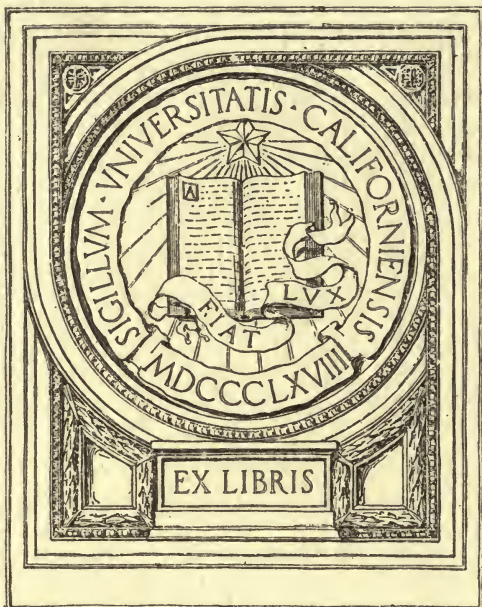


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 Lent by Mrs. Harry Paine Whitney.
1019. Drawing No. 4.
 Lent by Mrs. Harry Paine Whitney.
1020. Drawing No. 5.
 Lent by Mrs. Harry Paine Whitney.
1021. St. Agnes' Eve.
1022. Parson Dunkhardt.
- Ackerman, Olga M.**
 1023. At a Concert.
- Adams, John Otis.**
 1025. Winter Morning.
 Lent by the Muncie Art Association.
1026. A Bit of the Whitewater.
- Adams, Philip.**
 1027. The Sailor.
 1028. At the Spring.
- Ahrens, Ellen Wetherald.**
 1029. Miss G. C.
 1030. A Brown Study.
 1031. Little Bert.
- Aiken, Charles A.**
 1032. Portrait.
- Albert, Ernest.**
 1033. Ten Above Zero.
- Albright, Adam Emory.**
 1034. The Hill Road.
- Alexander, John W.**
 1035. Phyllis.
 Lent by the City Art Museum: St. Louis.
- Allen, Charles Curtis.**
 1036. Mountain and Cloud.
- Allen, Marlon Boyd.**
 1037. Enameling.
- Allis, C. Harry.**
 1038. Evening: Montreuil.
- Allston, Washington.**
 1039. Bacchanal.
 Lent by Albert Rosenthal, Esq.
- Alma-Tadema, Sir Lawrence.**
 1040. Among the Ruins.
- Ames, Blanche.**
 1041. General Adelbert Ames.
 1042. Pauline.
- Anderson, Karl.**
 1043. Fireflies.
- Anderson, Martinus.**
 1044. The Glittering Pageant.
- Anshutz, Thomas P.**
 1045. Portrait of a Little Girl.
 Lent by Mrs. John E. D. Trask.
1046. The Incense Burner.
 Lent by Dr. Charles W. Gessler.
1047. A Rose.
 Lent by William S. Pardee, Esq.

- Archambault, A. Margaretta.
 1048. Mrs. Clementine Dalcour.
 1049. Miss Frances Brock.
 1050. Miss M. Smith.
 1051. Jacqueline.
- Arthur, Stanley Massey.
 1052. Overland Transportation.
- Ashley, Clifford Warren.
 1054. Chase of the Bowhead Whale.
- Austin, Amanda P.
 1055. Market Scene: Port L'Abbe: Bretagne.
- Bacher, Otto H.
 1056. July.
- Baer, William Jacob.
 1057. Young Diana.
 1058. Mrs. E. R. Hewitt.
 1059. Loadicea.
 1060. Betty.
 1061. Girl with Violets.
 1062. Friends.
 1063. Doris.
 1064. Primavera.
 1065. Nymph and Cupid.
 1066. The Apple.
- Bail, Joseph.
 1067. A Lesson in Lacemaking.
- Bains, Ethel Frantslin Betts.
 1068. The Story of Hansel and Gretel.
 1069. The Frog Prince.
 1070. Rumpelstiltskin.
 1071. Snow White and Rose Red.
 1072. Cinderella.
 1073. The Story of the Six Swans.
- Baker, Bliss.
 1074. Landscape.
 Lent by H. C. Henry, Esq.
- Baker, George A.
 1075. Portrait of Charles L. Elliot.
- Baker, Samuel Burtis.
 1076. Portrait of Miss Marion Howard.
- Bakhuysen, Jan.
 1077. Marine with Figures.
- Balaxo, Paula Himmelsback.
 1078. Parthenon: Moonlight.
- Ball, Robert E., Jr.
 1079. The Palms.
 1080. Moonlight: Gothic Arch *; St. Jean: Brittany.
- Ballin, Hugo.
 1081. Sorrow.
- Barlow, M.
 1082. Apples.
 1083. Flowers.
 1084. Fish Sellers.
- Barnard, Edward H.
 1085. The Young Calves: Early August.
 Lent by the St. Botolph Club.
- Barnes, Gertrude.
 1086. Girl with Persian Cat.
- Barnett, Tom P.
 1087. Winter.
 Lent by the City Art Museum: St. Louis.
- Baroccio.
 1088. Portrait of Prince of Urbino.
 Lent by Dan Fellows Platt, Esq.
 1089. Portrait of Prince of Urbino.
 Lent by Dan Fellows Platt, Esq.
- Bartlett, Frederic Clay.
 1090. Spring Recess.
 1091. Our Country Dining Room.
- Bassano, Il. (Jacopo da Ponte).
 1092. Nativity.
 Lent by William M. Paxton, Esq.
1093. Banquet of Dives.
 Lent by Dan Fellows Platt, Esq.
- Bastien-Lepage, Jules Emile.
 1095. Le Reve Bleu.
 Lent by Albert Rosenthal, Esq.
- Baumgartner, Thomas.
 1096. Lady in Furs.
- Baxter, Martha Wheeler.
 1097. Theodore.
 1098. My Mother.
 1099. The Peacock Fan.
 1100. Portrait of Miss T.
 1101. Boy Driving.
- Beal, Gifford.
 1102. The Gossips.
 1103. Summer Landscape.
 1104. Old Town Terrace.
 1105. The End of the Street.
- Beal, Reynolds.
 1106. Orr's Mills.
 1107. Lawrenceville Lock.
- Beard, W. H.
 1108. Having Taken Possession.
 Lent by Fred Sander, Esq.
- Beatty, John W.
 1109. Plymouth Hills.
 Lent by the National Gallery.
 1110. Plymouth Sand Dunes.
- Beaumont, Lillian Adele.
 1111. The Satin Gown.
- Beaux, Cecelia.
 1112. New England Woman.
 Lent by The Pennsylvania Academy of the Fine Arts.
1113. The Dreamer.
 1114. Sita and Sarita.
 1115. Dorothea and Francesca.
 1116. Portrait Study.
 1117. Portrait.
 1118. The Dreamer.
 1119. Ernesta.
- Becker, Benno.
 1120. At Lake Como.
- Becker, Eulabee Dix.
 1121. Portrait of Esther Hoyt.
 1122. Philip Dix Becker.
 1123. Mrs. John Graves.
- Becker, Maurice.
 1124. The Older Generation.
 1125. The Boy and the Man.
- Beckington, Alice.
 1126. Portrait of Mr. Lewis.
 1127. Helen.
 1128. The Morning Paper.
 1129. Study of a Head in Shadow.
 1130. Study in Blues and Greens.
- Beckwith, J. Carroll.
 1131. Portrait of George Coleman, Esq.
- Beechey, Sir William.
 1132. Mr. Monroe Furgeson.
 Lent by the Hackley Gallery: Muskegon: Michigan.
 1133. Group of a Nobleman's Family with a Dog.
- Beek, Alice D. Engley.
 1134. Portrait Study.
- Belcher, Hilda.
 1135. The Little Boston Girl.
 1136. Day-dreamer.
- Bell, Clara Louise.
 1137. Elizabeth.
 1138. Little Girl with the Curls.
- Benda, W. T.
 1139. Lalla.
 1140. Amazones.
 1141. Amazones: II.

- Berlin, Harry.**
1142. Motherhood.
1143. Vermont Hills.
- Berneker, Louis F.**
1144. Coral and Blue.
- Berninghaus, Oscar E.**
1145. A Southwestern Pueblo.
- Bernstein, Theresa.**
1146. Open Air Show.
- Best, Hans.**
1147. Grandmother and Grandchild.
- Betts, Anna Whelan.**
1148. At the Window.
1149. The Promenade.
1150. The Candle.
1151. Coral Beads.
1152. Preparations for Bed.
1153. The Dancing Class.
1154. The Trundle Bed.
1155. A Winter Day.
- Betta, Louis.**
1156. Lady in White.
- Bierstadt, Albert.**
1157. Grand Lake: Colorado.
Lent by Miss Marion T. Meagher.
1158. No Title.
- Bissell, Helen Rathbun.**
1159. A German Interior.
1160. Old Melodies.
- Bittinger, Charles.**
1161. The Library of the Prince: Versailles.
1162. After Supper.
1163. Isabel.
1164. Vanity.
- Bixbee, William.**
1165. Winter.
- Blackburn, Jonathan B.**
1166. Portrait of Mrs. Willis.
Lent by Mrs. R. H. Patchin.
1167. Portrait of Mrs. Kennon.
Lent by Mrs. R. H. Patchin.
- Blakelock, Ralph A.**
1168. Sunset.
Lent by Henry Smith, Esq.
1169. Ecstasy.
Lent by Hackley Gallery: Muskegon: Michigan.
- Blaney, Dwight.**
1170. Anemone Cave: Mt. Desert.
1171. Solitude.
- Bliss, Alma Hersig.**
1172. An Italian Child.
1173. Study.
- Blumenschein, Ernest L.**
1174. Wise-Man: Warrior: Youth.
1175. Love of Life No. 1.
1176. Love of Life No. II.
1177. The Peacemaker.
- Blumenschein, Mary Greene.**
1178. The Fan.
1179. A Girl.
1180. Valentine.
- Bodine, Helen.**
1181. Inseparable.
1182. Portrait.
- Bobrowsky, Grigori.**
1183. Portrait of a Woman.
- Bohm, Max.**
1184. Portrait.
1185. The Promenade.
1186. The Sea: Barbers.
- Bonheur, Rosa.**
1187. Goats at Rest.
- Bonnington, Richard P.**
1188. Village Scene in Italy.
- Bonsall, Mary W.**
1189. Study of Old Man.
- Boone, Cora.**
1190. A Pot of Flowers.
1191. Tulips.
1192. Cinerarias.
- Borg, Carl Oscar.**
1193. Chateau Gaillard.
1194. Campagna Romana.
1195. Landscape.
Lent by Mrs. P. A. Hearst.
- Borie, Adolphe.**
1196. Nude.
1197. Lady with Black Scarf.
1198. A Woman Pensive.
1199. Spring.
- Bosley, Frederick A.**
1200. The Dreamer.
1201. Girl in Pink Dress.
1202. Interior.
1203. Girl Against Chinese Screen.
- Boston, Joseph H.**
1204. Mount Hamlin.
- Both, Jan.**
1205. Landscape.
- Boudin, E.**
1206. Sunset at Havre.
Lent by C. E. S. Wood, Esq.
- Boughton, George H.**
1207. The Fallen Angel.
Lent by F. C. Havens, Esq.
- Bourne, Gertrude B.**
1208. Rear View of Boston State House.
1209. Rhododendrons.
- Bowdoin, Harriette.**
1210. A Venetian Highway.
1211. A Bit of Sunshine.
- Bower, Alexander.**
1212. The White Shore.
- Boyle, Sarah Yocum McFadden.**
1213. Maid Marion.
1214. Peggie.
1215. Portrait of Dr. William H. McFadden.
- Boynton, Ray S.**
1216. Aphrodite.
1217. Spokane Valley.
1218. Young Diana.
1219. Vanity.
1220. Venus.
1221. Eve.
1222. A Boy.
- Bradford, William.**
1223. Caught in the Ice Floes.
- Bradley, Susan H.**
1224. Grand Canyon.
- Brascassat, Jacques Raymond.**
1225. Noonday Rest in France.
- Braun, Maurice.**
1226. Sunlit Hills: Southern California.
1227. The Hillside Morning.
1228. Hills and Valley: Southern California.
- Breckenridge, Hugh H.**
1229. Bowl of Fruit.
1230. Italian Pitcher and Fruit.
1231. Studio Interior: The Tapestry Wall.
1232. The Studio Window.
1233. Corner of the Garden.
1234. The Open Garden.
1235. Tapestry and Fruit.
1236. Still Life: Blue and Gold.
1237. Studio Interior: Chinese Jar.
1238. White Vase.

- Bredin, R. Sloan.
1239. The Farm.
- Bremmer, Anne M.
1240. Isabella.
1241. Gladiolas.
1242. The Fur Collar.
1243. The Village of Good Cheer.
1244. Marigold and Primrose.
- Breton, Jules.
1245. The Vintage.
- Breuer, H. J.
1246. Lake Louise.
1247. The Santa Inez Mountains.
1248. Mount Sir Donald.
1249. Mount Assinaboine.
- Breyfogle, John Winstanley.
1250. The Serpent.
Lent by William H. Fox, Esq.
- Bringhurst, R.
1251. Journalism.
- Brinley, D. Putnam.
1252. Matins.
1253. Noon.
- Brooke, Richard Norris.
1254. A Stony Outpost.
- Brouwer, Adriaen.
1255. Head of Old Man.
- Brown, Benjamin Chambers.
1256. Cliffs: Golden Gate.
1257. Over the Roofs: Antwerp.
- Brown, Charlotte Harding.
1258. On the Hillside.
1259. The Squab Syndicate.
1260. Hump Yourself.
- Brown, George Loring.
1261. Castello U'oba.
- Brown, John G.
1262. The Detective Story.
- Browne, Charles Francis.
1263. La Vacherie: France.
- Browne, George Elmer.
1264. Port of Sottomarina.
- Brownell, Matilda.
1265. Girl in the Chinese Porcelain Room.
1266. Girl with Columbine.
- Brumback, Louise Upton.
1267. High Tide on the Beach.
1268. The Harbor: Gloucester.
- Brune, Heinrich.
1260. Picnic in the Woods.
- Bush, George de Frest.
1270. Portrait of a Lady.
Lent by the Carnegie Institute.
1271. Andromeda.
1272. The Potter.
- Bryant, Everett L.
1273. Peonies.
1274. Snapdragon.
1275. Wild Honeysuckle.
1276. Snapdragon and Fan.
- Bryant, Maude Drein.
1277. Still Life: Crimson Ramblers.
1278. Still Life: Larkspur.
1279. Still Life: Asters.
- Budworth, Will S.
1280. Early Spring: Wakefield Woods.
1281. Afternoon Shadows: Chestertown.
- Buehler, Lytton Briggs.
1282. The City of Pleasure.
- Buehr, Karl Albert.
1283. Dejeuner sur l'Herbe.
1284. Une Gage d'Amour.
- Bull, Charles Livingston.
1285. Beauty and the Beast.
1286. The Sea Horse of Grande Terre.
- Bunker, Dennis M.
1287. Portrait of Miss Anne Page.
Lent by Miss Anne Page.
1288. The Mirror.
Lent by the Art Club of Philadelphia.
- Burleigh, Sydney Richmond.
1289. At the Wharf.
- Burmester, Ernst.
1290. Railroad Bridge.
- Burnham, Anita Willets.
1291. Day Dreaming.
1292. Napping.
1293. Twenty-first Chapter of Job.
- Burnside, C.
1294. The Yellow Curtain.
- Bush, Ella Shepard.
1295. A Fairy Tale Princess.
1296. A Kappa of Washington.
1297. Balaustion.
- Bush-Brown, Margaret Lesley.
1298. Portrait of Moncure D. Conway.
1299. The Flute Lesson.
- Bushnell, Adelyn.
1300. Portrait of an Old Man.
- Butler, Edward B.
1301. The Brook.
- Butler, Howard Russell.
1302. Spirits of the Twilight.
- Butler, J. J. P.
1303. No title given.
- Butler, Mary.
1304. Trees at Shubel's Mount: Nova Scotia.
- Butler, Theodore Earl.
1305. Sunrise.
1306. Afternoon.
1307. Peonies.
- Button, Albert Prentice.
1308. Girl of the Desert.
1309. In the Meadow.
1310. Girl in Gray.
1311. Ultima Thule.
1312. An October Day.
- Byne, Arthur.
1313. Patio in an Old Posada in Alcala.
1314. An Old Palace in Avila.
1315. Tarragona Cathedral Seen from the Cloister.
1316. A Fountain in Lugo.
1317. A Toledan Tenement.
1318. Vigo from the Bay.
1319. Cathedral Silhouette: Zaragoza.
1320. The Bishop's Well: Palencia.
- Cadenasso, Guiseppo.
1321. Summer.
1322. The Reflection.
- Cahill, Arthur.
1323. Illustration for Western Story.
- Cahill, William V.
1324. The Bed Book.
- Caliga, I. H.
1325. Autumn.
- Callahan, Caroline E.
1326. Le Petit Dejeuner.
- Camp, Harold M.
1327. Turn in the River.
1328. Snow Clouds.
1329. A Hill Top.
- Carew, Berta.
1330. The Late Archbishop Corrigan.

- Carles, Arthur B.
 1331. Nude.
 1332. Torso.
 1333. Repose.
- Carlsen, Emil.
 1334. The Open Sea.
- Carlson, John Fabian.
 1335. Cloud Legions.
 1336. Silvered Acres.
 1337. Spring Morning.
 1338. Along the Stream.
 1339. Grey Woods.
 1340. Frost Bound.
- Carpenter, F. D.
 1341. Portrait of Abraham Lincoln.
 Lent by the Union League Club,
 New York City.
- Carpenter, Fred G.
 1342. The Gay Set.
- Carreno, Carreno de Miranda.
 1343. Portrait.
 Lent by Dan Fellows Platt, Esq.
- Carriere, Eugene.
 1344. Lady With Dog.
 Lent by Martin Ryerson, Esq.
- Carrigan, William L.
 1345. Midsummer Masque.
- Case, B.
 1346. View: Sidi Ben Said: Tunis.
- Caser, Ettore.
 1347. Musical Moment.
 1348. Old Venice.
 1349. The Fire.
- Cassatt, Mary.
 1350. Femme et Enfant Avec echarpe Rose.
 1351. Femme lisant dans un jardin.
 1352. Femme a l'eventail.
- Casterton, Eda Nomoede.
 1353. Miss Pauline Batchelder.
- Cauldwell, L.
 1354. Portrait of Colonel W.
- Cazin, Jean Charles.
 1355. The Repentance of Simon Peter.
 Lent by Rev. Frank W. Gunsaulus.
 1356. The Retreat.
- Champaigne, Philippe de.
 1357. Richelieu.
 Lent by Albert Rosenthal, Esq.
- Chandler, H. C.
 1358. Nevada Desert.
- Chapman, Carlton Theodore.
 1359. The American Fleet Hoisting the
 Flag at Monterey, July 7th, 1846.
- Chapman, Charles S.
 1360. The Marauder.
- Chappel, Alonzo.
 1361. Lafayette: De Kalb: D'Estaing.
 Lent by Albert Rosenthal, Esq.
 1362. Surrender of Lee.
 Lent by Albert Rosenthal, Esq.
- Chase, Adelaide Cole.
 1363. The Violinist.
 1364. Portrait of Mrs. Swan.
- Chase, Lila. ---
 1365. Portrait.
 1366. Elizabeth.
- Chase, William Merritt.
 1367. Portrait of Mrs. C.
 Lent by Carnegie Institute.
 1368. Woman With the White Shawl.
 Lent by the Pennsylvania Academy
 of Fine Arts.
 1369. Day Dream.
 1369A. Portrait of Whistler.
 1370. Mrs. Mason.
 1371. Self Portrait.
1372. A Poor Man's Meal.
 1373. Orangerie.
 1374. Mrs. Vonnon.
 1375. Friendly Advice.
 1376. Mrs. Chase.
 1377. A Passenger Boat.
 1378. Venice.
 1379. Old Houses: Venice.
 1380. On a Grand Canal.
 1381. Italian Landscape.
 1382. Long Island Landscape.
 1383. Koto.
 1384. Study of a Young Girl.
 1385. Mrs. Labagean.
 1386. Fruit.
 1387. Portrait of Carriers.
 1388. Miss Emmett.
 1389. Helen.
 1390. R. U. Johnson.
 1391. Still Life: Fish.
 1392. Big Copper Kettle and Fish.
 1392. Back of the Villa.
 1394. Steichen.
 1395. Mrs. Sullivan.
 1396. Just Onions.
 1397. Portrait of an Artist.
 1398. Salute.
 1399. Mr. Sullivan.
- Chimona, Nicolas.
 1400. Hellas.
 1401. Les Isles du Prince.
- Christmas, E. W.
 1402. El Cristo de los Andes.
 1403. Moonlight in the Argentine.
- Church, Frederick Edwin.
 1404. Niagara Falls.
 Lent by the Corcoran Galley of
 Art.
- Churchill, William W.
 1405. The Model.
 1406. The Manuscript.
 1407. Pouring Tea.
- Clark, Alson Skinner.
 1408. Sosa Hill From the Quarry.
 1409. The Cut From Empire.
 1410. Big Cranes: Miraflores.
 1411. Three Hills From Culebra.
 1412. Gates: Pedro Miguel.
 1413. Cucaracha Slide.
 1414. In the Cut.
 1415. Dredges Under Gold Hill.
 1416. Moving the Tressel.
 1417. Culebra Slide.
 1418. The Cranes: Miraflores.
 1419. In the Lock: Miraflores.
 1420. Pedro Miguel Locks.
 1421. In Tropical Waters.
 1422. Panama From the Pacific.
 1423. Market in Panama.
 1424. Gold Hill From Culebra.
 1425. First Dredges Through Gatun.
- Clark, Freeman.
 1426. The Climbers.
- Clark, Harriette A.
 1427. Mme. Sherry.
 1428. Mrs. Lefevre.
 1429. Constance E. Fairchild.
- Clarke, Thomas Shields.
 1430. The Dawn of New Life.
- Clarkson, Ralph.
 1431. Portrait: Edson Keith.
- Clement, Catherine.
 1432. Portrait.
- Clonney, James Goodwyn.
 1433. Militia: Training.
 Lent by the Pennsylvania Academy
 of the Fine Arts.
- Closson, William Baxter.
 1434. A Glimpse of the Sea.

- Clute, Walter Marshall.
1435. Romance.
- Cockroft, Edythe Varien.
1436. Portrait Study.
1437. Girl Reading.
- Coffin, William Anderson.
1438. Early Morning in May.
1439. September Afternoon.
1440. A March Evening.
- Cohen, Lewis.
1441. The Great Bridge: Toledo.
1442. A Stronghold of the Scaligers.
- Cole, George Townsend.
1443. Mrs. Gregory McLaughlin.
1444. Miss Aileen McCarthy.
1445. Mrs. H.
- Cole, J. Foxcroft.
1446. Landscape With Cattle.
- Cole, Thomas.
1447. Landscape.
1448. Four Sketches of the Voyage of Life.
- Cole, Thomas Caslear.
1449. Portrait of a Lady.
- Coleman, Charles Caryl.
1450. Sorrow.
- Coleman, Samuel.
1451. Caravan in the Desert.
Lent by the Hillyer Art Gallery, Smith College.
- Colwell, Elizabeth.
1452. The Sea From Penobscot Light-house.
- Coman, Charlotte Buell.
1453. Pocono Hills in Winter.
- Comegys, George H.
1454. The Ghost Story.
Lent by the Pennsylvania Academy of the Fine Arts.
- Conant, Lucy Scarborough.
1455. The Beloved Pine: Campfer.
1456. Piz Languard From Rosegg Valley.
1457. The Matterhorn.
1458. The Sella Joch: Dolomites.
1459. The Jungfrau at Noon.
1460. The Silver Lakes of the Engadine.
- Conant, Marjorie.
1461. Late Afternoon.
- Congdon, T. E.
1462. The Greenroom.
- Connell, E. D.
1463. The Dunes.
- Conner, John Ramsey.
1464. Cottage Interior.
1465. The Little Seamstress.
- Coolidge, Bertha.
1466. Portrait of a Russian Girl.
1467. Portrait of Miss E. L. V.
1468. Woman in White.
1469. Portrait of Mrs. R.
1470. Portrait of Miss Gertrude Fiske.
- Coolidge, Mary Rosamond.
1471. Portrait of S. Burtis Baker.
1472. Portrait: Miss S.
1473. The Old-Fashioned Gown.
- Cooper, Colin Campbell.
1474. The White House.
1475. A Salem Residence.
1476. Mountain at Gruyeres: Switzerland.
1477. Bowling Green: New York.
1478. Beauvais Cathedral.
1479. Fifth Avenue: New York.
- Cooper, Emma Lampert.
1480. Temple at Jaipur.
1481. Side Street: Beauvais.
- Copley, John Singleton.
1482. Portrait of Mrs. Elizabeth Willing Powell.
Lent by the Pennsylvania Academy of the Fine Arts.
- Coques, Gonzales.
1483. Burgomeister and Family.
Lent by Charles M. Cooke, Esq.
- Cornoyer, Paul.
1484. Winter: Columbus Circle.
1485. Old New York.
- Corot, Jean Baptiste Camille.
1486. Landscape.
Lent by Caroline A. McClees.
1487. Boy Sketching.
Lent by Mrs. Henrietta E. Failing.
- Courbet, Gustave.
1488. Study of a Thoroughbred.
Lent by Albert Rosenthal, Esq.
1489. Young Man With Violinello.
Lent by C. E. S. Wood, Esq.
- Couse, E. Irving.
1490. The Turquoise Beadmaker.
1491. An Indian Shepherd.
1492. Twilight: Taos Pueblo.
- Cox, Kenyon.
1493. Plenty.
Lent by the National Gallery.
- Cox, Louise.
1494. Mayflowers.
Lent by the National Gallery.
1495. A Daughter of Eve.
- Crane, Bruce.
1496. The Templed Hills.
- Crisp, Arthur.
1497. The Philanderer.
1498. A Song Hit.
1499. The Little Spinster.
1500. "Dim Yesterday's Pageant Backgrounds Today."
- Crome, John (Old Crome).
1501. The Blasted Tree.
- Cropsey, Jasper F.
1502. On the River.
Lent by Harry W. Watrous, Esq.
- Cross, Sally.
1503. Portrait: Miss Lilian Gardener.
1504. Portrait of Miss Turner.
1505. Mrs. Quincy.
1506. Miss Dora Wetherbee.
1507. Portrait of Miss McKay and Peter.
1508. Portrait of Olin Downes, Esq.
- Crowley, Gray Price.
1509. Mrs. Alfred Gray.
- Cucuel, Edward.
1510. The Bath.
1511. Summertime.
1512. The Girl in Yellow.
1513. Autumn Sun.
- Cuneo, Rinaldo.
1514. Notre Dame: Paris.
- Curran, Charles C.
1515. Daffodils.
- Currier, J. Frank.
1516. A Munich Boy.
Lent by the Carnegie Institute.
1517. Whistling Boy.
Lent by the John Herron Art Institute.
1518. Self Portrait.
Lent by William M. Chase, Esq.
A Head.
Lent by J. Harsen Rhoades, Esq.
- Curtis, William Fuller.
1519. The Golden God.

- Cushing, Howard Gardiner.**
 1520. Decorative Panel.
 1521. Decorative Panel.
 1522. Decorative Panel.
 1523. Interior.
 1524. Portrait.
 1525. Portrait.
 1526. Wardrobe.
- Dabo, Leon.**
 1527. The Rockets: Rain of Fire.
- Dagnan-Bouveret, Pascal Adolphe Jean.**
 1528. Consolatrix Afflictorum.
- Dana, Charles Edmund.**
 1529. The Canon's House: Gruyere's.
 1530. St. Augustine: Fribourg.
 1531. Morat.
 1532. Treves.
 1533. Bazaar Okair Zoht.
 1534. Abazzia San Gregorio: Venice.
 1535. Bad-el-Metawaleh: Cairo.
 1536. Bazaar: Gama Ibrahim Aga: Cairo.
- Daubigny, Charles Francois.**
 1537. The New Moon.
 Lent by Charles F. Adams, Esq.
- Davey, Randall.**
 1538. Captain Dan Stevens: Lighthouse Keeper.
 1539. Girl in Blue.
 1540. Segovian Man.
- Davis, Charles H.**
 1541. The Northwest Wind.
 1542. May Morning.
- Davis, Stuart.**
 1543. The River.
 1544. The Fog.
 1545. A Back Yard.
 1546. The Cafe Logue.
- Davol, Joseph Benjamin.**
 1547. Maine Coast.
 1548. A Winter Coast: Moonlight.
 1549. Where Sea and River Meet.
- Dawson, George Walter.**
 1550. An Old Cottage Rose.
 1551. A New England Garden.
 1552. Yellow Harrison Roses.
 1553. Rhododendrons.
 1554. Rose-Covered Wall: Spain.
 1555. White Water Lily.
 1556. Water Lily Among Rushes.
- De Camp, Joseph R.**
 1557. Portrait of Frank Duvenek.
 Lent by the Cincinnati Museum Association.
- De Jong, Betty.**
 1558. Beatrix.
 1558. The Dancing Girl.
 1560. Portrait of Miss Isabelle P.
- De Voll, F. Usher.**
 1561. East River: New York: Winter.
 1562. Quebec From the Fortifications.
 1563. The White City.
 1564. Brooklyn Bridge: Winter.
- de Wentworth, Cecile.**
 -565. Portrait of William Howard Taft.
 1566. Taper to Saint Genevieve.
- Del Mue, Maurice.**
 1567. Late Afternoon in the Sierras.
- Deming, Adelaide.**
 1568. A Quiet Day.
- Deming, Edwin Willard.**
 1569. Prayer to the Manes of the Dead.
 1570. Vow of Vengeance.
- Dewey, Charles Melville.**
 1571. The Harvest Moon.
- Diaz, Narciso Vergilio de la Pena.**
 1572. No title.
- Dillaye, Blanche.**
 1573. The God of Good Fortune.
 1574. The Evening Star.
 1575. On the Grand Morin.
 1576. Moonlight.
- Dimock, E.**
 1577. Sweat Shop Girls in the Country.
 1578. East Side School Children.
 1579. Group.
 1580. Group.
 1581. Group in New England.
 1582. Sweat Shop Girls in the Country.
- Dirks, Rudolph.**
 1583. On the Dike.
 1584. The Boatman.
 1585. Head of Old Dutchman.
 1586. Clearing Land.
- Dixon, Maynard.**
 1587. Navajo Women.
 1588. The Trail in Oregon.
 1589. The Palomino Mare.
- Dolph, J. H.**
 1590. The Rat Who Retired From the World.
 Lent by Mrs. H. F. Barnett.
- Donoho, Ruger.**
 1591. The Rose Terrace.
 1592. A Veil of Leaves.
 1593. Wind Flowers.
 1594. A Garden.
- Dougherty, Parke C.**
 1595. Moonlight.
 1596. Mount St. Michel.
 1597. Winter Morning: Etretat.
- Dougherty, Paul.**
 1598. Toward the Sunlight.
 1599. Changing Weather.
 1600. Storm Glams.
 -1601. From Clodgy Point.
- Doughty, Thomas.**
 1602. On the Susquehanna.
 Lent by the Pennsylvania Academy of the Fine Arts.
 1603. Landscape.
 Lent by the Pennsylvania Academy of the Fine Arts.
- Dow, Arthur Wesley.**
 1604. The Great Shadow.
 1605. The Enchanted Mesa.
- Du Bois, Guy Pene.**
 1606. Trapeze Performer.
- Duez, E.**
 -1607. By the Sea Shore.
- Dufner, Edward.**
 1608. Portrait: A Ray of Sunlight.
 1609. Summer Evening.
 1610. Moonlight on the Lake.
 1611. Reflections.
- Dull, John J.**
 1612. Winter Landscape: No. 1.
 1613. Winter Landscape: No. 2.
 1614. Winter Landscape: No. 3.
 1615. Winter Landscape: No. 4.
- Dumond, Frederic Melville.**
 1616. 1849.
 1617. Portrait Sketch of Babette de Cernoe.
 1618. Hoss Tradin' on the Reservation.
 1619. Ratón Pass.
 1620. Sea Carvings.
- Dumond, Frank Vincent.**
 1621. The Bathers.
 1622. May Bloom.
 1623. July Afternoon.
 1624. Gray Newfoundland.
 1625. The Elopers.
 1626. The Fairy Tale.
- Dumond, Helen Savier.**
 1627. An Arm of the Mediterranean.
 1628. Southern France.

