50c, plus transportation.
University of Iowa—16mm. Rental \$1.50, plus transportation. Registration fee 35c.
Bell & Howell Co.—16mm. Sale \$30.00.

952. LIGHTNING CALCULATOR, THE—1 reel 35mm

Animated drawings show the development of calculating through the ages as well as the causes of inaccuracy of mental calculations.

Burroughs Adding Machine Co.—Transportation only.

953. MAGNETISM, THE PRINCIPLES OF—1 reel 35mm

This film represents the principles of magnetism as applied to the Bosch Magneto.

Chicago Film Laboratory—Transportation only.

954. MOLECULAR THEORY OF MATTER—(Sound)—1 reel 16mm 35mm

In this picture the behavior of molecules by devices is made clear. In vivid animation the long free paths of the molecules of a gas, the restricted movements in the liquid state, and the oscillations of the molecules of a solid, are portrayed.

Erpi Picture Consultants, Inc.—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

University of Chicago Press—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

Indiana University—Rental 16mm \$3.50, plus transportation; sale \$50.00. Rental 35mm \$5.00, plus transportation; sale \$100.00.

955. MYSTERIOUS FORCES—2 reels 16mm

This film presents experiments showing waves cast by a stone thrown in the water; sound waves; demonstration of Chladni's experiments; capillary attraction.

Edited Pictures System—Rental \$3.00, plus transportation.

956. NEW AND OLD LOCOMOTIVES— $\frac{1}{2}$ reel 16mm 35mm

This film compares the primitive wood-burning locomotives of 1832 with a modern powerful locomotive.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 172 footage, divide by four-tenths.

957. OIL FILMS ON WATER—(Sound)—4 reels 35mm

Dr. Irving Langmuir performs and explains many experiments in an interesting and understandable manner.

General Electric Co.—Transportation only.

958. ORIGIN AND USES OF THERMOMETERS—1 reel 35mm

This film shows the delicate mechanism of the thermometer.

University of Texas—Registration fee \$1.00, plus transportation.

959. OUT OF THE SILENCE—(Sound)—1 reel 35mm

A dramatically and scientifically correct presentation of the problem confronted by the hard-of-hearing. The film opens in the Viennese studio of Ludwig van Beethoven in 1825 and shows that great musical genius composing his Ninth Symphony at a time when his hearing had become so impaired that he could not distinguish his own musical notes. The story then changes to the present and shows how a school child also suffering from impaired hearing can be helped by the remarkable new ear aid developed by Bell Telephone Laboratory engineers.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

960. OXIDATION AND REDUCTION—(Sound)—1 reel 16mm 35mm

Through the medium of simple experimental materials the student is shown the methods of investigating chemical problems. The film illustrates the oxygen theory of combustion, regeneration of oxygen. Practical applications of the principles of oxidation and reduction in modern industry are depicted.

Erpi Picture Consultants, Inc.—Rental 16mm \$3.50, plus transportation; sale \$50.00.
Rental 35mm \$5.00, plus transportation; sale \$100.00.
University of Chicago Press—Rental 16mm \$3.50, plus transportation; sale \$50.00.
Rental 35mm \$5.00, plus transportation; sale \$100.00.
Indiana University—Rental 16mm \$3.50, plus transportation; sale \$50.00. Rental
35mm \$5.00, plus transportation; sale \$100.00.

961. PECULIARITIES OF THE AIR—½ reel 16mm 35mm

This film shows laboratory experiments—water in a vacuum made to boil by application of ice; cotton caused to burn when saturated with liquid air, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 240 footage 35mm; to obtain
16mm footage divide by four-tenths.

962. PHYSICAL PROPERTIES OF WATER—(Sound-On-Film)—1 reel 35mm

This reel brings out the following points—three states in which water occurs, variation in the crystalline structure, growth of the crystal, photographing the crystals, crystal changing from one form to another, role water plays in solutions, contrast of molecular dispersion, colloidal dispersion, and suspension, demonstration of the ultra-microscope in studying the colloidal field, precipitation of the colloidal material viewed under the ultra-microscope. Baltimore filtration plant.

Electrical Research Products, Inc.—Rental \$5.00 1 or 2 days.

963. RADIOACTIVE RAYS—(Sound)—1 reel 35mm

A technical study, with diagrams and experiments, of the disintegration of certain minerals.

General Electric Co.—Transportation only.

964. REFRIGERATION—1 reel 16mm

Shows the ammonia compression system of refrigeration applied to artificial ice making and household mechanical refrigerators; making "dry ice"; harvesting natural ice; construction of refrigerator cabinets; circulation of air due to convection.

University of Kansas & Colorado—Rental \$1.50, plus transportation.
Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
Indiana University—Rental \$1.00, plus transportation.

965. REFRIGERATOR FACTS—1 reel 35mm

This reel shows the construction of an ice-box, the principles of refrigeration, and various types of ice boxes.

University of California—Rental 50c, plus transportation.

966. ROMANCE OF THE SKIES—1 reel 16mm 35mm

This film tells the story of comets, eclipses and other phenomena of the heavens.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 891 footage 35mm; to obtain
16mm footage, divide by four-tenths. Rental by special arrangement.

967. SECRETS OF CHEMISTRY—1 reel 16mm 35mm

Crystalization, electrolysis of metals and other experiments.

F. C. Pictures Corp.—Rental.

968. SIMPLE MACHINES—1 reel 16mm

This film promotes the understanding of all complex machines by illustrating the following: Levers—of first, second and third classes of practical application, principles of moments and of automatic counterpoise scale; Wheels—advantages, fixed and moving pulleys; Inclined Planes—comparison with screw and principle of wedge; combinations traced in action of large steam shovel.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of California—Rental \$1.00, plus transportation. Lesson 15c.

969. SOUND WAVES AND THEIR SOURCES—(Sound)—1 reel 16mm 35mm

By animation the action of longitudinal waves are shown in two dimensions in air; to illustrate the fundamental concepts of amplitude, frequency, and wave lengths; sound effects accompany the animated drawings.

Erpi Picture Consultants, Inc.—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

University of Chicago Press—Rental 16mm \$3.50, plus transportation; sale \$50.00.

Rental 35mm \$5.00, plus transportation; sale \$100.00.

Indiana University—Rental 16mm \$3.50, plus transportation; sale \$50.00. Rental 35mm \$5.00, plus transportation; sale \$100.00.

970. SPECTACULAR EXPERIMENTS IN CRYSTALLIZATION—½ reel 16mm 35mm

This film shows the effect of crystallization from chemical solutions under the microscope—the solutions experimented with are: ammonium of zinc, fused salicin, ammonium chloride, sulphate of zinc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 381 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—16mm. Rental \$1.00, plus transportation. Also sale.

971. STEEL. GLASS. SALT—1 reel 35mm

Smelting and rolling steel. Fusing and rolling plate glass. Making salt from sea water.

University of California—Rental 50c, plus transportation.

972. STORY OF COMPRESSED AIR, THE—2 reels 35mm

This film shows animated drawings of how compressed air is produced and types of engines for making compressed air and illustrates the uses of compressed air in industry.

University of California—Rental \$1.00, plus transportation.

973. SUBMARINE GARDENS—1 reel 16mm

This film shows a variety of under-the-sea pictures taken from a diving bell off the Florida Coast showing sponges, coral, and other formations.

Kodascope Library—Rental \$1.25, plus transportation; also sale.

974. TESTING OF SMOKELESS POWDERS—1 reel 16mm 35mm

This film pictures the delicate and scientifically correct instruments that record the recoil, velocity, patten, and pressure of each sample of powder. There are unusual hunting and trap-shooting scenes.

Iowa State College—Rental 35mm \$1.50, plus transportation; 16mm \$1.00, plus transportation.

Hercules Powder Co.—Transportation only.

975. TIDES AND THE MOON—½ reel 16mm 35mm

By animated drawings this film gives a graphic explanation of the attraction of the moon's mass in drawing the fluid water of the ocean toward the side upon which it is shining and drawing the earth away from the water on the opposite side; influence of moon upon tides.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 318 footage 35mm; to obtain 16mm footage, divide by four-tenths.

Kodascope Library—Rental \$1.00, plus transportation; also sale. 16mm.

976. TIME—1 reel 16mm

Methods of keeping time from the dawn of history to the present day.

F. C. Pictures Corp.—Rental.

University of Kansas and Colorado—Rental 50c, plus transportation.

977. TRIP TO THE MOON, A—1 reel 35mm

This film shows actual lunar photography combined with animated drawings dealing with conditions as scientists believe them to be on the surface of the moon.

University of Texas—Rental \$2.00, plus transportation.

978. VELOCITY—½ reel 16mm 35mm

This film presents a study of "Relativity" in speed, through pictures of animal life and natural forces in motion—from the snail to the race horse, the man-made wagon to the airplane, etc.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 727 footage 35mm; to obtain 16mm footage, divide by four-tenths.

979. VELOCITY—1 reel

A simple explanation of the elements of the Einstein Theory.

F. C. Pictures Corp.—Rental.

980. VOICE THAT SCIENCE MADE, THE—(Sound)—1 reel 35mm

Graphic presentation for the first time in sound motion picture film of the action of the human vocal organs contrasted with the new artificial larynx as developed by Bell Telephone Laboratory engineers. Three active men of affairs who would be speechless without the aid of the artificial larynx are pictured and recorded at their daily work using the new voice that science has given them.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

981. WATER CYCLE, THE—1 reel 16mm

This film, through graphic examples of evaporation, condensation, precipitation, and run-off, shows how nature preserves her water resources.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Edited Pictures System—Rental \$2.00, plus transportation.

982. WONDERLAND OF SCIENCE—1 reel 35mm

This reel depicts the history of combustion and shows experiments with matches and liquid air.

University of California—Rental \$1.00, plus transportation.

SHOEMAKING

983. CHANGING HIDES INTO LEATHER—1 reel 35mm

This film shows all the processes connected with making leather shoes and gives statistics on the number of shoes made each year and the number of hides used.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

984. FROM CALVES TO KIDDIES—1 reel 35mm

This film shows how baby's feet are shod.

University of Texas—Registration fee \$1.00, plus transportation.

985. FROM HIDE TO LEATHER—1 reel 16mm

Manufacture of shoes.

Wholesome Films—Sale.

986. LEATHER—1 reel 16mm

The first unit of this film pictures animals in their native habitats (goats, alligators, snakes, sheep, lambs, and cattle). The remaining scenes compare tanned and untanned skins, outline the tanning process, and contrast the old shoemaker with a modern shoe factory.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Iowa—Rental \$1.50, plus transportation.

987. MODERN SHOEMAKING—2 reels 16mm

This film shows the latest machine processes in the manufacture of shoes from cutting to the finished product.

University of California—Transportation only.

988. ON FOOT WITH THE ARMY AND NAVY—1 reel

Views showing process of manufacturing shoes for the army.

State College of Washington—Registration fee \$1.00, plus transportation.

989. ROMANCE OF SHOEMAKING—2 reels 16mm 35mm

This film traces the development of shoemaking from the Landing of the Pilgrim Fathers through the 1800's and into the days of mass production. There are 208 machine operations shown. One or two sequences of animation which show the shoe coming together under its own power.

Melville Shoe Corp.—Transportation one way.

990. SHOES, LEATHER FOOTPRINTS—½ reel 16mm 35mm

This film shows how custom-made shoes are fashioned over plaster casts made from wax impressions of the feet.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 305 footage 35mm; to obtain 16mm footage, divide by four-tenths.

991. SHOE, THE—1 reel 16mm

This film demonstrates the method of making our shoes from the raw materials.

Edited Pictures System—Rental \$2.00, plus transportation.

992. STORY OF THE SHOE, THE—1 reel 16mm 35mm

Preparation of leather; how shoes are manufactured in a modern factory, as contrasted with the hand methods of an earlier day.

University of Kansas and Colorado—16mm. Rental \$1.50, plus transportation.

Indiana University—35mm. Rental \$1.00, plus transportation.

993. WALKING ON CORK—1 reel 16mm 35mm

This film shows the manufacture and use of various shoe products in shoe construction.

Armstrong Cork Co.—Free.

SILVERSMITHING

994. FINE ART WITH HAMMER AND ANVIL— ½ reel 16mm 35mm

This film depicts artistic work in precious metals at Teachers' College, Columbia University—a silver case is designed; cut from sheet metal, hammered, decorated and finished; a wedding ring is hammered by the ancient methods of goldsmiths.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 327 footage 35mm; to obtain 16mm footage, divide by four-tenths.

995. SILVER— 1 reel 16mm

This reel illustrates the manufacture of sterling flatware and hollow ware, the production of plated ware and mirrors, the uses of silver in photography.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
University of Kansas and Colorado—Rental \$1.50, plus transportation.
University of Iowa—Rental \$1.50, plus transportation.

996. SILVER: HEIRLOOMS OF TOMORROW— 3 reels 16mm 35mm

Reel 1—Illustrates factory processes of making spoons, forks, etc.

Reel 2—Shows making hollow ware chasing; engraving; etc.

Reel 3—Mining of ore through shafts and in open pits; concentration, smelting and refining of silver by electrolysis.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

997. SILVERSMITH, THE— 2 reels 16mm 35mm

This film tells the complete story of hand-wrought silver and was produced through the cooperation of Arthur J. Stone, the outstanding worker in silver in this country.