- Dunbar, Harold C.
1629. Girl in Black.
1630. Portrait of Mrs. D.
- Dunlap, Helena.
1631. The Dressing Table.
1632. Mountain Cottages.
1633. The Senor's Garden.
1634. Summer Afternoon.
- Dunlap, William.
1635. Portrait.
Lent by Albert Rosenthal, Esq.
1636. Portrait.
Lent by Albert Rosenthal, Esq.
1637. President Tyler.
Lent by Albert Rosenthal, Esq.
1638. Portrait of a Lady.
Lent by Albert Rosenthal, Esq.
1639. Scene from Harvey Birch: The Spy.
Lent by Albert Rosenthal, Esq.
- Durand, Asher Brown.
1640. The Morning of Life.
Lent by the National Academy of Design.
1641. The Thunder Storm: Catskills.
Lent by H. K. Bush-Brown, Esq.
1642. A. B. Durand as a Young Man.
- Durkee, Helen Winslow.
1643. Baigneuse.
1644. Portrait of Miss D.
1645. Margaret.
1646. The Spanish Shawl.
1647. Hilda.
1648. William Ives, Esq.
1649. Autumn.
1650. Still Life.
1651. Kadidje.
1652. A Study.
1653. The Flowered Dress.
1654. Still Life.
1655. Portrait.
- Dustin, Silas S.
1656. Midnight in New England.
- Duveneck, Frank.
1657. Beechwoods: Polling: Bavaria.
Lent by the Cincinnati Museum Association.
1658. Unfinished Portrait Study.
Lent by the Cincinnati Museum Association.
1659. Head of a Young Girl.
Lent by the Cincinnati Museum Association.
1660. Girl's Head.
Lent by the Cincinnati Museum Association.
1661. Young Man With Red Skull Cap.
Lent by the Cincinnati Museum Association.
1662. Girl's Head: Yellow Background.
Lent by the Cincinnati Museum Association.
1663. Blind Old Man.
Lent by the Cincinnati Museum Association.
1664. Sketch of a Nude.
Lent by the Cincinnati Museum Association.
1665. Study of a Nude Back.
Lent by the Cincinnati Museum Association.
1666. Young Man With a Ruff.
Lent by the Cincinnati Museum Association.
1667. Blacksmith.
Lent by the Cincinnati Museum Association.
1668. Whistling Boy.
Lent by the Cincinnati Museum Association.
1669. John W. Alexander.
Lent by the Cincinnati Museum Association.
1670. Head: Portrait of Mr. Mills.
Lent by the Cincinnati Museum Association.
1671. Man With Red Hair.
Lent by the Cincinnati Museum Association.
1672. Woman With Forget-Me-Nots.
Lent by the Cincinnati Museum Association.
1673. Portrait of Man in Spanish Costume.
Lent by the Cincinnati Museum Association.
1674. Portrait of William Adams.
Lent by the Cincinnati Museum Association.
1675. Turkish Page.
Lent by the Pennsylvania Academy of the Fine Arts.
1676. Italian Boy.
Lent by George E. Hopkins, Esq.
1677. The Hunchback.
Lent by Miss Jane Otis.
1678. Portrait of Frank Currier.
Lent by Alfred Juergens.
1679. Blue Boy.
Lent by Mrs. D. H. Holmes.
1680. Lady With a Veil.
Lent by George E. Hopkins, Esq.
1681. Portrait of Professor Loeffts.
Lent by Mrs. Herman Goepper.
1682. Portrait: Mrs. Francis Hinkle.
Lent by W. H. Hinkle, Esq.
1688. Woman With a Fan.
Lent by M. A. De Wolfe Howe, Esq.
1684. Sketch of a Turk.
Lent by the Tavern Club.
1685. Portrait.
Lent by William M. Chase, Esq.
1686. Portrait Sketch.
Lent by the Tavern Club.
1687. Laguna: Venice.
Lent by Cincinnati Museum Association.
1688. Venetian Bridge.
Lent by Cincinnati Museum Association.
1689. Riva degli Schiavoni No. 2.
Lent by Cincinnati Museum Association.
1690. Grande Canal: Venice.
Lent by Cincinnati Museum Association.
1691. Bridge of Sighs.
Lent by Cincinnati Museum Association.
1692. The Rialto: Venice.
Lent by Cincinnati Museum Association.
1693. Piazza San Marco: Venice.
Lent by Cincinnati Museum Association.
1694. View of the Grande Canal: Venice.
Lent by Cincinnati Museum Association.
1695. Palazzo Ca Doro: Venezia (1883).
Lent by Cincinnati Museum Association.
1696. In the Bay of Venice.
Lent by Cincinnati Museum Association.
1697. Ponte Vecchio: Florence (1884).
Lent by Cincinnati Museum Association.
1698. San Pietro in Castlido: Venice.
Lent by Cincinnati Museum Association.
1699. Riva degli Schiavoni: Venice No. 1.
Lent by Cincinnati Museum Association.

- Eakins, Thomas.**
 1700. The Bohemian.
 1701. Portrait of Henry O. Tanner.
 1702. The Veteran.
 1703. The Home Ranch.
 1704. The Crucifixion.
 1705. The Concert Singer.
- Eaton, Charles Warren.**
 1706. The Shawangunk Valley.
 1707. Summer Night: Lake Como.
- Ebert, Charles.**
 1708. The Fog Bow.
 1709. Monhegan Headlands.
 1710. Early November.
- Edmondson, William J.**
 1711. The Garden.
- Edwards, George Wharton.**
 1712. No-Man's Ledge: Monhegan.
- Eichholtz, Jacob.**
 1713. Portrait: Mr. Arundel.
 Lent by Albert Rosenthal, Esq.
 1714. Portrait: Mrs. Arundel.
 Lent by Albert Rosenthal, Esq.
 1715. Portrait of Unknown Man.
 Lent by Dr. Gilbert L. Parker.
- Eisenlohr, E. G.**
 1716. First Furrows.
- Elliott, Charles Loring.**
 1717. Portrait of Colonel Thomas L. McKenney.
 Lent by the Corcoran Gallery of Art.
 1718. Portrait of H. W. Hewitt.
 Lent by the Art Institute of Chicago.
 1719. Portrait of Mrs. Mary A. Goulding.
- Elliott, Elizabeth Shippen Green.**
 1720. The Princess.
 1721. Antoine and the Little Wooden Soldier.
 1722. The Moon World.
 1723. The First Communion.
 1724. Inspector Joly.
 1725. Queen Cophetua.
 1726. Queen Jehan and Riczi.
 1727. Elizabeth.
- Engel, Otto H.**
 1728. Picnic on the Beach.
- Engelbrechtsen, Cornelis.**
 1729. Lot and His Daughters.
 Lent by Dr. Gilbert L. Parker.
- English, Frank F.**
 1730. River Wensum: Norwich.
 1731. A Delaware Village.
 1732. Cobb's Creek.
 1733. A Home at Brookville.
 1734. Millbank: Upper Darby.
 1735. A Mill on Cobb's Creek.
 1736. A Summer Evening.
 1737. Yarmouth.
 1738. Folly Bridge: Oxford.
 1739. Norwich.
- Enneking, John Joseph.**
 1740. November Twilight.
 1741. December Thaw.
- Ericson, David.**
 1742. The Late Tea.
 1743. Low Tide.
- Esser, Theodor.**
 1744. Interior.
- Evans, Frances.**
 1745. Portrait.
- Everett, Herbert Edward.**
 1746. Cottage Garden.
 1747. Garden at Pipestave Hill.
- Fairchild, May.**
 1748. The Rose.
- Farley, Richard Blossom.**
 1749. Blue and Gold.
 1750. Barnegat Beach.
 1751. Dunes at Barnegat.
- Farndon, Walter.**
 1752. Wistaria Arbor.
- Fassett, Truman E.**
 1753. Spanish Dancer.
 1754. Portrait: Mrs. Fassett.
- Fechin, Nicholas.**
 1755. Lady in Pink.
- Feldman, Baruch M.**
 1756. Portrait Study: Introspection.
- Fenderson, Annie M.**
 1757. Portrait of Wilhelmina.
- Ferguson, Nancy M.**
 1758. The Old Homestead.
 1759. A Rural Lane.
 1760. The Barber Shop.
- Fernow, Bernice P. Andrews.**
 1761. Pierpont Edwards Dutcher: Third.
 1762. Childhood.
 1763. Mrs. E. J. Smith.
 1764. Mrs. Charles Palmer.
- Filemyr, Joseph J.**
 1765. The Silent Hour.
- Fink, Denman.**
 1766. Portrait of Mrs. F.
- Fink, F.**
 1767. Portrait of Artist in His Studio.
- Finkelnburg, Augusta.**
 1768. My Woodsie Park.
 1769. The Old Homestead.
- Finn, James Wall.**
 1770. Girl With a Fan.
- Firebaugh, Nettie King.**
 1771. Professor Joseph Le Conte.
 1772. Mrs. August Porter.
- Fiske, Gertrude.**
 1773. The Shadow.
 1774. Study in Black and White.
- Fitz, Benjamin B.**
 1775. The Harvesters.
 Lent by the Hillyer Art Gallery: Smith College.
- Fitz, Charles Noel.**
 1776. Portrait of Paul Wayland Bartlett.
 Lent by L. A. Wiley & Son.
- Flagg, Jared.**
 1777. Portrait of Judge Brown.
 Lent by the City of New York.
- Folger, Annie B.**
 1778. October Hillside: Nantucket.
 1779. November Day: Nantucket.
- Foot, Josephine J.**
 1780. Junior.
- Foot, Mary.**
 1781. Portrait of Mrs. Herman Kobbé.
 1782. Mrs. John Carpenter.
 1783. Portrait of August Jaccaci, Esq.
 1784. Study.
 1785. Portrait of Miss Matilda Brownell.
- Foot, Will Howe.**
 1786. Italian Girl's Head.
 1787. Gloucester Harbor.
 1788. Sunny Interior.
 1789. Hydrangeas.
- Foresman, Alle.**
 1790. Portrait: Irish Rose.
 1791. Portrait.
- Forsyth, William.**
 1792. Winter in the Hills.
 1793. The Red Hill.
 1794. A Sunny Corner.
 1795. The Wind From the West.

- Fortune, E. Charlton.
1796. The Galloway Inn.
1797. Moonlight.
1798. Betty.
1799. Summer.
1800. Carmel Mission.
1801. The Pier.
1802. The San Gabriel Vine.
- Fortuny y Carbo, Mariano.
1803. The Model: A Sketch.
Lent by the Pennsylvania Academy of the Fine Arts.
1804. The Arab Blacksmith.
Lent by Mrs. Reginald Smith.
- Foss, Harriet Campbell.
1805. Pink Phlox.
- Foster, Ben.
1806. October Morning.
- Fournier, Alexis Jean.
1807. Peaceful Night on the Seine.
1808. Morning in Venice.
- Frieske, Frederic Carl.
1809. The Garden Chair.
1810. Sleep.
1811. Youth.
1812. Boudoir.
1813. Girl Embroidering.
1814. The Bay Window.
1815. The Garden.
1816. Summers.
- Froelich, Maren M.
1817. The Chinese Robe.
- Fuller, George.
1818. Lorette.
Lent by the Corcoran Gallery of Art.
1819. A Head.
Lent by W. B. Ayer, Esq.
1820. Marguerite.
- Fuller, Henry B.
1821. Triumph of Truth Over Error.
- Fuller, Lucia Fairchild.
1823. The Girl and the Net.
1823. In the Days of King Arthur.
1824. Portrait of a Child.
1825. Artemidora.
1826. The Red Flower.
- Funk, Wilhelm.
1827. Mrs. John W. McKinnon.
- Gaensslen, Otto Robert.
1828. Youth.
- Gainsborough, Thomas.
1829. Sir Wm. Lynch.
Lent by the Hackley Art Gallery: Muskegon.
1830. Landscape.
Lent by Charles M. Cooke, Esq.
1831. A Grand Landscape.
- Gale, Harriette Draper.
1832. Study in Brown.
- Gallagher, Sears.
1833. From the Bridge.
- Galt, Charles Franklin.
1834. The Etcher.
1835. The Gypsy.
- Garber, Daniel.
1836. Sister.
1837. The Sunlit Wall.
1838. Quarry: Evening.
1839. Cherry Blossoms.
1840. Little Village: Winter.
1841. From Tincum Hill.
- Garrett, Edmund.
1842. Heart of New England.
- Gauley, Robert David.
1843. Reverie.
1844. Portrait: Pedro de Cordoba.
- Gay, Walter.
1845. Les Pigeons Savantes.
Lent by Albert Rosenthal, Esq.
- Gelhaar, Emil.
1846. Packer Hall.
- Gifford, Sanford R.
1847. The Golden Horn.
Lent by Hon. Charles H. Carey.
- Gihon, C.
1848. Peasant Houses.
1849. Haunted House.
1850. A Corner: Rue de Vaugirard.
- Gilchrist, Wallace W., Jr.
1851. Girl in Pink.
1852. The Old Gold Screen.
1853. A Quiet Sea.
1854. Rocks: The Maine Coast.
1855. The Fish Dock.
1856. Towards the Sun.
1857. Twin Birches.
1858. Incoming Tide.
- Gilmore, Ada.
1859. Promenade.
- Glackens, William J.
1860. Woman with Apple.
1861. Chez Moquin.
1862. Family Group.
1863. Girls Bathing.
1864. Green Car.
- Gleeson, Charles K.
1865. The Carriers.
- Glintenkamp, Henry J.
1866. Wind Gap.
- Goetsch, Gustav F.
1867. Marblehead.
1868. In the Harbor.
1869. Marblehead Harbor.
1870. The Harbor.
1871. On the Harlem River.
- Gohler, Hermann.
1872. Schloss Favorite.
- Goodwin, Arthur Clifton.
1873. Boylston Street: Boston.
1874. T Wharf: Boston.
1875. Boylston Street: Boston.
- Gotthold, Florence Wolf.
1876. The Yellow Cat.
- Goya y Lucientes, Francisco Jose de.
1877. Don Juan Jose Perez Mora.
Lent by the Hackley Gallery: Muskegon.
1878. Portrait of Isodoro Marquez.
Lent by Martin A. Ryerson, Esq.
- Grabach, John R.
1879. Banks of the Connecticut River.
- Grant, L.
1880. Fishing Boats: Concarneau.
- Granville-Smith, Walter.
1881. The Boat Shop.
1882. Summer Breeze.
1883. The Landing.
1884. Queen's Lace.
1885. Clearing Mists.
- Gray, Frederick G.
1886. Early Morning.
1887. Portrait Study: Hon. Joseph C. Cannon.
1888. Portrait.
- Gray, Henry Peters.
1889. Cupid Begging His Arrows.
Lent by the Pennsylvania Academy of the Fine Arts.
- Gray, Percy.
1890. Out of the Desert: Oregon.
- Griffin, J. W.
1891. River Lee: Cork.

- Griffin, Walter.**
 1892. Church of S. Trovaso: Venice.
 1893. Late Afternoon: Breton Village.
 1894. Springtime.
 1895. Grand Canal: Venice No. 1.
 1896. Grand Canal: Venice No. 2.
 1897. May Morning.
 1898. Bridge: Venice.
 1899. Zattere: Venice.
- Groll, Albert Lorey.**
 1900. Arizona Desert.
 1901. Lake Louise.
 1902. Peace: Hopiland.
- Grossman, Edwin Booth.**
 1903. Still Life.
- Grover, Oliver Dennet.**
 1904. Ponte Vecchio: Florence.
 Lent by Mrs. J. B. Blackstone.
 1905. Rocky Shore: Lake Garda.
- Guerin, Jules.**
 1906. Pigeon Mosque: Constantinople.
 1907. Temple of Sunium.
 1908. Eyub on the Golden Horn.
 1909. The Great Bazaar: Constantinople.
 1910. The Mosque of Suleiman: Constantinople.
 1911. Cairo: The Blue Mosque.
 1912. Landscape Near Siena.
 1913. The Three Wise Men.
- Guido of Siena.**
 1914. Madonna.
 Lent by Dan Fellows Platt, Esq.
- Gustin, Paul Morgan.**
 1915. Great Cloud.
 1916. Mountain Snowfields.
 1918. The Cascades from Pyramid Park.
 1918. Mount Rainier.
 1919. November Evening: Puget Sound.
 1920. A Clearing in the Northwest.
- Gutmann, Bernhard.**
 1921. Nude.
- Haggin, Ben Ali.**
 1922. Little White Dancer.
- Hailman, Johanna K. Woodwell.**
 1923. A Tropical Menage.
 1924. To Market in the West Indies
 1925. Tony.
- Hale, Lillian Westcott.**
 1926. Portrait.
 1927. Lavender and Old Ivory.
 1928. Bleeding Hearts.
 1929. Anemones.
 1930. The Fortune Teller.
 1931. Madonna Lillies.
 1932. Portrait of Nancy.
 1933. China Asters.
 1934. Gardenia Rose.
 1935. Celia's Arbor.
- Hale, Philip Leslie.**
 1936. Sun Bath.
 1937. La Princesse Lointaine.
 1938. A Family Affair.
 1939. Lillies of the Madonna.
 1940. Autumn Fruits.
 1941. A Passing Hour.
 1942. Wisteria and the Mysterious Miss Wistar.
 1943. The Tower of Ivory.
 1944. Portrait.
 1945. Woman with Roses.
- Hale, Walter.**
 1948. The Walk Along the Ramparts.
 1946. Ruined Castle on the Neckar.
 1947. The Chapel on the Rock: Le Puy.
- Hall, Kleber.**
 1949. Constance.
- Hallowell, George Hawley.**
 1950. Wood's Lake.
 1951. Island Lake.
 1953. The Driving Pitch.
 1954. The Logan.
 1955. The Snow Path.
 1956. The Choppers.
- Halpert, Samuel.**
 1957. Interior.
 1958. Lake George.
 1959. Still Life.
- Hambuchen, Wilhelm.**
 1960. Early Autumn Morning.
- Hamilton, James.**
 1961. Old Ironsides.
 Lent by the Pennsylvania Academy of the Fine Arts.
 1962. The Ancient Mariner.
 Lent by the Pennsylvania Academy of the Fine Arts.
- Hamilton, John McLure.**
 1963. Sketch.
 1964. Gladstone.
 1965. Pennell.
 1966. Sir A. Serke.
 1967. Mother.
- Hamilton, Mary Riter.**
 1968. Old Woman: Study.
 1969. The Poor.
- Hamilton, Wilbur Dean.**
 1970. Portrait.
 1971. Portrait of Justice McKenna.
 1972. Spring.
- Hammond, Arthur J.**
 1973. The Old Artist.
- Hansen, Armin C.**
 1974. At the Breakfast Table.
 1975. The Belated Boat.
- Harding, Chester.**
 1976. John Randolph of Roanoke.
 Lent by the Corcoran Gallery of Art.
- Harding, George.**
 1977. Night: Australian Desert.
 1978. The Wreckers.
 1979. The Fisherwoman.
 1980. Colombo Harbor.
 1981. Busy Day at the Docks.
- Harland, Mary.**
 1982. Italian Fisherman.
- Harper, Marian Dunlap.**
 1983. My Dear.
 1984. Miss G.
- Harrison, Alexander.**
 1985. The Joy of Life.
 1986. Sun: Sea.
 1987. Wave Glitter.
 1988. Sun Glitter.
 1985. Moon Clouds.
 1990. Nature's Mirror.
- Harrison, Birge.**
 1991. White Wings.
 1992. Evening in Philadelphia.
 1993. The Tow on the Lake.
 1994. The Red Saw Mill.
- Hart, James McD.**
 1995. On the Croton.
 Lent by Fred Sander, Esq.
- Hartman, C. Bertram.**
 1996. Two Natures.
- Haseltine, Charles F.**
 1997. Summer Day in New Hampshire.
 1998. Summer Day in the Woods.
- Haseltine, William Stanley.**
 1999. Cannes.

- Hassam, Childe.**
 2000. *Puerta del Sol*: Toledo.
 2001. *Isles of Shoals*: Duck Island.
 2002. *Newfields*: New Hampshire.
 2003. *The Old Home with Elms*.
 2205. *The Squall*: Gloucester.
 2006. *Lannion*.
 2007. *Moonrise at Sunset*.
 2208. *Brittany Cottage*.
 2009. *Happy Valley*: Harney Desert.
 1010. *Skull Springs*: Oregon.
 2011. *Der Groot House*: Haarlem.
 2012. *The Quais*: Lannion.
 2013. *The Fete of Lannion*: Grey Evening.
 2014. *Brelevenez*: 2nd.
 2015. *Aphrodite*.
 1016. *St. Michaels*: Lannion.
 2017. *La Clarte*.
 2018. *Brelevenez*.
 2019. *Street in Haarlem*.
 2020. *The Blue Sea*: Appledore.
 2021. *Weir's Farm*: the Rain.
 2022. *Cathedral Spire*: Antwerp.
 2023. *The Terre Cult Tea Set*.
 2024. *The Strawberry Tea Set*.
 2025. *The Woman with Black Furs and Fire Opals*.
 2026. *Sunset*: New England Coast.
 2027. *In the Shadow of the Vine*.
 2028. *The South Ledges*.
 2029. *The Yachts*: Gloucester Harbor.
 2030. *Diana's Bath*.
 2031. *Portrait of a Young Girl*.
 2032. *The Ancient Window of Nemours*.
 2033. *The West Indian Girl*.
 2034. *New England Peaches and Grapes*.
 2035. *Couch on the Porch*: Cos Cob.
 2036. *Reading the Letter*.
 2037. *California Hills in Spring*.
- Haweis, Stephen.**
 2038. *Na Aissama*: a Fijian Village.
 2039. *Vakamololo Dance*: Fiji: 1.
 2040. *Vakamololo Dance*: Fiji: 2.
 3041. *Vakamololo Dance*: Fiji: 3.
 2042. *Vakamololo Dance*: Fiji: 4: Three Girls.
 2043. *Na Moala*: Fiji Islands.
 2044. *Fort Dei Marml*: Liguria.
- Hawley, Margaret Foote.**
 2045. *Portrait of Clarence Williams*.
 2046. *Portrait of Miss Jean Hooke*.
 2047. *Sketch of a Jewish Boy*.
 2048. *Portrait of Miss Barbara Quin*.
- Haworth, Edith.**
 2049. *Gibraltar*.
 2050. *Midsummer*.
 2051. *Cypress Tree*.
 2054. *Village Street*: Provincetown.
 2052. *African Coast*.
 2053. *Rainy Evening*.
- Hawthorne, Charles Webster.**
 2055. *The Market Woman*.
 2056. *Une Fille d'un Pescheur*.
 2057. *Mother and Child*.
 2058. *Granddaughter*.
- Hayden, Charles H.**
 2059. *Landscape*.
- Hazelton, Mary Brewster.**
 2060. *Reverie*.
 2061. *The Letter*.
- Hazen, Wilhelmina.**
 2062. *Twin Pearls*.
 2063. *La Senora G.*
 2064. *Brownie*.
- Healy, G. P. A.**
 2065. *Daniel Webster*.
 Lent by John Frederick Lewis.
- Hecht, Victor David.**
 2066. *Portrait of Mrs. Irving Stern*.
- Heil, Charles Emile.**
 2067. *Bluejay*.
 2068. *Field Sparrow*.
 2069. *Young Bluejay*.
 2071. *Young Catbird*: Phoebe.
 2072. *Black-cap Chickadee*.
 2074. *Golden-crowned Kinglet No. 1*.
 2075. *Golden-crowned Kinglet No. 2*.
- Hellwag, Rudolph.**
 2076. *The Pool of London*.
- Helsby, Alfredo.**
 2077. *Chilean Farmhouses in Spring*.
 2078. *A Coming Storm in the Andes*.
- Henderson, A. Elizabeth.**
 2079. *Lessons*.
 2080. *The Daily Chapter*.
 2081. *The Violin*.
- Henri, Robert.**
 2082. *Blue Kimono*.
 2083. *Herself*.
 2084. *Lady in Black Velvet*.
 2085. *Yen Tsid* (Ground Sparrow).
 2086. *Chinese Lady*.
 2087. *Odallsque*.
 2088. *Himself*.
- Henry, Edward Lamson.**
 2089. *The Presidential Election of 1844*.
- Herkomer, Herman G.**
 2090. *Mrs. Hamilton Griffin*.
 2091. *Sir Hubert von Herkomer, R. A.*
 2092. *Portrait*: William Harvey, Esq.
- Herr, Margaret.**
 2093. *Malvina*.
 2094. *Portrait of Miss Dougal*.
- Heuermann, Magda.**
 2095. *My Father*.
 2096. *Franz von Lenbach*.
 2097. *Miss Virginia*.
- Hicks, Thomas.**
 2098. *A Friendly Warning*.
 Lent by Robert M. Olyphant, Esq.
- Higgins, Eugene.**
 2099. *The Strange Land*.
- Hildebrandt, Cornelia Ellis.**
 2100. *Baby's Head*.
- Hills, Laura Coombs.**
 2101. *Psyche*.
 2102. *Miss Margaret Curzon Hale*.
 2103. *The Nymph*.
 2104. *Portrait*.
 2105. *The Morning Cup*.
 2106. *Little Agnes*.
 2107. *Girl with Violets*.
- Hinkle, Clarence K.**
 2108. *Portrait*.
- Hitchcock, George.**
 2109. *Vanquished*.
 2110. *En Brabant*.
- Hittle, Margaret A.**
 2111. *Flower Beds at Reissigo*.
- Hobart, Clark.**
 2112. *The Blue Bay*: Monterey.
- Hoerber, Arthur.**
 2113. *Spray*.
 2114. *The Meadow Brook*.
- Hoffman, Harry Leslie.**
 2115. *Saturday Morning*: Savannah Market.
 2116. *A Mood of Spring*.
- Hogarth, William.**
 2117. *Viscountess Irwin*.
 Lent by the Hackley Gallery:

- Hollister, Antoinette B.**
2118. Bavarian Peasant Mother and Child.
- Holmboe, Thorolf.**
2119. Elder Ducks.
- Homer, Winslow.**
2120. The Wreck.
Lent by the Carnegie Institute.
2121. Unruly Calif.
Lent by the Brooklyn Museum.
2122. The Coming Storm.
Lent by the Lotos Club: New York City.
2123. An Adirondack Lake.
Lent by C. H. Henry, Esq.
2124. Afternoon Fog.
Lent by John Calvin Stevens, Esq.
2125. Gathering Autumn Leaves.
2126. The Home Signal.
2127. The Water Melon Bug.
2128. Sunlight and Shadow.
2129. The Yellow Jacket.
2130. Fisherfolks: Tynemouth.
2131. A Country Lad.
2132. The Butterfly.
2133. Summer Afternoon.
- Hooper, Rosa.**
2134. Doesn't Your Mamma Wash Your Face?
2135. A Frenchman.
2136. Grandfather.
- Hopkins, J.**
2137. Beside the Lake.
- Hopkins, James E.**
2138. Mandarin Blue.
2139. Frivolity.
2140. Memories.
- Hopkinson, Charles.**
2141. Effect of Light.
2142. Effect of Light.
2143. Effect of Light.
2144. Effect of Light.
2145. Portrait.
2146. Knitting.
2147. Salem Bay: Massachusetts.
- Hoppner, John.**
2148. The Marchioness of Wellesley and Children.
- Houlehan, Kathleen.**
2149. Portrait.
- Hovenden, Thomas.**
2150. Peonies.
Lent by Edward H. Coates, Esq.
2151. Breaking Home Ties.
Lent by Charles Custos Harrison, Jr.
- Howard, Clara E.**
2152. Cadet.
- Howe, William Henry.**
2153. Low Lands: Holland.
- Howland, Alfred C.**
2154. At Cernay la Ville.
2155. At Manchester: Vermont.
2156. Saturday Afternoon.
- Howland, Allen S.**
2157. Portrait of Miss A.
2158. Portrait Study.
- Hubbard, Mary Wilson.**
2159. A Portrait Sketch.
- Hubbell, Henry Salem.**
2160. The Crimson Charger.
- Hubner, Ulrich.**
2161. Clear Weather.
- Hudspeth, E. N.**
2162. Miss Dorothy Dodge.
2163. Rev. Canon Tremayne.
- Hunt, William Morris.**
2164. The Flight of Night.
Lent by the Pennsylvania Academy of the Fine Arts.
2165. Woman's Portrait.
Lent by Mrs. Inez Gilmore.
2166. Landscape: Newtonville: Mass.
- Hunter, Sara Katherine.**
2167. Study of a Head.
- Huntington, Daniel.**
2168. Sketcher.
Lent by the Brooklyn Museum.
- Huntington, Margaret Wendell.**
2169. Still Lie.
- Hurley, Edward Timothy.**
2170. Murmuring.
2171. The New Year.
- Hurley, Irene Bishop.**
2172. Portrait of Mrs. H.
- Hurry, Lucy W.**
2173. The Concert in the Garden.
2174. Waiting for the Stagecoach.
2175. The Peacock.
- Hutchison, F. W.**
2176. A Northern River.
- Hyde, William Henry.**
2177. Vera.
- Hyett, Will J.**
2178. Cross Roads: Ravenrock.
- Ingersoll, Emma K. H.**
2179. Portrait Sketch.
2180. Baby Dan.
2181. Mary Meigs.
- Inman, Henry.**
2182. Portrait of Henry Pratt.
Lent by the Pennsylvania Academy of the Fine Arts.
2183. Mumble-the-Peg.
Lent by the Pennsylvania Academy of the Fine Arts.
2184. Picnic on the Catskills.
Lent by the Brooklyn Museum.
- Inness, George.**
2185. The Clouded Sun.
Lent by the Carnegie Institute.
2186. In the Berkshire Hills.
Lent by the Rhode Island School of Design.
2187. The Coming Storm.
Lent by the Buffalo Fine Arts Academy.
- Irvine, Wilson.**
2188. Laughing June.
2189. The Bathing Beach.
2190. The Chasm.
- Isham, Samuel.**
2191. In the Park.
Lent by the Buffalo Fine Arts Academy.
- Isreal, Joseph.**
2192. Poor Man's Harvest.
- Italian School.**
2193. No Title.
2194. No Title.
- Jackson, Annie Hurlburt.**
2195. Mrs. Pickering Almy.
2196. Lapis Lazuli.
2197. Helen Kreck.
2198. Baby's Head.
2199. Child's Head.
2200. Little Newsie.
2201. The Blue Mantle.

- Jakobi, Ruth.**
 2202. On the Sand.
 2203. The Beach.
 2204. Brooklyn Bridge.
 2205. Atlantic City.
 2206. City Square.
 2207. Silent Street.
 2208. Reaping.
 2209. Towards Evening.
 2210. Water Front.
- Jamar, S. Corinne.**
 2211. Bob.
- James, William.**
 2212. Portrait Study.
- Jansson, Alfred.**
 2213. Illinois Landscape.
- Jarvis, John Wesley.**
 2214. Portrait of a Gentleman.
 Lent by Clarence Winthrop Bowen, Esq.
- Jay, Cecil.**
 2215. Bacchante Dansante.
 2216. Maternity.
 2217. Maternity.
 2218. Maternity.
 2219. The Love Letter.
 2220. La Jupe Déchiré.
- Jewett, William.**
 2221. Portrait: Samuel L. Waldo.
 Lent by the National Academy of Design.
- Johansen, John Christen.**
 2222A. Venetian Arcade.
 2222B. The Rider.
 2222C. Portrait of Miss F. B.
 2222D. Village Rider.
 2222E. Approaching Storm.
- Johnson, David.**
 2223. Portrait: William S. Mount.
 Lent by Albert Rosenthal, Esq.
- Johnson, Eastman.**
 2224. A Drummer Boy.
 Lent by the Union League Club.: New York City.
 2224A. Henry Codman Potter: Bishop of New York.
 2224B. Edwin Booth.
- Johnson, Harry L.**
 2225. Moon Before Sundown.
 2226. The Inquiry.
 2227. The Garden.
 2228. Wind in the Clouds.
 2229. Mother and Child.
 2230. Mother and Child.
 2230. Early Spring: Rose Valley.
 2231. Charybdis.
- Jones, Francis C.**
 2232. The Divan.
- Jones, Hugh Bolton.**
 2233. Through the Trees.
- Jones, Leon Foster.**
 2234. Long Island Village.
 2235. A Misty Day in Winter.
- Jouett, Matthew Harris.**
 2236. Artist's Wife.
 Lent by R. H. Menefee, Esq.
 2237. Portrait of Boy and Dog.
- Juergens, Alfred.**
 2238. In May.
 2239. Garden Flowers.
- Jung, C. Jac.**
 2240. Winter Afternoon.
- Kaelin, Charles S.**
 2241. Bits of Snow.
 2242. Boats in Harbor.
 2243. Old Mill.
- Kaiser, Richard.**
 2244. From an Old Park.
- Kaula, Lee Lufkin.**
 2245. On the Old Settle.
- Kaula, William J.**
 2246. Clouds from the West.
- Keith, William.**
 2247. Revelation.
 Lent by Mrs. E. N. Harmon.
 2248. Quiet Pool.
 Lent by Mrs. E. N. Harmon.
 2249. Shepherdess.
 Lent by Mrs. E. N. Harmon.
 2250. Sunset.
 Lent by Mrs. E. N. Harmon.
 2251. Landscape.
 Lent by Mrs. Reginald Smith.
 2252. Grey Morning.
 Lent by Mrs. Mary C. Richardson.
 2253. Landscape.
 Lent by Mrs. Mary C. Richardson.
 2254. Sketch.
 Lent by Mrs. Mary C. Richardson.
 2255. Water Color.
 Lent by Mrs. Mary C. Richardson.
 2256. The Impression.
 Lent by Mrs. Mary McHenry Keith.
 2257. Spirit of Music.
 Lent by Mrs. Mary McHenry Keith.
 2258. Midsummer Night's Dream.
 Lent by Mrs. Mary McHenry Keith.
 2259. Landscape.
 Lent by the Joseph Worcester Estate.
 2260. No. Title.
 Lent by the Joseph Worcester Estate.
 2261. Landscape. No. 1.
 Lent by Mrs. Henrietta Zeile.
 2262. Landscape. No. 2.
 Lent by Mrs. Henrietta Zeile.
 2263. Landscape. No. 3.
 Lent by Mrs. Henrietta Zeile.
 2264. Landscape. No. 4.
 Lent by Mrs. Henrietta Zeile.
 2265. Landscape. No. 5.
 Lent by Mrs. Henrietta Zeile.
 2266. Landscape. No. 6.
 Lent by Mrs. Henrietta Zeile.
 2267. Cloudy Day.
 2268. Rainy Day.
 2269. The Symphony of Peace.
 2270. Portals of the Woods.
 2271. Silent Hour.
 2272. Storm.
 2273. Into the Storm.
 2274. Landscape.
 2275. Water Color.
- Keller, Arthur I.**
 2276. The Bach Double Concerto.
 2277. The Young Critic.
- Keller, Edgar.**
 2278. Under the Bridge: Harlem River.
- Kelly, Hannah R.**
 2279. When Roses Bloom.
- Kendall, Margaret.**
 2280. Miss Helen Huntington.
 2281. Springtime.
 2282. In the Brook.
 2283. Bruno and His Mistress.
 2284. Three Little Sisters.

- Kendall, Sergeant.
 2285. Alison.
 2286. Venetian Brocade.
 2287. Devotion.
 2288. Reflection.
 2289. Phantasmata.
- Kensett, John Frederick.
 2290. Rapids: Niagara Falls.
 Lent by Robert M. Olyphant, Esq.
 2291. In the Adirondacks.
 Lent by Robert M. Olyphant, Esq.
 2292. Mallett's Bay: Lake Champlain.
 Lent by Robert M. Olyphant, Esq.
 2293. Autumn Afternoon.
 Lent by the National Academy of Design.
- Kent, Rockwell.
 2294. A Mother and Her Sons.
- Kindlund, Anna Belle Wing.
 2295. Madeleine Dabo.
 2296. Love.
 2297. Lady in Black.
- King, Charles B.
 2298. John C. Calhoun: When Secretary of War.
 Lent by Corcoran Gallery of Art.
- King, Edith Laurence.
 2299. Nude.
 2300. On the Beach: Capri.
- King, Paul.
 2301. Winter.
 2302. Snug Harbor.
- Kips, Erich.
 2303. Steamer in Dock: Hamburg.
- Kirkpatrick, William A.
 2304. Pleading Reflections.
- Klein, Tillie V. Ryan.
 2305. Portrait of Sir Wilfred Laurier.
 2306. Portrait of William Keith.
 2307. Portrait of Mrs. Thomas E. Flynn.
- Kneller, Sir Godfrey.
 2308. Portrait.
 Lent by Albert Rosenthal, Esq.
- Knirr, Heinrich.
 2309. Self Portrait.
- Knox, James.
 2310. White Swan.
- Kohn, Irma.
 2311. The Lighthouse on the Pier: St. Ives.
 2312. Street in Stratford-on-Avon.
- Kopman, Benjamin D.
 2313. Portrait of a Young Man.
 2314. Plucking a Goose.
- Kretzinger, Clara Josephine.
 2315. A Thoughtful Moment.
- Krimmell, John Lewis.
 2316. Fourth of July in Centre Square.
 Lent by the Pennsylvania Academy of the Fine Arts.
- Kroll, Leon.
 2317. River Industries.
 2318. Weehawken Terminal.
 2319. Lower Manhattan.
 2320. Rockport Quarries.
- Kronberg, Louis.
 2321. Ballet Girl in Green.
 2322. Preparing for the Dance.
 2323. The Exercise.
 2324. The Visitor.
- Kyle, Joseph.
 2325. Portrait Group.
 Lent by Albert Rosenthal, Esq.
- La Farge, John.
 2326. Woman Centaur.
 Lent by the Brooklyn Museum.
 2327. Portrait of Richard Hunt.
 2328. The Hillside Farm.
 2329. Our Boatman.
 2330. The Willow.
 2331. The Ravine.
- Lamb, F. M.
 2332. Our New England.
 2333. Threatening.
- Lampert, Gertrude A.
 2334. Black and Green.
- Lang, Annie Traquair.
 2335. From My Window: Venice.
 2336. The Gray Kimona.
 2337. The Hotels: Venice.
 2338. Japanese Print.
- Langhorne, Katherine.
 2339. Rhode Island Pool.
 2340. A Day Last Summer.
- Langtry, Mary.
 2341. A September Night: Ipswich.
 2342. Personally Conducted.
- La Touche, Gaston.
 2343. The Masquerade Ball: Grand Opera House: Paris.
- Lathrop, William Langson.
 2344. Coming Storm.
 Lent by Mrs. Genge Ellery Woods.
 2345. The Canal.
 Lent by George Coffing Warner.
 2346. Golden Afternoon.
 2347. A Grey Day.
 2348. Landscape.
 2349. Summer Afternoon.
- Lavery, John.
 2350. Portrait.
 Lent by Dan Fellows Platt, Esq.
- Lawrence, Sir Thomas.
 2351. Portrait of a Young Man.
 Lent by Albert Rosenthal, Esq.
 2352. Lady Margaret: Second Daughter of the Earl of Kinnoul.
- Lawson, Ernest.
 2353. Hills at Innwood.
 2354. Beginning of Winter.
 2355. Hudson River and Palisades.
- Le Brun, Charles.
 2356. The Family of Darius at the Feet of Alexander.
 Lent by Art Institute of Chicago.
- Leigh, William Robinson.
 2357. The Stampedee.
- Lely, Sir Peter.
 2358. Portrait of a Lady.
 Lent by F. Tillmann, Esq.
- Lenbach, Franz von.
 2359. Self Portrait.
 Lent by the San Francisco Institute of Art.
 2360. Portrait of Mommsen.
 Lent by Mrs. Henrietta Ziele.
- Lepine, Stanislas.
 2361. St. Cloud on the Seine.
 Lent by Martin A. Ryerson.
 2362. River Scene.
 Lent by Charles F. Adams.
- Leutze, Emanuel.
 2363. Portrait of Nathaniel Hawthorne.
 Lent by Henry Fairfield Osborn, Esq.
 2364. Columbus Discovering America.

- Lever, Hayley.**
 2365. Saint Ives Harbor.
 2366. Winter: Harlem River.
 2367. Smeaton's Quay: St. Ives.
 2368. St. Ives Fishing Boats.
 2369. Washington Bridge.
- Levy, William Auerbach.**
 2370. Central Park Impression.
 2371. Song of Summer.
 2372. Rainy Night.
 2373. Normandy Fishermen.
- Levy, Beatrice S.**
 2374. The Draftsman.
- Lewis, Edmund D.**
 2375. Upper Delaware River.
- Lewis, Helen V.**
 2376. Portrait of C. R. Baxter, Esq.
 2377. The Fichu.
 2378. An American.
 2379. Editha.
 2380. Miss Whitelaw.
 2381. Miss Lakeman.
 2382. Portrait of an Actor.
 2383. Miss Madge Kennedy.
 2384. Miss H. Draper.
 2385. Katherine.
- Lichtenauer, J. Mortimer.**
 2386. Study for Shubert Theatre.
 2387. Study for Harris Theatre.
- Lie, Jonas.**
 2388. Palms in Wind.
 2389. Gates at Pedro Miguel.
- Liljestrom, Gustav F.**
 2390. Vishnu Temple: Grand Canyon.
- Linde, Ossip L.**
 2391. A Gateway in Venice.
 2392. Venice.
 2393. Steps: Venice.
 2394. Chioggia: Venice.
- Lindin, Carl Eric.**
 2395. Evening.
- Linford, Charles.**
 2396. Landscape: Pennsylvania.
- Lippincott, William Henry.**
 2397. Love Finds the Way.
- Little, John Wesley.**
 2398. In Devonshire.
- Little, Philip.**
 2400. An Upland Meadow.
 2401. The Upper Ipswich.
 2402. The Making of New Lands.
- Lockman, De Witt M.**
 2403. Portrait of Miss D.
- Loeb, Louis.**
 2404. The Bud.
 Lent by William Scott Bond, Esq.
 2405. The Peacock.
 Lent by Emanuel Loeb, Esq.
- Lökke, Marie.**
 2406. Portrait of a Child.
- Londoner, Amy.**
 2407. Park Bench.
 2408. The Fairy Tale.
 2409. Woman in Black.
 2410. Trees and Mountains.
 2411. The Bathers.
 2412. Boardwalk: Atlantic City.
 2413. Cripple Creek.
 2414. A Strange House.
- Longacre, Lydia Eastwick.**
 2415. Portrait of Mr. Gino C. Speranza.
 2416. Miss Helene Pupke.
- Lopez-Masquita, José M.**
 2417. Matador.
 2418. A Spanish Gipsy.
- Lowdon, Elsie Motz.**
 2419. Portrait of D. B. C.
- Loy, Mina.**
 2420. Lillah, Gaby and Amaranthe.
 2421. The Etruscan Loggia.
- Lucas, Jean Williams.**
 2422. Man with Ruff.
 2423. Mrs. Frederick M. Thomas.
 2424. Paddie Cat and Mistress.
 2425. Mrs. Alfred Williams Lucas.
 2426. Miss Agnes Rogers.
- Ludovici, Alice E.**
 2427. Portrait of Miss Ludovici.
- Luini, Bernardo.**
 2428. The Angel.
 Lent by Dan Fellows Platt, Esq.
- Luke, Kathryn Logan.**
 2429. The Little French Model.
 2430. Portrait of Mrs. Phillip Campbell.
- Luks, George.**
 2431. New York Boy.
 2432. Children's Page.
 2433. Man in Brown.
 2434. The Mother.
- Lundborg, Florence.**
 2435. Etna in the Afterglow.
 2436. Old Fountain: Taormina.
 2437. Stone Pines.
- Lungren, Fernand.**
 2438. In the Abyss: Grand Canyon.
- Lynch, Anna.**
 2439. Portrait of Henrietta E. Countiss.
 2440. Marion Stanton.
- McArthur, Stanley.**
 2441. The Spanish Legend.
- McCarter, Henry.**
 2442. Lust for Gold.
 2443. Yearly Tribute to the King of Tara.
 2444. Return from the Foray: Early Ireland.
- McCull, Mary A.**
 2445. Reflections.
- McComas, Francis.**
 2446. The Broken Oak.
 2447. Oaks of the Monte.
 2448. Wolpi: Arizona.
 2449. Pines at Monterey.
 2450. Lichomovi: Arizona.
 2451. The Red Wagon.
 2452. The Navajo Gateway: Arizona.
 2453. A Los Olivos Oak Tree.
 2454. A City of the Dead.
 2455. Mariano.
- McCormick, Howard.**
 2458. Hopi Ceremonial.
- McCormick, M. Evelyn.**
 2459. Old Custom House: Monterey.
- MacChesney, Clara T.**
 2460. A Good Story.
 Lent by the National Gallery.
 2461. Still Life.
- MacDougall, John A.**
 2462. Dick.
- MacEwen, Walter.**
 2463. Vanity.
 2464. Waiting.
 2465. In the Studio.
 2466. Yes or No.
 2467. At the Burgomaster's.
 2468. An Interlude.
 2469. The Betrothed.
 2470. Oldebroeck.

- McFee, Henry Lee.**
 2471. Still Life.
- MacGilvary, Norwood.**
 2472. June in the Forest.
 2473. Autumn Idyl.
 2474. Nocturne.
 2475. The Voices of Dreams.
- McIntire, Katharine.**
 2476. Portrait of a Man.
- McKillop, William.**
 2477. Portrait of Robert W. Chanler.
 2478. The Letter.
- McLane, M. Jean.**
 2479. Brother and Sister: Portraits.
 Lent by Arthur H. MacKie,
 2480. Group: Mother and Children.
 2481. Portrait of Mrs. R. G. Arnold.
- McMillen, Mildred.**
 2482. Low Tide: Etapes.
- Maccari, Cesare.**
 2483. Music Hath Charms.
 2484. Fond Memory.
- Macky, Constance.**
 2485. Portrait of Mrs. Frederick Roth.
 2486. Roses.
- Macky, E. Spencer.**
 2487. Portrait.
 2488. Mother and Child.
 2489. Alice.
- Macrum, George H.**
 2490. Woolworth Building from West
 Street.
 2491. The Towering City.
- Macsoud, Nicholas S.**
 2492. Portrait of Julius A. Gross, Esq.
 2493. Portrait of Miss Theresa Borman.
 2494. Portrait of My Mother.
 2495. Portrait of a Boy.
- Mager, Gus.**
 2496. Flower Bouquet.
 2497. The Laborer.
 2498. Tulips and Irises.
- Magonigle, Edith M.**
 2499. The Queen of Hearts.
 2500. The Secret Garden.
 2501. Linet de Maris.
 2502. Vice and Virtue.
 2503. Louis Ayres, Esq.
 2504. Gwendolyn Munroe.
- Major, Ernest L.**
 2505. Blonds in Blue.
- Makowsky, Alexander.**
 2506. Profile.
- Malbone, Edward Greene.**
 2507. Portrait of Joseph Marx.
 Lent by the Pennsylvania
 Academy of Fine Arts.
- Manigault, E. Middleton.**
 2508. Pastoral.
- Mannheim, Jean.**
 2509. On Tuesday.
 2510. Frolicking Times.
- Marchant, Edward D.**
 2511. Colonel E. D. Baker.
 Lent by Dr. Gilbert L. Parker.
- Maris, Matthew.**
 2512. Water Color.
- Mark, Louis.**
 2513. Preparing for a Walk.
 2514. Before the Mirror.
 2515. Lady with Parasol.
 2516. Breakfast Table.
- Marsh, Alice Randall.**
 2517. Michel and Maud Bouvier.
 2518. Portrait Sketch of a Russian Girl.
- Marshall, W. E.**
 2519. Portrait of A. B. Durand.
 Lent by the National Academy
 of Design.
- Martin, Homer D.**
 2520. Saranac Lake.
 Lent by the Union League
 Club, New York City.
 2521. Newport Neck.
 Lent by the Lotos Club.
- Martinez y Orozco, Xavier T.**
 2522. Land of Silence.
 2523. The Storm.
- Mason, John.**
 2524. On the Road to Killingworth.
 2525. Old Cider Mill.
- Mason, Maud M.**
 2526. Still Life.
- Mathews, Arthur F.**
 2527. The Carnation.
 2528. Cypress Grove.
 2529. Masque of Pandora.
 2529A. The Butterfly.
 2530. Oaks.
 2531. Monterey Bay.
 2532. The Web.
 2533. The Swan.
 2534. Monterey Hills.
 2535. Portrait.
 2536. Cypress.
 2537. Marine.
 2538. Ghost Story.
 2539. Eve.
- Mathews, Lucia K.**
 2540. Little Girl.
 2541. Monterey Pine.
- Maurer, A.**
 2542. Bal Bullier.
 2543. Jeanne.
- Maury, Cornelia F.**
 2544. One Shoe Off.
 2545. The Three Bears Story.
- May, Edward Harrison.**
 2546. The Dying Brigand.
 Lent by the Pennsylvania
 Academy of Fine Arts.
- Mayer, Louis.**
 2547. Portrait of Mrs. M.
 2548. Lady with Black Veil.
- Maynard, Richard F.**
 2549. In and Out of an Oval Mirror.
 2550. Reading.
- Mayr, C.**
 2551. Reading the News.
 Lent by the National Academy
 of Design.
- Mazzanovich, Lawrence.**
 2552. Grey Glow.
- Meakin, Lewis Henry.**
 2553. Kicking Horse River.
 2554. Rockport.
 2555. Rocky Mountain Valley.
 2556. Stormy Day.
- Mears, Helen Farnsworth.**
 2557. Portrait of My Mother.
- Meissonier, Jean Louis Ernest.**
 2558. St. John the Divine.
- Melcher, Bertha Corbett.**
 2559. My Daughter Charlotte.
 2560. A Mountain Lassie.

- Melchers, **Gari**.
 2561. Skaters.
 Lent by The Pennsylvania Academy of the Fine Arts.
2562. Morning Room.
 Lent by Dr. George Woodward.
2563. Mother and Child.
 Lent by James Deering, Esq.
2564. Sailor and His Sweetheart.
 Lent by Charles L. Freer, Esq.
2565. The Smithy.
 2566. Portrait Group.
 2567. The Open Door.
 2568. Girl Sewing.
 2569. Lily Pond.
 2570. Madonna of the Fields.
 2571. Young Woman at Toilet.
 2572. Roomful of Color.
 2573. House with Green Gable.
 2574. The Fencing Master.
 2575. Supper at Emmaus.
 2576. Virginia.
 2577. House on Canal.
 2578. Breakfast Table.
 2579. Maternity.
 2580. Writing.
 2581. The White Church.
- Mendenhall, **Emma**.
 2582. Street in St. Ives: Cornwall.
 2583. An English Village.
 2584. Mulberry Street Hill.
 2585. Luxembourg Gardens.
- Menzler, **Bertha S.**
 2586. Twilight on the Dunes.
- Meryman, **Richard S.**
 2587. Portrait.
- Messer, **Edmund Clarence**.
 2588. Blue Ridge.
- Metcalf, **Willard L.**
 2589. Salmon River: Norway.
 2590. Early Spring Afternoon: Central Park.
 2591. Winter's Festival.
 2592. Blossom Time.
 2593. Trembling Leaves.
 2594. October Afternoon.
 2595. Cherry Blossoms.
- Meyn, **George Ludwig**.
 2597. Frau v. Cotta.
- Michel, **G.**
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3352. Captain Joseph Anthony.
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 3522. Tavern Scene.
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 3635. The Falling Rocket.
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 3636. Nude Figure.
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 3637. Blue and Gold: The Rose Azalea.
 Lent by Charles L. Freer, Esq.
 3638. White Symphony: Three Girls.
 Lent by Charles L. Freer, Esq.
 3639. Green and Silver Bealileu Terrace.
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 3640. Venus.
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 3642. Symphony in White and Red.
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 3644. Venus Rising from the Sea.
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 3645. The White House.
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 3646. Petite Mephiste.
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 3647. The Sad Sea: Dieppe.
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 3648. Gray and Silver: The Life Boat.
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 3651. Nude Figure and Cupid.
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 3652. Wortley: Note in Green.
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3666. Arnold W. Brunner, Esq.
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3668. Madame Gerville-Reache as Carmen.
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3674. Storm Cleared Sea.
3675. The Drama of Life: The Plague.
3676. The Drama of Life: Daughters of Man.
3677. The Drama of the Sea: The Breakers.
3678. The Drama of Hell: Forest of Loves.
3680. Moonlit Breaker.
3681. The Idol.
- Williams, Isaac L.
3682. Portrait of John Neagle.
Lent by the Pennsylvania Academy of the Fine Arts.
- Williams, J. Scott.
3683. In September.
3684. (No title.)
- Williamson, Ada C.
3685. Baby in a French Cap.
- Willson, Martha B.
3686. Girls' Profile.
3687. The Lace Cap.
- Wilson, Floyd.
3688. Chinatown: Portland.
- Wolcott, Katherine.
3689. On the Dunes.
- Wood, Kathryn Leone.
3690. Mother.
- Woodbury, Charles H.
3691. The Rainbow.
3692. The Bark.
3693. Nutmeg Island.
3694. Tropical Sea.
3695. Evening.
3696. Monadnock.
3697. The Tramp Steamer.
3698. New Empire.
3699. Out at Empire.
3700. Near Pedro Miguel.
3701. Sea Wall: Panama.
3702. Culebra Cut.
3703. The Great Slide.
- Woodville, R. Caton.
3704. War News from Mexico.
Lent by the National Academy of Design.
- Woodward, Ellsworth.
3705. Felucca.
3706. Veere.
- Woodward, William.
3707. Old Cabildo: New Orleans.
- Woodwell, Joseph R.
3708. Sand Dunes.
3709. Squaw River.
3710. Mist from the Sea.
- Woolf, Samuel Johnson.
3711. The News Stand.
3712. The Underworld.
3713. Brown the Wheats.
- Workman, David Tice.
3714. Elvet Bridge: Old Durham.
- Wright, John.
3715. Sicilian Landscape.
- Wright, Joseph.
3716. Joseph Wright and Family.
Lent by the Pennsylvania Academy of Fine Arts.
- Wright, Louise Wood.
3717. In Dorsetshire.
3718. Corfe Castle: Dorset.
- Wuerpel, Edmund H.
3719. The Call of Lingerin Day.
3720. Harmony in Brown.
3721. Late Afternoon.
3722. An Evening Symphony.
3723. Gathering Clouds.
3724. The Sheltered Bay.
- Wyant, Alexander H.
3725. A Mountain Brook.
Lent by the Buffalo Fine Arts Academy.
3726. Afternoon near Arkville: N. Y.
Lent by the Carnegie Institute.
3727. The Windy Day.
- Wyeth, N. C.
3728. Ebenezer Balfour (Kidnapped).
3729. Captain Bones Routes Black Dog (Treasure Island).
3730. Old Pew (Treasure Island).
3731. The Picador.
3732. Chinese Pirates.
3733. Roaring Skipper.
- Wylie, Robert.
3734. The Story Teller: Breton Interior.
Lent by the Pennsylvania Academy of Fine Arts.
3735. A Breton Home.
- Yarrow, William H. K.
3736. Jansen: Ex-Sea-Captain.
3737. Still Life.
3738. In the Orchard.
3739. The Checkered Dress.
- Yates, Cullen
3740. Spring.
3741. Old Farm: November.
3742. November Snow.
- Young, Arthur.
3743. Love One Another.
3744. Mother Jones.
3746. This World of Creepers.
3746. The Supreme Court Obstructs Traffic.
3747. The Unemployed.
3748. Senatorial Courtesy.
3749. Pit and Dome.
3750. Extinct.
3751. The Game.

- Young, Charles Morris.
3752. The Red Mill.
3753. Winter Landscape with Crows.
3754. The Gray Mill.
3755. Winter Afternoon.
3756. My House in Winter.
3757. Farm House in Winter.
- Young, Mattie.
3758. Sister.
- Zarubine, Victor.
3759. Clouds.
- Ziegler, Karl.
3760. Portrait Study of a Child.
- Ziem, Felix.
3761. Garden in Venice.
Lent by Charles F. Adams, Esq.
3762. Stamboul.
- Zimmerman, M. W.
3763. The Chalet at Night.
3764. Across the Lake.
3765. Across the Valley.
- Zorach, Marguerite.
3766. The Waterfall.
3767. Legend.
3768. The Earth.
3769. Spring.
- Zorach, William.
3770. Flowers.
3771. The Country Valley.
3772. The Wood Cutters.
3773. Woods in Autumn.
- Zugel, Heinrich von.
3774. In the Rhine Meadows.

H. A. VAN CAENEN TORCHIANA
Commissioner General

WILLEM WITSEN
Commissioner of Fine Arts

G. E. DE VRIES
Assistant Commissioner of Fine Arts

HOLLAND SECTION

- Addicks, Christian Johannes.**
1. Mother and Child.
- Akkeringa, Johannes.**
2. On the Edge of the Water.
- Arntzenius, Paul.**
3. Native of Volendam.
- Asscher, Henriette.**
4. Tailor Hands at the Old Men's Home.
- Bastert, Nicolaas.**
5. My Village.
6. Enkhuizen Harbour.
- Bauer, Marius.**
7. Oriental Equestrian.
- Bautz, David.**
8. Dead Birds.
- Beek, Bernardus Antonie.**
9. Dutch Landscape.
- Berg, Anna C. van den.**
10. Larkspur.
- Berkemeyer, Ludolph.**
11. On the Banks of a Dutch Lake.
- Bleckmann, W. C. C.**
12. Spring.
- Blommers, Bernardus Johannes.**
13. On the Way Home.
14. Summer.
- BoDIFFÉ, Paul.**
15. Field of Blooming Poppies.
- Boer, G. J. de.**
16. In the Woods.
- Breitner, G. H.**
17. Amsterdam Timber-Port.
- Breman, C. O.**
18. The Bay of Naples.
- Chattel, Fredericx J.**
19. To the Mill.
- Coert, Anthoni.**
20. The Deserted House.
- Deutman, Frans.**
21. Old Woman.
- Deventer, Johanna Cornelia van.**
22. Beeches.
- Dooyewaard, Jacob.**
23. Meditation.
- Duyf-Schwartz, Th. van.**
24. The Fan.
25. Mahler's Bust by Rodin.
26. Portrait of H. M. the Queen of the Netherlands.
- Dysselhof, G. W.**
27. Lobsters.
- Engel, Frederik.**
28. Milking Time.
- Jan, van Essen.**
29. Pelicans.
- Frankfort, E. D.**
30. Along the Road.
- Garjeanne, J.**
31. Shadows of the Clouds.
- Garms, Coenraad M.**
32. The Enkhuizen St. Pancras Steeple.
- Gerdes, Ed.**
33. Womanhood: 1913.
- Goedvriend, Theodoor.**
34. From a Fairy of the Veluw County.
35. Old Cottage at Chailly: France.
- Gori, Berta.**
36. Old Woman.
- Gorter, Arnold Marc.**
37. Autumnal Day.
- Graafland, Rob.**
38. Summer Day.
- Groot, G. de.**
39. In the Kempen Country.
- Haverman, H. J.**
40. Fresh Life.
- Hem, Piet van der.**
41. Katwyk Fisherwoman.
- Hyner, Arend.**
42. Village Talk.
- Israels, Isaac.**
43. Spanish Cafe.
44. The Great Mare.
- Ives Browne, Robert.**
45. Before the Mirror.
- Jans, Jan.**
46. Standing Water on the Sand Hills: Spring Morning.
- Jurres, J. H.**
47. Casting Stones at Don Quixote.
- Kerling, Anna E.**
48. Diligent Old Woman.
49. Providing with Fodder.
- Koster, Anton Louis.**
50. A Bulb Grower's House with Nursery of Darwin Tulips in Holland.
51. View on the River Spaarne near Haarlem.
- Krabbe, H. M.**
52. At Granny's.
53. First Steps.
- Kramer, Martinus.**
54. Winter Time in Holland.
- Ledeboer, Hans.**
55. What I Saw in My Dream.
- Lenselink, Rens.**
56. March Weather in Holland.
- Maarel, M. van der.**
57. Idleness.
- Martens, Willy.**
58. Going to Church.
- Masterbroek, Johan Hendrik van.**
59. In the Lock at Delfshaven.
60. As Busy as Bees in the Harbor at Rotterdam.
- Mension, C. J.**
61. The Beast of Prey.
- Mesdag, H. W.**
62. Sunset.
- Meyer, Johan.**
63. Early Morning.
- Moens, Charles Antoine.**
64. Begonias.
- Mondriaan, Frits.**
65. The Hague Wood in October.
- Monnickendam, Martin.**
66. Life's Joy.
- Nakken, Willem Carel.**
67. Cart for the Conveyance of Stones.
68. Near Paris.
- Oldewelt, Ferdinand Gustaaf Willem.**
69. For the Poor.

- Overbeek, G. J. van.
70. Cart Horses at the Bank of the River.
- Pieters, Evert.
71. Gypje.
- Regt, P. de.
72. Dreary Day In Spring.
- Repelius, Betsy.
73. Interior of a Dutch Home.
- Rhynnen, Jan van.
74. Charming Spot.
- Roelofs, Albert.
75. Meditation.
- Roelofs, Willem E., Jr.
76. In the Land of Tulips.
- Rosse, Hermann.
77. The Water Palace.
78. Carmel Bay.
- Schaap, E. R. D.
79. Spring.
- Schaap-van der Pek, H. W. J.
80. Ruins on a Mountain Top.
- Schermer, Cornelis.
81. Billeting Dutch Lancers.
- Schildt, Martinus.
82. Interior of a Home.
- Schipperus, Pieter Adrianus.
83. Winter.
- Schulman, David.
84. A Winter Afternoon at Laren.
- Sluiter, Willy.
85. The Angelus.
- Sluyters, Jan.
86. Woman in Scarlet.
87. Woman in Yellow.
- Smith, Hobbe.
88. Old Woman Reading the Bible.
- Steelink, Willem.
89. On the Heath.
90. Along the Coast.
- Steere de Jong, J. F.
91. Sunday Morning at Laren.
- Surie, Jacoba.
99. Boy and Vegetables.
- Thol-Ruysch, Aletta van.
93. Mushrooms.
- Tholem, W. B.
94. Church Near Leidem.
- Tonge, Lammert van der.
95. Riches.
- Velsen, Suze.
96. Autumn.
- Vlaanderen, Joh.
97. Country Road in the County of Overyssel.
- Vreedenburg, C.
98. Unloading Peat on the Edge of the Canal.
- Vredenburg, Schotel M.
99. Slum in the City of Hattem.
- Waay, Nicolaas van der.
100. A Dutch Orphan House Girl.
- Wandscheer, M.
101. Nasturtium.
- Waning, Cornelis, Anthony van.
102. Ancient Part The Hague City.
- Weele, H. J. van der.
103. Dutch Ploughing Oxen.
- Weissebruch, Jan Willem.
104. View of a Dutch City.
- Westermann, G.
105. On the Pavement.
- Weyns, J. H.
106. Old Women's Home.
- Wiggers, Derk.
107. Full Moon.
- Willigen, C. A. van der.
108. Nasturtium.
- Witsen, W.
109. Binnenkant: Winter at Amsterdam.
110. Montelbaans Steeple: Oude Waal at Amsterdam.
- Wolbers, Hermanus Gerardus.
111. In the Meadow.
- Wolter, Hendrik Jan.
112. Fishing Fleet Leaving a Cornish Harbor.
- Wysmuller, J. H.
113. View of Part of the City of Amsterdam.
- Zoetelief, J.
114. On the Beach.
- Zon, Jacques.
115. Navying.

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- Arntzenius, Paul.
116. The Training Ship.
117. The Old Dutch Waterland.
- Bauer, M. A. J.
118. The Holy Camel.
119. A Damascus Bazar.
120. An Oriental Prince.
- Bosch, Etienne.
121. Salerno.
122. Notre Dame de Paris.
- Dupont, P.
123. Western Church Steeple.
124. Old Church Steeple.
- Graadt van Roggen (Johannes Mattheus).
125. Old Bridge.
126. Showery Weather.
- Harting, Dirk.
127. Amersfoort Canal.
128. The Amsterdam Lock.
129. Beggar.
130. Generalife.
131. Ass Drivers.
- Hemelman, Albert.
132. Small Ghelder Yard.
133. Pile Driver at Amsterdam.
- Hoytema, Th. van.
134. White Herons.
135. Cactus.
- Jong, Toon de.
136. Meere Cathedral.
137. Tjalk Outside Dordrecht.
- Koekkoek, Gerard.
138. Delfshaven Harbour.
- Kouw, Casper Marinus Leendert.
139. On the Dyke.
140. Thistle.
- Krabbe, H. M.
141. Portrait of a Child.
142. Portrait of a Lady.
- Kramer, Martinus.
143. To the River.
144. Down-Oaks.
- Moulyn, S.
145. Le Chateau de Beaufort.
146. Study of the Nude.
147. Villa d'Este.
- Nieuwenkamp, W. O. J.
148. Woodcutters.
149. Edam.
150. On the Lake.
151. Dropping Leaves.

- Poortenaar, Jan.
 152. Trafalgar Square.
 153. Jerusalem Chamber: Westminster Abbey.
- Proost, Johannes.
 154. Brick Kiln.
- Scheffhout, Lodewyk.
 155. Winter Tree.
 156. Les Angles.
- Tholen, W. B.
 157. Nave.
 158. Harbour.
 159. The Philosopher.
 160. Cage.
 161. Grass.
- Veldheer, J. G.
 162. The Borough.
 163. The Old Watchman.
 164. Rotterdam.
 165. Harlem St. Anne.
- Velsen, Suze.
 166. Sunny Doorlet.
 167. Old Dutch Slum.
- Witsen, W.
 168. Reconstruction in Old Amsterdam.
- Zwart, W. de.
 169. The Kran Lock.
 170. Steeple Montelbaan: Oude Waal.
 171. Sunny Tree-Lined Path.
 172. Cattle Market.

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- Clercq, T. le.
 1. Perditiön.
- Dantzig, Rachel M. van.
 2. Mother and Child.
 3. Italian Farmer's Wife and Kid.
- Hesselink, Abraham.
 4. Narcis.
 5. Lidia.
- Jeltsema, T. E.
 6. Rythmus of Dance: Isidora Duncan.
 7. Young Sportsman Sitting Down: Ready to Start Again.
- Mesdog, H. W.
 8. A Stormy Sea.
- Schreve-Yzerman, Jo.
 9. Amsterdam Orphan Girl.
 10. Da War es od und Leer.
- Wyk, Charles van.
 11. On the Way Home.
 12. Sheep and Lamb.
 13. Cessation from Labor.