University Film Foundation—Rental, 35mm \$3.50 per day, plus transportation. Sale, 35mm \$75.00 per reel, safety; \$65.00 per reel, nitrate; sale 16mm, \$24.00 per reel safety—plus transportation.
University of Iowa—16mm. Rental \$3.00, plus transportation.

998. SILVERSMITH, THE— 1 reel 35mm

This reel depicts the mining of silver, making "sterling" silver, making silverware, and compares ancient and modern methods of silversmithing.

University of California—Rental \$1.00, plus transportation.

999. SILVERWARE— 1 reel 35mm

Ford Motor Company—Sale \$8.00.

TEXTILES

Cotton

1000. CONQUERING THE DESERT—2 reels 16mm 35mm

This film shows the transformation of a trackless waste in the Salt River Valley of Arizona into a cotton plantation. There are scenes of planting the seeds, gathering the crop, movement of cotton to the gins and to the textile mills where it is made into tire fabric.

Goodyear Tire & Rubber Company—Transportation one way.

1001. COTTON—2 reels 16mm 35mm

This film shows the cotton regions of the world in pictures and animated maps, the process of growing the cotton plants and picking, ginning, baling and marketing the raw cotton in our southern states, the manufacture of cotton cloth and blankets in New England, etc.

Gordon Ellis Productions—Sale, 16mm \$35.00 per reel; 35mm \$110.00 per reel—on non inflammable stock less a discount of 25 per cent.

1002. COTTON—1 reel 16mm

This film shows the planting and cultivating of cotton, the boll weevil, picking and preparing for market.

Edited Pictures System—Rental \$2.00, plus transportation.

1003. COTTON, CIVILIZATION'S FABRIC—2 reels 16mm 35mm

Reel 1—Shows cotton picking, ginning, baling, sorting and preparation for spinning.

Reel 2—Shows spinning into fine threads, spooling, warping, weaving, bleaching, washing and the finished fabric.

American Museum of Natural History—16mm Free to New York City Schools only.
University of California—35mm. Rental \$1.00, plus transportation.
University of Missouri—35mm. Rental \$1.00, plus transportation.

1004. COTTON—DIXIE'S GREATEST CROP—1 reel 16mm 35mm

This film, of general interest, illustrates the problems of the up-to-date cotton grower. Scenes include preparation of soil, planting, cultivating, picking and delivery at gin, the boll-weevil menace.

U. S. Department of Agriculture—Transportation only.

1005. COTTON, FROM SEED TO CLOTH—2 reels 16mm 35mm

Shows cotton producing regions and growing of cotton, details of spinning, weaving and manufacture in color photography. This film was made under the supervision of the Department of Geology and Geography of Harvard University. A Teaching Guide for use in connection with the showing of the film is supplied.

Films of Commerce, Inc.—Transportation only.
Iowa State College—Rental \$2.00, plus transportation.
University of Kansas and Colorado—16mm. Rental 50c, plus transportation.
Y. M. C. A. Motion Picture Bureau—35mm. Registration fee \$2.00, plus transportation.
University of California—Rental \$1.00, plus transportation.
Indiana University—35mm. Rental \$2.00, plus transportation.
University of Missouri—35mm. Rental \$1.00, plus transportation.
University of Texas—16mm. Registration fee \$1.00, plus transportation.
American Museum of Natural History—16mm. Free to New York City Schools only.

1006. COTTON GOODS—1 reel 16mm

This film covers the carding, twisting, and drawing of thread; the weaving and testing of cotton fabrics; and some of the multiple uses of cotton in every-day life.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Edited Pictures System—Rental \$2.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

1007. COTTON GROWING—1 reel 16mm

Shows stages in the growth of cotton from preparation of ground, methods of fighting the boll weevil to harvesting, ginning, bagging and transportation of the product.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Indiana University—Rental \$1.00 per day, plus transportation.

University of Missouri—Rental 35c, plus transportation.

1008. COTTON INDUSTRY—3 reels 35mm

This picture depicts the marketing and ginning of cotton and the processes in the manufacture of hose, yarn, towels, etc.

University of Texas—Registration fee \$1.00, plus transportation.

1009. COTTON, THE LAND OF—2 reels 16mm 35mm

This film was produced at the world's largest plantation, most important cotton terminal and in one of the greatest textile mills. It depicts the cotton industry from the planting of seed to the finished product.

General Electric Co.—Transportation only.

American Museum of Natural History—16mm. Free to New York City Schools only.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

Indiana University—35mm. Rental \$2.00, plus transportation.

University of California—Rental 50c, plus transportation.

University of Iowa—Rental \$3.00, plus transportation. Registration fee 70c.

University of Missouri—35mm. Rental \$1.00, plus transportation.

1010. FROM COTTON TO CLOTH—3 reels 16mm

This film pictures the mills in southern Georgia, South Carolina, and North Carolina, and illustrates the complete process of making cotton goods from picking to the finished product.

McCampbell & Co.—Rental \$1.50, plus transportation.

1011. WITHIN THE GATES—2 reels 16mm 35mm

The making of a single shirt is shown as an example of women's participation in the mass production system. The textile industry from cotton field, mill and factory processes, to store counter is pictured in this film.

U. S. Department of Labor (Women's Bureau)—Transportation only.

Indiana University—35mm. Rental \$2.00, plus transportation.

University of California—35mm. Rental \$1.00, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

Silk

1012. FROM COCOON TO KIMONA—1 reel 16mm 35mm

The silk industry of Japan. A Holmes Lecture.

Wholesome Films—Sale.

Eastin Feature Films—16mm. Sale \$5.00.

1013. FROM COTTON TO SPOOL—1 reel 16mm 35mm

This reel pictures the story of the manufacture of silk thread from silk worms to the spool.

Iowa State College—Rental 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

American Museum of Natural History—Free to New York City Schools only. 16mm

Indiana University—35mm Rental \$1.00, plus transportation.

University of Missouri—16mm Rental 35c, plus transportation; 35mm Rental 50c, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

1014. FROM EGG TO SILK—1 reel 16mm

This subject presents a striking record of the complete process of silk manufacture.

Eastin Feature Films—Sale \$6.00.

1015. IN HIGHER SPHERES—1 reel 35mm

Mountain scenic and making silk hose.

Ford Motor Co.—Transportation only. Also sale \$8.00.

1016. MY LADY'S STOCKINGS—1 reel 16mm

Beginning with the feeding and growing of the silkworms in Japan, the successive operations in the production of hundreds of thousands of pairs of fine silk stockings are shown.

Kodascope Library—Rental \$1.25, plus transportation. Also sale.

1017. ROMANCE OF RAYON, THE—2 reels 16mm 35mm

A portrayal of the manufacture of rayon from its natural source in wool or cotton to its completion.

University of Kansas and Colorado—16mm. Rental 50c.

Iowa State College—16mm, rental \$1.00, plus transportation; 35mm, rental \$1.50, plus transportation.

American Museum of Natural History—16mm. Free to New York City Schools only.

Y. M. C. A. Motion Picture Bureau—35mm Registration fee \$2.00, plus transportation.

Indiana University—35mm. Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

University of Iowa—16mm. Rental \$3.00, plus transportation. Registration fee 70c.

University of Missouri—35mm. Rental \$1.00, plus transportation.

University of Texas—35mm. Registration fee \$1.00, plus transportation.

State College of Washington—16mm. Rental \$1.00, plus transportation.

1018. SILK—1 reel 16mm

Shows raw silk from the Orient, steaming cocoons for reeling, unloading silk in U. S. at San Francisco, fast silk trains, warp and woof for weaving, weaving processes, looms, designs printed on silk, etc.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

1019. SILK (Colored)—1 reel 35mm

This reel tells the story of manufacturing silk thread and cloth from the culture of silk worms, spinning cocoons, and shipping to American factories.

University of California—Rental 50c, plus transportation.

1020. SILKEN COCOONS—1 reel 16mm

The story of a piece of silk from hatching of silk worms, feeding them mulberry leaves to unwinding silk from the cocoon.

Edited Pictures System—Rental \$2.00, plus transportation.

1021. SILK CULTURE AND INDUSTRY—1 reel 16mm 35mm

This reel features silk worm culture in China; mating moths; examining females for disease; mulberry leaves as food for worms; spinning the cocoon; reeling silk from the cocoons, etc.

Iowa State College—Rental 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.

1022. SILK INDUSTRY, THE—1 reel 16mm 35mm

A detailed inspection of the interesting processes of silk weaving, from the arrival of raw silk, to the final folding and measuring of the completed brocades.

Educational Film Exchanges—Sale, 16mm \$24.00; 35mm \$60.00.

University of Texas—16mm. Registration fee \$1.00, plus transportation.

1023. SILK MOTH, THE—1 reel 16mm

This film presents the life history of the silk moth.

Producers' Film Sales Corp.—Sale \$35.00.

Bell & Howell Co.—Sale \$30.00.

1024. SILKWORM, THE—1 reel 16mm

A story of the insect which has such tremendous commercial value.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

Bell & Howell Co.—Sale \$9.50.

1025. STORY OF SILK, THE—16mm

This film tells the story of silk from the fragile moth to the winding of silk from cocoons and spinning into cloth.

Iowa State College—Rental \$1.00, plus transportation.

1026. WHERE SILK COMES FROM—1 reel 16mm

This film depicts the culture of silk worms and obtaining the raw silk; manufacturing processes to the finished bolt of silk.

Edited Pictures System—Rental \$2.00, plus transportation.

Wool

1027. AMERICA'S LITTLE LAMB—1 reel 16mm

This film tells the life story of a typical American range sheep.

Kodascope Library—Rental \$1.25, plus transportation. Also sale.

1028. GOLDEN FLEECE, THE—1 reel 16mm 35mm

Jason, a progressive eastern farmer, learns that clean handling of wool, grading and cooperative selling will bring success in his search for the "golden fleece."

U. S. Department of Agriculture—Transportation only.

Iowa State College—Rental, 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.

1029. LITTLE BO PEEP—1 reel 35mm

This reel illustrates processes of making yarn.

Iowa State College—Rental \$1.50, plus transportation.

1030. PROFIT AND LOSS IN CANADIAN WOOL MARKETING—1 reel 16mm 35mm

This reel illustrates the proper methods of raising, shearing and preparing wool for shipment and the value of cooperative marketing.

Dominion Live Stock Commission, Department of Agriculture, Ottawa, Canada—Transportation only.

1031. TO "SUIT" MAN—1 reel 35mm

Making Clothing.

Ford Motor Co.—Transportation only. Also sale \$8.00.
University of Texas—Registration fee \$1.00, plus transportation.

1032. VIRGIN WOOL—1 reel 35mm

This reel shows the difference between "shoddy" and virgin wool and depicts preparation of wool for market, etc.

University of Texas—Registration fee \$1.00, plus transportation.

1033. WOOL—1 reel 16mm

This film pictures sheep raising and shearing; packing and shipping of wool to the mill and the processes of converting it into cloth.

Edited Pictures System—Rental \$2.00, plus transportation.

1034. WOOL-MARKETING AND MANUFACTURE—3 reels 16mm 35mm

This film covers the whole process of manufacture of woolen materials from the fleece to the finished fabric.

U. S. Department of Agriculture—Transportation only.
Iowa State College—35mm. Rental \$2.00, plus transportation.

1035. WOOL TO CLOTH—2 reels 16mm 35mm

Illustrates sorting of wool and weighing at warehouse; buyers purchasing wool from sample clips; wool sorted by hand and cleaned, washed, carded and wound by machines; twisted into yarn of various grades, then woven into cloth; the fifteen processes of shrinking, singeing, etc.

U. S. Department of Agriculture—Transportation only.
Iowa State College—Rental, 16mm \$1.00, plus transportation; 35mm \$1.50, plus transportation.

1036. WOOLEN GOODS—1 reel 16mm

This reel traces the sources of wool and contrasts methods of carding, spinning, and weaving homespun with factory-made woolens. Shows the operations involved in making an overcoat.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.
Indiana University—Rental \$1.00, plus transportation.
Edited Pictures System—Rental \$2.00, plus transportation.

1037. WOOLEN YARN, A—1 reel 16mm 35mm

This film reviews the history of the wool industry, depicts the steps from sheep-shearing to the manufacture of cloth, showing the methods and machines used in carding, spinning and weaving.

General Electric Co.—Transportation only.

University of Kansas and Colorado—16mm. Rental 50c, plus transportation.

American Museum of Natural History—Free to New York City Schools only.

Indiana University—35mm. Rental \$1.00, plus transportation.

University of California—Rental 50c, plus transportation.

University of Iowa—35mm. Rental \$1.50, plus transportation. Registration fee 35c.

University of Missouri—35mm. Rental 50c, plus transportation.

Miscellaneous Manufacturing

1038. AMERICAN GLOVE CRAFT—2 reels 16mm 35mm

This film tells the complete story of glove manufacturing.

De Frenes & Co.—Transportation only.

1039. ART OF SPINNING AND WEAVING, THE—2 reels 16mm 35mm

This film shows the Colonial spinning wheels for flax and wool, the old clock reel for winding the homespun thread, and the niddy-noddy for making skeins and pictures graphically the basic processes in weaving, first on the simple tape loom and then on the common hand loom.

University Film Foundation—Rental, 35mm \$3.50 per day per reel, plus transportation. Sale, 16mm \$24.00 per reel, plus transportation; 35mm \$75.00 per reel, safety, \$65.00 per reel, nitrate, plus transportation.