A. D. DUFFNER

Executive Officer of the
Portuguese Commission

PORTUGUESE SECTION

- Aires, Frederico Pereira.**
 1. A View of Minho.
 2. The Great Overflowing.
 3. Fog in River Tagus.
 4. The Shore of Buarcos.
 5. Cape Mondego.
 6. The Country of Santarem.
- Azevedo e Silva, Antonio Gonçalves.**
 7. The Top.
 8. A Love Affair.
 9. The Parrot.
 10. Errand Boy.
 11. Testing the New Wine.
- Batalha Reis, D. Zoé.**
 12. On a Festival Day.
 13. The Cup of Tea.
 14. Chilly.
- Bordalo Pinheiro, Columbano.**
 15. Portrait of the Portuguese Poet
 Bulhao Pato.
 16. Portrait of the Portuguese Actor
 Vale.
 17. The White Glove.
 18. Oranges.
 19. Oysters.
- Bonvalot, Carlos.**
 20. Job.
 21. Study.
 22. The Grandmother.
- Brito, José de.**
 23. The Wave.
 24. Tired of Waiting.
- Calderon, Leandro Joao.**
 25. A Court in Minho.
 26. The Road to Louza.
 27. The Ancient Monastery of Alco-
 baca.
- Campas, Jose.**
 28. Idyl.
- Cardoso, Artur Alves.**
 29. A Cork Tree in the Afternoon.
 30. A Country Home.
 31. Weaving.
 32. A Farm in Alentejo.
 33. The Beautiful Apple Tree.
 34. The Granddaughter Amusing Her-
 self.
 35. Portrait.
 36. Portrait.
- Condeixa, Ernesto Ferreira.**
 37. The Vintage.
 38. A Seaman.
- Correa de Lacerda, Alberto V. da Rocha Por-
 tugal.**
 39. Blindman's Buff.
 40. The Church of Santa Clara-a-
 Velha: Coimbra.
 41. At Dawn.
 42. The Porta da Agua: Alfete.
- Cristino da Silva, Joao Ribeiro.**
 43. A Court in the Environs of Leiria.
 44. Sunset at Belem: Para.
- Fonseca, Martinho Gomes da.**
 45. An English Lady.
 46. A Child's Head.
 47. Leda Surprised.
- Gonçalves, D. Maria F. Mauhin.**
 48. In the Dining-Room.
- Guedes, Pedro.**
 49. Cheesemaker.
 50. Effect of Light.
 51. Noon's Rest.
 52. The Road to Barrosa.
- Malhoa, Jose.**
 53. The Native Song.
 54. Returning from the Festival.
 55. The Country Schoolmaster.
 56. A Catholic Procession in the Coun-
 try.
 57. Stop, Father!
 58. The Drunkards.
 59. Teasing.
 60. The Nightingale's Veranda.
- Manta, Abel Abrantes.**
 61. The Cloister of the Silence in the
 Monastery of Santa Cruz:
 Coimbra.
 62. A Miserable Ward.
 63. A Sad Landscape.
- Melo, David de.**
 64. An Old Woman.
- Mily, Possoz.**
 65. Roses.
 66. Oranges.
 67. Death Nature.
 68. Drawing.
- Moraes, Narciso Alfredo de.**
 69. The Grandmother.
 70. The Blacksmiths.
- Praat, Artur.**
 71. Herd of Sheep: Foggy Morning.
 72. Ambuscade.
- Reis, Joao.**
 73. Spring.
 74. Needy Homes.
 75. Autumn Morning.
 76. Roofs in the Village.
- Ribeiro, J., or José Nunes.**
 77. The Potter.
 78. An Arabian Smoking.
 79. At the Looking Glass.
 80. The Mountain of Cintra.
 81. The Path of Colares.
 82. A Rustic Home.
 83. Lighting the Cigarette.
 84. At Dawn.
 85. A Rustic Farm House: Environs
 of Cintra.
 86. The Lake of Sete Cidades in the
 Island of St. Michael.
 87. Preparing for the Wash.
 88. A Corner at Sete Cidades in the
 Island of St. Michael.
- Saude, Antonio Manoel da.**
 89. On the Banks of the Meuse.
 90. The Moon Over the Seine.
 91. The Night and the Seine.
 92. On the Banks of the Zezere.
 93. On the Banks of the Meuse.
 94. On the Banks of the Zezere.
- Sousa Lopes, Adriano de.**
 95. The Pilgrimage.
 96. Portrait.
 97. Portrait.
 98. Portrait.
 99. Effect of Light: Study.
 100. The Home of the Washerwoman.
 101. The Home of the Sexton.
 102. Effect of Moonshine: Venice.
 103. Almond Tree in Blossom.
 104. The Canal of St. Gregory: Venice.

105. The Sun in Winter.
 106. Under the Orange Trees.
 107. The Court of the Lacemakers:
 Bruges.
 108. Study.
 109. Landscape.
 110. Landscape.
 111. The Spanish Bridge: Bruges.
 112. The Canal: Venice.
 113. The Shore of Nazare.
 114. My Village.
 115. A Village Church.
 116. Thirteen Impressions: Portugal.
 117. Seven Impressions: Venice.
 118. Court in Bruges: Belgium.
 119. Five Impressions: Venice.
- Trigoso, Joao de Melo Falcao.**
 120. Golden Seacoast: Algarve.
 121. The Silver Weddings.
- Vaz, Joao.**
 122. An Old Wharf.
 123. The Church of the Mother of God:
 Lisbon.
 124. Embarking.
- Veloso Salgado, José.**
 125. Gathering Sea Moss: Minho.
 126. Ox Driver: Minho.
 127. Charm.
 128. Sea Flower.
 129. A Girl of Minho on Sunday.
 130. Washerwoman of Minho.
- GROUP 1
 CLASS 2
- Christino da Silva, Joao Ribeiro.**
 131. An Ancient Convent: Environs of
 Merceana.
- Fonseca, Martinho Gomes da.**
 132. Little Boy.
 133. Ecstasy.
 134. Ellen.
 135. Mary.
 136. A Nun.
 137. Fixing One's Eyes.
- Matoso da Fonseca, Joao Guilherme.**
 138. Getting Warm.
 139. Going Far Off.
- Mily, Possoz.**
 140. Mother and Daughter.
 141. Study.
 142. Environs of Etampes.
- Ribeiro Jor., José Nunes.**
 143. Door in the Alcazar: Tangier.
- GROUP 2
 CLASS 3
- O Comercio do Porto.**
 Engravings.
- GROUP 3
 CLASS 4
- Castro, Rodrigo de.**
 144. A Child Study: Marble.
- Costa Mota, Antonio Augusto da.**
 145. The Digger.
- Prat, Artur.**
 146. Dreaming.
- Simões d'Almeida, Sobrinho José.**
 147. Bust of an Old Woman.
 148. The Wake.
 149. Childhood.
- Tomás, Costa.**
 150. Hebe.
 151. Venus Anadyomene.
 152. David.
- Vaz Jor., Julio.**
 153. The Grandmother.
 154. Octogenarian.
 155. The Light and the Darkness.
- GROUP 3
 CLASS 7
- Barreiros, Augusto Cesar.**
 Wood Carvings, Louis XIV Style.

P. RICHARD BERNSTROM
Commissioner General

ANSHALM SCHULTZBERG
Commissioner of Fine Arts

SWEDISH SECTION

PIANTINGS, DRAWINGS, ETCHINGS AND TAPESTRIES

- Aminoff, Gregori.**
1. The Peacock.
- Backlund-Celsing, Elsa.**
2. Sking.
3. Tobogganing.
4. The Birthday Table.
- Bauer, John.**
5. Fairy Girl.
6. Brother Martin: 1.
7. Brother Martin: 2.
8. Brother Martin: 3.
9. Brother Martin: 4.
10. Flipper Woman.
11. "It Is the Wood Nymph," said the Moose.
12. "Is It Silver?" asked a hoarse voice.
13. Wingmor: opened.
14. The Princess Sat Amid Flowers.
15. The Witch Hewed Firewood.
16. Hut and Goblins.
17. The Fogey is Furious.
18. Goblins and Dogs.
19. "'Tis Thy Eyes," said the Goblins.
20. The Magic Plant.
21. Humpe at the Spring.
22. Humpe and His Mother.
23. The Fairy and the Hultra-forests Nymph.
24. The Goblins Jumped.
25. The Lady of the Woods.
26. The Giant Boy Who Slept 15 Years.
- Behm, Wilhelm.**
27. Winter Evening.
28. Autumn Day.
29. Farmstead.
30. Snowflakes.
31. Sunset in the Forest.
32. Spring Evening.
- Bergman, Oscar.**
33. Midsummer.
34. Birch Trees in Springtime.
35. Cliff and Snow.
36. Apple Bloom.
37. Islands Outside Stockholm.
38. Gray Weather.
39. Fruit Trees in Bloom.
40. Thaw.
41. Pines and Snow.
42. Winter: 1.
43. Winter: 2.
44. Winter: 3.
45. Winter: 4.
46. Winter: 5.
47. Ice Formations after Storm.
48. Cypress.
49. Fiesols.
50. The Lighthouse.
51. Sandhamn.
52. Firs and Snow.
- Bergström, Alfred.**
53. Spring Day.
54. Spring Evening.
55. Summer Evening.
- Bergström, Sigge.**
56. Hilly Country.
57. Cliffs.
58. Sunny Recess in the Mountains.
- Boberg, Anna.**
59. First Snow in the Mountains.
60. The Fisher's Cemetery.
61. Arctic Night.
62. Huts and Boats.
63. Drying the Sails.
64. The Glacier Lake.
65. In This Fjord of the Dead.
66. April Morning.
67. Fisherboats in the Harbour.
68. Spring in the Mountains.
69. Lights and Shades.
- Burmeister, Gabriel.**
70. The Rill.
71. Old Age.
72. Contemplation.
- Carlburg, Hugo.**
73. Spring Morning at the River.
74. Crofters Returning Home.
75. Timber Drivers.
76. Springtime.
- Dufva, Torgny.**
77. Summer Day.
- Elgström, Ossian.**
78. Tjudes Tale.
79. Tjudes Tale.
80. The Arctic Seas Tale.
81. Horagulla Gets Angry.
82. The Duel.
83. The Duel.
84. Warris Tale.
85. Tjudes Tale from Jakonga: 1.
86. Tjudes Tale from Jakonga: 2.
87. Tjudes Tale from Jakonga: 3.
88. Tjudes Tale from Jakonga: 4.
89. The Laplander Who Disbelieved His Master: 1.
90. The Laplander Who Disbelieved His Master: 2.
91. The Laplander Who Disbelieved His Master: 3.
92. The Laplander Who Disbelieved His Master: 4.
93. Tarras or Five Gods.
94. The Soul's Transmigration.
95. The Drama at Gandvik: 1.
96. The Drama at Gandvik: 2.
97. The Drama at Gandvik: 3.
98. Ajataja Sorcery.
99. Northern Lights.
100. Return to the Earth.
101. The Jabmekaibmo—Travel: 1.
102. The Jabmekaibmo—Travel: 2.
103. The Jabmekaibmo—Travel: 3.
104. The Christmas Night.
105. The God.
- Ericksson, Erik Edw.**
106. Mother's Joy.
- Fahlcrantz, Axel.**
107. Approaching Storm.
108. Moonlight and Rising Mist.
- Fjaestad, Gustav.**
109. The First Snow.
110. The First Snow.
111. Winter.
112. Winter.
113. Head of the Poet G. Froding.
114. April Morning.
115. The Artist's Portrait.
116. Winter Afternoon.

117. Summer Night's Breeze.
 118. New Cottage in the Forest.
 119. The Spring in Springtime.
 120. Winter Moonlight.
 121. Hoarfrost in the Mountains.
 122. Easter.
 123. Moonlight on the Mountain Lake.
 124. Hoarfrost in Sunlight.
 125. Rippling Water.
 126. Moving Water.
 127. Moving Water.
 128. Winter Night.
 129. Thaw in the Forest.
 130. Summer Evening at the River.
 131. Spring: Winter.
 132. Meditation: Winter Moonlight.
 133. Summer Night.
 134. Thaw.
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 135. Spring Time.
 136. The First Spring Day.
 137. Winter Day.
- Hedberg, Erik.**
 138. New Fallen Snow.
 139. Between the Mountains.
 140. Summer Night.
 141. Spring Evening.
- Hesselborn, Otto.**
 142. My Native Country.
 143. View Over the Lake Arran.
 144. Pine Tree in Snow.
- Hjortzberg, Olle.**
 145. My Wife.
 146. Italian Man.
 147. Head.
 148. Forge in Terracina.
- Hullgren, Oscar.**
 149. Sun Glitter on the Sea.
 150. Winter Evening in Lofoten.
 151. The Sea.
 152. Breaking Sea.
- Johansson, Carl.**
 153. Early Spring.
 154. Evening.
 155. Almond Trees.
 156. Summer Day.
 157. The Baltic Sea.
 158. Pine Trees in Sunlight.
 159. The Sacrificial Grove.
- Kallstenius, Gottfrid.**
 160. Iron Works in Vestergotland.
 161. Manor House in Varmland.
- Kulls, Axel.**
 162. The Artist's Portrait.
 163. The Naked Birch.
 164. Setting Sun: Still Water.
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 165. Calves.
 166. Ducks.
 167. Kids by the Fence.
- Larsson, Carl.**
 168. Between the White Trunks.
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 170. The Study.
 171. Ski Runner.
 172. The Reading Room.
 173. Forth Outfit.
 174. Deep Thoughts.
 175. The School Children's Household.
 176. The Workshop.
 177. A Lodge.
 178. The Homes Angel.
 179. The Klitchen Maid.
 180. The Old Room.
 181. Dressing Up for the Joke.
 182. Toilet in the Summer Morning.
 183. Repairing.
 184. Mother Kersti.
185. The Dining Room.
 186. Wash House.
 187. The Bed Room.
 188. The Dogs.
 189. Lisbeth Takes in by Ladefuls.
 190. Nude Girl by the Stove.
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 192. Hellberg's Chicks.
 193. Nude Girl.
 194. Nude Girl.
 195. Lisbeth.
 196. A Girl's Back.
 197. Karin Does Kerstis Hair.
 198. Mother.
 199. Anna-Stina.
 200. Martina.
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 203. Wild Geese.
 204. Sea Eagles.
 205. Sea Gull at the Nest.
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 206. Kiruna.
- Lindquist, Herman.**
 207. Sunny April Day.
- Mas-Ollc, Helmer.**
 208. Dalecarlian Girl.
 209. Old Peasant from Dalecarlia.
 210. Old Dalecarlian Man.
 211. Portrait of Rector Magnificus Schüick.
 212. Old Dalecarlian Man.
 213. Dalecarlian Women.
 214. Peasants from Dalecarlia.
 215. His Majesty King Gustaf V.
- Osslund, Helmer.**
 216. Mullfjället.
 217. Water Fall Porjus.
 218. Water Fall Porjus.
 219. The Water Fall Handölsforsen.
 220. Summer Evening.
 221. Evening.
 222. The Water Fall Elfkarlso.
- Schultzberg, Anshelm.**
 223. Winter in the Forest.
 224. Charcoal Burning.
 225. The Coal Man's Hut.
 226. Midsummer Night.
 227. Gray Winter Day After the First Snow.
 228. The Wood Barn.
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 230. Winter in the Forest.
 231. A Frosty Afternoon.
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 234. The Avenue.
 235. "It Will Be a Windy Night."
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 238. The League Boy.
 239. The Cripple.
 240. Trampler.
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 241. Winter Moon.
 242. Lamplight in the Fog.
- Torneman, Axel.**
 243. Torgny Lagman.
 244. The Dead Girl.
- Wallin, David.**
 245. Spring.
- Wieslander, Agnes.**
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 247. Fisherfolk.

- Foir, Emil.**
 248. Potato Gathering.
 249. Breakers.
- Osterlund, John.**
 250. The Abandoned Church.
- Osterlund-Wigert, Mathilda.**
 251. Thaw.
 252. When the Leaves Fall.
- Osterman, Emil.**
 253. His Majesty King Gustaf V.
 254. Portrait of Professor Curman.

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 256. The First Autocar in Smaland.
- Börjeson, John.**
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 263. Secretum.
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 267. Sphinx.
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 274. Doctor Romdahl.
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 276. Monique.
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 278. August Strindberg.
- Larsson, Gottfrid.**
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 280. Old Florentine.
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 283. Industry.
 284. Iron Workers.
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 286. The Swedish Challenge Prize at the Olympian Games.
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 287. The Little Boatmaker.
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- Bergström, Sigge.**
 314. Filipstad.
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 316. At the Strand.
 317. Hokbergst.
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 319. Village Street.
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 323. Parrot.
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 325. Lungarno.
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 328. In the Offing.
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 337. Moonlight.
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 340. Twilight in the Park.
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 344. Interior of St. Stephen's Church: Vienna.
 345. Street Near the House of Nobility.
 346. St. Martin Bridge: Toledo.
- Burmeister, Gabriel.**
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 350. Adagio Pathétique.
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 352. The Gates of the Fide Cemetery.
- Fischer, Per.**
 353. Lacko Castle.
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 355. Song of Solomon: 11 chap., 7 verse.
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 358. Old End Wall.
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- Hallgren, Ernst.**
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- Johansson, Thor.**
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 365. The Yard.
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 367. Sheep.
 368. Calves Among the Reeds.
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 370. At the Death Bed.
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- Luch, C. C.**
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 375. Chantecleer.
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 376. Lavallere.
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 378. Storm.
- Nordling, Gerda.**
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 380. Rocks.
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 382. Study: Head.
 383. The Stork Pair.
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 384. Double Tulips.
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 386. Dedication.
 387. Roses.
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- Magnusson, Gustaf.**
 389. Dancing Girl.
 390. Salome.
 391. "For the First Time."
 392. Violin Player.
- Molin, Hjalmar.**
 393. Motiv from Stockholm.
 394. The Town Gate.
- Nyman, Hilding.**
 395. Sking.
 396. The Village Shoemaker.
 397. Man from Mora.
- Petersén, Carlo.**
 398. Cats.
 399. Hens.
 400. Owl.
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 402. Ducks.
 403. From the Crinoline Time.
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 404. Karin.
 405. Siri Is Smoking.
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- Ramberg, Gustaf.**
 407. Croft in Skane.
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- Sahlén, Arthur.**
 410. Head.
 411. Evening.
 412. Barber Woman.
 413. Night in June.
 414. Pine Tree.
- Sahlström, Anna.**
 415. Youth.
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 417. Oat Harvest.
 418. Siesta.
- Schonberg, Torsten.**
 419. Self Portrait.
 420. Self Portrait (on the ice).
 421. The Golden Charlot.
 422. The Royal Barche: "Vasa Orden."
- Schwab, Eigil.**
 423. Portrait.
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 426. Grimace.
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 427. Selma Lagerlof.
 428. Gustaf Fredrikson.
- Staat, Hjalmar.**
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 430. Pine.
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- Tolr, Emil.**
 436. Solitude.
- Uberg, Emil.**
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MR. H. YAMAWAKI
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Commissioners of Fine Arts

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- Shodo Hirata.
1. Voices of Little Birds.
- Sento Morimura.
2. Festival of Nara.
- Hoko Murakami.
3. Mulberry and Cocoon.
- Tesshu Okajima.
4. Early Summer Day.
- Shunki Tamaya.
5. Eastern Breeze.
- Keisui Ito.
6. Sailing Boat.
- Kashu Kikuchi.
7. Maple.
- Taisei Minakami.
8. Flower of Ryukyu.
- Banri Mitsui.
9. Southern Garden in Spring.
- Bunto Hayashi.
10. Woodcutter.
- Sesso Okada.
11. Ryukyu Shoken: Morning of Shuri.
12. Evening: Nawa Harbor.
- Shoyen Ikeda.
13. After the Intermission.
- Teiun Toshima.
14. Morning Shadow.
- Ranshu Dan.
15. Moving Clouds.
- Toyen Oka.
16. Midday of Summer.
- Banyoh Shibata.
17. Ploughing.
- Kangai Takakura.
18. Spring of Kamo River.
- Tomone Kobori.
19. Mashashige Kusunoki Saving an Enemy.
- Kogyo Tsukioka.
20. Horse Market at Kiso.
- Toho Hirose.
21. Spring Rain.
- Oshu Nishi.
22. Praying for Luck.
- Hosui Okamoto.
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- Gentaro Koito.
24. Cloudy Day.
- Banka Maruyama.
25. Saigo: Harbor in Iki.
- Hakutei Ishii.
26. Drizzle at a Harbor.
- Hisashi Tsuji.
27. Early Autumn.
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28. Portrait of Mr. S. Nomura.
- Kunishiro Mitsutani.
29. Fisherman's Habitat.
- Eisaku Wada.
30. At a Seashore.
- Hiromitsu Nakazawa.
31. Dim Light.
- Katsumi Miyake.
32. Afternoon at Haneda.
- Hiroshi Yoshida.
33. Creek.
- Hachiro Nakagawa.
34. Summer Morning of the Inland Sea.
- Morinosuke Yamamoto.
35. "Kiokura."
- Toraji Ishikawa.
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- Fusetu Nakamura.
37. Rakan.
- Takeji Fujishima.
38. Femme Pensive.
- Nachiko Aida.
39. Storehouse on Water Front.
- Choun Yamazaki.
40. Consolation for a Classmate.
41. Breaking the Branch.
- Unkai Yonehara.
42. Sowing the Seed.
- Kingoro Yezama.
43. Saint Gama.
44. Pillal Son.
45. Manza.
- Ikka Tashima.
46. Goat.
- Homei Yoshida.
47. Mantle.
- Kichigoro Murata.
48. "Uraraka."
- Hodo Tomioka.
49. Rest.
- Chozo Toyama.
50. Old Man Loving Rabbit.
51. Smoking.
- Shokichi Hata.
52. Portrait of Count Okuma.
53. Hagaromo.
- Kogan Tobarai.
54. A Woman.
55. Tamanori Onna.
- Homei Yoshida.
56. Arayori: A Peasant Woman.
- Nagao Watanabe.
57. Strike.
- Yuhachi Ikeda
58. Hay.
- Choshun Matsuo.
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- Kuniyo Kawakami.
60. Spade.
- Seibo Kitamura.
61. Hopeless Love.
- Shigeo Kawasaki.
62. Deep Water.
- Uichiro Okura.
63. Rich Harvest.
- Homei Yoshida.
64. Chinese Children.
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65. Silver Box.
66. A Tower in Mist.

- Sadajiro Ametani.
67. Copper Picture.
- Ihei Nakano.
68. Bronze Vase: Carp.
- Kingoro Yezawa.
69. Silver Box: Country Spring.
- Masatoshi Iwai.
70. Bronze Ornament: Three Turtles.
- Chozo Toyama.
71. Damask Picture: Carp.
- Chozaburo Yamada.
72. Iron Ornament: A Devil.
73. Iron Ornament: A Puppy.
- LACQUER**
- Hikobei Nishimura.
74. Writing Box: Willow and White Stork.
75. Necktie Box: Maple of Ogura.
76. Picture: Carp.
- Kuhei Hayashi.
77. Shelf: Pine: Bamboo: Plum.
78. Box: Hydrangea.
79. Box: Waves.
80. Box: Butterfly.
81. Box: Water Lily.
- Sakujiro Nakamura.
82. Box: Peony.
83. Box: Evergreen.
- Masanori Ogaki.
84. Letter Box: Snow Scene.
- Jisaburo Mikami.
85. Paper Box and Writing Box: Temple Design.
- Kotaro Matsumoto.
86. Ornament: Rooster.
- Hideo Kimura.
87. Box: Leaves.
88. Tray: Waves.
- Takayasu Sasaki.
89. Tray: Battle of Gempel.
- Shoka Tsujimura.
90. Cigarette Box: Tree.
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91. Screen: Design of Arms.
92. Cigarette Box: Elephant.
- Tatsukichi Fujii.
93. Inlaid Work: Screen: Tree.
- Kozan Hosaka.
94. Paper Knife: Insect.
95. Paper Knife: Bird.
96. Paper Knife: Sea Weed.
97. Paper Knife: Nuts.
- Cho Yui.
98. Screen: Plum Flowers.
99. Screen: Twelve Months.
100. Screen: Hen.
101. Picture: Grape.
102. Picture: Turkey.
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- Kozan Miyakawa.
103. Vase: Crockery: Peony.
104. Vase: Crockery: Mountain Scene.
105. Vase: Crockery: Mountain Scene.
106. Incense Burner: Crockery: Phoenix.
107. Incense Burner: Porcelain.
108. Vase: Crockery.
- Hazan Itaya.
109. Vase: Crockery: Grass.
110. Vase: Crockery: Peacock.
111. Vase: Crockery: Bamboo Leaves.
- Tomotara Kato.
112. Vase: Crockery: Famous Scene of Omi.
113. Vase: Crockery: Waterfall.
- Eizayemon Fukagawa.
114. Vase: Crockery: Dragon.
- Tokumatsu Takashima.
115. Vase: Crockery.
- Juji Ando.
116. Incense Burner: Cloissonne.
117. Vase: Cloissonne.
118. Vase: Cloissonne: Phoenix.
119. Box: Silver Cloissonne: Gold Fish.
- Sosuke Namikawa.
120. Vase: Cloissonne: Pomegranate.
121. Writing Box: Cloissonne: Cormorant Catching Fish.
- Jubei Ando.
122. Vase: Cloissonne: Plum.
- Shuto Nakamura.
123. Vase: Crockery: Phoenix.
- Sobel Kinkozan.
124. Vase: Crockery: Flower and Bird.
125. Vase: Crockery: Grass.
126. Vase: Crockery: Phoenix.
127. Vase: Crockery: Tree.
128. Vase: Crockery: Scenery.
- Yohei Seifu.
129. Vase: Porcelain: Chrysanthemum.
130. Vase: Porcelain: Cherry.
- Rihei Hiraoka.
131. Vase: Porcelain: Chrysanthemum.
132. Incense Burner: Porcelain: Four Saints.
133. Vase: Porcelain: Cherry.
- Rokubei Shimizu.
134. Vase: Crockery: Flower.
- Maizan Yabu.
135. Bowl: Crockery: Peony.
136. Bowl: Crockery: Procession of Daimio.
137. Vase: Crockery: Cherry.
138. Incense Burner: Crockery: Bamboo.
139. Incense Burner: Crockery: Phoenix.
140. Incense Burner: Crockery: Tree.
- Tozan Ito.
141. Vase: Crockery: Grass.
- DYED FABRICS AND EMBROIDERIES**
- Shinhichi Iida.
142. Screen: Embroidered: Waves.
143. Screen: Embroidered: Iris.
144. Screen: Embroidered: Seagull.
145. Picture: Dyed Velvet: Autumn Scene.
- Junbei Kawashima.
146. No Dress.
147. Wall Picture: Grass Design.
- Sozayemon Nishimura.
148. Screen: Embroidered: Lion.
149. Wall Picture: Dyed Velvet: Fuji Mountain.
- Rihichi Tanaka.
150. Screen: Embroidered: Pheasant.
151. Screen: Embroidered: Crane: Pine.
- Sozayemon Nishimura.
152. Screen: Embroidered: Goose.
- Seifu Tsuda.
153. Cushion: Embroidered: Carnation.

PRINTS

- Yetsutaro Yoshida.
154. Printing from Wood Curving: Per-
simmon and Net.
Shiro Makino.
155. Printing: Boat in Snow.
Bonkotsu Igami.
156. Printing: Madrid.
157. Ground of Yoshima Shrine.
Naosaburo Yamada.

DESIGN

158. Printing: Horse.
Koho Goto.
159. Design for Screen: Boat in Reed.
Takezo Hayashi.
160. Design for Dish.
Sadakichi Junicho.
161. Design for Stand.
162. Design for Cake Bowl: Animal.
Motokichi Terada.
163. Design for Vase: Tempio Period.
Kakuyei Abe.
164. Screen Design.
Kojiro Ibuki.
165. Design for Dish.
Seiichiro Sawada.
166. Designs for Vase and Screen.

OLD MASTERPIECES

- Gyokusho Kawabata.
167. Kakemono: Group of Monkeys.
Mitate Kawabe.
168. Kakemono: Battle Scene of Yosh-
iaki Nitta.
Yukoku Noguchi (1825-1898).
169. Kakemono: Pine Tree.
Chokunyu Tanomura.
170. Kakemono: Scenery.
Kwampo Araki.
171. Kakemono: Peacock.
Motonobu Kano (1476-1559).
172. A Set of Three Pictures: Buddha
in center: flowers on both sides.
Nichokuan Sago.
173. Screen: Hawk.
Sotatsu Tawaraya (about 1630).
174. Bamboo: Plum.
Yusetsu Umikita.
175. Scenery.
Mitsuoki Tosa (1617-1691).
Mitsunari Tosa.
176. Autumn Scene.
Tsunenobu Kano (1636-1713).
177. Dragon.
Gantai.
178. Goose.
Gaho Hashimoto (1835-1908).
179. Cat: Bamboo Forest.
Inen.
180. Screen: Flowers.
Matabei Den Iwasa (1578-165 .)
181. Court Lady.
Moronobu Hishikawa (1638-1714).
182. Woman.
Masanobu Okumura (1690-1768).
183. Mountain House.
Kaigetsudo (about 1710).
184. Popular Pictures.
Baiyuken.
185. Popular Pictures.

Choyodo.

186. Popular Pictures.
187. "Kichijoten": Yakushiji: Copy.
Chohoji.
188. Resurrection of Buddha (Copy).
Sesshu.
189. Scenes of Four Seasons (Copy).
Shubun.
190. Screen: Scenes (Copy).
Koho.
191. Wistaria: Peony: Maple (Copy).
Okyo Maruyama (1733-1795).
192. Screen: Hozu River (Copy).
Eitoku Kano (1543-1590).
193. Screen: Pine and Eagle.
Toko Kuroda.
194. Screen: Fish.
Sesson (1420-1506).
195. Tiger and Bamboo.
Tanyu Kano (1602-1674)
196. Birds and Flowers (Rare).
Okyo Maruyama (1733-1795).
197. Bamboo: Rooster.
Shunsho Katsukawa (1726-1792).
198. Woman.
Shohaku Soga (about 1750).
199. Screen: Girl Under Willow.
Tsunenobu Kano (1626-1713).
200. White Hawk.
Sansetsu Kano.
201. Screen: Scenery.
To-eki.
202. Screen: Scenery.
Kagei.
203. Flowers.

CARVING.

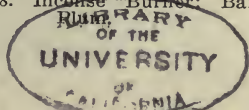
- Hosei Mori.
204. Ornament: Battle.
Toen Morikawa
205. Ornament: Festival.
206. "Tentoki": by Koden (Copy).
207. "Ryuyoki": by Koden (Copy).
208. Dancing Mask.
209. "No" Dancing Mask.

METAL WORKS.

- Shukyo Tsukada.
210. Vase: Silver: Horai Mountain.
Ichiga Numata.
Komakichi Hiratsuka.
211. Ornament: Fighting Soldier.
Bisei Unno
212. Ornament: Silver: Knight.
Eisho Kurokawa.
Ichiya Sekiguchi.
213. Incense Burner.
Yukiyasu Namihira.
214. Sword.
Yoshihiro Sagaminokuni.
215. Short Sword.

LACQUER WORK.

216. Ornament: Grass.
217. Writing Box: Chrysanthemum and
Iris.
Katsuyoshi Shoami.
218. Incense Burner: Bamboo: Pine:



- 219. Box: Katawaguruma (Copy).
- 220. Box: Aster.
- 221. Writing Box: Deer and Autumn Grass.
- 222. Writing Box: Cherry.
- 223. Prayer Book Box of Yenrekiji (Copy).
- 224. Jewel Box of Ninwaji (Copy).
- 225. Table: Grass Design of Toji (Copy).
- 226. Saddle: Dancing and Music.
- 227. "Inro."

WOOD WORK.

Teishutsu Gigei in.

- 228. Cabinet: Mulberry Tree: with the following contents and accessories:
 - 1 Picture Album.
 - 1 Picture Paper Weight: Deer Design.
 - 2 Ornaments: Wooden Figures: Colored.
 - 1 Incense Burner: Cherry Design.
 - 1 Incense Box: Cloisonne: Butterfly Design.

- 1 Incense tray.
- 3 Seals: Copper.
- 1 Seal Cabinet: Silver Inlaid: Peony Design.
- 1 Ink Box: Dragon Design.
- 1 Writing Box: Pine and Waves: Inlaid Birds.
- 1 Knife: Made in Seiji Namikawa.

CLOISONNE AND PORCELAIN.

Ryozan.

- 229. Vase: Pine and Fish.

Toji.

- 230. Vase: Pine and Rising Sun.
- 231. Vase: Corn.

Juji Ando.

- 232. Vase: Cloisonne: Spring Chickens.

EMBROIDERIES AND DYED FABRICS.

- 233. A Set of No Dancing Costumes, consisting of
 - 1 Kara-ori.
 - 1 Atsuta Kimono.
 - 1 Nuihaku.
 - 1 Happi.
 - 1 Hankiri.

EDUCATION AND SOCIAL ECONOMY

Official Catalogue
of Exhibitors

PANAMA - PACIFIC
INTERNATIONAL EXPOSITION
SAN FRANCISCO 1915



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SAN FRANCISCO
OFFICE OF THE PRESIDENT

July 10 1914.

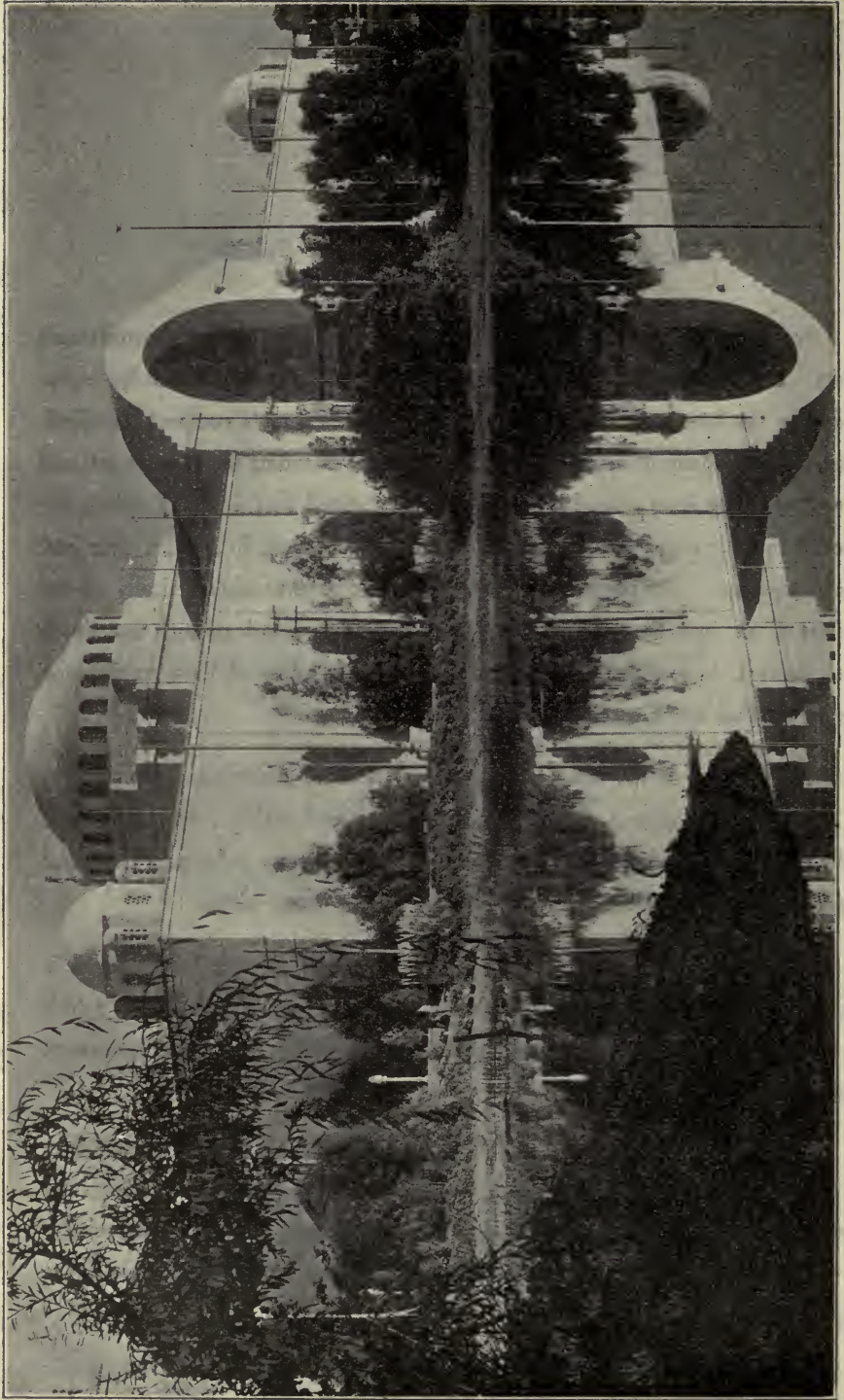
To Whom It May Concern:

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.

Charles Wahlgreen
President.



Alfred Strauss
Secretary.



PALACE OF SOCIAL ECONOMY

EDUCATION

Official Catalogue Department B

CLASSIFICATION OF EXHIBITS

Elementary Education

Secondary Education

Higher Education

Special Education in Fine Arts

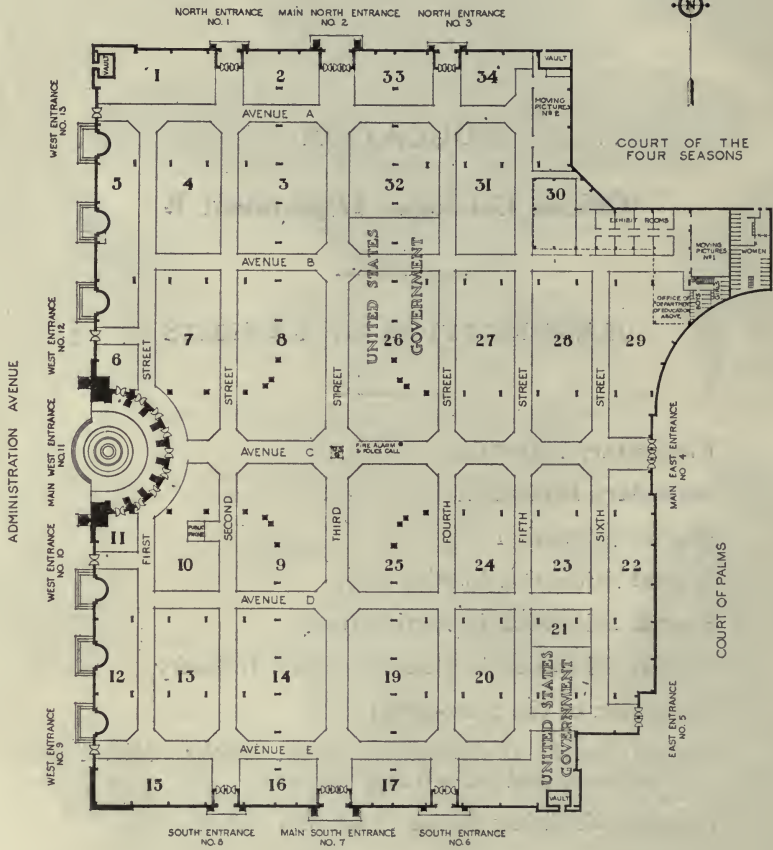
Special Education in Agriculture

Special Education in Commerce and Industry

Education of the Subnormal

Special Forms of Education, Text Books, School
Furniture and School Appliances

Physical Training of the Child and Adult



AVENUE OF PALMS

FLOOR PLAN

**PALACE OF EDUCATION & SOCIAL ECONOMY
PANAMA-PACIFIC INTERNATIONAL EXPOSITION**

OPENS FEBRUARY 20 SAN FRANCISCO, U.S.A. 1915. CLOSES DECEMBER 4

INTRODUCTION

Department of Education

BY

Alvin E. Pope, Chief

The compelling force that attracts the public to an Exposition is the educational value of its exhibits. Education in its broadest sense is the theme of the entire Panama-Pacific International Exposition. The far-reaching effect of educational influence in stimulating and directing future progress alone justifies the enormous expenditure of time, effort and money involved in this endeavor; the Department of Education is therefore expected to establish the standard for the educational movement.

The Palace of Education, situated at the extreme western end of the exhibit building area, is 396 feet by 526 feet and was erected at a cost of \$425,610.00. It fronts on Administration Avenue and on the east is the Court of Palms, designed by George W. Kelham. At the entrance to this Court on each side is a tower of Italian Renaissance, 200 feet in height. Between the two towers stands the magnificent statue "The End of the Trail."

Domestic Education occupies one-fourth of the floor space in the Palace of Education; foreign Education, one-fourth, the other half being devoted to exhibits in Social Economy.

Domestic Exhibits were secured by invitation, the policy of the Department being to request each exhibitor to confine his exhibit to one distinct system or process in which he excelled; to some definite lesson which he was capable of teaching the world; to present complete information on his particular subject which would be of interest and benefit to the visitors to an international exposition. These invitations were restricted in order to avoid duplication and these special exhibits were so assembled as to portray the salient features of Modern American Education. We have outgrown the old style educational display consisting of comprehensive, duplicate exhibits, composed chiefly of pupils' work; therefore it has been the aim and endeavor of the Department to have each exhibitor deal with the fundamental principles of education, illustrating the means used to develop a child into the highest type of citizenship. Foreign countries and Insular Possessions have followed the general policy of the Department in regard to the arrangement of exhibits.

Demonstrating classes will show the actual processes of education in operation. These classes will cover nearly every subject of education treated by an exhibit. For the first time in exposition history motion pictures will play an important part in Education. The demonstrating classes will find a rival in these pictures which will illustrate the various processes of education from the leading schools of the country.

By securing the co-operation of exhibitors in following the principles herein outlined; by arranging the exhibits for the benefit of the visitors instead of the exhibitors, the Department hopes to be of great assistance in improving international educational conditions. It hopes to have a definite message to all lines of educational and scientific thought. It hopes to produce a world-wide effect on the education of the future. It hopes to assist in making useful citizens of the boys and girls of today.

HOW TO LOCATE AN EXHIBIT

The Palace of Education is laid out in blocks, which are consecutively numbered from 1 to 34, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Sixth), running north to south, and as avenues (A to E), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Education, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF EDUCATION

Official Classification of Exhibits

GROUP 5 ELEMENTARY EDUCATION

- Class 8. Kindergarten.
Class 9. Elementary Grades.
Class 10. Training and certification of teachers.
Class 11. Continuation schools, including evening schools, vacation schools and schools for special training.
Class 12. Vocational education toward specific training and occupation.

Legislation, organization, general statistics.
School supervision and school management.
Buildings; plans, models; school hygiene.
Methods of instruction; results obtained.

GROUP 6 SECONDARY EDUCATION

- Class 13. High schools and academies, manual training schools, commercial high schools.
Class 14. Training and certification of teachers.

Legislation, organization, statistics.
Buildings: plans and models.
Supervision, management, methods of instruction, results obtained.

GROUP 7 HIGHER EDUCATION

- Class 15. College examination and inspection boards in relation to college entrance requirements.
Class 16. Colleges and universities.
Class 17. Scientific, technical and engineering schools and institutions.
Class 18. Professional schools.
Class 19. Libraries.
Class 20. Museums.

Legislation, organization, statistics.
Building: plans and models.
Curricula, regulations, methods, administration, investigations, etc.

GROUP 8 SPECIAL EDUCATION IN FINE ARTS

(Institutions for Teaching Drawing, Painting and Music.)

- Class 21. Art schools and institutes.
Class 22. Schools and departments of music, conservatories of music.

Methods of instruction; results obtained.
Legislation, organization, general statistics.

GROUP 9 SPECIAL EDUCATION IN AGRICULTURE

- Class 23. Agricultural education in the elementary and secondary schools. Boys' and Girls' Agricultural Clubs.
Class 24. Agricultural colleges and departments, experiment stations, instruction in forestry; methods and results.

Curricula, experiments and investigations, results.
Methods of transportation and shipment.
Legislation, organization, general statistics.
Buildings: plans and models.

GROUP 10 SPECIAL EDUCATION IN COMMERCE AND INDUSTRY

Commercial Education

- Class 25. Business and commercial schools, higher instruction in commerce.

GROUP 10-A Industrial Education

- Class 26. Industrial and trade schools, evening industrial schools.
Class 27. Education of the Indian.
Class 28. Education of the Negro.

GROUP 11
EDUCATION OF THE SUBNORMAL

- Class 29. Education of defectives and delinquents.
 Class 30. Institutions for the blind, publications for the blind.
 Class 31. Institutions for the deaf and dumb.
 Class 32. Institutions for the feeble-minded.
 Class 33. Special schools for cripples.
 Class 34. Open-air schools for tubercular children, etc.

Management, methods, courses of study, results.
 Special appliances for instruction.
 Legislation, organization, statistics.
 Buildings: plans and models.

GROUP 12

SPECIAL FORMS OF EDUCATION, TEXT BOOKS, SCHOOL FURNITURE AND SCHOOL APPLIANCES

- Class 35. Summer schools.
 Class 36. Extension courses; popular lectures and people's institutes; correspondence schools.
 Class 37. Scientific institutions, societies and associations; scientific expeditions, and investigations.
 Class 38. Educational publications, text books, etc.
 Class 39. School furniture, school appliances.

GROUP 13

PHYSICAL TRAINING OF THE CHILD AND ADULT

- Class 40. Lectures and conventions, physiology and hygiene of exercise, anthropometry, school games, school exercises, theory of physical training, etc.
 Class 41. Exhibits of work, photographs and plans of gymnasiums, fields, classes, teams, etc.
 Class 42. Exhibits of class work illustrative of school work, systems of gymnastics, etc.

GROUP 6

SECONDARY EDUCATION

- State of California. Av. B, bet. 4th & 5th Sts. Out-of-door education.
 Friction Transfer Pattern Company, The, New York, N. Y. Education vocational schools. V. I., 2nd St., bet. Avs. C & D.
 State of Illinois. Av. B & 3rd St. State educational exhibit.
 Gary Public Schools. Gary, Ind. Wider use of the schools. Av. B and 4th St.
 Indiana Educational Committee. Indianapolis, Ind. 4th St., bet. Avs. A & B.
 McCormick, Elizabeth Memorial Fund. Chicago, Ill. Av. C, bet. 4th & 5th Sts.
 State Board of Education. Salem, Ore. Rural System. Cor. Av. A and 5th St.
 State of Arkansas. Education 20 years ago and today. 2nd St., bet. Avs. B & C.

GROUP 7

HIGHER EDUCATION

- American Library Association. Chicago, Ill. Av. A, bet. 3rd & 4th Sts. Library Equipment, growth of public and institutional libraries, aids for establishing libraries, etc. A national organization, established in 1876, to promote the welfare of libraries in America. Headquarters, 78-E Washington St., Chicago.
 Carnegie Institution of Washington. Washington, D. C. Av. C, bet. 4th & 5th Sts. Scientific research. Exhibits consisting of publications, transparencies, models, photographs, drawings and diagrams representing work of ten departments of research.
 Education, Board of. St. Louis, Mo. 3rd St., bet. Avs. A & B.
 Harris, The W. N. Public School of the Field Museum of Natural History. Chicago, Ill. Av. A, bet. 3rd & 4th Sts.
 Massachusetts. Collective exhibit of photographs from following. Av. C, bet. 5th & 6th Sts.:

- Amherst College, Amherst.
 Boston College, Boston.
 Boston University, Boston.
 Clark College, Worcester.
 Clark University, Worcester.
 Harvard University, Cambridge.
 Holy Cross College, Worcester.
 Massachusetts Institute of Technology, Boston.
 Mt. Holyoke College, South Hadley.
 Radcliffe College, Cambridge.
 Simmons College, Boston.
 Smith College, Northampton.
 Tufts College, Medford.
 Wellesley College, Wellesley.
 Wheaton College, Norton.
 Williams College, Williamstown.
 Worcester Polytechnic Institute, Worcester.
 Smith College. Northampton, Mass. Higher Education of Women. Av. A7 and 4th St.
 State of Wisconsin. State and University Extension. Av. B, bet. 5th & 6th Sts.
 St. Louis, Missouri. Educational Museum. 3rd St., bet. Avs. A & B.
 The University of the State of New York, State Education Department, Albany. Cor. Av. C & 3rd St. Centralization of the state educational system.
 U. S. Steel Corporation and Subsidiary Co's. New York. Collective. Ed. Ex. Min. Pal.

GROUP 8

SPECIAL EDUCATION IN FINE ARTS

- Board of Education, Oakland, Cal. Education in music in the public schools including chorals, orchestras and bands.
 Commission on Fine, Applied and Manual Arts Education, San Francisco, Cal. Exhibit on Fine, Applied and Manual Arts education gathered from schools in the United States.
 High and Endowed Schools. San Francisco, Cal. Art Room. 6th St. and Av. B.

GROUP 9

SPECIAL EDUCATION IN AGRICULTURE

Agricultural College, Logan, Utah: The State at large, the college campus. 3rd St. & Av. B.

Hough Company, Romeyn B., Lowville, N. Y. Aids in study of woods and trees. 5th St. and North Wall of Pal. "American Woods"—a publication illustrated by specimens. "Handbook of Trees," photo-descriptive, mounts of woods for lantern and microscope. Pictures in tree studies. Wood-en cross-section cards.

International Harvester Co. of America, Chicago, U. S. A. Agr. Pal. 4th St., bet. Avs. B & C. Agricultural education in the elementary and secondary schools; Boys' and Girls' Agricultural Clubs; Agricultural colleges and departments, experiment stations, instruction in forestry, methods and results.

State of Iowa. Agricultural education, 4th St., bet. Avs. A & B.

United States Department of Agriculture, Washington, D. C. Collective Exhibit on Agricultural Education, Av. B, bet. 3rd & 4th Sts. College of Agriculture of the University of Cal., Berkeley, Cal.; College of Agriculture of the University of Illinois, Urbana, Ill.; Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa; Kansas State Agricultural College, Manhattan, Kan.; Louisiana State University and Agricultural and Mechanical College, Baton Rouge, La.; Massachusetts Agricultural College, Amherst, Mass.; College of Agriculture of the University of Minnesota University Farm, St. Paul, Minn.; College of Agriculture of the University of Missouri, Columbia, Mo.; Rutgers College, the New Jersey State College for the Benefit of Agriculture and Mechanic Arts, New Brunswick, N. J.; New York State College of Agriculture, Ithaca, N. Y.; Oregon State Agricultural College, Corvallis, Ore.; Institution of Animal Nutrition of the Pennsylvania State College, State College, Pa.; The Clemson Agricultural College of South Carolina, Clemson College, S. C.; South Dakota State College of Agriculture and Mechanic Arts, Brookings, S. D.; The Agricultural College of Utah, Logan, Utah; College of Agriculture of the University of Vermont, Burlington, Vt.; College of Agriculture of the University of Wisconsin, Madison, Wisconsin.

GROUP 10

SPECIAL EDUCATION IN COMMERCE AND INDUSTRY

Standard Commercial School, San Francisco, Cal. Commercial education. 6th St. & Av. C.

Gregg Publishing Company.

Palmer Company, A. N.

Remington Typewriter Company.

Yawman-Erbe Company.

Thirty students will be given a six months course in stenography, bookkeeping, type-writing and salesmanship. School term: April to October. Location: Main East Entrance.

GROUP 10-A

Massachusetts. State-aided Vocational Schools and Textile Schools. Av. C, bet. 5th & 6th Sts.

Ashfield, Vocational, Agricultural Dept. Sanderson Academy. Pictures of pupils' work.

Beverly Independent Industrial School.

Pictures of pupils' work, charts, product. Boston Day Industrial School. Pictures of pupils' work, course of study, product.

Boston Trade School for Girls. Pictures of pupils' work, product.

Brinfield, Vocational, Agricultural Dept. Hitchcock Free Academy. Pictures of pupils' work.

Bristol County Agricultural School, Segreganset. Pictures of pupils' work.

Concord, Vocational, Agricultural Dept. High School. Pictures of pupils' work.

Essex County Agricultural School, Hawthorne. Pictures of pupils' work.

Hadley, Vocational, Agricultural Dept. Hopkins Academy. Pictures of pupils' work.

Harwich, Vocational, Agricultural Dept. High School. Pictures of pupils' work.

Holyoke, Vocational School. Pictures of pupils' work.

Lowell Vocational School. Pictures of pupils' work.

Marlborough Vocational Agricultural Dept. High School. Pictures of pupils' work.

New Bedford Independent Industrial School. Pictures of pupils' work, product.

Newton Vocational School. Charts, pictures of pupils' work, product.

Smith's Agricultural School and Northampton School of Industries. Pictures of pupil's work.

North Easton Vocational Agricultural Dept. High School. Pictures of pupils' work.

Petersham Vocational Agricultural Dept. High School. Pictures of pupils' work.

Quincy Industrial School. Charts, pictures of pupils' work, product.

Somerville Vocational School for Boys. Picture of pupils' work.

Somerville Vocational School for Girls. Charts, pictures of pupils' work, product.

Westfield Trade School. Pictures of pupils' work.

Worcester Boys' Trade School. Picture of pupils' work, product.

Worcester Girls' Trade School. Pictures of pupils' work, product.

Boston Evening Industrial School, Dearborn School, Roxbury. Pictures of pupils' work, product.

Boston Evening Practical Arts Courses, Warren School, Charlestown. Pictures of pupils' work.

Boston Evening Practical Arts Courses, Washington Allston School. Pictures of pupils' work.

Holyoke Independent Evening Industrial School. Pictures of pupils' work.

Lawrence Independent Evening Industrial School. Pictures of pupils' work, product.

North Attleborough Independent Evening Industrial School. Pictures of pupils' work.

Quincy Independent Evening Industrial School. Pictures of pupils' work.

Taunton Independent Evening Industrial School. Pictures of pupils' work.

Wakefield Independent Evening Industrial School. Pictures of pupils' work.

Bradford Durfee Textile School, Fall River. Charts, pictures of pupils' work, product, course of study.

Lowell Textile School. Charts, course of study, pictures of pupils' work, product.

Massachusetts Board of Education. Administration, charts, maps, models, reports, statistics and slides.

Massachusetts Nautical School. Charts, course of study, maps, pictures of pupils' work.

GROUP 11.

Oakland, Calif. The Atypical child. Av. C. bet. 4th & 5th Sts.

GROUP 12

SPECIAL FORMS OF EDUCATION, TEXT BOOKS, SCHOOL FURNITURE AND SCHOOL APPLIANCES

American Crayon Co., The, Sandusky, O. Art exhibition of crayon drawings. Av. B & 6th St. The pioneer crayon mfrs, established 1835. Makers of Waltham and Empire brands white and enamel black board crayons, Hygieia Dustless Crayons, Pastello, Crayograph, Crayonart, drawing crayons; Marking, checking, lumber, tailors', railroad and carpenters' crayons.

Andrews Co., A. H., Chicago, Ill. Mfrs. chairs for theaters and churches, school desks, furniture and appliances. San Francisco Branch, 728 Mission St.

Binney & Smith Co., New York City. Crayons, etc. 5th St., and North Wall of Pal.

Coleman, George A., 1635 Cedar St., Berkeley, Cal. Av. A and 4th St., North Entrance No. 3. Observation Bee Hives, Bees and Queens, Bee Books, Bee Keepers Supplies (A. I. Root), Nature Study Books and Supplies.

Milton Bradley, Boston, Mass. School Supplies. 5th St. and North Wall of Pal.

Brigham, Miss Louise, New York, N. Y. Furnished rooms equipments. 6th St. and Av. E.

Manuel D. Christinides, New York. Method of teaching English to immigrants. 5th St. and North Wall of Pal.

Ginn & Co., Boston, Mass. Publishers. 5th St., Av. A. School and college textbooks.

International Harvester Co. of America, Chicago, U. S. A. Agr. Pal. 4th St., bet. Avs. B & C. Extension courses, popular lectures and people's institutes, correspondence schools.

Laird & Lee, Chicago, Ill. Publishers. 5th St. and North Wall of Pal. Dictionaries, etc.

Newson & Co., New York City. Publishers. 5th St. and North Wall of Pal. Educational publications.

Palmer Co., The A. N., New York City. Penmanship. 5th St. and North Wall of Pal.

Singer Sewing Machine Co., New York, N. Y. V. I. Pal., 1st St., Av. D, 2nd St. & Av. E. Educational publications relative to the operation of sewing machines.

Victor Talking Machine, Camden, N. J. Phonographs. Lib. Ar. Pal. Av. C, 4th & 5th Sts. Talking Machines.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS. BUREAU OF EDUCATION. MANILA.

Location: First Street, between Avs. A and C.

GROUP 5

Written work, charts, motion pictures, photographs, statistics, system:

Luzon, Mindanao, Cebu, Leyte, Samar, Negros, Panay, Palawan, Bohol, Romblon, Masbato, Batanes, Mindoro.

Model building, unit system construction: Kawit, Cavite.

Philippine public school system
Bureau of education, Manila.

GROUP 6

Written work, charts, motion pictures, photographs, statistics, curricula:

Philippine Normal School, Manila.
Written work, charts, statistics:
Cagayan High School, Tuguegarao, Cagayan.

Ilocos Norte High School, Laoag, Ilocos Norte.

Ilocos Sur High School, Vigan, Ilocos Sur.
Bangued High School, Abra, Bangued.

La Union High School, San Fernando, La Union.

Nueva Vizcaya High School, Bayombong, Nueva Vizcaya.

Pangasinan High School, Lingayen, Pangasinan.

Tarlac High School, Tarlac, Tarlac.
Pampanga High School, San Fernando, Pampanga.

Bulacan High School, Malolos, Bulacan.

Bataan High School, Balanga, Bataan.

Rizal High School, Pasig, Rizal.

Laguna High School, Santa Cruz, Laguna.

Tayabas High School, Lucena, Tayabas.

Batangas High School, Batangas, Batangas.

Zambales High School, Iba, Zambales.
Nueva Ecija High School, San Isidro, Nueva Ecija.

Cavite High School, Cavite, Cavite.

Sorsogon High School, Sorsogon, Sorsogon.

Albay High School, Albay, Albay.

Camarines High School, Naga, Camarines.

Samar High School, Catbalogan, Samar.

Leyte High School, Tacloban, Leyte.

Cebu High School, Cebu, Cebu.

Iloilo High School, Iloilo, Iloilo.

Capiz High School, Capiz, Capiz.

Antique High School, San Jose, Antique.

Occidental Negros High School, Bacolod, Occidental Negros.

Oriental Negros High School, Dumaguete, Oriental Negros.

Bohol High School, Tagbilaran, Bohol.

Surigao High School, Surigao, Surigao.

Misamis High School, Cagayan de Misamis.

Manila High School, Manila.

Isabela High School, Iligan, Isabela.

Mindoro High School, Calapan, Mindoro.

Palawan High School, Cuyo, Palawan.

Libraries:
Tayabas High School and high schools listed above, and three hundred intermediate schools.

Museums:
Bureau of Education, Manila.

Philippine School of Commerce, Manila;
museums in provincial capitals listed in this group.

GROUP 7

Publications, photographs, chart:

The University of the Philippines, Manila.

GROUP 8

Drawings:

Philippine School of Arts and Trades, Manila.

GROUP 9

Photographs, charts, statistics, courses:

Datac Farm School, Datac, Ilocos Norte.

Central Luzon Agricultural School, Muñoz, Nueva Ecija.

Santa Maria Farm School, Santa Maria, Ilocos Sur.

Indang Farm School, Indang, Cavite.

Guinobatan Farm School, Guinobatan, Albay.

Iba Farm School, Iba, Zambales.

Tacloban Farm School, Tacloban, Leyte, and other special agricultural schools.

GROUP 10

Written work, photographs, curricula:
Philippine School of Commerce, Manila.

GROUP 10-A

Curricula, charts, statistics, articles, photographs, motion pictures:
Islands entered in Group 5.

GROUP 12

Photographs, courses, publications, charts, statistics:

Philippine Normal School and vacation assemblies held at provincial capitals listed under Group 6.

Educational publications, textbooks:
Bureau of Education, Manila.

GROUP 13

Photographs, charts, statistics, publications, motion pictures:
Islands entered in Group 5.

State Exhibits

Education State of Utah

State of Utah—Co-operation and consolidation made easily possible by the settlement of the state by towns. A closely knit school system distributing its advantages broadly. 3rd St. and Av. B.

Group 9: Agricultural College, Logan, Utah.

The State at Large, the College Campus.

Group 6: Granite, Jordan, Box Elder and

other consolidated school districts. The efficiency and economy of consolidation.

Group 6: Ogden, Utah. School work and the industries of the city correlated.

Group 13: Salt Lake City, Utah. The concern of the schools for the pupils' physical welfare.

Group 7: University of Utah, Salt Lake City. The educational opportunity in the great natural resources of the state.

Foreign Section

Argentine. Av. C, bet. 2nd & 3rd Sts. Collective educational exhibit.

Republic of China. Both sides of 2nd St., bet. Avs. A & C. Collective educational exhibit.

Uruguay. Av. B, bet. 5th & 6th Sts. Collective exhibit on education.

JAPAN

GROUP 6

Monbusho—Historical explanation of period when Commodore Perry arrived at Japan. Photos of school conducted by Americans in Japan. Educational statistics.

GROUP 7

Kyushu Teikoku Daigaku—Photographs and diagrams.

Tokyo Teikoku Daigaku—Photographs and rules of Imperial University.

GROUP 8

Ishikawakenritsu Kogyo Gakko—Porcelain and other work.

Toyamakenritsu Kogyo Gakko—Sculpture and other work.

Shiritsu Joshi Bijutsugakko—Japanese painting, oil painting, knitting, embroideries and sewing.

Shiritsu Osaka Kogyo Gakko—Students' work and models.

Shiritsu Nippon Joshi Daigakko—Photographs and diagrams.

Shiritsu Kyoritsu Joshi Shokugyo Gakko—Dress, furniture, ornaments.

Shiritsu Nogoya Shogyo Gakko—Photos and students' work.

Sagakenritsu Arita Kogyo Gakko—Porcelains and other work.

Tokyo Joshi Koto Shihan Gakko—Students' work and photos.

Tokyo Koto Kogyo Gakko—Model of present Japanese house. Dyed fabrics and porcelain.

Tokyo Bijutsu Gakko—Japanese picture, designs, lacquer.

Tokyo Furitsu Kogei Gakko—Furniture and ornaments.

Wakayamenken Kuroyo Choritus Shiki Gakko—Lacquer ware.

Tokyo Furitsu Shokko Gakko—Furniture and photograph.

Tokyo Furitsu Shokusen Gakko—Dyed cotton fabric.

Tohoku Teikoku Daigaku Noka Daigaku—Models and photographs showing the development of the college of agriculture.

Uyeda Sanshi Senmongakko—Pictures showing spinning and silk worm, silk, cocoon and eggs.

Aichikenritsu Norin Gakko—Model school, model of forest, specimen of forest products.

Nigatakenritsu Nobu Suisangakko—Models of fishery apparatus, canned goods, diagrams, photos.

GROUP 10

Kyoto Shiritsu Bijutsu Mogei Gakko—Students' work.

Kyotofuritsu Daiichi Koto Jogakko—Students' work.

Kyotofuritsu Daiichi Koto Jogakko—Students' work.

Shiritsu Joshi Eigaku Juku—Students' work, diagrams.

Tokyoshi Sakamoto Jinjo Shogakko—Students' work.

Tokyofu Aoyama Shihan Gakko—System of teaching and drilling students, work of the students.

Kyoto Koto Kogei Gakko—Process of making "Yuzen" fabrics, the designs.

Tokyo Koto Shihan Gakko—Photograph of school.

GROUP 12

Tokyo Mo Gakko—Photo of raised type text books.

Tokyo Moa Gakko—Text book system of teaching.

Tokyofu Daiichi Chugakko—Text books, students' work, photographs.



Official Catalogue of
Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHARLES C. MOORE
President

Director-in-Chief

FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

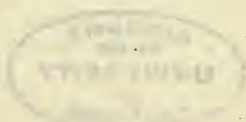
Department C

SOCIAL ECONOMY

ALVIN E. POPE, Chief

Preliminary Edition

Published for the Division of Exhibits by
The Wahlgreen Company, Official Publishers
San Francisco, 1915



SOCIAL ECONOMY

Official Catalogue Department C

CLASSIFICATION OF EXHIBITS

Agencies for the Study, Investigation and Betterment of Social and Economic Conditions

Economic Resources and Organizations

Demography, Eugenics

Hygiene

Alcohol, Drugs and Tobacco

Labor

Co-operative Institutions

Banks and Provident Institutions

Charities and Correction

Preparation, Enactment and Enforcement of Legislation

Nomination and Election Systems

Public Utilities and Their Regulation

Municipal Advancement

Recreation

HOW TO LOCATE AN EXHIBIT

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| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF SOCIAL ECONOMY

Official Classification of
Exhibits

GROUP 14

AGENCIES FOR THE STUDY, INVESTIGATION AND BETTERMENT OF SOCIAL AND ECONOMIC CONDITIONS

- Class 43. Public bureaus, offices, commissions, etc.
 Class 44. Societies: humane, institutional, church and other. Private agencies, commercial organizations, museums, etc.
 Class 45. Economic and social reform associations, special educational agencies, literature, congresses.
 Class 46. Surveys and special community investigations.

GROUP 15

ECONOMIC RESOURCES AND ORGANIZATIONS

- Class 47. Physical resources and characteristics, location and organization of industrial enterprises, general industrial statistics. Governmental promotion of industry.
 Class 48. Conservation of national resources.

GROUP 16

DEMOGRAPHY, EUGENICS

- Class 49. Composition, characteristics and movement of population; statistical methods, machines and appliances employed.
 Class 50. Immigration.
 Class 51. Eugenics.