1040. BATHTOWEL BEASTIES—½ reel 16mm 35mm

This film shows how animal toys can be made from ordinary bathtowelings.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 375 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1041. CARPETING A CENTURY—2 reels 35mm

This film shows the development of carpet making and the modern methods of manufacturing fine carpets.

Indiana University—Rental \$2.00, plus transportation.

1042. FROM EAST TO WEST—1 reel 35mm

Making Wilton Rugs.

Ford Motor Company—Transportation only. Also sale \$8.00.

1043. FROM FLAX TO LINEN—1 reel 16mm

Traces flax from the plant and seed stage to line flax; spinning of line flax and making of cloth.

Eastman Teaching Film—Sale \$24.00. Teaching manual supplied.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

1044. HISTORY OF WEAVING—½ reel 16mm 35mm

This film traces the development of weaving from the Indian girdle looms to the modern power loom.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 334 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1045. HISTORY OF WEAVING. HAGOPIAN, THE RUGMAKER—(Colored)—1 reel 35mm

This picture shows Navajos weaving rugs, the oldest known type of loom, samples of Peruvian prehistoric weaving; Old North American Indian loom; Viking weaving device, Modern hand and machine looms; the Armenian rugmaker, Hagopian, demonstrates how he makes rugs.

University of California—Rental \$1.00, plus transportation.

1046. JUST KIDS—1 reel 35mm

This film shows how gloves are made.

Ford Motor Company—Transportation only. Sale \$8.00.

1047. MAKING A TURKISH TOWEL—1 reel 16mm 35mm

This film visualizes the complete process of making a Turkish towel from picking of cotton to drawing designs, weaving, cutting and packing.

De Frenes & Co.—Transportation only.

1048. MAKING OF TWINE, THE—1 reel 35mm

This reel illustrates the process of binder twine manufacture, shows securing fibres from the sisal plant in the tropics, inspecting fibre, testing for strength, making sacks, final inspection.

International Harvester Co.—Transportation only.

Indiana University—Rental \$1.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

University of California—Rental 50c, plus transportation.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

University of Texas—Registration fee \$1.00, plus transportation.

1049. MAKING TWINE TO BIND UNCLE SAM'S HARVEST—½ reel 16mm 35mm

This film shows the raw material (Manila or Sisal hemp) used in making twine; sorting and softening the fibre; combing; spinning and balling.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 265 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1050. MARTEX—1 reel 16mm 35mm

This film shows the making of a Turkish towel from picking the cotton, stapling, spinning, drawing of designs, making patters, weaving, cutting, and packing.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

1051. MODERN CINDERELLA, THE—3 reels 16mm 35mm

The story of a young farmwife and her experience in the use of a sewing machine.

Singer Sewing Machine Co.—Free.

Iowa State College—16mm. Rental \$1.50, plus transportation; 35mm \$2.00, plus transportation.

Indiana University—35mm. Rental \$3.00, plus transportation.

University of Texas—35mm. Rental \$1.00, plus transportation.

1052. PUTTING THE NUT TO WORK— $\frac{1}{2}$ reel 16mm 35mm

This film gives scenes of the only vegetable-ivory manufacturing plant in the United States; there are close-ups of the ivory nuts as they arrive from South America and the intricate machinery invented to convert them into buttons.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 229 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1053. READING FULL-FASHIONED KNITTING MACHINE, THE—1 or 2 reels 16mm 35mm

This film explains the operation of full-fashioned knitting machines and shows them in action.

De Frenes & Co.—Transportation only.

1054. REVIVING THE WEAVER'S CRAFT— $\frac{1}{2}$ reel 16mm 35mm

This film shows the celebrated Kleiser looms at Englewood, New Jersey, where valuable tapestries are made, repaired, and restored; dyeing and matching yarns; sketching designs for restorations; weaving and finishing.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 217 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1055. ROMANCE OF CLOTH—1 reel 35mm

From field to loom and finished product.

Wholesome Films—Sale.

1056. SAMPLER UP TO DATE, THE— $\frac{1}{2}$ reel 16mm 35mm

Skillful needle workers employed in a New York tapestry establishment making theatre curtains, draperies for public buildings, hand made wall hangings.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 296 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1057. STORY OF CHASE VELMO, THE—3 reels 16mm 35mm

This illustrates mohair from angora goat to lustrous velvet.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

1058. TEXTILE FILM—1 reel 16mm 35mm

An illustration of the methods of using cork units on machinery.

Armstrong Cork Co.—Free.

VOCATIONAL GUIDANCE

1059. APPRENTICE COURSE, THE—2 reels 16mm 35mm

Shows the work of apprentices (high school graduates accepted by G. E.) in classroom, drafting room, foundry, machine shop, and testing laboratory.

General Electric Co.—Transportation only.

1060. BEHIND THE SCENES IN THE MACHINE AGE—2 or 3 reels 16mm 35mm

This film points out technological changes as a cause of unemployment of women and human waste unless accompanied by a well planned program of adjustment of displaced workers. Examples from cereal manufacturing, printing, cigar making, telephone industry are featured. The efficacy of a short workday, a living wage, a safety program, good working conditions and sanitary service facilities are stressed in an interesting manner.

U. S. Department of Labor—Women's Bureau—Transportation only. 3 reels.

Iowa State College—Rental \$2.00, plus transportation. 3 reels.

Indiana University—16mm. Rental \$2.00, plus transportation. 2 reels.

1061. BENDING THE HUMAN TWIG—½ reel 16mm 35mm

This film shows classes in mechanics, cabinet making, engineering, designing, dressmaking, millinery and cooking in a famous New York vocational school.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 239 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1062. THE BUILDERS—2 reels 16mm 35mm

This picture furnishes occupational information for boys who are thinking about a future occupation. The film illustrates the numerous occupations in the building field.

Electrical Research Products, Inc.—Rental, 35mm \$10.00; 16mm \$7.00. Sale, 35mm \$150.00; 16mm \$60.00.

1063. CHOOSING YOUR VOCATION—1 reel 16mm 35mm

This film shows in dramatic form the steps that should be taken in choosing an occupation.

Electrical Research Products, Inc.—Rental, 16mm \$3.50; sale \$40.00. Rental 35mm \$5.00; sale \$100.00.

1064. COMMITTEE REPORTS, THE—(Sound-On-Film)—2 reels 35mm

This film tells the story of three children who on visiting a post office, telephone exchange, and a power house, try to decide which is the most important in serving the public.

New York Telephone Co.—Free to New York State only, through local telephone commercial offices, 2 weeks' notice.

1065. DAY WE CELEBRATE, THE—1 reel 35mm

A foreign-born employee demonstrates his fitness to become an American citizen by the performance of his duty in the face of danger—portrayed by a professional cast.

Southern Bell Tel. & Tel. Co.—Transportation only. Distributed in that territory only.
New York Telephone Co.—Free to New York State only, through local telephone commercial offices, 2 weeks' notice.

1066. ENGINEER, THE—1 reel 16mm 35mm

A study of the activities and problems of the engineer, illustrating the technical information he must have.

- University of Kansas and Colorado—16mm Rental \$1.50, plus transportation.
 Y. M. C. A. Motion Picture Bureau—35mm. Rental \$3.50, per day; \$5.00—2 days; \$10—5 days.
 University of California—16mm. Sale \$1.00, plus transportation. Lesson 5c.
 University of Iowa—16mm. Rental \$1.50, plus transportation.
 Edited Pictures System—16mm. Rental \$2.00, plus transportation.
 University of Texas—16mm. Rental \$3.50 per day, \$5.00, 2 days, plus transportation.

1067. EXECUTIVE, THE—1 reel 16mm

This reel shows steps in the development from routine worker to the business executive and emphasizes the need for knowledge of men and materials:

- University of Texas—Rental \$3.50 per day; \$5.00, 2 days, plus transportation.
 Edited Pictures System—Rental \$2.00, plus transportation.
 University of California—Rental \$1.00, plus transportation. Lesson 5c.
 University of Iowa—Rental \$1.50, plus transportation.

1068. FARMER, THE—1 reel 16mm 35mm

Shows the aptitude, temperament, training and skill of the farmer, so that the pupil may subconsciously prepare himself to select his life work wisely. Part of a course of nine types of vocations.

- Y. M. C. A. Motion Picture Bureau—Rental 35mm \$3.50 per day; \$5.00 2 days; \$10.00, 5 days, plus transportation. Rental 16mm \$2.00 per day; \$3.00, 2 days; \$5.00, 5 days, plus transportation.

1069. GETTING OUT THE GOODS—1 reel 35mm

This reel pictures the distribution of the production of a great telephone manufacturing plant—of special value to trade and industrial training school.

- Western Electric Co.—Transportation only.

1070. GIRL WHO FOUND HERSELF, THE—1 reel 35mm

A girl who is afraid of herself and her fellow workers discovers that a big step toward success is applying the same principles to work as to friendship and play.

- Western Electric Co.—Transportation only.
 Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
 University of Texas—Registration fee \$1.00, plus transportation.

1071. GREATER CAMPUS, THE—2 reels 16mm 35mm

This film shows the work of the student engineers (engineering college graduates engaged by the General Electric) in a two year course in various factories of the company.

- General Electric Co.—Transportation only.
 University of California—Rental \$1.00, plus transportation.

1072. GUIDANCE IN PUBLIC SCHOOLS—2 reels 16mm 35mm

This film treats orientation courses, educational guidance, testing of pupils, adjusting the pupil to the school and to the community as administered in the public schools at Providence, Rhode Island.

- Electrical Research Products—Rental 16mm \$7.00; sale \$60.00; rental 35mm \$10.00, sale \$150.00.

1073. HENRY FORD TRADE SCHOOL—4 reels 35mm

This film pictures the purpose and activities of the vocational school.

Ford Motor Co.—Transportation only.

1074. LEARNING BY DOING—1 reel 35mm

This picture illustrates the training of telephone men in the most up-to-date Plant School in the country.

New York Telephone Co.—Free to New York State only, through local telephone commercial offices, 2 weeks' notice.

Southern Bell Telephone & Telegraph Co.—Transportation only. Distributed in that territory only.

1075. "P B X" PRESCRIPTION, A — (Sound-On-Film) —2 reels 35mm

This film tells the story of an untrained operator in a small business establishment who is sent to the telephone company's training school.

Southern Bell Telephone and Telegraph Co.—Transportation only. Distributed in that territory only.

1076. HER RIGHT PLACE—1 reel 35mm

This picture shows a young girl entering the training class given for telephone operators and follows her career until she becomes Chief Operator.

New York Telephone Co.—Free to New York State only, through local telephone commercial offices, 2 weeks' notice.

Southern Bell Telephone and Telegraph Co.—Transportation only. Distributed in that territory only.

1077. INDUSTRIAL WORKER, THE—1 reel 16mm

Animated drawings show how lack of education forces men and women into industrial ranks. Life in factory and at home. Monotony but freedom from responsibility.

Edited Pictures System—Rental \$2.00, plus transportation.

University of California—Rental \$1.00, plus transportation.

University of Iowa—Rental \$1.50, plus transportation.

1078. SALESMAN, THE—1 reel 16mm

University of California—Rental \$1.00, plus transportation. Lesson 5c.

1079. SKILLED MECHANIC, THE—1 reel 16mm

This reel shows the trained mechanic at work, the necessity for skill and speed, and the diversity of skilled crafts.

University of Kansas and Colorado—Rental \$1.50, plus transportation.

University of California—Rental \$1.00, plus transportation. Lesson 5c.

University of Iowa—Rental \$1.50, plus transportation.

Edited Pictures System—Rental \$2.00, plus transportation.

University of Texas—Rental \$3.50 per day; \$5.00, 2 days, plus transportation.

1080. SPIRIT OF SERVICE—1 reel 35mm

This reel pictures the loyalty of telephone employees in dramatic incidents.

Southern Bell Telephone & Telegraph Co.—Transportation only. Distributed in that territory only.

1081. VOCATIONAL GUIDANCE TEACHING FILMS—10 reels 16mm 35mm

Nine types of vocations calling for fundamentally diverse aptitudes, temperaments, training and skills, are presented in this course so that the pupil, training, working, and living in each occupation, may subconsciously prepare himself to select wisely his life work. Teacher's manual supplied:

- Reel 1—The Farmer.
- Reel 2—People Who Live on a Great Plain.
- Reel 3—The Industrial Worker.
- Reel 4—The Skilled Mechanic.
- Reel 5—The Engineer.
- Reel 6—The Executive.
- Reel 7—The Salesman.
- Reel 8—The Doctor.
- Reel 9—The Journalist.
- Reel 10—The Artist.

Y. M. C. A. Motion Picture Bureau—Rental 35mm \$3.50 per day, \$5.00, 2 days; \$10.00, 5 days; rental 16mm \$2.00 per day, \$3.00, 2 days, \$5.00, 5 days, plus transportation.

1082. WHAT THE JOB PAYS—2 reels 35mm

This film is the story of the personnel and industrial activities at the Western Electric Mfg. works at Chicago, Ill.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.
University of Texas—Registration fee \$1.00, plus transportation.
Western Electric Co.—Transportation only.