GROUP 17

HYGIENE

- Class 52. Vital statistics.
 Class 53. Growth and nutrition, food.
 Class 54. Hygiene of infancy and childhood.
 Class 55. Communicable diseases.
 Class 56. State and municipal hygiene, public-health work and health laboratories.
 Class 57. Care of the sick, nursing. Care of defectives. Life saving.
 Class 58. Industrial hygiene, occupational diseases.
 Class 59. Special hygiene: traffic and transportation, military, naval, tropic, mental, 'sex, dental.
 Class 60. Educational publicity.

GROUP 18

ALCOHOL, DRUGS AND TOBACCO

- Class 61. Physiological and other effects of alcohol, drugs and tobacco. Statistics of consumption and economic cost. Organized efforts for lessening intemperance and use of drugs and tobacco.
 Class 62. Legal regulation of trade in liquor, drugs and tobacco. Private and public management of liquor trade.

GROUP 19

LABOR

- Class 63. Regulation and inspection of factories, mines and other work. Woman and child labor.
 Class 64. Organization of employees. Organization of employers.
 Class 65. Systems of industrial remuneration. Wages and cost of living.
 Class 66. Industrial disputes and their settlement. Statistics of unemployment, treatment of unemployed.
 Class 67. Statistics of industrial accidents and means for prevention. Employers' liability. Workmen's compensation.
 Class 68. Welfare work.

GROUP 20

CO-OPERATIVE INSTITUTIONS

- Class 69. Co-operative societies for production and distribution.
 Class 70. Co-operative credit and banking institutions, rural credit systems.
 Class 71. Co-operative building societies.
 Class 72. Co-operative agricultural societies.

GROUP 21

BANKS AND PROVIDENT INSTITUTIONS

- Class 73. National, state and private banks; loan and trust companies.
 Class 74. Savings banks, postal savings banks, provident savings and loan institutions.
 Class 75. Insurance: life, fraternal, accident, fire, marine, fidelity, and other forms.
 Class 76. Social insurance. Retirement provisions for public employees.

GROUP 22

CHARITIES AND CORRECTION

- Class 77. Care of dependent and neglected children.
 Class 78. Institutional care of destitute adults. Institutional care of defectives.
 Class 79. Relief of needy families in their homes.
 Class 80. Preventive social work. Supervisory and educational movements.

- Class 81. Statistics of crime. Identification of criminals.
 Class 82. Prisons, jails, work-houses, lock-ups. Prison labor, peonage.
 Class 83. Reformatories; education of delinquents.
 Class 84. The juvenile offender. Defective delinquents.
 Class 85. Indeterminate sentence, probation and parole. Aid and relief.

GROUP 23

PREPARATION, ENACTMENT AND ENFORCEMENT OF LEGISLATION

- Class 86. Legislative reference bureaus, commissions, etc. Operation of initiative, referendum and recall. Results of efforts for uniform state and municipal legislation. Police systems and police administration. Courts. Reform in court procedure.

GROUP 24

NOMINATION AND ELECTION SYSTEMS

- Class 87. Qualifications of voters. Party organization. Nomination and election systems. Australian ballot, short ballot, voting machines. Restrictions and publicity of election expenditures. Corrupt practice legislation.

GROUP 25

PUBLIC UTILITIES AND THEIR REGULATION

- Class 88. State, municipally and privately owned utilities. Public service commissions.

GROUP 26

MUNICIPAL ADVANCEMENT

- Class 89. Municipal statistics.
 Class 90. Local government and the State. Charters. Systems of government.
 Class 91. Municipal activities; methods, instrumentalities and results.
 Class 92. Public and private agencies for promoting economy and efficiency.

GROUP 27

- Class 93. Town and city planning. Housing.

GROUP 28

RECREATION

- Class 94. Parks, playgrounds and recreation centers. Baths, swimming pools and bathing beaches. Utilization of school house as social center. Public entertainments. Commercial recreation.

GROUP 14.

AGENCIES FOR THE STUDY, INVESTIGATION AND BETTERMENT OF SOCIAL AND ECONOMIC CONDITIONS.

Federal Council of Churches, San Francisco, Cal. Coll. Exh. on religious education. Av. D to South Wall of Pal., bet. 1st & 2nd Sts.
 Buddhist Churches in America, Oceana, Cal. N. S. West Ent. No. 10 & 1st St.

Civic Center League, Los Angeles, Cal. Unified Social Center Exhibit. Av. C, bet. 5th & 6th Sts. "The Rural Social Center with genesis of the Social Center at Rochester," by Mr. E. J. Ward, for Wisconsin; "Extent and Variety of Wider Use," by Dr. E. W. Still, for New York; "Recreation Center in High Schools with Cultural Aspects," by Mrs. Eva White for Boston; "Recreational use of School Houses under Teacher Management," by Mr. J. D. Shoop, for Chicago; "An intensive recreational use of school buildings with club-like characteristics in the material equipment of the centers," by O. A. Berg for Milwaukee; "A school plant constructed for wider use and a school system favoring social and recreational work," by Supt. Wm. A. Wirt, for Gary; "The high school as an Art Center," by Supt. J. T. Giles, for Richmond, Indiana; "School architecture designed for social center uses and school orchestras for community use, and use of school buildings for political meetings and balloting," by Supt. A. C. Barker, for Oakland, Cal.; "The Civic Center and Civic Education of Immigrants," by Mr. C. C. Kelso, for Los Angeles; "How to begin Social Center Development," by Mr. E. B. de Groot, for San Francisco; "The Suburban Social Center," by Wm. Kent; "School Equipment for Social Centers," by Mr. Dwight H. Perkins, for Chicago; "Rural Social Centers on the Pacific

Coast," by Mr. C. C. Thomassen, for Olympia, Washington; "A Typical High School Social Center," Walter Nagle, Sec. Chamber of Commerce, for Santa Rosa, Cal.

Christian Science Publishing Society, The. Boston, U. S. A. Publications. Ed. Pal.; cor. 2nd St. & Av. D.

Council of Jewish Women, The. Headquarters 3437, Kansas City, Mo. 6th St. bet. Avs. D & C.

Domestic and Foreign Missionary Society. Berkeley, Cal. Av. D, bet. 1st & 2nd Sts. Missionary work.

Hoffman, Mrs. F. Burrall, Washington, D. C. Catholic Cathedral exhibit. 5th St. op. Av. D.

Joint Board of Sanitary Control. New York, N. Y. Welfare work. Av. D, bet. 5th & 6th Sts.

Liberty Bell Bird Club. Philadelphia, Pa. An association for the protection of all song and insectivorous birds. Membership and button free.

Rosierucian Fellowship. Headquarters, Ocean-side, Cal. Pal. of Ed. & Social E., Blk. 12, nr. W. En. No. 10.

Theosophical Society. Los Angeles, Cal. No. side W. Ent. No. 10 & 1st St. Theosophy.

Unitarian Church, First. Education Bldg., Rel. educational. 1st St., nr. So. Side W. Ent. No. 10.

U. S. Steel Corp. & Subsid. Cos. New York. Collective Sec. & Economic Exh. Mines Pal.

GROUP 16.

Carnegie Institution of Washington. Washington, D. C. Av. C, bet. 4th & 5th Sts. Scientific research. Exhibits consisting of publications, transparencies, models, photographs, drawings and diagrams representing work of ten departments of research.

Christinides, Manual D. New York, N. Y. Teaching to immigrants.
The Race Betterment Foundation. Battle Creek, Mich. Race methods. Av. C & 3rd St.

GROUP 17.

Arequipa Sanitorium & Pottery. Fairfax, Marin Co., Cal. Care tuberculous. Av. E & 3rd St.

Barrett Mfg. Co. Frankford, Phil. Disinfectants. Min. Pal., 7th St., bet. Avs. C & D.

Bureau of Health for the Philippine Islands. Manila. Tropical Hygiene. Av. E, bet. 3rd & 4th Sts.

Boston, Massachusetts. Medical inspection of public schools. Av. C, bet. 5th & 6th Sts.

California State Board of Health. Sacramento, Cal. Tuberculosis. 3rd St., nr. Av. E.

Commonwealth of Pennsylvania, Department of Health. Av. D, bet. 4th & 5th Sts.

Mouth Hygiene Association of America, San Francisco, Cal. Physicians Bldg. Av. E & 4th St. Mouth hygiene.

American Social Hygiene Association, New York, N. Y. 4th St. & Av. D. Social hygiene.

American Medical Association, New York, N. Y. 4th St., bet. Avs. D & E. Educational work in personal hygiene, patent medicine, quack doctors and fake medical schools.

Board of Health of Baltimore, Md. 3rd St., bet. Avs. D & E. Sanitation, city high pressure water system and sewage disposal system.

Cuban Government, Havana, Cuba. Both sides of main west entrance 11th and 2nd Sts. Tropical diseases.

Massachusetts. Quarantine. Av. C, bet. 5th & 6th Sts.

New York State Dept. of Health, Albany, N. Y. Health education. Av. D, bet. 3rd & 4th Sts.

Rockefeller Foundation, International Health Com. New York City. Hookworm. 4th St., bet. Avs. D & E. Hookworm diseases, life-size models of persons afflicted, male and female hookworms, embryos, eggs, greatly enlarged, embryos passing through skin, hookworms attached to intestine; transparencies, photographs.

Workmen's Compensation Service Bureau. New York City. Liability. Pal. Mines, 2nd St., bet. D & C.

GROUP 18

Anti-Saloon League of America. Westerville, Ohio. Publishing interests. 5th St. & Av. E. Effects of alcohol; methods of work. (Exhibit of Scientific Temperance Federation.)

Prohibition National Committee. Chicago, Ill. Anti-liquor display. Ed. Pal., 1st St., bet. Avs. D & E. 5,000,000 Enrollment Headquarters. Liquor traffic in politics pictured. Harley H. Gill and David H. Gill in charge.

World's Woman's Christian Temperance Union. London, England. Av. D & 3rd St. National Woman's Christian Temperance Union, Evanston, Ill. Physiological effects of alcohol and other habit-forming drugs.

GROUP 19

American Federation of Labor. Washington, D. C. Social welfare. 6th St., bet. Avs. C & D.

Ford Motor Company. Detroit, Mich. Welfare work. S. E. Sec. Mines Bldg., 3rd St., bet. Avs. D & C.

International Harvester Company of America. Chicago, U. S. A. Agr. Pal., 4th St., bet.

Avs. B & C. Regulation and inspection of factories, statistics of industrial accidents and means for prevention, employer's liability, welfare work.

National Consumers' League. New York. Labor. Av. D, bet. 5th & 6th Sts.

United States Steel Corp. & Subsid. Cos. New York. Col. accident prevention. Mines Pal.

National Child Labor Committee, New York, N. Y. 6th St. and Av. D. Child labor and its results.

Industrial Accident Commission of California, San Francisco, Cal. Accident prevention work. 2nd St. & Av. D, Min. Pal.

GROUP 21

BANKS AND PROVIDENT INSTITUTIONS

Aetna Life Insurance Co. Hartford, Conn. Mines Bldg., Av. D & 2nd St. Safety appliances.

Collective Insurance and Universal Safety Exhibit. S. E. Sec., Mines Bldg., 1st St, Av. B.

Hartford Fire Insurance Company. Hartford, Conn. Mines Bldg., Av. C1 & 1st St. Fire prevention and protection.

International Harvester Company of America. Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Social insurance, retirement provisions for public employes.

Maryland Casualty Company. Baltimore, Md. Insurance bonding. Av. B & 2nd St., Pal. of Mines.

Metropolitan Life Insurance Company, New York, N. Y. Exhibit of welfare work for policy holders and employees. Pal of Min., 1st St., Avs. C & D. This exhibit outlines various measures for safeguarding the health of over ten million policyholders and seventeen thousand employees. Charts and photographs in one division describe the visiting nurse service, the Health and Happiness League, the company's publications on hygiene and various forms of co-operation with health officers and other civic and social agencies. The charts in the second division outline the company's policy with reference to luncheons for employes, the Staff Savings Fund, the educational activities, working conditions, and other features which operate most successfully in the developing an efficient and satisfied working staff.

Prudential Insurance Company of America. Mines Bldg., S. S. Main W. Entrance & 1st St. Relation of life insurance to public welfare.

Bankers Trust Company, New York, N. Y. Intersection of Av. C and 3rd St. American Bankers Association Travelers' Cheques.

Internat'l Order of King's Daughters & Sons, Oakland, Cal. 1st St., bet. Avs. D & E. Pictures and literature of the order.

Modern Woodmen of America. Rock Island. Mines Bldg., 2nd St., bet. Avs. C & D. Royal Neighbors of America and Woodmen of the World. Fraternal insurance.

Workmen's Compensation Service Bureau. Rock Island. Mines Bldg., 2nd St., bet. Avs. C & D. Workmen's compensation, insurance and accident prevention.

World's Insurance Congress Events. S. E. Sec., Mines Bldg., 1st St. and Av. B.

National Union Insurance Co., San Francisco, Cal. 2nd St. & Av. C, Min. Pal. Fraternal insurance.

GROUP 22

CHARITIES AND CORRECTION

New York State Dept. of Prisons. Identification of criminals. Av. C, bet. 3rd & 4th Sts.

GROUP 24

NOMINATION AND ELECTION SYSTEMS

American Voting Machine Co. Boston, Mass. Voting machine. 6th St., bet. Avs. C & D.
Congressional Union for Woman's Suffrage. Washington, D. C. 6th St., nr. Av. C.

GROUP 26

MUNICIPAL ADVANCEMENT

Brigham, Miss Louise. New York, N. Y. School of manual economics. 6th St. & Av. E.

GROUP 27

TOWN AND CITY PLANNING. HOUSING

Pad Portable Cons. Co. Los Angeles, Cal. Housing. The mine. Min. Pal.
United States Steel Corp'n. & Subsid. Cos. New York. Col. model housing exh. Mines Pal.

GROUP 28

RECREATION

Girl's Friendly Society of California. S. F., Cal. 5th St., nr. Av. E. Work and progress of Girls' Friendly Society.

United States Steel Corp'n. & Subsid. Cos. New York. Col. recreation and entertainment exhibit. Mines Pal.

THE GOVERNMENT OF THE PHILIPPINE ISLANDS. BUREAU OF EDUCATION. MANILA.

GROUP 14

Charts, exhibits, publications, statistics: Bureau of Education, Manila.

GROUP 15

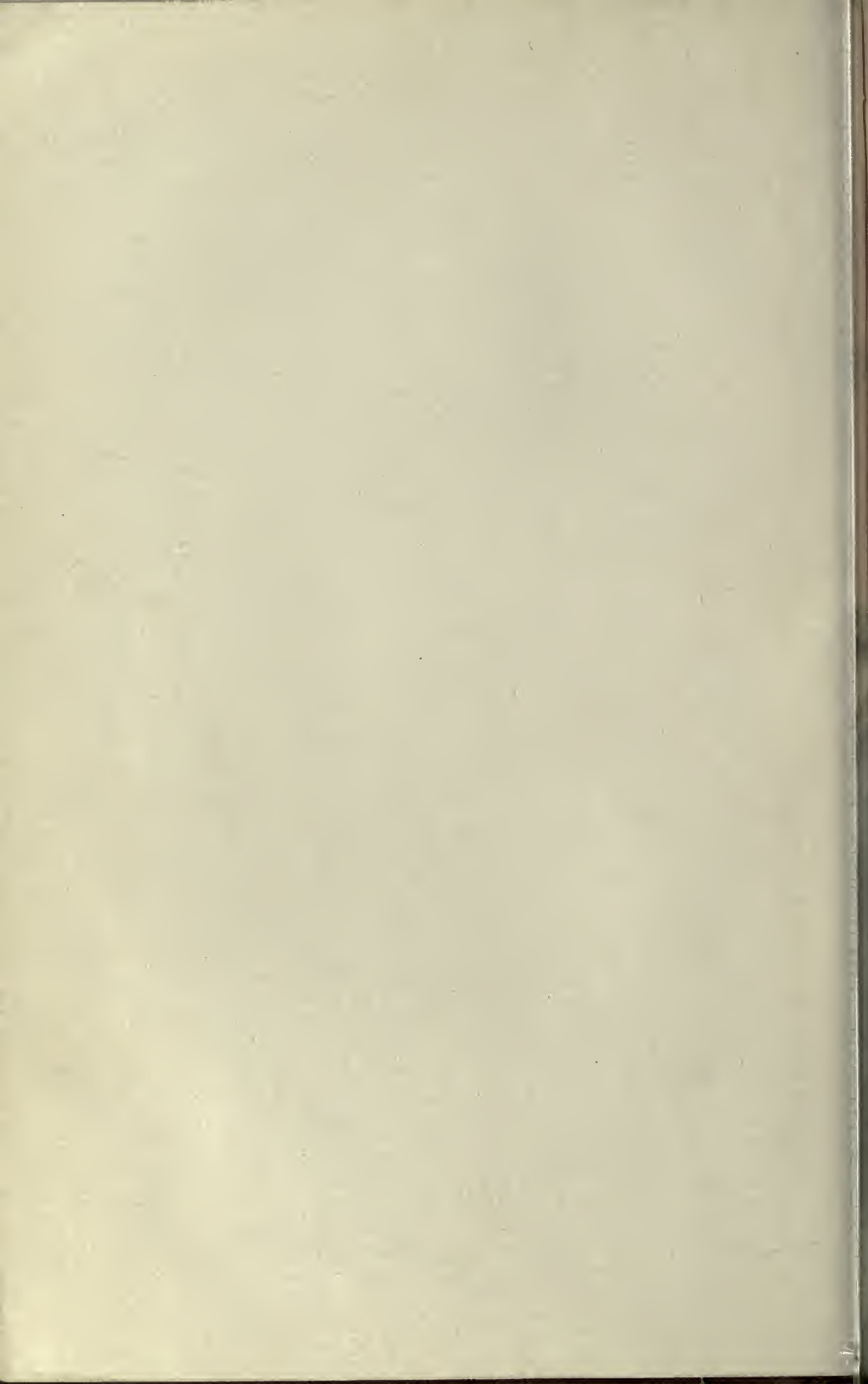
Exhibit, publications, statistics: School of Household Industries, Manila. Bureau of Education, Manila.

GROUP 17

Publications, photographs: Bureau of Education, Manila.

GROUP 28

Charts, photographs, statistics, publications: Bureau of Education, Manila.



LIBERAL ARTS

Official Catalogue of Exhibitors

PANAMA - PACIFIC
INTERNATIONAL EXPOSITION
SAN FRANCISCO 1915



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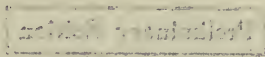
To Whom It May Concern:-

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.

G. A. Wahlgreen
President.



Walter H. Hays
Secretary.



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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915.

Official Catalogue of
Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHARLES C. MOORE
President

Director-in-Chief

FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department D

LIBERAL ARTS

THEODORE HARDEE, Chief

Preliminary Edition

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San Francisco, 1915

PREFACE

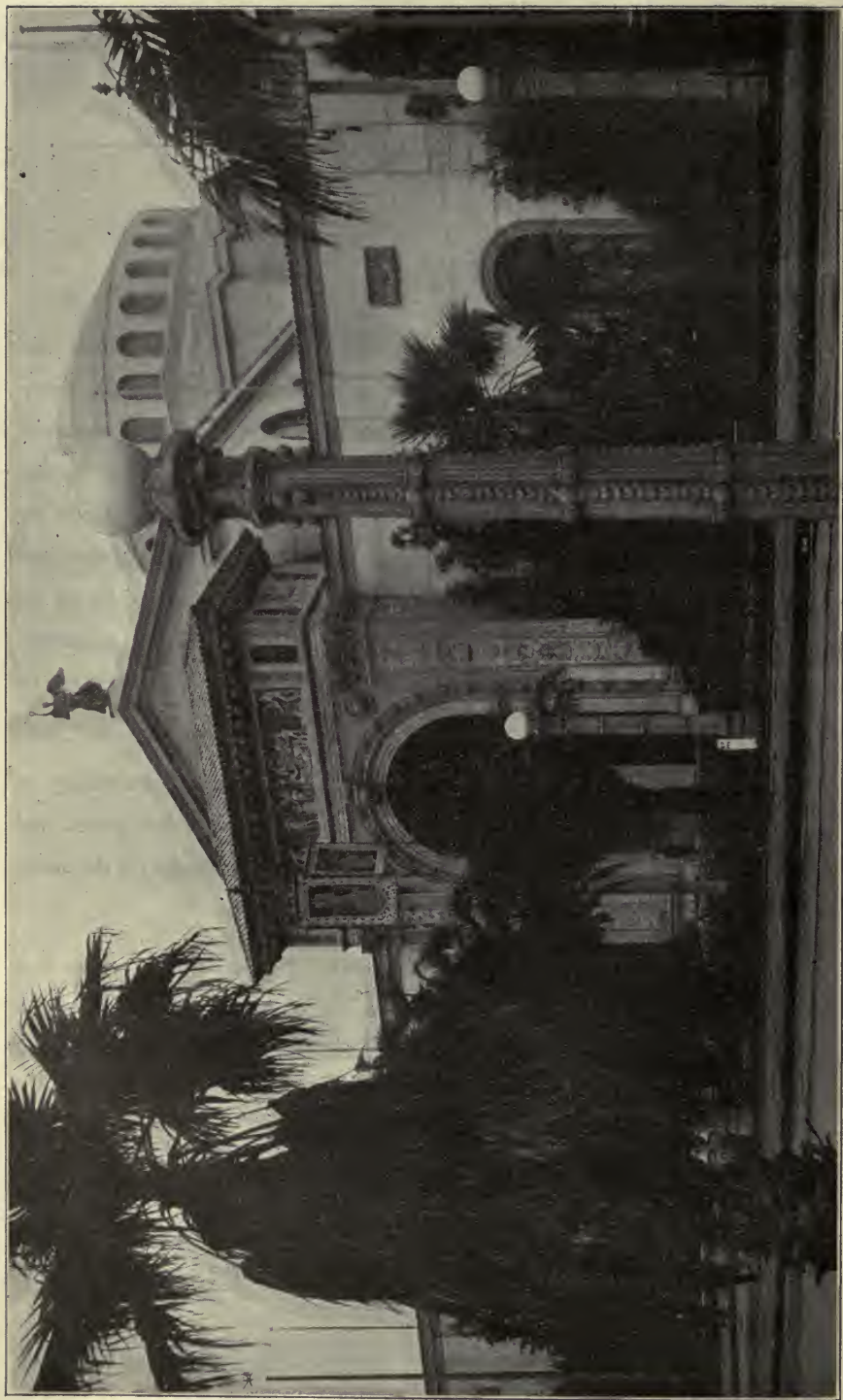
By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF LIBERAL ARTS

LIBERAL ARTS

OFFICIAL CATALOGUE

Department D

TYPOGRAPHY

BOOKS AND PUBLICATIONS

MAPS AND APPARATUS FOR GEOGRAPHY

MANUFACTURE OF PAPER

PHOTOGRAPHY

INSTRUMENTS OF PRECISION

PHILOSOPHICAL APPARATUS

COINS AND MEDALS

MEDICINE AND SURGERY

CHEMICAL AND PHARMACAL ARTS

MUSICAL INSTRUMENTS

THEATRICAL EQUIPMENT

ELECTRICAL METHODS COMMUNICATION

MODELS FOR PUBLIC WORKS

ARCHITECTURE

ARCHITECTURAL ENGINEERING

INTRODUCTION

Installation of Exhibits

in the

Department of Liberal Arts

By Theodore Hardee, Chief of Department.

The Palace of Liberal Arts is approximately 585 feet long by 470 feet wide, with walls 55 feet high, and covers nearly six acres of ground. The main front of the building faces the South Gardens and the westerly end fronts on the "Court of Palms" and the "Court of the Four Seasons"; the northerly wall is divided from the Palace of Agriculture by an oblong garden connecting the "Court of the Four Seasons" with the grand central "Court of the Universe," which, with its wide approach from the lofty "Tower of Jewels," opposite the main entrance to the Exposition grounds, forms the northeasterly and easterly boundaries of the Palace of Liberal Arts. The dome in center of the Palace is 160 feet high and the tower over the southwest corner rises to a height of 195 feet. Wide entrances at convenient intervals afford ready access to the building and make pleasing and imposing effects.

The aisles of the Palace are designated as avenues (by letters) running east and west, and as streets (by numbers) from north to south. All exhibits may thus be readily located by reference to the Official Catalog for this Department.

The general scheme for installation of exhibits in the Palace of Liberal Arts provides for location of commercial and scientific exhibits from the United States in "industrial" groups corresponding to the Official Classification for this Department. The Foreign exhibits are displayed in groups according to their respective nationalities. The Domestic Section occupies the entire southern half and the upper portion of the northeastern quarter of the Palace. The Foreign Groups are located in the northeastern quarter. The whole northwest quarter is devoted to the United States Government exhibits.

Owing to limitation of space in the Palace of Liberal Arts, the exhibits of Printing Presses, their processes, and kindred equipment, Road Rollers and similar heavy products of the Liberal Arts classification are installed in the northeast

corner of the Palace of Machinery, where a "Liberal Arts Section" is established for this purpose. While these exhibits are not displayed in the Palace of Liberal Arts, they are listed in the Official Catalog as exhibits of Liberal Arts and are subject to review as such by the International Jury on Awards for the Department of Liberal Arts.

The three groups composing the Graphic Arts, consisting of typography, books and publications and maps, occupy three blocks just south of Avenue "C" in the southwestern corner and one block in the northeastern quarter of the Liberal Arts Palace. Adjoining the Graphic Arts are the Medical and Surgical exhibits, and next come the Musical Instruments. Photography covers the two blocks along the southern wall directly opposite.

On the eastern side of Fifth Street, below Avenue C, the Instruments of Precision and Electrical Methods of Communication exhibits occupy the first three blocks and opposite, along the south wall, is the Engineering group. The Chemical and Pharmacal group follows in the next three blocks. Theatrical Equipment is shown along the southeast wall.

Adjoining the main east entrance to Avenue C is a small block containing an important "working exhibit" which forms the central Fire Alarm and Police Signal station for the entire Exposition.

The Domestic Architectural displays are in the northeastern part of the Foreign Section.

As a matter of accommodation, and for other important reasons, many exhibits classified as Liberal Arts may be found installed in other exhibit palaces, the Exposition Hospital, and elsewhere on the Exposition grounds. A number are in use by the Exposition management, as "working exhibits," throughout its administrative offices. The immense Pipe Organ in Festival Hall is a "working exhibit" of the Musical Instrument group. The Garbage and Refuse Disposal Plant at the extreme western end of the Exposition grounds, and the great "Panama Canal" concession on the "Zone," are both "working exhibits" in the Civil and Military Engineering group of this Department.

In the extreme southeast corner of the building are located the public service booths for Telephoning, Telegraphing and Typewriting.

Under the dome in the center of the palace is a great Telescope, with a 20-inch lens and forty feet long, emblematic of the Applied Sciences which the Department of Liberal Arts represents.

HOW TO LOCATE AN EXHIBIT

The Palace of Liberal Arts is laid out in blocks, which are consecutively numbered from 1 to 37, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Tenth), running north to south, and as avenues (A to D), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Liberal Arts, unless otherwise indicated after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

INDEX

United States
 France
 Japan
 Great Britain

Netherlands
 New Zealand
 Portugal
 Sweden

DEPARTMENT OF LIBERAL ARTS

Official Classification
of Exhibits

GROUP 29

TYPOGRAPHY—VARIOUS PRINTING PROCESSES

(Equipment, Processes and Products.)

- Class 95. Machinery, presses and other apparatus used in typography, lithography, copper-plate printing, autography, engraving on stone, copper, zinc, aluminum, etc.
- Class 96. Machinery used for photo-mechanical printing.
- Class 97. Equipment, apparatus and products of type foundries, and other auxiliary and miscellaneous printing office appliances and labor-saving devices of stereotyping, electrotyping, electrolytic appliances and processes; electro-thermic appliances and processes.
- Class 98. Machines for setting and distributing type, casting type, etc.
- Class 99. Special equipment for printing bank notes, postage stamps, bonds, etc.
- Class 100. Typewriting machines and devices for duplication of copy, mimeograph, neostyle, addressing machines, dictating machines, etc.
- Class 101. Specimens in black and color typography, lithography, copper-plate printing and other methods of printing.
- Class 102. Specimens of engravings and drawings obtained, reproduced, enlarged or reduced by photo-mechanical processes.

GROUP 30

BOOKS AND PUBLICATIONS—BOOK BINDING

- Class 103. Newspapers, reviews and other periodicals and publications; newspaper and magazine offices or plants shown by models or photographs; means and methods of advertising, news gathering, etc.; methods and processes of publication. (Technical and trade publications may be displayed in the Departments with which they are allied.)
- Class 104. Collections of books, forming special libraries.
- Class 105. New books and new editions of old books.
- Class 106. Drawings for book, newspaper and magazine illustration, atlases, albums.
- Class 107. Musical publications. } May be displayed in Group 37.
- Class 108. Musical scores. }
- Class 109. Equipment and processes of making stitched books and of book binding.
- Class 110. Specimens of binding, stamping, embossing, gilding, etc.
- Class 111. Artistic book binding.

GROUP 31

MAPS AND APPARATUS FOR GEOGRAPHY, COSMOGRAPHY, TOPOGRAPHY

- Class 112. Maps, charts and atlases; geographical, topographical, geological, hydrographical astronomical, etc.
- Class 113. Topographic models in relief.
- Class 114. Terrestrial and celestial globes; statistical works and tables.
- Class 115. Statistical tables and nautical almanacs for the use of astronomers, surveyors and seamen.

GROUP 32

MANUFACTURE OF PAPER

(Raw Materials, Equipment, Processes and Products.)

- Class 116. Collections of raw materials used in the manufacture of paper and card-board.
- Class 117. Equipment and processes used in making pulp from rags, straw, wood, etc.
- Class 118. Appliances and processes used in the manufacture of paper by hand.
- Class 119. Equipment and processes used in the manufacture of paper by machinery. Machines for producing endless paper. Apparatus for cutting, glazing, calendering, polishing.
- Class 120. Apparatus and processes used in the manufacture of special papers and of card-board.
- Class 121. Paper mill products, including papers of common and special grades not made up; paper for newspapers, books, maps, bank notes, drawings; photographic and art papers; paper for stationery; packing, wrapping and blotting paper; filter and laboratory paper; building and stock for wall paper; mill board, and card-board; papier maché, compressed paper, etc.

GROUP 33

PHOTOGRAPHY

(Equipment, Processes, and Products.)

NOTE: Photographs relating to any exhibit may be shown in connection therewith in any exhibit palace.

- Class 122. Materials, instruments and apparatus of photography, equipment of photographic studios, stereopticons, mutographs, kinetoscopes, moving pictures, etc.
- Class 123. Negative and positive photography on glass, paper, wood, cloth, films, enamel, etc. Photogravure in intaglio and in relief; photocollography, photolithography. Stereoscopic prints, Enlarged and micrographic photographs. Color photography. Direct, indirect and photocollography. Scientific and other applications of photography.
- Class 124. Pictorial photography.

GROUP 34

INSTRUMENTS OF PRECISION, PHILOSOPHICAL APPARATUS, ETC.,

COINS AND MEDALS

(Equipment, Processes and Products.)

- Class 125. Laboratory apparatus for physical investigations; mathematical instruments; instruments for practical geometry; instruments for refined physical measurement; sensitive balances, high grade thermometers, indicators, integrators, chronographs, etc. Lecture room apparatus.
- Class 126. Instruments for and methods of land surveying, including plane, topographic and geodetic surveying. Surveyors' compasses, leveling instruments, transits, geographic instruments, pedometers, heliotropes, etc.
- Class 127. Astronomical instruments and methods; telescopes and fittings, astronomical photographic apparatus and photographs; reflectors, helioscopes, astronomical clocks.
- Class 128. Navigation instruments and equipment; including sextants, mariners' compasses, alidades, patent logs, sounding machines, chronometers, etc. Meteorological instruments, thermometers, barometers, wind current meters, etc.
- Class 129. Electrical instruments and apparatus for scientific investigations or research work; electrical furnaces for laboratory use; thermal batteries; electrical standards.
- Class 130. Photometry: apparatus for determining the intensity, distribution and illuminating power of light. Standards.
- Class 131. Transferred to Class 542.
- Class 132. Optical instruments for general use; telescopes, binoculars, opera, field and marine glasses, magnifying glasses. Lenses for testing vision; eye glasses and spectacles.
- Class 133. Calculating machines; cash registers; scales, weights and measures of various countries.
- Class 134. Equipment for the manufacture of coins and medals. Appliances for weighing the metal, testing the standard of alloys, melting and casting, rolling, stamping out, milling, washing, verification of weight of coins, counting, striking, and checking them before delivery; equipment for the preparation of stamps and dies, coins and medals; treatises upon coins, economical, statistical, etc.

GROUP 35

MEDICINE AND SURGERY

- Class 135. Appliances, instruments and apparatus for work in anatomy, histology and bacteriology; anatomical models; normal and pathological, histological and bacteriological preparations.
- Class 136. Apparatus for sterilizing instruments and wound-dressing appliances, and for other purposes of sterilization.
- Class 137. Instruments for general and special medical research.
- Class 138. Instruments and apparatus for general, special and local surgery.
- Class 139. Electricity as applied in therapeutics, surgery and dentistry: X-ray apparatus; electric sterilizers, ozonizers.
- Class 140. Appliances for dressing wounds.
- Class 141. Apparatus for plastic and mechanical prosthesis; orthopedic apparatus; apparatus for hernia; apparatus for medical gymnastics; material, instruments and apparatus for special therapeutics.
- Class 142. Instruments and apparatus used in the practice of dentistry; dental surgery, bridge and plate work, etc.
- Class 143. Appliances for the use of the infirm, of invalids, and of lunatics; artificial limbs, artificial eyes.
- Class 144. Chests and cases of instruments and medicines for the use of surgeons of the army and navy; appliances for rendering aid to the wounded on the field of battle; appliances for rendering aid in case of accident; ambulance service, etc.
- Class 145. Appliances for rendering aid to persons apparently drowned or asphyxiated.
- Class 146. Instruments and appliances for veterinary surgery.
- Class 147. Equipment and utensils used by druggists and pharmacists.

GROUP 36

CHEMICAL AND PHARMACAL ARTS

(Equipment, Processes and Products.)

- Class 148. Laboratory apparatus and utensils; lamps, blow-pipes; presses, drying ovens, filters; furnaces, ovens, etc., used in chemical laboratory work.
- Class 149. Apparatus and instruments for making industrial and commercial analyses.
- Class 150. Equipment and processes used in the chemical treatment of animal substances, with their products; superphosphates, soaps, candles, glycerine.
- Class 151. Apparatus and processes for the production of electrolysis of hydrogen peroxide, chlorine, hypochlorites, chlorates, soda, bleaching materials, and various other chemicals. Also electro-thermal apparatus and processes for chemical manufacture not otherwise specified.
- Class 152. Equipment and processes used in the manufacture of vegetable essences.
- Class 153. Transferred to Class 776.
- Class 154. By-products for pharmaceutical use obtained from the treatment of mineral substances such as petroleum and coal tar derivatives, etc.
- Class 155. Equipment and processes used in treating waste matter from factories (by chemical or electrical methods) with a view to permitting their return to water courses or to the atmosphere.
- Class 156. Equipment for charcoal work and the production of various derivatives; methylated spirit, acetone, acetic acid, tar, wood alcohol, pyroigneous acid. Products of charcoal burning.
- Class 157. Apparatus and processes for the compression and liquefaction of gas. Liquefied gases.
- Class 158. Apparatus and processes for the manufacture of artificial textiles.
- Class 159. Appliances and processes used in the manufacture of pharmaceutical products. Raw materials of pharmacy; sera and other biological products, as bacterines, vaccines, tubercullines, etc.; drugs of mineral, animal and vegetable origin, crude, powdered and compound; special appliances for collecting, cleaning, peeling, slicing, cutting and garbelling crude drugs.
- Class 160. Disinfectants; standardization of disinfectants; manufacture of disinfectants; drug preservation, drug sterilization, ampuls, etc.
- Class 161. Acids, alkalies, salts and compounds of every kind. Chemical elements derived from their compounds and chemical compounds not otherwise classified.
- Class 162. Refined sulphur and derivatives from sulphur.
- Class 163. Equipment and processes used, and products obtained in the manufacture of phosphorus and matches.
- Class 164. Drug adulteration; methods of adulteration; methods of detecting adulteration.
- Class 165. Various products of chemical industries; tanning materials, waxes, essential oils, glue and gelatine; perfumes, cosmetics and extracts; various glazes, printing ink, blacking.
- Class 166. (Transferred to Manufactures and Agriculture.)
- Class 167. (Transferred to Mines and Metallurgy.)
- Class 168. Alcohols modified for industrial purposes.
- Class 169. Equipment and appliances for producing calcium carbide, and for the storage of acetylene gas.
- Class 170. Insecticides; fungicides; parasiticides and methods of manufacture and use.
- Class 171. Pyrotechnics, bombs, signals, etc.

GROUP 37

MUSICAL INSTRUMENTS

(Materials, Processes and Products.)

- Class 172. Materials and processes for manufacturing musical instruments.
- Class 173. Wind instruments of metal or wood, having openings with or without keys, simple mouth pieces, pipes or reeds, with or without reservoir of air.
- Class 174. Metal wind instruments, plain or with lengthening pieces, slides, pistons, keys or reeds.
- Class 175. Wind instruments with key-board; organs, accordions, etc.
- Class 176. Stringed instruments without key-board, played with the fingers or with a bow.
- Class 177. Pianos, player pianos, and other stringed instruments with key-board.
- Class 178. Instruments played by percussion or friction; drums and cymbals.
- Class 179. Automatic instruments: barrel organs, bird organs, musical boxes, piano and organ players, bandonians, orchestrions, etc.
- Class 180. Phonographs, talking machines, graphophones and similar devices.
- Class 181. Separate parts of musical instruments and orchestral appliances; strings for musical instruments.

GROUP 38

THEATRICAL APPLIANCES AND EQUIPMENT

- Class 182. Interior equipment and special furniture for theaters.
- Class 183. Arrangements for preventing and extinguishing fires. (See also Class 463.)
- Class 184. Scenery; curtains, metallic curtains, gauzes, nets; colors, brushes, palettes, cordage; special iron work; lighting; electrical apparatus, candelabra, colored screens, apparatus for imitating flame, smoke, lightning, fireworks; projections; spectres; phosphorescence.
- Class 185. Machinery; windlasses, drums, chests, traveling platforms, slides, trolleys, traps, counterweights, flies.
- Class 186. Costumes; special materials, printing on different materials, armor; jewelry; foot-gear; dancing shoes; wigs, beards, make-up; paints for making up.
- Class 187. Properties for imitation of various phenomena, such as thunder, hail, wind, snow, gun-firing; card-board work of all kinds; furniture made in perspective.

GROUP 39

ELECTRICAL METHODS OF COMMUNICATION

- Class 188. Telephone, telegraph and wireless instruments, dictographs, devices for the deaf, etc.; their apparatus and specific equipment.
- Class 189. Fire alarm systems and equipment; police signals and patrol box systems and equipment; electric annunciators and other electric signal apparatus not classified.

GROUP 40

CIVIL AND MILITARY ENGINEERING

- Class 190. (Transferred to Mines and Metallurgy.)
- Class 191. Methods of testing structural materials, and apparatus used therefor.
- Class 192. (Transferred to Class 215.)
- Class 193. Methods used in earth work, such as the construction of canals, railroads, levees, embankments, etc.
- Class 194. Equipment and methods for the construction and maintenance of roads, streets, promenades and highways.
- Class 195. Equipment for and methods used for preparing foundations; piles, pile-drivers, screw-piles, pneumatic apparatus, caissons, diving apparatus, wire trams, etc.
- Class 196. Passenger elevators, pneumatic tubes, etc.
- Class 197. Military defenses and accessories: engineering material employed in the operation of an army.
- Class 198. (Transferred to Classes 197 and 532.)
- Class 199. Equipment for and methods used in storing and distributing water. (See Class 759 for special methods in mining.)
- Class 200. Equipment for and methods of city sanitation.

GROUP 41

MODELS, PLANS AND DESIGNS FOR PUBLIC WORKS

- Class 201. Roads and other public highways. Construction and maintenance of streets in cities.
- Class 202. Inland navigation; improvement of rivers, construction of canals, dams, locks, lifts, ship railways, reservoirs, spillways and feeders; dredges, pile sinkers, pile drivers, current deflectors, scraping and water-jet devices for removing sand-bars, etc.; pumping stations, mechanical towing and warping; equipment used for the development of river ports.
- Class 203. Sea ports (general arrangements); piers, docks, jetties, basins; equipment for development (not including shipping).
- Class 204. Bridges and viaducts; railway, road and foot bridges.
- Class 205. Maritime canals.
- Class 206. Protection against flooding by rivers or by sea; levees, dikes and sea walls.
- Class 207. Railways as regards plan and profile of the line, and engineering works, subways, elevated lines, tunnels.
- Class 208. Statistics, maps and publications relative to public works; transactions and other features pertaining to engineering societies.

GROUP 42

ARCHITECTURE

- Class 209. Drawings, models and photographs of completed buildings.
- Class 210. Drawings, models and photographs of artistic architectural details.
- Class 211. Designs for mosaics and for mosaic and leaded glass.

GROUP 43

ARCHITECTURAL ENGINEERING

- Class 212. Models and working plans of public and commercial buildings, large and small dwelling houses, flats, apartment houses, and other architectural structures.
- Class 213. Models, detail drawings and specifications for foundations, walls, partitions, floors, roofs and stairways, wood and metal framing, etc.
- Class 214. Designs and models of special contrivances for safety, comfort, and convenience in the operation of moving stairways, doors, windows, house signals, fire escapes, ventilators, etc.
- Class 215. Working plans for the trades, mason, carpenter, etc., connected with building construction; designs and models of bonds, arches, coping, vaulting, etc.; plastering and construction of partitions.

GROUP 29.

TYPOGRAPHY—VARIOUS PRINTING PROCESSES

Acorn Brass Mfg. Co., The, Chicago, Ill. Thexton Envelope Sealers. 1st St. bet. Avs. C & D. Represented by H. S. Crocker Co., 565 Market St., San Francisco.

Addressograph Co., The, Chicago, Ill. Addressing Machines. 1st St., bet. Avs. C & D. Represented by H. S. Crocker Co., 565 Market St., San Francisco.

American Automatic Press Co., New York, N. Y., San Francisco, Cal. Mch. Pal., Av. A, cor. 3d St. New Hoag Auto. Ptg. Press.

American Multigraph Sales Co., The, Cleveland, O. Multigraph, etc. Work'g exh. in Lv. St. Pal.

Beck Duplicator Co., The, New York, N. Y. Duplicating Copy Machine. 1st St., bet. Avs. C & D. Represented by H. S. Crocker Co., 565 Market St., San Francisco.

Blair-Murdock Company, San Francisco, Cal. Printing plant. Mch. Pal., Av. A, cor. 4th St. Printers and Publishers; Edition Printing and Binding; Illustrated Catalogs and Booklets; Advertising Literature prepared; Printers of the Panama-Pacific International Exposition Official Guide Book.

Brown Barotype Co., The, Chicago, Ill. Composing Machines. Mch. Pal., 5th St., bet. Avs. A & B

Columbia Graphophone Co., New York, N. Y. Dictaphones. Av. D, 4th and 5th Sts.

Columbia Graphophone Co., New York, N. Y. Dictaphones. Wkg. exh., Adm. offices. of. Expe.

Corona Typewriter Co., Groton, N. Y. Folding Typewriters. 1st St.; bet. Avs. C & D.

Crocker Co., H. S., San Francisco, Cal. Collective exhibit. 1st St., bet. Avs. C & D.

Denny, Hilborn & Rosenbach, Philadelphia, Pa. Embossing Inks. Mch. Pal., 5th St., cor. Av. A

Dick Co., The A. B., Chicago, Ill. Mimeographs. 1st St., bet. Avs. C & D. Edison-Dick Mimeographs and Supplies. Represented by H. S. Crocker Co., 565 Market St., San Francisco.

Egry Register Co., The, Dayton, O. Manifold Registers. 2d St., bet. Avs. C & D.

Funk & Wagnalls Company, New York, N. Y. Lithographic Work. 2d St., bet. Avs. C & D. Interesting exhibit showing the production of lithographic work step by step.

Graphic Arts Co., The, Philadelphia, Pa. Etching Machine. Mch. Pal., 5th St., cor. Av. A

Hearst, W. B. New York, N. Y. Hearst publications. Mch. Pal., 4th St., Avs. A and B.

Hoe & Co., E., New York, N. Y. Printing Presses. Mch. Pal. In Hearst exhibit.

Lanston Monotype Mach. Co., Phil., Pa. Type-setting machines. Mch. Pal., 5th St., cor. Av. B.

Levy, Jos. B., Philadelphia, Pa. Cameras. Mch. Pal., 5th St., cor. Av. A. Photo-Engravers, Process Cameras and Stands.

Levy, Max, Philadelphia, Pa. Engraved Gratings. Mch. Pal., 5th St., cor. Av. A.

Lisency Manufacturing Co., Fresno, Cal. Multicolor Press. Mch. Pal., 5th St. and Av. B.

Mayer & Company, Robert, New York, N. Y. Mch. Pal., 5th St., cor. Av. A. Lithographing Inks; Bronzing Machines; Parks Lithographic Hand Presses; Lithographic Machinery. Geo. Russell Reed Co., San Francisco, Distributors.

Mergenthaler Linotype Co., New York, N. Y. Linotype Machines. Mch. Pal., 5th St., cor. Av. A

Muller, E. C., New York, N. Y. Engraving Tools, etc. Mch. Pal., 5th St., cor. Av. A.

Peerless Check Protecting Co., Rochester, N. Y. Peerless Check Writers. 1st St., bet. Avs. C & D

Reed Co., Geo. Russell, San Francisco, Cal. Collective exh. Mch. Pal., 5th St., cor. Av. A.

Reed Co., Geo. Russell, San Francisco, Cal. Printers' Inks, etc. Mch. Pal., 5th St., cor. Av. A

Remington Typewriter Company, New York, N. Y. Remington Typewriters. Working exhibits in all Administrative offices of the Exposition.

Remington Typewriter Company, New York, N. Y. Typewriters, Av. C, 1st and 2d Sts. Remington, Smith-Premier and Monarch Typewriters. Typewriters, Typewriter-Adding Machines and Supplies, manufactured and sold by Remington Typewriter Company, Inc., comprising Remington, Smith-Premier and Monarch Typewriting Machines and Remington Wahl Typewriter-Adding Machines.

Royle & Sons, John, Paterson, N. J. Routing Machines, etc. Mch. Pal., 5th St., cor. Av. A.

Schmidt Lithograph Co., San Francisco, Cal. Lithographic work. 1st St., bet. Avs. C & D.

Schmiedewend & Co., Paul, Chicago, Ill. Printers' Equipment. Mch. Pal., 5th St., cor. Av. A.

Scott-Hiner Co., The, San Francisco, Cal. Artists and Designers. 2d St., bet. Avs. C & D.

Sheip Mfg. Co., Henry H., Philadelphia, Pa. Cherry Wood Blocks. Mch. Pal., 5th St., cor. Av. A

Sibley, E. L., Bennington, Vt. Challenge Eyelet Presses. 1st St., bet. Avs. C & D. Represented by H. S. Crocker Co., 565 Market St., San Francisco.

Sweigard Ideal Co., Chicago, Ill. Contact Frames. Mch. Pal., 5th St., cor. Av. A.

Taylor-Hobson Company, New York, N. Y. Photo-engraving Lenses. Mch. Pal., 5th St., cor. Av. A, Cooke Process Lenses.

GROUP 30.

BOOKS AND PUBLICATIONS—BOOK-BINDING.

American Roll Gold Leaf Co., Providence, R. I. Mch. Pal., 4th St., Avs. B & C.

Anderson & Son, C. F., Chicago, Ill. Folding Machines. Mch. Pal., 4th St., Avs. B & C.

Annals of Surgery, Philadelphia, Pa. Medical Publications. Work'g exh. in Expo. Hospital.

Appleton & Co., D., New York, N. Y. Medical Publications. Work'g exh. in Expo. Hospital.

Brown Folding Machine Co., Erie, Pa. Mch. Pal., 4th St., Avs. B & C.

Burton's Son, A. G., Chicago, Ill. Numbering Machines, etc. Mch. Pal., 4th St., Avs. B & C.

Challenge Machine Co., Grand Haven, Mich. Paper Cutters. Mch. Pal., 4th St., Avs. B & C.

Christian Science Publishing Society, The, Boston, U. S. A. Publications. Ed. Pal., cor. 2d St. and Av. D. Exhibiting the works of Mary Baker Eddy. Publishers of "The Christian Science Journal," "The Christian Science Sentinel," "Der Herold der Christian Science," "The Christian Science Monitor," and other publications pertaining to Christian Science.

Chronicle Publishing Company, San Francisco. Newspaper, Av. C, cor. 2nd Street. Drawings, Zinc Etchings, Stereotype Metal, and materials used in producing a newspaper.

Cleveland Folding Machine Co., Cleveland, O. Folding Machines. Mch. Pal., 4th St., Avs. B & C.

Collier & Son, P. F., New York, N. Y. Publications. Wkg. exh. in Lib. Arts Dept. Offices.

Covina Pub. Co., Covina, Cal. Publications. Working exhibit in Lib. Arts Dept. offices.

Elder & Co., Paul, San Francisco, Cal. Publications and Bindings. Av. D, cor. 2d St. Publications by Paul Elder & Co.; Books on California; Fine and Rare Books; Leaflets, etc.

Encyclopedia Britannica, The, New York, N. Y. Encyclopedias, etc. Ave D, cor. 1st St.

Funk & Wagnalls Co., New York, N. Y. Med. ref. library. Wkg. exh. in Expo. Hospital.

Funk & Wagnalls Co., New York, N. Y. The Literary Digest, 2nd St. bet. Avs. C & D. Publications, Periodicals; new books and new editions of old books; drawings; New Standard Dictionary; Standard Dictionary Abridgments; Works of Reference.

Gane Bros. & Co., Chicago, Ill. Embossing Machines, Mch. Pal., 4th St., Avs. B & C.

Grolier Society, The, New York, N. Y. Encyclopedia. 1st St. bet. Avs. C & D.

Hall Co., The Norman F., San Francisco, Cal. Coll. exhibit. Mch. Pal., 4th St., Avs. B & C.

Hearst, W. R., New York, N. Y. Hearst Publications, Mch. Pal., 4th St., Avs. A & B.

Hickok Mfg. Co., The W. O., Harrisburg, Pa. Mch. Pal., 4th St., Avs. B & C. Ruling Machine and Feeder; Gilding Press; Finishing Stand, Ruling Pens & Paper Ruling Machine.

Hill Publishing Co., New York. Tech. Books. Mch. Pal., 1st St., bet. Avs. C & D.

Horton Mfg. Co., Minneapolis, Minn. Pulleys. Mch. Pal., 4th St., bet. Avs. B & C.

Howell, John, San Francisco, Cal. Publications and Bindings. 2d St. bet. Avs. C & D. 14th & 15th Century manuscripts on parchment illuminated; Importer and Publisher, Old and Rare Books, Manuscripts, Autograph Letters.

Jacques & Son, John, Worcester, Mass. Table Shears. Mch. Pal., 4th St., Avs. B & C.

Lang Mfg. Co., E. G., New York, N. Y. Index Tabs. Mch. Pal., 4th St., bet. Avs. B & C.

Lippincott, J. B., Philadelphia, Pa. Med. Ref. Library, Wkg. exhibit in Expo. Hospital.

Marriott, F., San Francisco, Cal. Publications. 6th St., bet. Avs. C and D.

Master Mind Pub. Co., Los Angeles, Cal. Publications. 2d St., bet. Avs. C & D.

McGraw Publishing Co., New York. Tech. Books. Mch. Pal., 2nd St. & Av. C.

Merriam Co., G. & C., Springfield, Mass. Webster Dictionaries & Pubs. 2d, bet. Avs. C & D.

Methodist Book Concern, The, Cincinnati, O. Books, Periodicals, Charts, etc. Ave. C, cor. 1st St. The Abingdon Press, Founded 1789, Cincinnati; New Books, New Editions of Old Books; Sunday School Periodicals. Pacific Coast Headquarters—Our own building, 3-5-7 City Hall Av., San Francisco, Cal.

Munder, Norman T. A. & Co., Baltimore, Md. Printing, Advertising Literature, Framed Pictures. 2nd St., bet. Avs. C & D.

Muller, Chas. A., New York, N. Y. Glueing Machine, Mch. Pal., 4th St., Avs. B & C.

Munder Co., Norman T. A., Baltimore, Md. Books & Fmd Pictures. 2d St., Avs. C & D.

Pacific Press Publishing Association, Mountain View, Cal. Publications. Mch. Pal., 5th St., cor. Av. B. Bound books in various languages, complete and process of manufacture. Seventh-day Adventist Publications, Books, Tracts and Periodicals in various languages. Main Offices, Mountain View, Cal. Branches, Kansas City, Mo.; Portland, Ore.; College View, Neb.; Calgary, Alta., Can.; Review & Herald Pub. Assn. Main Office, Takoma Park, Washington, D. C. Branches, 32 Union Square, New York City; South Bend, Ind.; Southern Pub. Assn. Main Office, Nashville, Tenn. Branches, Atlanta, Ga.; Fort Worth, Texas.

Plimpton Transfer Truck, Norwood, Mass. Tfr. Trucks. Mch. Pal., 4th St., Avs. B & C.

Rebman Co., New York, N. Y. Medical Publications. Wkg. Exh. in Expo. Hospital.

Reed Co., Geo. Russell, San Francisco, Cal. Glue & Cement. Mch. Pal., 5th, cor. Av. A.

Roberts & Co., H. L., New York, N. Y. Silk Sticking Mehns., Mch. Pal., 4th, Avs. B & C.

Rosback Co., The F. P., Benton Harbor, Mich. Book Mkg. Mch. Mch. Pal., 4th, Avs. B & C.

Saunders Co., W. B., Philadelphia, Pa. Medical Books. Wkg. Exh. in Expo. Hospital.

Scott-Hiner Co., The, San Francisco, Cal. Artists & Designers. 2d St., bet. Avs. C & D.

Seybold Machine Co., Dayton, O. Book-making Mch. Mch. Pal., 4th St., Avs. B & C.

Smyth Co., Jos. E., Chicago, Ill. National Sewing Mach. Mch. Pal., 4th St., Avs. B & C.

Standard Mch. Co., The, Mystic, Conn. Book Making Mch. Mch. Pal., 4th St., Avs. B & C.

Sunset Magazine, San Francisco, Cal. Publications. 2nd St., bet. Avs. C & D. The Pacific Monthly, reflecting the life of the Pacific Slope. Its Service Bureau gives impartial information.

Tatum Co., Samuel C., Cincinnati, O. Book Making Mch. Mch. Pal., 4th St., Avs. B & C.

Technical Publishing Co., S. F. Tech. Books. Mch. Pal., Main West Entrance.

Wood & Co., Wm., New York, N. Y. Medical Publications. Wkg. Exh. in Expo. Hospital.

GROUP 31.

MAPS AND APPARATUS FOR GEOGRAPHY, COSMOGRAPHY, TOPOGRAPHY.

Cahill World Map Co., San Francisco. New Map of World. 2nd St., bet. Avs. C & D.

GROUP 32.

MANUFACTURE OF PAPER.

Disston & Sons, Inc. Henry, Philadelphia, Pa. Paper cutters. Mfr. Pal., Av. C, cor. 6th St.

Paraffine Paint Company, The, San Francisco, Cal. Roofing Papers. Min. Pal., 7th St., cor. Av. C. Plastic Caulking Cement; Wall Board; Building and Roofing Papers.

GROUP 33.

PHOTOGRAPHY.

Anso Company, Binghamton, N. Y. Photo Supplies. Av. D, opp. 3rd St. Photographic Supplies and Apparatus.

Booth, Mary A., Springfield, Mass. Photomicrographs. Sprague-Hathaway booth.

Eastman Kodak Company, Rochester, N. Y. Photography. Av. D, cor. 5th St. Cameras; Kodaks; Color Photography; Photographic Films; Photographic Paper; Photographic Plates; Photographic Supplies; Photographic Enlargements.

- Hopkins, Kathryn, San Francisco, Cal. Photographs. Av. D, opp. 1st St.
- Power Co., Nicholas, New York, N. Y. Motion Picture Machines. Ed. Pal., Av. D, at So. Ent. No. 10.
- Power Co., Nicholas, New York, N. Y. Moving Pictures. The Mine, Min. Pal.
- Precision Machine Co., The, New York, N. Y. Ed. Pal., Av. A, cor. 5th St. Motion picture projector.
- Precision Machine Co., The, New York, N. Y. Motion Picture Machines. Ed. Pal., 5th St. & north wall of Palace & east end of Av. B.
- Robin, J. E., 317 East 34th St., New York. Cinematograph Engineering. Ed. Pal., 5th St. and North Wall of Palace.
- Simple Photo Products Co., New York, N. Y. Photographic and Cinematographic Apparatus and Materials. 1st St., bet. Avs. C & D.
- Sprague-Hathaway Co., W. Somerville, Mass. Portraiture. Av. D, bet. 1st and 2nd Sts.
- Vanoscope Co., Chicago, Ill. Motion Picture Projectors. Av. D, opp. 2nd St.
- Worden, Willard E., San Francisco, Cal. Av. D, bet. 3rd & 4th Sts. Photographs.
- Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. Mch. Pal., 2nd & 4th Sts. Motor Generator Sets and Control of moving picture machines. Displays of photographs of Westinghouse Plants and Apparatus of all kinds.

GROUP 34.

INSTRUMENTS OF PRECISION, PHILOSOPHICAL APPARATUS, ETC. COINS AND MEDALS.

(Equipment Processes and Products.)

- Bausch & Lomb Optical Co., Rochester, N. Y. Optical Goods. 5th St., cor. Av. D.
- Brashear Company, John A., Pittsburgh, Pa. Lenses; instruments. Av. O & 6th St.
- Bristol Co., The, Waterbury, Conn. Speed Recorders. Mch. Pal., 2nd St. & Av. D.
- Burroughs Adding Machine Co., Detroit, Mich. Adding Machines. Av. D & 6th St.
- Coin Machine Mfg. Co., Portland, Ore. Coin handling devices. 6th St., bet. Avs. C & D.
- Dalton Adding Machine Co., San Francisco, Cal. Calculating Machines. Av. D, cor. 7th St. Adding machines; Adding typewriters.
- DeZeng-Standard Company, Camden, N. J. 7th St.; bet. Avs. C & D. Makers of Optical Instruments. San Francisco Address, 146 Grant Street.
- Felt & Tarrant Mfg. Co., Chicago, Ill. Adding and Calculating Machines. Av. D, cor. 2nd St. Manufacturers of the Comptometer; adding and calculating machine.
- Felt & Tarrant Mfg. Co., Chicago, Ill. "Comptometer." Wkg. exh. in Aud. Office, Expo.
- Gurley, W. & L. E., Troy, New York. Measures. 7th St., bet. Avs. C & D. Branch Factory, Seattle, Wash.; Civil Engineers and Surveyors Instruments; Standard Weights and Measures; Guaranteed Accurate Thermometers.
- Industrial Instrument Co., The, Foxboro, Mass. Recd. Instr. Mch. Pal., 3d & Av. C2.
- Keuffel & Esser Co., Hoboken, N. J. Scientific Instruments, 5th St., bet. Avs. C & D.
- Lietz Co., The A., San Francisco, Cal. Naut. & Surv. insts. Av. D, cor. 6th St.
- Marchant Calculating Machine Co., Inc., Oakland, Cal. Av. D, cor. 7th St. San Francisco Office, 34 Powell St.
- National Cash Register Co., Dayton, O. National Cash Registers. Av. C, 5th & 6th Sts.
- Shore Instrument & Mfg. Co., New York, N. Y. Pyroscopes. Mch. Pal., 5th, bet. Avs. B & C.
- Thordarson Elec. Mfg. Co., Chicago, Ill. Lab. Apparatus. Mch. Pal., 1st & 2nd St. & Av. D.
- Toledo Scale Co., Toledo, Ohio. Scales. 5th St., bet. Avs. C & D. Weighing Machines; Automatic Springless; Computing; Heavy Capacity; Dormant; and Portable for factory use; Person Weighing Machines; Parcel Post; Laboratory Scales.
- United Autographic Register Co., Chicago, Ill. Autographic Registers. 7th St., bet. Avs. C & D. Autographic Registers and Roll Paper; Typewriter Attachments and supplies.
- Warner & Swasey Co., Cleveland, Ohio. Telescope under Great Dome. Lib. Arts Pal.
- Warner & Swasey Co., Cleveland, Ohio. Scientific instruments. Av. C, cor. 6th St.
- Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. Trns. Pal., under Dome. Harmonic Analyzer; Portable and Precision Instruments.

GROUP 35.

MEDICINE AND SURGERY.

- Aladdin Company, New York, N. Y. Therapeutic Appar. Mch. Pal., 1st St. & Av. D.
- American Sterilizer Co., Erie, Pa. Sterilizers, Disinfectors. Working Exhibit in Exposition Hospital. Combination of electric heated dressing water; utensil and instrument sterilizers. F. A. Hamilton, 1025 Hearst Building, San Francisco; Sun Drug Company, Los Angeles, Sales Agents.
- Aunger Artificial Limb Co., San Francisco. Artificial Limbs. 3rd St., bet. Avs. C & D.
- Bausch & Lomb Optical Co., Rochester, N. Y. Hospital Equip. Wkg. exh. in Expo. Hos.
- Bristol Co., The, Waterbury, Conn. Speed Pressure Recorders. Mch. Pal., 2d & Av. D.
- Campbell Electric Co., Lynn, Mass. X-Ray & high frequency appar. 3d, bet. Avs. C & D.
- Carnes Artificial Limb Co., Kansas City, Mo. Artificial Arms. 3rd St., bet. Avs. C & D.
- Chicago Artificial Limb Co., San Francisco. Artificial Limbs. 3rd St., bet. Avs. C & D.
- Columbus Dental Manufacturing Co., The, Columbus, Ohio. Interchangeable, artificial teeth for crown and bridge work. Av. D, cor. 3rd St. Steele's Interchangeable Facings; Steele's Interchangeable Posteriors; Bridge-Work Models; Steele's Rugapaks.
- Dentists Supply Company, New York, N. Y. Manufacturers. Av. D, cor. 3rd Street. Artificial teeth.
- DeZeng-Standard Company, Camden, N. J. 7th St., bet. Avs. C & D. Surgical Diagnostic Equipment; Electrically Lighted Eye, Ear, Nose and Throat Diagnostic Instruments. San Francisco Office, 146 Grant avenue.
- Draeger Oxygen Apparatus Co., The, Pittsburgh, Pa. Wkg. exh. in Expo. Hospital.
- Eastern Electric Co. of Cleveland, San Francisco, Cal. 3d St., bet. Avs. C and D.
- Gantner & Mattern Co., San Francisco. Abdominal Bands. V. I. Pal., 4th, cor. Av. E.
- Harvard Co., The, Canton, O. Dental Equipment. 3rd St., bet. Avs. C & D.
- Industrial Instrument Co., The, Foxboro, Mass. Blood Pressure Recorders. Mch. Pal., 3rd St. & Av. C2.