1083. WOMAN WORKER, PAST AND PRESENT—2 reels 16mm 35mm

A contrast of women's industrial activities when women did the spinning, weaving, sewing and baking for the family with their present day occupations in factories, mills, and workshops. The benefits to society and the hardships to women of modern wholesale manufacturing and the need for improvement of industrial conditions are emphasized.

U. S. Department of Labor, Women's Bureau—Transportation only.
Indiana University—35mm. Rental \$2.00, plus transportation.
University of California—35mm. Rental \$1.00, plus transportation.
University of Texas—35mm. Registration fee \$1.00, plus transportation.

WATCH AND CLOCK-MAKING

1084. CHRONOMETRY AND CHRONOMETERS—1 reel 16mm 35mm

This reel shows the flight of time and the adaptation of scientific time measurements to modern day use.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

1085. FOUNTAIN OF TIME—2 reels 35mm

A trip through a large clock factory which shows the various steps in the making of a clock.

Indiana University—Rental \$2.00, plus transportation.

1086. HOUSE OF WONDERS—2 reels 16mm 35mm

A very interesting story stressing the value of time; showing the evolution and development of time-keeping methods and mechanism.

Chicago Film Laboratory—Transportation only.

1087. HOW TIME FLIES NOW AND THEN— $\frac{1}{2}$ reel 16mm 35mm

This film gives the history of the watch from sun dials and water clocks to the dainty jewelled wrist-watch of today.

Bray Film Library—Sale 10c ft. nitrate, 11c ft. safety; 384 footage 35mm; to obtain 16mm footage, divide by four-tenths.

1088. TICK TOCK—1 reel 35mm

Making watches and clocks.

Ford Motor Company—Transportation only. Also sale \$8.00.

1089. TIME—2 reels 35mm

This film tells the story of recording time and shows how modern watchmaking is accomplished.

University of California—Rental \$1.00, plus transportation.

Iowa State College—Rental \$1.50, plus transportation.

Indiana University—Rental \$2.00, plus transportation.

WELDING

1090. ARC WELDING IN BUILDING ERECTION—2 reels 16mm 35mm

This picture demonstrates the arc welding processes in the construction of large office buildings.

General Electric Co.—Transportation only.

1091. AUTOMATIC ARC WELDING—2 reels 16mm 35mm

This film shows a number of major applications of electric arc welding in the manufacture of automobiles and in the steel and electrical industries.

General Electric Co.—Transportation only.

1092. THE ELECTRIC NEEDLE—1 reel 16mm 35mm

An illustration of the electric arc welding and the installation of a pipe line made of half-inch boiler plate. These lines are used to convey oil, gas, and steam, and also water in large municipal systems.

General Electric Co.—Transportation only.

University of California—Rental 50c, plus transportation.

1093. MODERN MANUFACTURING WITH STABLE ARC—1 reel 16mm

This film covers welding and the method of welding of various kinds of equipment such as bases, wheels, etc.

Lincoln Electric Co.—Transportation one way only.

1094. OXYGEN—THE WONDER WORKER—2 reels 35mm

This film portrays the use of the oxyacetylene flame in production welding and cutting.

Y. M. C. A. Motion Picture Bureau—Registration fee \$2.00, plus transportation.

U. S. Bureau of Mines, Pittsburgh, Pa.—Transportation only.

1095. TIES OF STEEL—1 reel 16mm 35mm

This picture shows the conversion of scrapped steel rails into railroad ties by the automatic arc-welding machine and illustrates the economies effected by this industrial development.

General Electric Co.—Transportation only.

University of California—Rental 50c, plus transportation. 16mm.

1096. WELDING THE UPPER CARNEGIE BUILDING—1 reel 16mm

This film shows how the Upper Carnegie Building, a four story building 60 x 120', an entirely welded building, was made without using a single rivet in its construction.

Lincoln Electric Co.—Transportation one way only.

FILM SLIDES*

ELECTRICITY

Appliances and Equipment

1. DIRECT-CURRENT MOTORS—Also obtainable in glass slides.

In this lecture, two distinct types of motors, the Type BD and the Type CD, are considered in detail. Attention is given to the design and assembly of these motors, and there is also included a comprehensive description of their operating characteristics.

General Electric Company—Free. Text and slides may be retained by user.

2. ELECTRIC CAR DUMPER—14 slides

This gives details of the mechanism as now used.

Iowa State College—Transportation only.

3. ELECTRICITY—24 slides

Shows fundamental electrical apparatus and its applications, such as the lightning rod, magnetic field, electromagnet, meter, arm lamps, induction coil, transformer, telegraph and telephone.

Iowa State College—Rental 75c, plus transportation.

4. 15,000 KW INDUCTION FREQUENCY CONVERTER SET—15 slides

Use of frequency converters; construction, parts, and characteristics.

Iowa State College—Transportation only.

5. 50,000 KVA SYNCHRONOUS CONDENSERS—29 slides

Construction; parts; characteristics of these condensers.

Iowa State College—Rental 75c, plus transportation.

6. MOTOR: BTA—ALTERNATING CURRENT—25 slides COMMUTATOR MOTOR

Windings; characteristics; construction; applications of this type of motor.

Iowa State College—Transportation only.

7. MOTORS: TYPE KT POLYPHASE INDUCTION—59 slides

Types; windings; characteristics; construction.

Iowa State College—Transportation only.

General Electric Co.—Free. Slides and lecture may be retained by user.

8. OIL CIRCUIT BREAKERS—Also obtainable in glass slides

This lecture describes the construction and operation of modern oil circuit breakers and includes a detailed description of many of the important types.

General Electric Co.—Free. Text and slides may be retained by user.

* Lectures or teaching manuals are supplied with these slides. Other subjects for use with film slide equipment are listed under "Lantern and Glass Slides."

9. 60,000 KW TURBINE GENERATOR SET—19 slides

Details of construction; assembly; parts; other details.

Iowa State College—Transportation only.

10. REPULSION MOTORS—TYPE SCR—Also obtainable in glass slides.

This lecture explains the characteristics of the Type SCR which is used in single-phase circuits. The notable characteristics include high starting torque, high accelerating torque, and no break in accelerating torque.

General Electric Co.—Free. Text and slides may be retained by user.

11. SOME ELECTRICAL DEVELOPMENTS OF 1929—Also obtainable in glass slides

This lecture outlines the progress made by the G-E company in outstanding electrical development during 1929. A large number of pictures of installations and new apparatus are included.

General Electric Co.—Free. Text and slides may be retained by user.

12. STEEL MILL ELECTRIC DRIVE—18 slides

Details of electrical equipment as applied to the steel industry.

Iowa State College—Transportation only.

13. SYNCHRONOUS MOTORS AND THEIR APPLICATION—Also obtainable in glass slides

This lecture covers the subject of synchronous motors and their applications, including the several forms, differing in mechanical structure and in electrical characteristics.

General Electric Co.—Free. Text and slides may be retained by user.

14. TUBE: COOLIDGE CATHODE RAY—14 slides

Theory of tube; construction; assembly; parts; other details.

Iowa State College—Transportation only.

15. VACUUM TUBE IN A WIDER FIELD, THE—36 slides

Various types of vacuum tubes and many applications today in industry.

Iowa State College—Transportation only.

Lighting

16. AIRPORT LIGHTING—16 slides

Types of lights and details of the systems used.

Iowa State College—Transportation only.

17. AVIATION LIGHTING—31 slides

Use of lights in aviation; various types of lights, where used, and how.

Iowa State College—Transportation only.

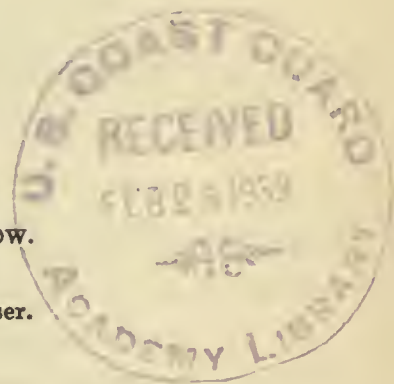
General Electric Co.—Free. Slides and lecture may be retained by user.

18. FLOODLIGHTING—31 slides

Details; types of lights; examples, etc.

Iowa State College—Transportation only.

General Electric Co.—Free. Slides and lecture may be retained by user. Also obtainable in glass slides.



19. HEAT, SOUND, LIGHT (Colored)—29 slides; also 60 slides

Analysis of a flame; convection; weather phenomena; evaporation; heating plants; echo bridge; manometric flame; sunshine; eclipse; images; photography; projection; rainbow spectrums.

Iowa State College—29 slides Rental 75c, plus transportation.

University of Kansas—Transportation one way, plus service fee 50c. When 20-50 sets are used, the annual service fee is \$8.50. 60 slides.

20. LIGHT'S GOLDEN JUBILEE—35 slides

Edison's early life; telegraph experiments; developments in the incandescent lamp field; fiftieth anniversary of invention of the incandescent lamp.

Iowa State College—Transportation only.

21. MERCURY ARC RECTIFIER DEVELOPMENT—27 slides

Interesting information on the development of mercury arc rectifiers; characteristic wave forms; circuits; etc.

Iowa State College—Transportation only.

General Electric Co.—Free. Slides and text may be retained by user. Also obtainable in glass slides.

22. STREET LIGHTING—61 slides

Details; types of lights; examples; etc.

Iowa State College—Rental 75c, plus transportation.

General Electric Co.—Free. Slides and text may be retained by user. Also obtainable in glass slides.

Radio and Telephone

23. HOW THE TELEPHONE TALKS—76 slides

Lecture Notes are in film. Diagrammatic explanation of the operation of the telephone in transferring the sound of the voice.

University of Kansas—Transportation to be paid by borrower one way, plus service fee 50c. When 20-50 sets are used, the annual service fee is \$8.50.

24. HOW WE HEAR—88 slides

Lecture Notes are in film. The mechanism of the ear and the method of transmitting sound waves is made clear by comparison of the ear with a telephone.

University of Kansas—Transportation to be paid by borrower one way, plus service fee 50c. When 20-50 sets are used, the annual service fee is \$8.50.

25. RADIO COMMUNICATION ON TRAINS—14 slides

Description of this form of communication.

Iowa State College—Transportation only.

26. TUBES: 100 KW TRANSMITTING VACUUM—14 slides

Size of tube; parts; construction; testing; use of tube.

Iowa State College—Transportation only.

27. VACUUM TUBES FOR RADIO COMMUNICATION—49 slides

Development of vacuum tubes and uses today.

Iowa State College—Transportation only.

General Electric Co.—Free. Slides and lecture may be retained by user.

Transportation

28. ALL ELECTRIC SHIP—39 slides

Details of the construction and operation of all electric ships.

Iowa State College—Transportation only.

29. BOATS: NEW YORK CENTRAL TUG—18 slides

A discussion of electrified tug boats; equipment and operation.

Iowa State College—Transportation only.

30. BUSES: GAS ELECTRIC—16 slides

Types of gas-electric buses; equipment; power plants; operation.

Iowa State College—Transportation only.

31. ELECTRIC LOCOMOTIVE—A. C.—19 slides

Details of motor generator; type of locomotive used for certain types of railroad operation.

Iowa State College—Transportation only.

32. ELECTRIC LOCOMOTIVES—Also obtainable in glass slides

This slide reviews the developments in the design and operation of the electric locomotive and presents a study of the running gear of conventional electric locomotives.

General Electric Co.—Free. Text and slides may be retained by user.

33. ELECTRIC SHIP "CALIFORNIA"—26 slides

Details of the steamship "California", largest American built liner and the world's largest commercial vessel with electric propulsion.

Iowa State College—Transportation only.

34. LOCOMOTIVE: 110-TON GAS-ELECTRIC STORAGE BATTERY—12 slides

Types of locomotives; construction; equipment; characteristics; circuits.

Iowa State College—Transportation only.

35. LOCOMOTIVE: 3,000 VOLT D. C.—18 slides

Details of the 150 ton, 3,000 volt, direct current locomotives built for the Paulista Railways of Brazil.

Iowa State College—Transportation only.

36. RAILWAY ELECTRIFICATION—Also obtainable in glass slides

This slide shows the progress made in the electrification of railways, especially in mountainous regions and in underground transportation.

General Electric Co.—Free. Text and slides may be retained by user.

37. RAILWAY MOTORS—Also obtainable in glass slides.

This lecture reviews the underlying theory of magnetism, describes the several types of motors, and explains their design and the way in which they meet requirements.

General Electric Co.—Free. Text and slides may be retained by user.

MATERIALS

38. BRICK AND ITS ROMANCE—45 slides

Uses of brick in famous buildings throughout the world and the processes of manufacture of brick.

Iowa State College—Rental 25c, plus transportation.
University of Missouri—Rental 10c, plus transportation.

39. COAL, BITUMINOUS—15 to 50 slides

University of Missouri—Rental 10c, plus transportation.

40. COPPER—50 slides

Lecture notes are in film. Preparation of copper for its various uses, from securing the ore through the processes necessary to produce the finished product.

University of Kansas—Transportation to be paid by borrower one way, plus service 50c. When 20-50 sets are used, the annual service fee is \$8.50.

41. FROM TIMBER TO LUMBER

This deals with the manufacturing processes in the lumbering industry, and includes a manual which provides ample material for an illustrated lecture from 30 to 60 minutes in length.

Junior-Senior High School, Newton, Iowa—Sale \$3.00.

42. GLASS—40 slides

Production of glass in a modern factory; various uses of the product.

University of Kansas—See Number 40.
Iowa State College—Rental 25c, plus transportation.
University of Missouri—Rental 10c, plus transportation.

43. GOLD—30 slides

How gold ore is mined and smelted, and how the precious metal is prepared for its various uses.

University of Kansas—See Number 40.
Iowa State College—Rental 25c, plus transportation.

44. IRON AND STEEL—50 slides

Lecture notes are in film. Mining and transportation of ore; preparation of iron and steel for their varied uses.

University of Kansas—Transportation to be paid by borrower one way, plus service fee 50c. When 20-50 sets are used, the annual service fee is \$8.50.

45. MINING BITUMINOUS COAL—33 slides

Formation of coal from the great swamp forests of centuries ago. Securing coal, by both underground surface methods.

University of Kansas—See Number 44.

46. ORIGIN OF COAL—57 slides

Lecture notes are in film. Restorations of the carboniferous age show the nature of coal-forming vegetation; drawings and diagrams show the geologic process by which the transformation of coal from plant life was wrought. Maps show the location of principal coal beds in the United States.

University of Kansas—See Number 44.

47. RUBBER—53 slides

Gathering and preparation of various grades of rubber, with particular attention to its use in the making of tires.

University of Kansas—See Number 44.

Iowa State College—Rental 25c, plus transportation.

University of Missouri—Rental 10c, plus transportation.

48. SALT—20 slides

The mining of salt, and its preparation for the use of the consumer.

University of Kansas—See Number 44.

Iowa State College—Rental 25c, plus transportation.

University of Missouri—Rental 10c, plus transportation.

MECHANICAL DRAWING

49. MECHANICAL DRAWING

Manual and supplementary problems accompany this film slide. This is a very fine one-semester course for beginners.

Junior-Senior High School—Sale \$5.00.

PAPERMAKING

50. ELECTRIC EQUIPMENT IN PAPER MILLS—

This lecture shows how electric equipment is applied in the development of paper manufacture on a large commercial basis. No manuscript is sent with this lecture, as the captions on the film furnish adequate continuity.

General Electric Co.—Slides may be retained by user.

51. ELECTRIC EQUIPMENT IN PULP AND PAPER MILLS—

The process of manufacture from raw material to finished product is described in detail. No manuscript is sent with this lecture, as the captions on the film furnish adequate continuity.

General Electric Co.—Slides may be retained by user.

52. MANUFACTURE OF PAPER—110 slides

The evolution of paper, from the tree of the forest to the pad on the office desk. The uses of paper are also touched upon, especially for commercial purposes.

University of Kansas—Transportation to be paid by borrower one way, plus service charge 50c. When 20-50 sets are used, annual service fee is \$8.50.

53. PAPER—37 slides

History of paper making; Fourdrinier's endless screen paper machine; modern processes in paper making from the trees in the woods to the completed paper. Developments of the use of paper from the sixteenth century to the present.

Iowa State College—Rental 25c, plus transportation.

SAFETY

54. CONDITION OF THE CAR—11 slides

A production of the National Safety Council. Safe practices in the care of an automobile, such as brakes, lights, rear view mirror, etc.

Iowa State College—Rental 25c, plus transportation.

55. DRIVING SAFELY BETWEEN INTERSECTIONS—19 slides

Safe practices in driving an automobile between intersections. Curves, high speeds, cutting corners, etc.

Iowa State College—Rental 25c, plus transportation.

56. RULES OF THE ROAD—19 slides

A production of the National Safety Council. General rules of the road to be followed when driving a car. Intersections, passing other vehicles, etc.

Iowa State College—Rental 25c, plus transportation.

57. SAFE DRIVING AT INTERSECTIONS—19 slides

A production of the National Safety Council. Safe driving practices at intersections. Special attention must be given by drivers to intersections because a big majority of accidents in cities occur there and the percentage is growing.

Iowa State College—Rental 25c, plus transportation.

58. TO DRIVE WITHOUT ACCIDENTS—18 slides

A production of the National Safety Council. General admonition to the automobile driver. The safe driving of automobiles is an important accomplishment.

Iowa State College—Rental 25c, plus transportation.

TEXTILES**59. COTTON GROWING—30 slides**

The cultivation of cotton as carried on in the Southern States.

University of Kansas—Transportation to be paid by borrower one way, plus service fee 50c. When 20-50 sets are used, annual service fee is \$8.50.

60. ELECTRIC MOTORS DRIVING TEXTILE MACHINERY—

This slide illustrates all phases of motor application in textile mills from cottonpicker drives to knitting-machine drives and shows how individual motor drive increases flexibility, efficiency, and production and reduces maintenance, spoilage, and danger.

General Electric Co.—Free. Slides may be retained by user.

61. FLAX AND LINEN—28 slides

Cultivation of flax and preparation of the fiber for manufacture into linen cloth.

University of Kansas—See Number 59.

University of Missouri—Rental 10c, plus transportation.

62. MANUFACTURE OF COTTON CLOTH—30 slides

How the cotton, after being received at the factory, is treated for manufacture into cloth.

University of Kansas—See Number 59.

63. SILKWORMS AND SILK—15 to 50 slides

University of Missouri—Rental 10c, plus transportation.

64. STORY OF SILK—64 slides

Lecture notes are in film. The silk industry as carried on in Japan.

University of Kansas—See Number 59.

65. STORY OF WOOL—75 slides

Sheep raising and shearing; preparation of the wool for use in cloth.

University of Kansas—See Number 59.

WELDING**66. ARC WELDING—THE ART—Also obtainable in glass slides**

Because of its economy and dependability and the flexibility of the apparatus, arc welding methods are being generally adopted in the erection and fabrication of steel structures. This lecture includes general information and the characteristics of the electric arc.

General Electric Co.—Free. Text and slides may be retained by user.

67. ARC WELDING—INDUSTRIAL

This lecture deals with the special apparatus which has been developed to meet the particular needs of arc welding as it is used in manufacture and construction to save time, labor, and material.

General Electric Co.—Free. Text and slides may be retained by user.

68. ARC WELDING—STRUCTURAL

This lecture describes the various types of equipment designed to meet the requirements of the arc-welding process and shows how welding energy is obtained from a motor-generator set, the motor being driven by either direct or alternating current.

General Electric Co.—Free. Text and slides may be retained by user.

69. ELECTRICALLY WELDED PIPE—23 slides

Details of the processes of electric arc welding. One of the newer applications is in the fabrication of pipe from rolled steel plate. The processes are shown.

Iowa State College—Transportation only.

70. WELDING: ATOMIC HYDROGEN—19 slides

Different kinds of metals may now be successfully welded by means of the atomic hydrogen process. This subject explains the process in detail.

Iowa State College—Transportation only.

General Electric Co.—Free. Text and slides may be retained by user.

MISCELLANEOUS**71. ELECTRIC HEAT IN INDUSTRY—Also available in glass slides**

The economics and various applications of electric heat are dealt with in a non-technical manner.

General Electric Co.—Free. Text and slides may be retained by user.

72. GETTING RID OF WASTE IN CITIES—42 slides

An explanation of two common methods of getting rid of waste from a city—the first, to send it far out to sea; the second, to filter it and destroy its dangerous germs.

University of Kansas—Transportation to be paid by borrower one way, plus 50c service fee. When 20-50 sets are used, the annual service fee is \$8.50.

73. HOW THE FOREST SERVES MAN—77 slides

Lecture notes are in film. The story of the tree for building and other purposes—marking, felling, sawing, transportation, and general preparation of wood for the many uses to which it is put.

University of Kansas—See Number 72.

74. MECHANICS AND ENGINEERING APPLICATIONS—53 slides

Standards; levers; pulleys; centrifugal force; density; pumps; capillary action; water wheels; pressure of liquids; siphon; barometers; pressure; other important principles. Included also are examples of applications, such as cranes, farm machinery, vacuum cleaning installations, submarines, etc.

Iowa State College—Rental 75c, plus transportation.

75. PANAMA CANAL ZONE—38 slides

Maps, scenes in Colon, Cristobal, Balboa, Panama City; locks; construction; ships passing through the canal; water route shortened by the construction of the canal.

University of Kansas—See Number 72.

76. STEINMETZ, CHARLES PROTEUS—27 slides

Life and work of this great scientist.

Iowa State College—Transportation only.

77. TURBINE-GENERATOR SETS—Also available in glass slides.

This lecture considers the first large turbine made in the U. S. It shows the increased capacities of turbines today, demonstrates the use of high-pressure and high-temperature steam.

See Number 71.

LANTERN AND GLASS SLIDES*

AVIATION

1. AEROPLANES—33 slides

This set illustrates and discusses the use of aviation during the World War. Aeroplanes, balloons, air maps, anti-aircraft guns.

Indiana University—Rental \$1.00, plus transportation.

2. AIRPLANES AND HOW THEY ARE MADE—33 slides

This set, which was prepared by the government during the World War, deals with the construction of airplanes during war times.

Indiana University—Rental \$1.00, plus transportation.

3. AVIATION—EARLY HISTORY AND DEVELOPMENTS—48 slides

Hercules Beetle; pre-historic reptile Pterodactyl; eagle; flying squirrel; Hermes; Leonardo da Vinci; Montgolfier's balloon; Charles and his hydrogen balloon; Henson's air liner of 1843; Chanute multiplane glider; Wright brothers' glider; Wright's first plane; Curtiss planes; Navy's first airship; Navy's Ott Pusher type seaplane.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

* Other subjects are listed under "Film Slides."

4. AVIATION. SERIES I.—49 slides

The development of aviation from the early dawn to F-5-L flying boat which was a standard patrol of the United States Navy during 1917.

Indiana University—Rental \$1.00, plus transportation.

5. AVIATION. SERIES II.—40 slides

Development from the time of the famous Lafayette Escadrille to the Hawaiian flight of Bronte and Ernest Smith, who started in a Travel-air monoplane, "City of Oakland", August 17, 1927, and landed on the Island of Molokai from lack of fuel.

Indiana University—Rental \$1.00, plus transportation.

6. AVIATION. SERIES III.—35 slides

This set starts with the successful solo flight of Lieutenant R. R. Bentley, South African Air Force, who on September 1, 1927, flew to Cape Town and landed his D. H. "Moth" plane on September 28, 1927. It illustrates aviation development to January 7, 1929.

Indiana University—Rental \$1.00, plus transportation.

7. AVIATION—DEVELOPMENTS FROM THE WORLD WAR TO THE PRESENT—82 slides

Curtiss JN 4-D used for training pilots during the war; Lafayette Escadrille; blimp observation balloon; aerial map; NC-4; views of various endurance record planes; U. S. N. Langley; the Los Angeles; amphibian planes; Lindbergh, Byrd, Clarence Chamberlin, etc.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation. 75 slides.

8. AVIATION LIGHTING—60 or 30 slides

A brief description of the earliest forms of airport lighting equipment, and a detailed description of the earliest forms of airport application of the various apparatus necessary in a modern well-lighted airport.

Indiana University—60 slides Rental \$1.00, plus transportation; 30 slides Rental \$1.00, plus transportation.

General Electric Co.—Transportation only.

9. BALLOONS—14 slides

This collection deals with the use of balloons during the World War.

Indiana University—Rental \$1.00, plus transportation.

10. FLYING FOR AMERICA—29 slides

Training aviators during the World War. Life of the aviator at the front. Some famous American war aces. Airplane views of enemy territory.

Indiana University—Rental \$1.00, plus transportation.

11. STORY OF AVIATION—37 slides

Devices lighter than air, heavier than air; balloons, airplanes; uses of airplanes in war and peace.

American Museum of Natural History—Free to New York City schools only.

CONSTRUCTION

12. CONSTRUCTION OF THE PANAMA CANAL (Colored)—33 slides

Hospital for Canal Workers; coal hoist; food storage plant; construction coffer of dam, October 1911; upper locks looking south, July 1910; conduit running through solid wall; Gatun Upper Locks and Dam; Gatun Spillway; etc.

University of Kansas—Rental 75c, plus transportation.

13. CONSTRUCTION AND OPERATION OF CONCRETE SEPTIC TANK—19 slides

Illustrates simple method of constructing a concrete septic tank and its operation.

Portland Cement Association—Transportation only.

14. ENGINEERING AS A PROFESSION—25 slides

Lecture by William E. Mott. Scenes include portion of a steel mill laboratory, rolling plate glass, chemical engineering acid plant, galvanizing plant, a well equipped hydraulic laboratory, Mussel Shoals Dam, Quebec Bridge, Suspension Bridge between Philadelphia and Camden, power stations, electrical machinery, etc.

Carnegie Institute of Technology—Free.

15. KEOKUK POWER PLANT—10 slides

A history of this great project; topography of site of dam; organization of water power company; financing; organizing for construction work. Slides describing big coffer dams; work of the Iowa division on construction; human side of the task, etc.

Iowa State College—Rental 75c, plus transportation.

16. LOS ANGELES AQUEDUCT—53 slides

History of this great project; necessity of it in order to supply Los Angeles with water; mountains from which water comes; Haiwee Reservoir site; the beginning; aqueduct construction starts; tunnel construction; huge steam shovels; Alabama Hills; Elizabeth Tunnel; dam construction; hydraulic mining in a hillside; completing aqueduct sections; construction of huge siphons; Nine-mile syphon; power plants; bringing in equipment; control room of large power plant.

Iowa State College—Rental 75c, plus transportation.

17. PANAMA CANAL, THE—82 slides

Slides portray the history of the Isthmus of Panama, construction of the Canal, and the Canal in operation.

American Museum of Natural History—Free to New York City Schools only.

18. WELDED STEEL CONSTRUCTION OF ELECTRIC MACHINES

This lecture presents a series of illustrations, with descriptive paragraphs, depicting the types and varieties of welded steel construction in use at the present time.

General Electric Co.—Transportation only.

ELECTRICITY

Industrial Applications

19. ALL-ELECTRIC SHIP, THE—39 slides

This lecture gives a complete picture and description of electric ship propulsion, and the conveniences and furnishing of the modern all-electric ship.

Indiana University—Rental \$1.00, plus transportation.
General Electric Co.—Transportation only. Also available in film slides.

20. PANAMA CANAL—

The important role that electricity has played in the building and maintenance of the canal.

Indiana University—Rental \$1.00, plus transportation.
General Electric Co.—Transportation only.

21. THE X-RAY—55 slides

Development of the x-ray; construction of x-ray tubes; applications of the use of x-ray tubes; use of x-ray in identification of diamonds; industrial applications.

Iowa State College—Rental 75c, plus transportation.
General Electric Co.—Transportation only. Also available in film slides.

Lighting

22. HISTORY OF THE INCANDESCENT LAMP—35 slides

Model of Edison's original laboratory at Menlo Park, New Jersey; replica of Edison's historic experimental lamp of October 21, 1879; early lamps; chemical meter; carbon lamp developments; bases—various types; tantalum lamp; tungsten lamp; later developments.

Iowa State College—Rental 75c, plus transportation.
Indiana University—Rental \$1.00, plus transportation. 47 slides.
University of Kansas—Rental 75c, plus transportation.
General Electric Co.—Transportation only.

23. LIGHT AND LIGHTING—8 slides

This lecture explains the theory of light, and its action on the human eye. Color, practical lighting methods, and the measurement of light are also briefly considered.

Indiana University—Rental \$1.00, plus transportation.
General Electric Co.—Transportation only.

24. LIGHT AND VISION—23 slides

The physics of light and vision is very interesting and a simple description is given. The theory of light in general is treated, and, in addition, there is a historical review of artificial illumination from torch through the periods of oil lamps, gas lights, and to the electric light. Several present day illuminants, including the arm lamp, mercury vapor lamp, the incandescent electric lamp, and the neon tubes, are described in detail.

Iowa State College—Rental 75c, plus transportation.
Indiana University—Rental \$1.00, plus transportation.
American Museum of Natural History—Free to New York City Schools only.
General Electric Co.—Transportation only. Also available in film slides.

25. LIGHTING OF THE FUTURE—30 slides

Developments in lighting homes, business, etc.; future of electric lighting of all types.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation. 60 slides.

General Electric Co.—Transportation only.

26. LUMINOUS HARMONY IN THE HOME—35 slides

This set illustrates the use of light for decoration, luminous table and room decorations, the modernistic trends in decoration and lighting, and modern developments in residential fixtures.

Indiana University—Rental \$1.00, plus transportation.

General Electric Co.—Transportation only.

27. MANUFACTURE OF THE INCANDESCENT LAMP—

This group of slides tells in detail the processes in the manufacture of incandescent lamps. Making tungsten filament; blazing lead wires; bulb making machine; exhausting air from lamp; attaching base; the finished lamp.

University of Kansas—41 slides. Rental 75c, plus transportation.

Iowa State College—24 slides. Rental 75c, plus transportation.

Indiana University—30 slides. Rental \$1.00, plus transportation.

General Electric Co.—Transportation only.

28. SEARCHLIGHTS—

Various installations and uses of arc floodlighting are considered in this lecture.

General Electric Co.—Transportation only. Also obtainable in film slides.

29. THOMAS A. EDISON—35 slides

Life and work of Thomas A. Edison in commemoration of the fiftieth anniversary of his development of the incandescent lamp. Early life as a newsboy; experiments in telegraphy; at Menlo Park; experiments on lamps; other developments; the present time.

Iowa State College—Rental 75c, plus transportation.

General Electric Co.—Transportation only.

Indiana University—Rental \$1.00, plus transportation. 53 slides.

Principles

30. HEAT—28 slides

Causes of heat; sources of heat; determining temperatures; modes of transferring heat from one place to another; expansion of heat; latent heat; electric heat.

American Museum of Natural History—Free to New York City Schools only.

Indiana University—Rental \$1.00, plus transportation.

General Electric Co.—Transportation only. Also available in film slides.

31. MAGNETISM—36 slides

Elementary conceptions of magnetism and molecular theory of magnetism; the contributions of Faraday and Steinmetz to the study of the magnetic field are reviewed.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

General Electric Co.—Transportation only. Also available in film slides.

32. MECHANICS—38 slides

Dynamics and kinematics; velocity; inertia; measure of forces; levers; pulleys; gears; elevator. This set intends to give an understanding of the meaning and the application of the term "mechanics".

Iowa State College—Rental 75c, plus transportation.

American Museum of Natural History—Free to New York City schools only. 41 slides.

General Electric Co.—Transportation only. Also available in film slides.

33. PRINCIPLES OF THE ELECTRIC MOTOR—24 slides

Magnets; electro-magnets; commutator; electric motor; shunt wound and series wound motors; types of railway motors.

American Museum of Natural History—Free to New York City Schools only.

34. TRANSFORMERS—26 slides

Various types of transformers; annealing furnace; winding disk coils; high voltage testing machine for sheet insulation; legs and bottom yokes; interlocking of leg and yoke laminations, large one and two phase core-type transformers, etc.

University of Kansas—Rental 75c, plus transportation.

General Electric Co.—Transportation only. Also available in film slides.

35. VACUUM TUBE IN A WIDER FIELD, A—36 slides

Descriptive of the non-radio applications of hot cathode tubes; developments in the vacuum tube field; requirements of electron tubes; various applications.

Iowa State College—Rental 75c, plus transportation.

General Electric Co.—Transportation only.

Radio and Telephone

36. "NUMBER PLEASE" IN 18 LANGUAGES—(Colored)—67 slides

The telephone in the countries of the world. Very interesting pictures show characteristic scenes in San Francisco; Japan; China; Rangoon; Burma; India; Benares; Alden; Arabia; Mecca; Constantinople and in some 16 other countries.

Iowa State College—Rental 75c, plus transportation.

37. PATHWAY OF A TELEPHONE CALL—31 slides

Shows work of Dr. Alexander Graham Bell and other pioneers; method of sending a call; method of recalling operator; pathway of a long distance call; radio broadcasting apparatus.

American Museum of Natural History—Free to New York City Schools only.

38. ROMANCE OF RADIO—75 slides

This set gives the history, development and theory of radio communication; discovery of Hertz waves; Marconi; first wireless message reception; atoms; electrons; induction; radio waves; theory of radio communication and development in detail.

Iowa State College—Rental 75c, plus transportation.

39. SOUND—29 slides

Sound as a wave motion; characteristics of sound and sound waves; velocity of sound; reflection of sound waves; refraction; intensity, pitch and quality; the telephone.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

General Electric Co.—Transportation only. Also available in film slides.

40. TELEPHONE IN AMERICA—47 slides

Photograph of 201 parts of a telephone; terminal "can"; wires in an underground cable; cable splicer; laying conduit; main distribution frame; switchboards; various types; apparatus in central office; map showing telephone exchanges in the U. S. toll line map of the U. S.; materials that go into the production of a telephone and where each is obtained; public address systems; transmission of photographs by telephone; statistics.

Iowa State College—Rental 75c, plus transportation.

FIRE PREVENTION AND SANITATION**41. FIRE PREVENTION—54 slides**

Portrays losses from fires; causes; methods of preventing fires; and what to do in case of fire.

American Museum of Natural History—Free to New York City Schools only.

42. STREAM POLLUTION—27 slides

Shows the menace to public health arising from the practice of polluting our streams with untreated sewage. Describes the operation of a modern sewage treatment plant.

Portland Cement Association—Transportation only.

43. WATER SUPPLY OF NEW YORK CITY, THE (Catskill System)—57 slides

This set pictures New York's three water supply systems.

American Museum of Natural History—Free to New York City Schools only.

FUR INDUSTRY**44. FUR ANIMALS—32 slides**

Illustrates the importance and economic value of native North American fur animals as a natural resource. Contains views of muskrat, skunk, raccoon, opossum, red fox, etc.

Iowa State College—Rental 75c, plus transportation.

45. FUR TRADE IN CANADA—(Colored)—80 slides

Romance of early days in Canada; contribution to early exploration; territorial expansion and national growth; fur bearers; modern commerce in furs; helpful legislation; fur farming.

Iowa State College—Rental 75c, plus transportation.

National Development Bureau, Canadian Government—Transportation only.

46. STORY OF OUR FURS, THE—70 slides

This set shows the numbers and kinds of animals at one sale; Norway House, station of Hudson Bay Company; where the furs are sold, and the different varieties.

American Museum of Natural History—Free to New York City Schools only.

MANUFACTURING**47. AUTO TIRES—18 slides**

Indiana University—Rental \$1.00, plus transportation.

48. BOOTS AND SHOES—18 slides

Indiana University—Rental \$1.00, plus transportation.

49. BUILDING BATTERIES WITH POWER FROM NIAGARA—60 slides

Depicts pouring antimonial lead to a cast grid; taking grid from mold; trimming and inspecting grid; weighing lead oxides; loading the mold; trimming and inspecting lead parts; loading conveyor table with plates; placing covers on batteries; etc.

University of Kansas—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation. 66 slides.

50. EVOLUTION OF THE WINDMILL—36 slides—Colored

The development, use, and manufacture of the windmill.

Indiana University—Rental \$1.00, plus transportation.

51. MANUFACTURING PINE—27 slides—(Colored)

The story of the evolution of modern welded pipe from crude devices for the conveyance of liquids to modern tubing. Lead, clay, wood, bamboo, and other materials had been used.

Indiana University—Rental \$1.00, plus transportation.

52. STORY OF THE PUMP—44 slides—(Colored)

The evolution of devices used to draw water since early times. Manufacture of modern water pumps.

Indiana University—Rental \$1.00, plus transportation.

53. BRICK MAKING—24 slides

Indiana University—Rental \$1.00, plus transportation.

54. CLAY—24 slides

Shows processes in the manufacture of porcelain dinner ware, brick, terra cotta, tile.

Iowa State College—Rental 75c, plus transportation.

55. CLAY AND CLAY PRODUCTS—60 slides

University of the State of New York—Free to schools in New York State only.

56. LIMESTONE—71 slides

Description of processes in securing limestone for building purposes such as quarrying, cutting, planing; views of buildings in which limestone has been used. A splendid architectural study.

Iowa State College—Rental 75c, plus transportation.

57. MANUFACTURE OF PORTLAND CEMENT, THE—50 slides

Shows all stages in the actual manufacture of cement from the quarry to the finished product.

Portland Cement Association—Transportation only.

58. STONE THAT YOU CAN MOLD, A—51 slides

Contains photographs of completed structures of all types illustrating the adaptability of concrete as a building material.

Portland Cement Association—Transportation only.

MATERIALS**Coal****59. COAL, ANTHRACITE—32 slides**

Indiana University—Rental \$1.00, plus transportation.

60. COAL, BITUMINOUS—11 slides

Indiana University—Rental \$1.00, plus transportation.

61. COAL MINING—42 slides

University of the State of New York—Free to schools in New York State only.

62. COAL AND COAL MINING, THE STORY OF—47 slides

Shows the discovery of coal, varieties of coal, coal mines and mining operations.

American Museum of Natural History—Free to New York City Schools only.

Copper**63. COPPER—14 slides**

Rich mines at Butte, Montana; skips for hoisting ore; air shafts in mine; processes in mining; blasting; refining processes; copper products.

Iowa State College—Rental 75c, plus transportation.

64. GLASS—24 slides

Descriptive of manufacture of plate glass, processes, etc., blowing bottles.

Iowa State College—Rental 75c, plus transportation.

65. GLASS MAKING—31 slides

Indiana University—Rental \$1.00, plus transportation.

Iron and Steel**66. FROM IRON MINE TO BLAST FURNACE—12 slides**

Indiana University—Rental \$1.00, plus transportation.

67. FROM ORE MINE TO SHEET METAL—60 slides

Ore docks at Duluth; mechanical unloading equipment; blast furnaces; open-hearth department; molds being stripped from steel ingots; rail mill; merchant bar mill, welfare of employees, etc.

University of Kansas—Rental 75c, plus transportation.

68. IRON AND STEEL INDUSTRY—60 slides

University of the State of New York—Free to schools in New York State only.

69. MAKING OF STEEL, THE—61 slides

U. S. Steel Corporation—Rental \$1.00, plus transportation.

70. MINING IN THE UNITED STATES—58 slides

Pictures prospecting for valuable metals; mining for gold; copper ores and mining; silver mining; iron deposits and open-pit mining.

American Museum of Natural History—Free to New York City Schools only.

71. STEEL AND STEEL PRODUCTS—60 slides

How steel is made; locating ore; loading ore; unloading ore; blast furnaces; processes in producing steel; ingots; rolling mills and processes; wire nail mill; steel pipe and tubing manufacture; tin plate mill; welfare activities of the U. S. Steel Corporation.

Iowa State College—Rental 75c, plus transportation.

Rubber

72. RUBBER—27 slides

Crude rubber as gathered in the Congo and Ceylon; process in refining rubber; making rubber hose; manufacture of tires and inner tubes; rubber shoes.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation. 10 slides.

Salt

73. MINOR INDUSTRIES OF NEW YORK STATE—33 slides

Shows history of salt industry; methods of treatment of brine; preparation for market; ice cutting; brick making.

American Museum of Natural History—Free to New York City Schools only.

74. SALT—24 slides

University of the State of New York—Free to schools in New York State only.

FORESTRY AND LUMBERING

75. FOREST CONSERVATION—65 slides

See Number 74.

76. FORESTRY AND LUMBERING—75 slides

See Number 74.

77. LUMBERING—24 slides

Contains views of various lumbering operations in camps of the U. S.; sorting logs seasoning lumber; etc.

Iowa State College—Rental 75c, plus transportation.

78. LUMBERING IN CANADA—60 slides—(Colored)

A discussion of Canada's forests and lumbering industry.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

National Development Bureau, Canadian Government—Transportation only. 58 slides.

79. OUR FORESTS AND THEIR USES—Two Parts—Part I 42 slides, Part II 57 slides.

Part I. Shows methods of lumbering and preparation of lumber for market.

Part II. Shows forest uses and products; forest protection and conservation.

American Museum of Natural History—Free to New York City Schools only.

80. STORY OF WOOD, THE—49 slides—(Colored)

A set on the lumbering industry.

Indiana University—Rental \$1.00, plus transportation.

PAINING AND DECORATING**81. COLOR IN INTERIOR DECORATION—17 slides—(Colored)**

This group of views illustrates the five rules in forming correct color schemes.

Indiana University—Rental \$1.00, plus transportation.

82. INTERIOR DECORATION—26 slides—(Partly Colored)

This collection illustrates some of the principles of decoration and deals especially with the treatment of floors, walls, ceilings, and woodwork.

Indiana University—Rental \$1.00, plus transportation.

83. STORY OF WHITE LEAD, THE—22 slides

Cross section of mine; separator; concentrates; desilvering kettle and bullion molds; casting the pigs; casting buckles; water mills; drag box; rake tub, drying pans; etc.

University of Kansas—Rental 75c, plus transportation.

84. WHITE LEAD: MANUFACTURE OF—31 slides

Showing the various industrial processes, beginning with the lead as it comes from the smelter; into the furnace; casting buckles; mixing with tan bark; corroding pots; acid; finished stack; shipping the corroded lead; beating the buckles; crushing; shaking; drying hopper and scales; grinding in oil; filling the kegs. Interesting to chemistry classes and manual training or shop classes.

Iowa State College—Rental 75c, plus transportation.

PAPER MAKING AND PRINTING**85. MAKING PAPER—54 slides**

Indiana University—Rental \$1.00, plus transportation.

86. MANUFACTURE OF PAPER, THE—40 slides

Shows sedge from which papyrus was made; making paper by hand; all the processes of pulp and paper manufacture; Hammermill Paper Mills.

University of Kansas—Rental 75c, plus transportation.

87. MANUFACTURE OF PULP AND PAPER, THE—58 slides

Courtesy of the Canadian Government. Portrays first paper-making machine—19th century; processes in the preparation of chemical pulp; distinction between the manufacture of pulp and paper; different grades of paper; location of paper mills; trees best suited for paper-making.

American Museum of Natural History—Free to New York City Schools only.

88. NEWSPAPER; MAKING A MODERN—35 slides

A detailed description of the many processes in the production of a large city daily; reporters; telegraph instruments; printer telegraph; copy desk; library; photographic department; engraving; etching; composing room; linotype machine; Ludlow casters; proof reading; make-up; plate casting; presses; paper; mailing machines; preparation for sending out papers; business office.

Iowa State College—Rental 75c, plus transportation.

89. PAPER: MANUFACTURE OF—39 slides

A review of paper making from ancient times to the present; Egyptian papyrus; early paper making in America; first paper machine; necessity of paper today; the mill of today; selecting wood pulp; the log drive in the spring; barking and chipping operations; acid making process of producing paper; cooking; fiber material for paper making; beater processes; a modern paper machine; finishing; packing.

Iowa State College—Rental 75c, plus transportation.

90. PRINTING—THE GREATEST FORCE IN CIVILIZATION—30 slides

Shows picture writing; writing in stone; clay tablets; writing on papyrus; page of a book with illuminated type; Gutenberg, the inventor of first movable type; first manufacturing of paper; first page from the Caxton press; modern process of making paper; modern printing press.

University of Iowa—Rental 50c, plus transportation.

91. PULP AND PAPER INDUSTRY IN CANADA, THE—73 slides—(Colored)

The history, vital factors affecting development, forest resources and ownership, contribution of water powers, manufacturing processes (ground-wood, sulphite, kraft and soda pulps), also the making of paper and other products.

National Development Bureau, Canadian Government—Transportation only.

TEXTILES**Cotton****92. COTTON—28 slides**

These slides tell the story of this familiar, artistic, essential, and useful fiber.

Indiana University—Rental \$1.00, plus transportation.

93. COTTON—25 slides

Plowing; cultivation; progress of growth; boll weevil; picking and weighing cotton; the cotton gin; baling cotton; pressing cotton seed; manufacturing processes.

Indiana University—Rental \$1.00, plus transportation.

Indiana University—Rental \$1.00, plus transportation.

94. COTTON—16 slides

University of the State of New York—Free to schools in New York State only.

95. COTTON CLOTH, THE MANUFACTURE OF—20 slides

Cotton bloom; boll weevil and its work; picking cotton; lapping; carding; roving frame; weaving fruit of loom; finished fabric.

University of Kansas—Rental 75c, plus transportation.

96. COTTON, THE STORY OF—35 slides

Depicts story of cotton from growing plant, picking, loading on steamers, spinning, to the finished product.

University of Kansas—Rental 75c, plus transportation.

Flax and Linen

97. FLAX—11 slides

University of the State of New York—Free to schools in New York State only.

98. FLAX AND LINEN—24 slides

Indiana University—Rental \$1.00, plus transportation.

99. LINEN—13 slides

Hanks of linen at mill; testing fibers; winding bobbins; winding spools; starching warp; making patterns; spinning the fabric; cropping machine; mangling linen fabric; calendering finished fabric; inspecting fabric; ready for shipment; towels; sheets; ducks; crashes; thread; and linen goods.

Iowa State College—Rental 75c, plus transportation.

Hemp

100. HEMP—18 slides

Musa textiles; cutting down trees; stripping; extracting fiber; drying hemp; hemp press; bales; binding bales with rattan; pressing bales; loading vessel; Filipino rope factory; interior native rope factory; Manila rope in use; selling at native market; winding spindle; weaving cloth.

Silk

101. SILK—ORIGIN, CULTURE AND MANUFACTURE—59 slides

Courtesy of the Corticelli Silk Company. Shows origin, culture, and manufacture of silk.

University of Missouri—Rental 35c, plus transportation.

102. SILK INDUSTRY—32 slides

Opening bales of raw silk; silkworms; feeding; making nests for silkworms; separating cocoons from their nests; reeling silk from cocoons; processes in weaving; decoration, etc.

Iowa State College—Rental 75c, plus transportation.

Indiana University—Rental \$1.00, plus transportation. 36 slides.

Wool

103. WOOL—17 slides

Description of the sheep and wool industry; feeding; shearing; wrapping newly shorn fleeces; sorting wool at mills; carding machine; spinning; weaving; finishing fine woolen goods.

Iowa State College—Rental 75c, plus transportation.

104. WOOLEN INDUSTRY—36 slides

Shows sheep ranges of South Colorado and other western states, Australia, and South America; assorting wool; spinning machine; warp machine; a large weaving room; shearing the nap of woolen fabrics; Navajo blanket weaving; etc.

Indiana University—Rental \$1.00, plus transportation.

University of Kansas—Rental 75c, plus transportation.

Miscellaneous Manufacturing

105. GREAT AMERICAN INDUSTRY, A—20 slides—Colored

These slides illustrate in natural color interesting points in the manufacturing and finishing processes of fabrics. A 16 page booklet giving 45 essential steps in the processes has been prepared for use with or without slides.

B. B. & R. Knight Corporation—Transportation only.

106. GUIDE TO FABRIC SELECTION—47 slides

Produced by U. S. Bureau of Home Economics.

Indiana University—Rental \$1.00, plus transportation.

MISCELLANEOUS

107. AIR—20 slides

A profile of the atmosphere; instruments used to test the air; the biggest air cushion in the world; compressed air; helium; men who gave us knowledge of the air.

University of Kansas—Rental 75c, plus transportation.

108. ARCHITECTURE—26 slides

Scenes include making of final drawings in a drafting room; exercises in composing classic fragments; various problems in architectural design, etc.

Carnegie Institute of Technology—Free.

109. CANADA'S NON-METALLIC MINERALS—58 slides

Uses, distribution, rate and trend of development, external trade, factors affecting development, industries supported.

National Development Bureau, Canadian Government—Transportation only.

110. CANADA'S METALLIC MINERALS—58 slides

Production, Laurentian plateau, Cordilleran belt, Southeastern Canada, external trade, industries, future prospects.

See Number 109.

111. CANADA'S WATER-POWER RESOURCES—58 slides

Shows history, extent and character, Canada's position, future growth, relation to industry.

See Number 109.

112. DECORATIVE ART—36 slides—(Colored)

A selection of textiles, pottery, basketry, etc, from art galleries and museums of New York, Philadelphia, and Chicago. Accurately colored from the originals.

Indiana University—Rental \$1.00, plus transportation.

113. DEVELOPMENT OF THE MODERN WATCH, THE—47 slides—(Colored)

Different ways of telling time; the astrolabe; Nuremberg watchmaker; Queen Elizabeth's wrist watch; shop of the first Swiss watchmaker; America's first watch factory; various departments in a modern watch factory.

University of Kansas—Rental 75c, plus transportation.

114. HISTORY OF CHEMISTRY—58 slides

Pre-historic iron furnace; modern blast furnace; blowpipe from Egyptian tomb; representation of transmutation of elements; ancient and modern tables of chemical symbols; early method of making sulphuric acid; Joseph Priestley; Lavoisier; Dalton's apparatus; Davy's Laboratory; Faraday's laboratory; etc.

University of Kansas—Rental 75c, plus transportation.

115. IRRIGATION AND ITS RESULTS—64 slides

Pictures the methods of watering plants artificially; irrigation projects of the U.S. Government.

American Museum of Natural History—Free to New York City Schools only.

116. NEWER COMMERCIAL CANADA, THE—58 slides

A discussion of the salient features of the economic changes in Canada's commercial and industrial structure—the growth of the population, the rise of the pulp and paper industry, the spread of the mining activity, the advance of manufacturing, etc.

National Development Bureau, Canadian Government—Rental \$1.00, plus transportation.

117. REFRIGERATION—17 slides

This set shows the early methods of securing ice; necessity for sanitary refrigeration; theory of refrigeration; features of good electric household refrigerator.

American Museum of Natural History—Free to New York City Schools only.

118. STEINMETZ, CHARLES PROTEUS—29 slides

This lecture touches on the outstanding events of his life, and describes his outstanding contributions to the world of science.

Indiana University—Rental \$1.00, plus transportation.

General Electric Company—Transportation only. Also obtainable in film slides.

119. TYPES OF TRANSPORTATION—50 slides—(Colored)

This collection of views shows the history and development of transportation and illustrates its relation to the progress of civilization.

Indiana University—Rental \$1.00, plus transportation.

STEREOGRAPHS

THE following titles of 24 pictures each are distributed by the University of Missouri for a loan period of two weeks, transportation to be paid by the borrower. Lecture notes are on the back of each picture. Title list of the sets will be sent in advance if desired. Stereoscopes will be furnished upon request.

- | | | | |
|-------------|------------|--------------------|-------------|
| 1. Coal. | 2. Cotton. | 3. Iron and Steel. | 4. Leather. |
| 5. Leather. | 6. Lumber. | 7. Paper. | 8. Rubber. |
| 9. Silk. | 10. Wool. | | |

STILLFILMS

STILLFILMS are arranged in continuous strips of noninflammable film $2\frac{1}{4}$ inches wide, on which there are several views pertaining to some specific subject. A stillfilm attachment may be used on standard glass-slide lanterns. The Stillfilms listed below may be secured from the University of Kansas at a rental cost of 50c per set, plus transportation. There are 15 pictures in each set.

Aeronautics

1. AERONAUTICS—Part I. Development of the airplane. Part II. Modern air transportation.

Materials and Manufacturing

2. COAL—The origin of coal; modern mining methods.
3. LEATHER PRODUCTION—Treatment of the hides in their transformation from raw hides to finished product.
4. LUMBER PRODUCTION—Felling the trees, transporting them to the mills, trimming and sawing into different sized pieces for their various uses.
5. PAPER MANUFACTURING—Securing the raw material; steps in the manufacturing process.
6. RUBBER—Tapping trees, gathering the latex, smoking the raw product; factory preparation for various uses.

Panama Canal

7. PANAMA—Map, nature of land, Culebra, French and American plans, General Goethals, construction machinery, Pedro Miguel lock, gates, importance to the U.S., trip through canal, Panama City, natives, etc.

Textiles

8. COTTON—Production and milling of cotton as carried on in the Southern States.
9. SHEEP AND WOOL—Care of sheep, shearing, preparing wool for manufacture into cloth.
10. SILKWORM—Life history of the silkworm; treatment of cocoon in securing the fiber for spinning.

SOURCES

Names and Addresses of Distributors

- | | | | |
|---|--|---|--|
| 1. Ajax Electrothermic Corporation | Trenton, New Jersey | 34. Cleveland Twist Drill Company | 1242 East 49th Street
Cleveland, Ohio |
| 2. Allen Studios, Inc. | 80 East Avenue
Rochester, N. Y. | 35. Floyd W. Cocking | Roosevelt Junir High School
San Diego, California |
| 3. Alpha Portland Cement Company | 15 South Third Street
Easton, Pa. | 35. Commonwealth of Massachusetts
Department of Education, Division
of University Extension | State House
Boston, Mass. |
| 4. American Auto Association | Washington, D. C. | 37. Crane Company | 835 S. Michigan Avenue
Chicago, Illinois |
| 5. American Brass Company | Waterbury, Conn. | 38. Darnell Corporation, Ltd. | 24 East 22nd Street
New York City |
| 6. American Electric Railway Association | 292 Madison Avenue
New York City | 39. De Frenes & Company | Wilkes-Barre, Pa. |
| 7. American Institute of Steel Construction | Dept. of Educational
Service
200 Madison Avenue
New York City | 40. Dodge Bros. Corporation | Detroit, Michigan |
| 8. American Museum of Natural History | 77th St. & Cen. Park West
New York City | 41. Dominion Live Stock Commission
Department of Agriculture | Ottawa, Canada |
| 9. American Rolling Mill Company | Middletown, Ohio | 42. E. I. DuPont de Nemours & Co.
Motion Picture Bureau | Wilimington, Delaware |
| 10. American Sheet & Tin Plate Co. | Pittsburgh, Pa.,
Frick Bldg. | 43. Eagle-Ficher Film Library
Industrial Film Library | 901 Temple Bar Building
Cincinnati, Ohio |
| 11. American Steel & Wire Company | 208 S. LaSalle Street
Chicago, Illinois | 44. Eastin Feature Films | Galesburg, Illinois |
| 12. American Writing Paper Company | Holyoke, Mass. | 45. Eastman Teaching Films | 343 State Street
Rochester, N. Y. |
| 13. Andlauer Film Company | Ozark Building
Kansas City, Missouri | 46. Edited Pictures System, Inc. | 330 West 42nd Street
New York City |
| 14. Armstrong Cork Company | Lancaster, Pa. | 47. Educational Film Exchanges, Inc. | 1501 Broadway
New York City |
| 15. Atkins & Co., E. C. | 402 S. Illinois Street
Indianapolis, Indiana | 48. Electrical Research Products, Inc. | 350 West 57th Street
New York City |
| 16. Atlas Educational Film Company | Oak Park, Illinois | 49. Erpi Picture Consultants, Inc. | 250 West 57th St.,
New York City |
| 17. Audio-Cinema, Inc. | 2825 Decatur Avenue
Bronx, New York | 50. Excelsior Film Company | Film Mart Building
1635 Central Parkway
Cincinnati, Ohio |
| 18. Automobile Club of Southern California | Arcade Station, Box 690
Los Angeles, California | 51. F. C. Pictures Corporation | 265 Franklin Street
Buffalo, New York |
| 19. Babcock and Wilcox Company | 85 Liberty Street
New York City | 52. Federal Mutual Liability Insurance | Boston, Mass. |
| 20. B. B. & R. Knight Company | 715 Hospital Trust Bldg.,
Providence, R. I. | 53. Films of Commerce, Inc. | Pathe Building
35 West 45th Street
New York City |
| 21. Bausch & Lomb Optical Co. | Pershing Square Building
New York City | 54. Ford Motor Company | 3674 Schaefer Road
Dearborn, Michigan |
| 22. Bell & Howell Company | 1801-1815 Larchmont Ave.
Chicago, Illinois | 55. General Railway Signal Company | Rochester, New York |
| 23. Henry Bollman | 20 Dixon Street
Tarrytown, N. Y. | 55. Goodyear Tire & Rubber Company
Motion Picture Division | Akron, Ohio |
| 24. Bray Film Library | 729 Seventh Avenue
New York City | 57. Gordon Ellis Production | Pathe Building
35 West 45th St., New York |
| 25. Burroughs Adding Machine Co. | Detroit, Michigan | 58. General Electric Company
Visual Instruction Section | Schenectady, New York |
| 26. a. Canadian Government Motion
Picture Bureau Department of
Trade and Commerce
b. National Development Bureau | Ottawa, Canada

Ottawa, Canada | 59. General Motors Corporation | 57th Street & Broadway
New York City |
| 27. J. I. Case Company | 700 State Street
Racine, Wisconsin | 60. Great Lakes Dredge & Dock Co. | 104 South Michigan Avenue
Chicago, Illinois |
| 28. Carnegie Institute of Technology | Pittsburgh, Pennsylvania | 61. Hammermill Paper Co. | Advertising Department
Erie, Pa. |
| 29. Celotex Company | Architectural Department
101 Park Avenue, New York | 62. Hanna Engineering Works | 1765 Elston Avenue
Chicago, Illinois |
| 30. Chicago Film Laboratory | 1322 Belmont Avenue
Chicago, Illinois | 63. John Hancock Mutual Life Insurance Co. | Boston, Mass. |
| 31. Chicago Tribune | Tribune Square
Chicago, Illinois | 64. Harris Seybold Potter Company | 4510 East 71st Street
Cleveland, Ohio |
| 32. Frank R. Church Films | 1719 Jefferson Street
Oakland, California | | |
| 33. Cincinnati Milling Machine & Cincinnati Grinders, Inc. | Cincinnati, Ohio | | |

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| 65. Hastings Pavement Company
(Director of Publicity) | 25 Broad Street
New York City | 103. Portland Cement Association | 33 West Grand Avenue
Chicago, Illinois |
| 66. Hercules Powder Company | Wilmington, Delaware | 104. Public Service Corporation of New
Jersey | 80 Park Place
Newark, N. J. |
| 67. Hollywood Film Enterprises, Inc. | 6060 Sunset Boulevard
Hollywood, California | 105. Postal Telegraph-Cable Company | 67 Broad Street
New York City |
| 68. Home Film Libraries | 500 Fifth Avenue
New York City | 106. Producers' Film Sales Corporation
Artclass Pictures Corporation | 729 Seventh Avenue
New York City |
| 69. Indiana University
(Extension Division) | Bloomington, Indiana | 107. Pyrene Manufacturing Company | 560 Belmont Avenue
Newark, N. J. |
| 70. International Business Machine
Corp. | 270 Broadway
New York City | 108. Ray-Bell Films, Inc. | 821 University Avenue
St. Paul, Minn. |
| 71. International Harvester Co. | 606 S. Michigan Avenue
Chicago, Illinois | 109. RCA—Radiotron Company | Harrison, N. J. |
| 72. International Nickel Company
Advertising Division | 67 Wall Street
New York City | 110. Reading Iron Company | 401 North Broad Street
Philadelphia, Pa. |
| 73. International Paper Company
Advertising Division | 220 East 42nd Street
New York City | 111. Remington Rand, Inc. | 465 Washington Street
Buffalo, New York |
| 74. Iowa State College
Engineering Extension Service | Ames, Iowa | 112. Douglas D. Rothacker | 729 Seventh Avenue
New York City |
| 75. Jam Handy Picture Service | 2900 East Grand Boulevard
Detroit, Michigan | 113. St. Louis Safety Council | St. Louis, Missouri |
| 76. Junior-Senior High School
Department of Industrial Education | Newton, Iowa | 114. Singer Sewing Machine Company | Education Department
797 Eighth Avenue
New York City |
| 77. Kalamazoo Vegetable Parchment
Company, Advertising Department | Parchment, Michigan | 115. Society for Visual Education, Inc. | 327 S. LaSalle Street
Chicago, Illinois |
| 78. Kodascope Library, Inc. | 33 West 42nd Street
New York City | 116. Southern Bell Telephone & Tele-
graph Co. | Atlanta, Georgia |
| 79. Liberty Mutual Insurance Com-
pany | Park Square Building
Boston, Mass. | 117. Southern Cypress Manufacturers'
Assn. | 722-24 Barnett National Bank
Bldg., Jacksonville Florida |
| 80. Lincoln Electric Company | 12818 Colt Road
Cleveland, Ohio | 118. State College of Washington
General College Extension | State College
Pullman, Washington |
| 81. Long-Bell Lumber Sales Corpora-
tion | R. A. Long Building
926-28 Grand Avenue
Kansas City, Missouri | 119. Studebaker Sales Corporation
Sales Promotion Department | South Bend, Indiana |
| 82. MacAndrews & Forbes Company | Camden, New Jersey | 120. Superheater Company, The
Publicity Manager | 60 East 42nd Street
New York City |
| 83. State of Maryland
Conservation Dept., Game Division | 512 Munsey Building
Baltimore, Maryland | 121. Tanners' Council of America | 41 Park Row
New York City |
| 84. McCampbell & Co. | 320 Broadway
New York City | 122. Thermoid Rubber Company | Trenton, New Jersey |
| 85. Mechanical Brickhandling Corpo-
ration | P. O. Box 239
Lancaster, Pa. | 123. U. S. Bureau of Mines
U. S. Department of Commerce | Bureau of Mines Experiment
Station, 4800 Forbes Street
Pittsburgh, Pa. |
| 86. Melville Shoe Corporation | 555 Fifth Avenue
New York City | 124. U. S. Bureau of Mines | Petroleum Station
Bartlesville, Okla. |
| 87. Metropolitan Motion Picture Co. | 1745 East Grand Boulevard
Detroit, Michigan | U. S. Bureau of Mines | Federal Building
Birmingham, Alabama |
| 88. Metropolitan Museum of Art | New York City | U. S. Bureau of Mines | North Central Experiment
Station, Univ. of Minnesota,
Minneapolis, Minn. |
| 89. Mogull Bros. | 1944 Boston Road
Bronx, N. Y. | U. S. Bureau of Mines | Health & Safety Station
Salt Lake City, Utah |
| 90. National Automatic Sprinkler Assn. | 205 East 42nd Street
New York City | U. S. Bureau of Mines | Petroleum Field Office
506 Customhouse
San Francisco, Calif. |
| 91. National Fire Protection Assn.
(Committee on Visual Education) | 60 Batterymarch Street
Boston, Mass. | U. S. Bureau of Mines | Northwest Experiment Sta-
tion Univ. of Washington
Seattle, Washington |
| 92. National Motion Pictures Co. | Indianapolis, Indiana | 125. U. S. Department of Agriculture
Office of Motion Pictures | Washington, D. C. |
| 93. National Safety Council, Inc. | 20 N. Wacker Drive
Chicago, Illinois | 126. U. S. Department of Labor | Women's Bureau
Washington, D. C. |
| 94. National Tube Company | Frick Building
Pittsburgh, Pa. | 127. U. S. Pipe and Foundry Company | Burlington, New Jersey |
| 95. New Jersey State Museum | Trenton, New Jersey | 128. U. S. Steel Corporation | Bureau of Sanitation & Wel-
fare, 71 Broadway
New York City |
| 96. New York State College of Forestry | Syracuse, N. Y. | 129. University Film Foundation | 40 Oxford Street
Cambridge, Mass. |
| 97. New York Telephone Company | 140 West Street
New York City | 130. University of California
Extension Division
Department of Visual Instruction | Berkeley, California |
| 98. New York Times | Times Square
New York City | 131. University of Chicago Press | Chicago, Ill. |
| 99. Norton Company
(Publicity Manager) | Worcester, Mass. | 132. University of Iowa
Department of Visual Instruction
Extension Division | Iowa City, Iowa |
| 100. Otis Elevator Company
(Publicity Division) | 260 Eleventh Avenue
New York City | | |
| 101. Packard Motor Car Company
General Sales Departme | Detroit, Michigan | | |
| 102. Perfect Circle Co., The | Hagerstown, Indiana | | |

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| 133. University of Kansas & Colorado
Bureau of Visual Instruction
Extension Division
or
Extension Division | University of Kansas
Lawrence, Kansas | 138. Western Electric Company
Motion Picture Bureau | 120 West 41st Street
New York City |
| 134. University of Missouri
University Extension Division
Visual Education Service | University of Colorado
Boulder, Colorado | 139. Wholesome Films Service, Inc. | 48 Melrose Street
Boston, Mass. |
| 135. University of the State of New
York | Columbia, Missouri | 140. Willoughbys | 110 West 32nd Street
New York City |
| 136. University of Texas
Visual Instruction Bureau
Division of Extension | Visual Instruction Division
Albany, New York | 141. John C. Winston Co., The | Winston Building
1006-1016 Arch Street
Philadelphia, Pa. |
| 137. Visugraphic Pictures | Austin, Texas | 142. Y. M. C. A. Motion Picture Bureau | 347 Madison Avenue
New York City |
| | 247 Park Avenue
New York City | 143. Youngstown Sheet and Tube Co. | Youngstown, Ohio |