- Johnson & Johnson, New Brunswick, N. J. Surg. Dressings and Appliances. C, cor. 3rd.
- Marcon Company, The, Brooklyn, N. Y. Shoe Supplies. 3rd St., bet. Avs. C & D. Arch Supports; Orthopedic Supplies.
- Marks Co., A. A., New York, N. Y. Artificial Limbs. 3rd St., bet. Avs. C & D. Invalid Rolling Chairs; Crutches.
- Marland, W. J. Oakland, Cal. Collective Exhibit. Mch. Pal., 1st St. & Av. D.
- Meinecke & Co., New York, N. Y. Hospital Supplies. Working exh. in Expo. Hospital.
- Ohio Chemical & Mfg. Co., The, Cleveland, O. Working Exhibit in Expo. Hospital.
- Ohio Chemical & Mfg. Co., The, Cleveland, O. Anesthesia Equip. 10th St., bet. Avs. C&D.
- Salem Glass Works, Salem, N. J. Hospital Supplies. Wkg. exh. in Expo. Hospital.
- Scheidel-Western X-Ray Coil Company, Chicago, Illinois. X-Ray Apparatus; Working exhibit in Exposition Hospital. Apparatus for producing the X-Ray for radiography, fluoroscopy & therapy, with all the working parts, supplies and accessory apparatus.
- Schrader's Son, Inc., A., Philadelphia, Pa. Druggists Supplies. Av. C, cor. 3rd St.
- Shelton Electric Co., New York. Elec. Vibrators. Mch. Pal., 1st St. & Av. D.
- Stevens Inventions Co., Philadelphia, Pa. Health Inventions. 3rd St., bet. Avs. C & D. Breathing and Inhaling Outfits. Semi-Automatic Pumps, Sprays, Inhaling and other health outfits for physicians, office and prescription uses. Portable Internal Bath, two sizes.
- Taylor Instrument Cos., Rochester, New York. Working exh. in Expo. Hospital, "Tyecos Sphygomanometer."
- Thordarson Elec. Mfg. Co., Chicago, Ill. X-Ray Transformers. Mch. Pal., 1st & 2nd Sts. & Av. D.
- Troeger Mfg. Co., Geo. E., Chicago, Ill. Arch Supports. 10th St., bet. Avs. C & D.
- Victor Electric Co., Chicago, Ill. Hospital Equipment. A working exhibit in Exposition Hospital showing: Victor Bone Surgery Engine; Victor Combistat; Victor Giant Magnet; Victor Electric Centrifuge; Victor Vibrator; Headlamps, etc.; Physicians' No. 2 Portable Faradic Battery, Neiswanger's Magnifying Glass, Victor Electric Centrifuge Dome Protector; their extensive and complete line of X-Ray and Electro-Medical apparatus being on display at their San Francisco branch office, 150 Post Street, W. O. Eddy, B. S., being in charge. Visiting physicians invited.
- Westinghouse Electric & Mfg. Co., Pittsburgh, Pa. Mch. Pal., 4th St., bet. Avs. E & F, 2nd & 4th Sts., Avs. C & D.
- Wizard Foot Appliance Co., St. Louis, Mo. 3rd St., bet. Avs. C & D. Devices for relief of foot troubles.
- GROUP 36.**
- CHEMICAL AND PHARMACAL ARTS.**
- Am. Druggists Synd., New York. Collective Chemical Drug Exh. Av. D, cor. 8th St.
- Anti-Uric Co., San Francisco. Patent Medicines. 8th & 9th Sts., bet. Avs. C & D.
- Aseptic Products Co., Long Island City, N. Y. Chemical and pharmacal arts. Av. D, cor. 8th St.
- Barrett Mfg. Co., Frankford, Phil., Pa. Insecticides, etc. Min. Pal., 7th St., bet. C&D.
- Bennett Co., E. W., San Francisco, Cal. Metal Polish. Working Exh. in Expo. Hospital.
- Buffalo Specialty Co., Buffalo, N. Y. Liquid Veneer. Mfr. Pal., 5th St., cor. Av. B.
- Caire Co., Justinian, S. F. Lab. Equipment. Fd. Pr. Pal., 2nd & 3rd Sts. & Avs. C & D.
- California Perfume Co., New York, N. Y. Toilet Requisites. 10th St., bet. Avs. C & D.
- Channell Chemical Co., Chicago, Ill. O-Cedar Products. 8th & 9th Sts.
- Conway, Jessie B., L. A., Cal. Plasters. 10th St., bet. Avs. C & D. Dr. Conway's M. D. Plasters.
- Cutter Laboratory, The, Berkeley, Cal. Biological Prod. 8th & 9th Sts., bet. Avs. C&D.
- Denny-Hilborn & Rosenback, Philadelphia, Pa. Stamping Inks. Mch. Pal., 5th, cor. Av. A.
- Drucker Co., August E., San Francisco, Cal. Tooth Powder. 9th St., bet. Avs. C & D. Drucker's Revelation Tooth Powder.
- Emerson Drug Co., Baltimore, Md. Bromo-Seltzer. Av. D, bet. 9th & 10th Sts.
- Fitch Co., The F. W., Boone, Ia. Toilet Preparations. Cor. Av. D & 9th St.
- Graton & Knight Mfg. Co., Worcester, Mass. Mch. Pal. Belt Cement & Dressing.
- Hoffman Co., The Geo. Wm., Indianapolis, Ind. Metal Polishes. 9th St., bet. Avs. C & D.
- Laughlin Fruit Refining Co., Los Angeles, Cal. Toilet Articles, "Citrus Cream." 9th & 10th, bet. Avs. C & D.
- Levey Co., Fred'k H., New York, N. Y. Ptg. Inks. Mch. Pal., 5th St., cor. Av. A.
- Mayer & Co., Robert, New York, N. Y. Lithographing Inks. Mch. Pal., 5th St., cor. Av. A.
- Orion Laboratories Co., Long Island City, N.Y. Chemical and pharmacal arts. Av. D, cor. 8th St.
- Pitman-Moore Company, Indianapolis, Ind. Biological Products, Lv. St. Pal. Anti-Hog-Cholera serum.
- Radium Therapy Corporation, New York, N.Y. Radio-Rem Outfits. Av. C, cor. 9th St. To produce Radio-active water of uniform strength. Schiefelin & Co., N. Y., Distributors.
- Reed Company, Geo. Russell, San Francisco, Cal. Printers' Inks & Supplies. Mch. Pal., 5th St., cor. Av. A. Collective exhibit of Printers Inks; Photo Engravers Machinery—Supplies.
- Rieger & Co., Paul, San Francisco, Cal. Perfumes, Extracts, etc. Av. C, 8th & 9th Sts.
- Roseen Toilet Co., San Francisco, Cal. Toilet Specialties. 9th St., bet. Avs. C & D.
- Safe-T-Kross Mfg. Co., Long Island City, N. Y. Chemical and pharmacal arts. Av. D, cor. 8th St.
- Saks Stamping Co., Long Island City, N. Y. Chemical and pharmacal arts. Av. D, cor. 8th St.
- Sanitol Chemical Co., St. Louis, Mo. Sanitol Tooth Powder and Sanitol Toilet Preparations. 8th & 9th Sts., bet. Avs. C & D.
- Solax Chemical Co., Long Island City, N. Y. Chemical and pharmacal arts. Av. D, cor. 8th St.
- Solvay Process Co., The, Syracuse, N. Y. Alkali Products. Av. D, 8th & 9th Sts.
- Standard Oil Co. of New York, San Francisco, Cal. Candles. Min. Pal., Av. C, bet. 6th & 7th Sts. Candles for Banquet, Coach, Domestic, Christmas, Church, Mining, Paraffine Wax for sealing.

Stern, Joe, Butte, Mont. Toilet Preparations. 9th St., bet. Avs. C & D.

Sweetser, L. H., New York, N. Y.; San Francisco, Cal. Polish. 9th St., bet. Avs. C & D.

Union Oil Company of California, San Francisco, Cal. Asphalt Products. Min. Pal., 6th St. & Av. B. Asphalt for Printers' Ink.

Vermilax Company, Inc., New York, N. Y. Dog Remedies. Av. D, cor. 8th St. Dog Remedies and accessories. Headquarters for Dog Fanciers.

Vogue Perfume Co., Long Island City, N. Y. Chemical and pharmaceuticals. Av. D, cor. 8th St.

Western Carbonic Gas Co., Agnew, Cal. Carbonic Gas. 8th & 9th Sts., bet. Avs. C & D.

West Disinfecting Co., New York, N. Y. Disinfectants; Insecticides. Av. C, cor. 10th St.

Willett, Walter M., San Francisco, Cal. Camelline, etc. 8th & 9th Sts., bet. Avs. C&D.

GROUP 37.

MUSICAL INSTRUMENTS.

American Electrelle, Philadelphia, Pa., & N.Y. Musical Instruments. 5th St. & Av. A.

American Graphophone Co., New York, N. Y. Talking Machines. Av. D, bet. 4th & 5th Sts. Grafonolas, Talking Machines, Graphophones, Records, Record Cabinets, Accessories.

Austin Organ Company, Hartford, Conn. Pipe Organs. Large pipe organ, in Festival Hall, as working exhibit. Local representative, R. F. Tilton, 135 Kearny St., San Francisco.

Autopiano Co., The, New York, N. Y. Musical Instruments. 5th St. & Av. A.

Autopurmatic Action Co., New York, N. Y. Musical Instruments. 5th St. & Av. A.

Cary & Sons, E. H., Stockton, Cal. Drums & accessories. 4th St., bet. Avs. C & D.

Cheney Talking Machine Co., Chicago, Ill. Tlkg. mchns. 4th & 5th Sts., bet. Avs. C&D.

Chickering & Sons, Boston, Mass. Musical Instruments. 5th St. & Av. A.

Columbia Graphophone Co., New York, N. Y. Talking machines. Av. D, 4th & 5th Sts. Grafonolas, Talking Machines, Graphophones, Records, Record Cabinets, Accessories.

Conn, Inc., C. G., Elkhart, Ind. Band and Orchestra Instruments. Av. C, cor. 4th St.

Eilers Music House, Portland, Ore. Collective exhibit. 5th St. & Av. A.

Galleazzi, J., San Francisco, Cal. Musical Reed Instruments. 4th St., bet. Avs. C & D.

Kimball Co., W. W., Chicago, Ill. Musical Instruments. 5th St. & Av. A.

Kumalae, Jonah, Honolulu, H.I. Hawaiian Prod. 4th St., bet. Avs. C & D. Ukuleles, etc.

Lanini, Alfred, San Jose, Cal. Violins. 5th St. & Av. A.

Marshall & Wendell Piano Co., Rochester, N. Y. Musical Instruments. 5th St. & Av. A.

Masteroll Perforating Co., San Francisco, Cal. Musical Instruments. 5th St. & Av. A.

Organ Power Co., The, Hartford, Conn. Two 20-h. p. 3-pressure 7-stage "Orgoblos" installed on Austin Pipe Organ, Festival Hall.

Palmer, James A., Boston, Mass. Musical Instruments. 5th St. & Av. A.

Parker & Co., Chas., Meriden, Conn. Musical Instruments. 5th St. & Av. A.

Peerless Piano Player Co., St. Johnsville, N.Y. Musical Instruments. 5th St. & Av. A.

Vanoscope Co., Chicago, Ill. Phonographs. Av. D, opp. 2nd St.

Victor Talking Machine Company, Camden, New Jersey, Talking Machines. Av. C, 4th & 5th Sts. Manufacturers of the Victor, the Victrola and Victor Records. Concert morning and afternoon.

Wurlitzer Co., The Rudolph, Cincinnati, O. Unit Orchestra. Min. Pal., Av. D & 7th St.

GROUP 38.

THEATRICAL APPLIANCES AND EQUIPMENT

Gantner & Mattern Co., San Francisco, Cal. Theatrical Tights. V. I. Pal., 4th, cor. Av. E.

Heywood Bros. & Wakefield Co., N. Y. Opera Chairs. Working exhibit Festival Hall.

Wisconsin Seating Co., New London, Wis. Theatre Chairs. 10th St. at E. Ent. No. 7.

GROUP 39.

ELECTRICAL METHODS OF COMMUNICATION.

Aero Fire Alarm Co., Seattle, Wash. Fire Alarm Equip. 10th St., at Entr. No. 7.

American Telegraphone Co., Springfield, Mass. Telegraphone. 6th St., bet. Avs. C and D.

American Telephone & Telegraph Co., N. Y. Av. C, 7th & 8th Sts.

Central Telephone & Electric Co., St. Louis, Mo., U. S. A. Manufacturers Electric Lanterns & Telephones.

De Forest Radio Tel. & Tel. Co., New York. Av. D, cor. 1st Street.

Dictaphone, The, Columbia Graphophone Company, New York. The ideal amanuensis. Direct method of dictation. Official Dictation Machine Panama-Pacific International Exposition Company and is the only dictation machine employed in dictating and transcribing the correspondence of the Exposition.

Edwards & Co., Inc., New York, N. Y. Fire Alarm Equip. Mfr. Pal., 8th St. & Av. C.

General Acoustic Co., New York, N. Y. Devices for deaf. Av. D and 8th St.

Gem Ear Phone Co., New York, N. Y. Devices for deaf. 6th St., bet. Avs. C & D.

Globe Ear Phone Co., Boston Massachusetts. Aids for deaf. 7th St., bet. Avs. C & D. Church and Theatre Ear-Phones. Secret phones for Detective use. Announcing Phone Systems.

Gray Telephone Pay Station Co., The, Hartford, Conn. Mfr. Pal., 8th St. & Av. C.

Standard Underground Cable Co., Pittsburgh, Pa. Tel. Wires, Mch. Pal., 3rd St. & Av. D.

Star Electric Co., Binghamton, N. Y. Fire Alarm and Police Tel. Av. C, cor. 10th St.

Seaman Co., W. S., Milwaukee, Wis. Telephone booths, Mfr. Pal., 8th St. & Av. C.

Western Union Telegraph Co., New York. Telegraph. Av. C, cor. 7th St.

GROUP 40.

CIVIL AND MILITARY ENGINEERING.

Austin-Western Machinery Co., Chicago, Ill. Road making machinery. Mch. Pal., 4th & 5th Sts., Avs. B & C. Canal and levee making machinery. Railroad construction machinery. Ore and rock crushing and handling machinery. Street cleaning machinery.

Bacon Co., Edw. R., San Francisco. Coll. Exh. Mch. Pal., 4th & 5th Sts., Avs. C & C2.

- Baker Mfg. Co., Springfield, Ill. Machinery. Mch. Pal., 4th & 5th Sts., Avs. C & C2.
- Barber Asphalt Paving Co., Philadelphia, Pa. Road Rollers. Mch. Pal., 5th St. & Av. I.
- Bartlett & Snow Co., C. O., Cincinnati, O. Garbage & Refuse Disposal Plant. Wkg. exh. Exposition Grounds.
- Barrett Mfg. Company, New York, N. Y. Macadam roads. Min. Pal., 7th, bet. C & D.
- Buffalo Steam Roller Co., Buffalo, N. Y. Steam Road Rollers. Mch. Pal., Av. A, cor. 4th St.
- Buffalo Steam Roller Co., Buffalo, N. Y. Road Rollers. Wkg. exh. on Expo. Grounds.
- Carnegie Steel Co., Pittsburgh, Pa. Steel Sheet Piling and uses. Min. Pal., Av. D.
- Chain Belt Co., Milwaukee, Wis. Concrete Mixers. Mch. Pal., 4th St., bet. Avs. C & D.
- C.H.&E. Mfg. Co., Inc., Milwaukee, Wis. Contractors' Equip. Mch. Pal., 5th, bet. H & I.
- City Street Improvement Co., San Francisco, Cal. Street Sweeper. Wkg. exh. on Expo. Gnds.
- Concrete Appliance Co., Los Angeles, Cal. Concrete Mixers. Mch. Pal., 5th St. & Av. I.
- Economy Engineering Co., Chicago, Ill. Manufacturers. Mch. Pal., Av. H, bet. 3rd & 4th Sts. Elevators, Portable, Standard and special designs.
- Eric Machine Shops, Erie, Pa. Mch. Pal., 4th St. & Av. C-2. Tandem Steam Rollers.
- Foote Mfg. Co., Nunda, N. Y. Mch. Pal., 4th & 5th Sts., bet. Avs. C & C-2. Road machinery and equipment.
- Galion Iron Works & Mfg. Company, Gallion, O. Mch. Pal., 4th & 5th Sts., bet. Avs. C & C-2. Road machinery and equipment. Corrugated pipe.
- Graves-Spears Road Mch. Co., Oakland, Cal. Coll. exh. Mch. Pal., Av. A, cor. 4th St.
- Harron, Rickard & McCone, San Francisco. Coll. Exh. Mch. Pal., 4th & 5th, Avs. G&H.
- Headley Good Roads Co., Philadelphia, Pa. Machinery. Mch. Pal., 4th St. & Av. D.
- Hvass & Co., Chas., New York. Road Oilers & Sweepers. Mch. Pal., 4th St. & Av. D.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Equipment and methods for the construction and maintenance of roads, streets, highways, etc.
- Iroquois Iron Works, Buffalo, N. Y. Road Rollers. Parrott and Company, San Francisco, Cal., Representative. See ad on front cover of Machinery catalog.
- Jaeger Machine Co., The, Columbus, O. Mch. Pal., 4th & 5th Sts., bet. Avs. C & C-2. Road machinery and equipment.
- Kelly Springfield Road Roller Co., The, Springfield, O. Mch. Pal., 4th St. & Av. D.
- Koehring Machine Co., Milwaukee, Wis. Manufacturers. Mch. Pal., 4th St., bet. Avs. F&G. Koehring Concrete Mixer. Koehring Paving Mixer. Koehring Hot Mixer.
- MacLead Co., The, Cincinnati, O. Incinerators. Mch. Pal., 1st St. & Avs. H & I.
- Marland, W. J., Oakland, Cal. Collective Exhibit. Mch. Pal., 1st St. & Av. D.
- McKiernan-Terry Drill Co., New York, N. Y. Pile driving hammer. Min. Pal., Av. D.
- Meese & Gottfried Co., San Francisco, Cal. Coll. Exh. Mch. Pal., 2d & 3d, Avs. H & I.
- Merritt Hydraulic Co., Philadelphia, Pa. Sewage Pumping. Mch. Pal., 1st St. & Av. D.
- Municipal Engineering & Contracting Co., Chicago, Ill. Road making machinery. Mch. Pal., 3rd St., cor. Av. B.
- Ohio Road Machinery Co., The, Oberlin, O. Road mch. Mch. Pal., Av. A, cor. 4th St.
- Olsen Testing Machine Co., Phil., Pa. Testing Mch. & Ins. Mch. Pal., 3rd St. & Av. E.
- Otis Elevator Co., N. Y. Passenger elevators & equip. Mch. Pal., 1st St. & Avs. F & G.
- Pacific Tank & Pipe Co., San Francisco, Cal. Min. Pal., 6th St., bet. Avs. A & B. Wood Caissons, Tanks, Pipe; Sewers for city sanitation.
- Parrott & Co., San Francisco, Cal. Collective Exhibit. Mch. Pal., 4th & 5th Sts. & Av. I.
- Patent Scaffolding Co., The, New York. Building Scaffolds. Mch. Pal., 5th St. & Av. H.
- Pawling & Harnischfeger Co., Milwaukee. Mch. Pal., 4th & 5th Sts. & Av. C2. Traction tamper and equipment.
- Pittsburgh, Des Moines Steel Co., Pittsburgh, Pa. Water Storage Tanks. Mch. Pal., 5th St. & Av. E.
- Power & Mining Machinery Co., Cudahy, Wis. Concrete Mixer. Mch. Pal., Av. A, cor. 4th.
- Russell Grader Manufacturing Company, Minneapolis, Minn. Road Machinery. Mch. Pal., cor. Av. I & 4th St. Parrott & Co., San Francisco, Cal., Representatives. See ad on front cover of Machinery catalog.
- Schrader's Sons, Inc., A., Philadelphia, Pa. Submarine Armor and Diving Apparatus. Av. C, cor. 3rd St.
- Simonds Machinery Co., S. F., Cal. Collective Exhibit. Mch. Pal., 1st & 2nd Sts. & Av. E.
- Smith Co., The, T. L., Milwaukee, Wis. Contractors' Equip. Mch. Pal., Av. I, bet. 4th & 5th Sts.
- Smith Mfg. Co., The, A. P., East Orange, N. J. Water Wks. Equip. Mch. Pal., 2nd St. & Av. G2.
- Smith & Sons Mfg. Co., The, Kansas City, Mo. Road Bldg., Road Mch. Mch. Pal., Av. A, cor. 4th St.
- Sterling Wheelbarrow Co., The, Allis, Wis. Contractors' Material. Mch. Pal., Av. G, bet. 4th & 5th Sts.
- Sturtevant Mill Co., Boston, Mass. Contractors' Material. Mch. Pal., 5th, bet. Avs. F&G.
- Universal Crusher Co., Cedar Rapids, Ia. Contractors' Material. Mch. Pal., 4th & 5th Sts.
- U. S. Steel Corp'n & Subsidiary Co's., New York, N. Y. Col. exh., Av. D, Min. Pal.
- Waterloo Cement Corp'n., Waterloo, Ia. Contractors' Mch. Mch. Pal., 4th St. & Av. D.
- Weber Subterranean Pump Co., N. Y. Sewage Pumps. Mch. Pal., cor. 1st St. & Av. C2.
- Western Pipe & Steel Co., San Francisco, Cal. Metal Culvert. Av. D, Min. Pal.
- Wood & Co., R. D., Philadelphia, Pa. Water Works Equipment. Mch. Pal., So. entrance.
- Young Machinery Co., A. L., San Francisco. Collective Exh. Mch. Pal., 4th St. & Av. D.

GROUP 41.

MODELS, PLANS AND DESIGNS FOR PUBLIC WORKS

- Armco Iron Culvert Manufacturers Association, Middletown, Ohio. Corrugated Armco Iron Culverts. Mch. Pal., 7th St., bet. Avs. C & D. Automatic Flood Gates. Pressure Head Gates.
- Baker Mfg. Co., Springfield, Ill. Mch. Pal., 4th & 5th, bet. C & D. Street cleaning mch.

Barrett Mfg. Co., New York. Brick, wood, block pavement. Min. Pal., 7th, bet. C & D.

Modesto Chamber of Commerce, Modesto, Cal. Av. D, bet. 6th & 7th Sts. Irrig. Dam.

New York State, Eng. & Surv. of, Albany, N. Y. Models of locks, dams, etc. Bet. 6th & 7th Sts., Av. D & 5th St.

Panama Canal Exhibition Co., The, Chicago, Ill. Working exhibit in "Zone."

U. S. Steel Corp'n & Subsidiary Co's., New York, N. Y. Coll. exh., Av. D, Min. Pal.

GROUP 42.

ARCHITECTURE.

Cantin, Alexander. A., San Francisco, Cal. Drawings. Court of Universe Blvd., cor. 7th.

United States Section

Government Exhibit.

Location: Northwest quarter of the Palace of

Liberal Arts.

Department of State.

Department of the Treasury.

Bureau of Public Health Service.
Supervising Architect's Office.

Department of War.

Medical Corps.
U. S. Military Academy (West Point).

Department of the Navy.

Bureau of Medicine and Surgery.
U. S. Naval Academy (Annapolis).
And other educational institutions.

GROUP 43.
ARCHITECTURAL ENGINEERING.
Barrett Mfg. Co., New York, N. Y. Models for Roofs. Min. Pal., 7th St., bet. Avs. C & D.
Broadway Park Place Co., New York, N. Y. Av. A, cor. Court of Universe Blvd.
Eclipse Scaffolding Co., The, Omaha. Building Scaffolds. Mch. Pal., 5th St. near Av. H.
Henderson, W. D., San Francisco, Cal. Bldg. Constr. Court of Universe Blvd., Av. D & 7th St.
Patent Scaffolding Co., The, New York. Building Scaffolds. Mch. Pal., 5th St. & Av. H.
Randall Elevator Door Control Co., San Francisco, Cal. Mch. Pal., 3rd St., cor. Av. C. Pneumatic device for opening and closing elevator doors, and automatically locking elevator while door is open.

Department of the Interior.

Office of Secretary National Parks.
General Land Office.
Office of Indian Affairs.
Reclamation Service.

Department of Commerce.

Bureau of Census.
Foreign and Domestic Commerce,
Bureau of Standards.
Coast and Geodetic Survey.

Smithsonian Institution.

National Museum.

Civil Service Commission.

The Panama Canal.
The Commission of Fine Arts.
American National Red Cross.
Library of Congress.
Motion Picture Exhibit.

Foreign Section

SWEDEN

The exhibits of Sweden, classified in this Department, are installed in the Swedish Building, Avenue of Nations.

NETHERLANDS

Location: Av. C, 5th & 6th Sts.

GROUP 29

TYPOGRAPHY—VARIOUS PRINTING PROCESSES

Enschede & Zonen, Johan, Haarlem. Letter-types, printing material and art printing.

GROUP 32

MANUFACTURE OF PAPER

Enschede & Zonen, Johan, Haarlem. Money paper, stamps, etc.

GROUP 35

MEDICINE AND SURGERY

Koninklyke Fabriek van Verbandstoffen, Voorheen Utermohlen & Co., Amsterdam. Bandages.

Oostwoud, M. Rytuygfabriek, Franeker. Ambulance service.

Pool & Zonen, L., Amsterdam. Tooth cleaning means. Instruments of dentistry.

GROUP 36

CHEMICAL AND PHARMACAL ARTS

Koninklyke Stearinekaarsen Fabriek "Gouda," Gouda. Glycerine, stearine, etc.

GROUP 40

CIVIL AND MILITARY ENGINEERING

Van Beest, A. G., Rotterdam. Building materials.

NEW ZEALAND

Location: Avs. C & D, 6th & 8th Sts.

PALACE OF AGRICULTURE

GROUP 33

PHOTOGRAPHY

Hobday, B., Fielding. Landscape photographs.
Schmidt, W. J., Auckland. Portraiture.
Winkelmann, Henry, Auckland. Marine photography.

GROUP 37

MUSICAL INSTRUMENTS

Williamson, J., Wellington. Violins.

PORTUGAL

Location: Southeast cor. Av. B-C & 7th St.

GROUP 31

MAPS AND APPARATUS FOR GEOGRAPHY, COSMOGRAPHY AND TOPOGRAPHY

Victoria Pereira, J. E. Cacella de, Lisbon. Chart of Portugal in relief.

GROUP 33

PHOTOGRAPHY

Alvao, Domingos, Oporto. Frames with photographs.

Guedes, Paulo Emilio, Lisbon. Photographs.
Silva, J. Carlos, Lisbon. Frames with photographs.

GROUP 41

MODELS, PLANS AND DESIGNS FOR PUBLIC WORKS

Victoria Pereira, J. E. Cacella de, Lisbon. Topographic maps.

Indoors and Out o'doors

Citrus Cream gives you that enviable clear-
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which every one ad-
mires—and desires!



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Otis Elevator Company

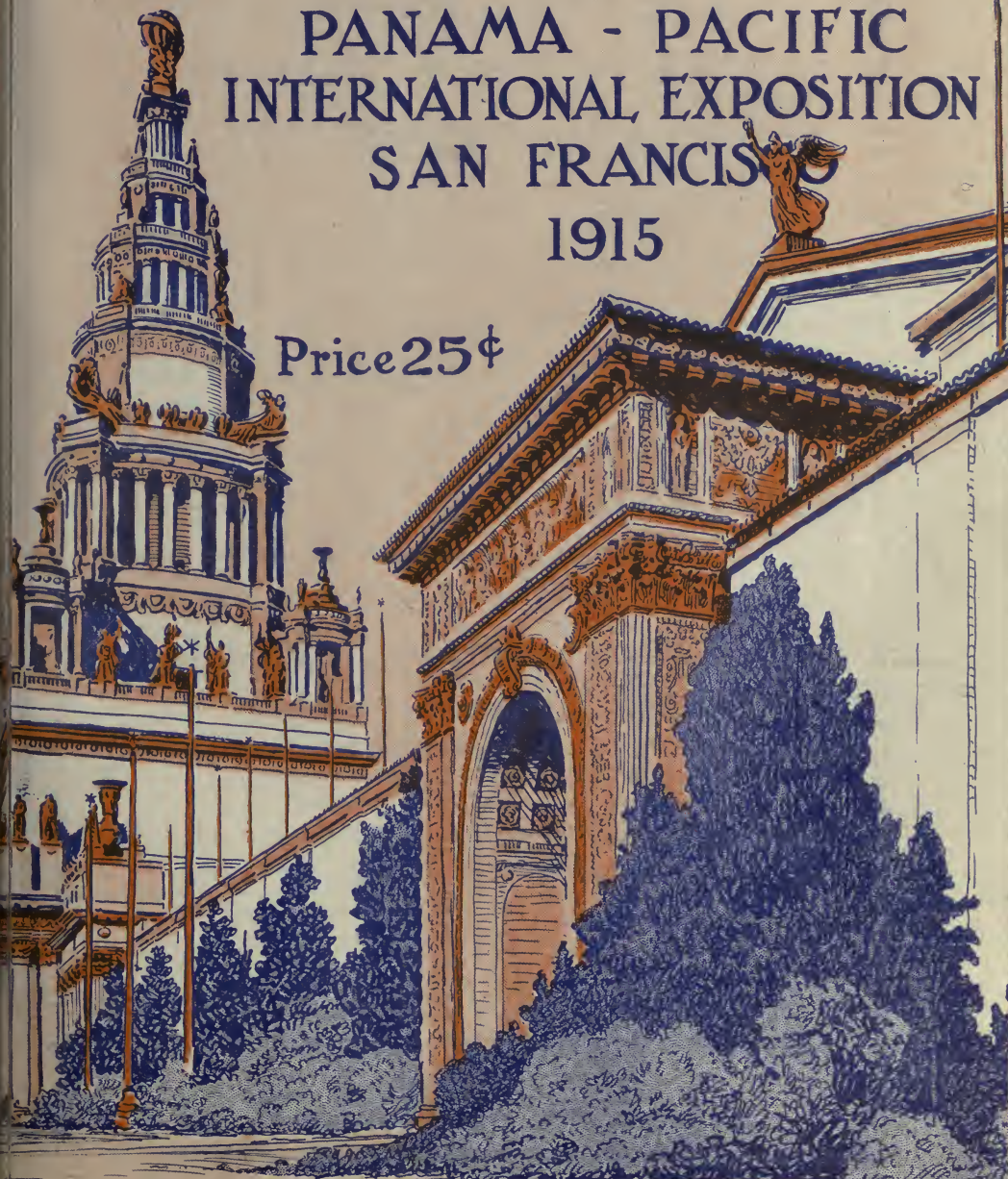
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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT

July 10 1914.

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President.



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Secretary.

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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915



Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

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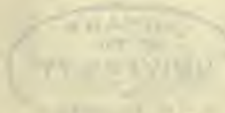
Department **E**

MANUFACTURES

CHAS. H. GREEN Chief

Preliminary Edition

Published for the Division of Exhibits by
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PREFACE

By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF MANUFACTURES

MANUFACTURES

Official Catalogue Department E

CLASSIFICATION OF EXHIBITS

Stationery, Desk Accessories, Artists' Materials.

Cutlery.

Silversmiths' and Goldsmiths' Ware.

Jewelry.

Clock and Watch Making.

Objects Exhibited More for Their Ornamental Design Than for Their Utility.

Ornamental Productions in Marble, Bronze, Cast Iron and Wrought Iron.

Leaded, Stained and Mosaic Glass.

Brushes, Fine Leather Articles, Fancy Articles and Basket Work.

Articles for Traveling and for Camping, India Rubber and Gutta Percha Industries.

Hunting Equipment and Products of Hunting.

Fishing Equipment and Products.

Toys.

Permanent Decoration and Fixed Furniture for Buildings and Dwellings.

Office and Household Furniture and Utilities.

Mortuary Monuments and Undertakers' Furnishings.

Hardware and Woodenware.

Electro-Thermal Apparatus.

Insulating Materials for Electricity.

Paper Hanging.

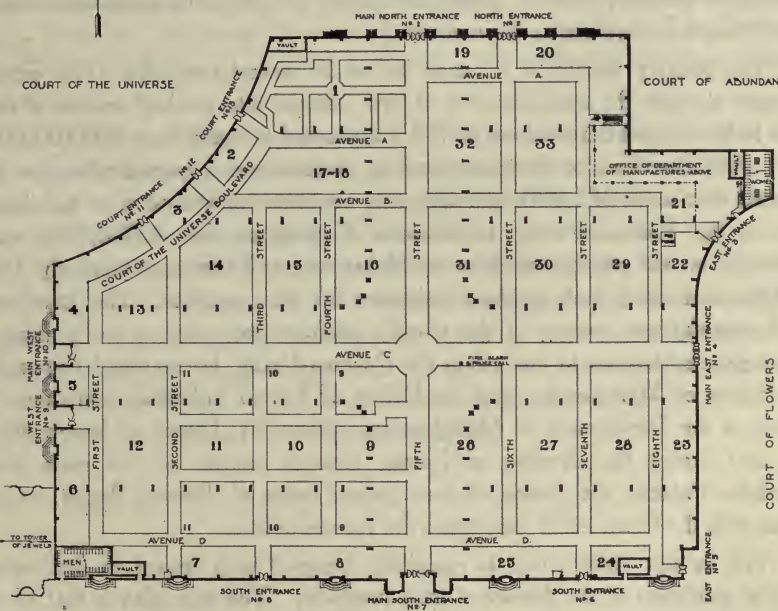
Carpets, Tapestries and Fabrics for Upholstery.
Upholsterers' Decorations.
Ceramics.
Plumbing and Sanitary Materials.
Glass and Crystal.
Apparatus and Processes for Heating and Ventilation.
Manufacture, Distribution and Uses of Gas for Light and Fuel.
Apparatus and Methods for Lighting, Not Otherwise Classified.
Textile Materials, Spinning and Rope Making.
Equipment and Processes Used in the Manufacture of Textile Fabrics.
Equipment and Processes Used in Bleaching, Dyeing, Printing and Finishing Textiles in Their Various Stages.
Equipment and Processes Used in Sewing and Making Wearing Apparel.
Threads and Fabrics of Cotton.
Threads and Fabrics of Flax, Hemp, Etc.; Cordage.
Yarns and Fabrics of Animal Fibers.
Silk and Fabrics of Silk.
Laces, Embroidery and Trimmings.
Industries Producing Wearing Apparel for Men, Women and Children.
Furs and Skins, Fur Clothing; Leather, Boots and Shoes.
Various Industries Connected with Clothing.
Safety Appliances.



COURT OF THE UNIVERSE

COURT OF ABUNDANCE

COURT OF FLOWERS



AVENUE OF PALMS

FLOOR PLAN

PALACE OF MANUFACTURES
PANAMA-PACIFIC INTERNATIONAL EXPOSITION

OPENS FEBRUARY 20 SAN FRANCISCO U.S.A., 1915. CLOSES DECEMBER 4

INTRODUCTION

Department of Manufactures

by
CHARLES H. GREEN, CHIEF.

The civilization of a nation is reflected by its manufactures. Science and industry, applied to natural resources, contribute to the development of mankind by lessening his burdens, allowing leisure for cultural pursuits with accumulative benefits affecting each succeeding generation.

The primary wealth of a nation lies in its natural resources. The increase of wealth through the transformation of raw material into finished articles of commerce in the United States alone in 1913 amounted to more than \$10,500,000,000. A further idea of the importance of manufacture is gained when the fact is recited that some 275,000 manufacturing concerns are interested in the display made at the Panama-Pacific International Exposition; that 6,000,000 wage-earners are on the payrolls of these establishments; and that approximately 100,000,000 consumers look to these industries for their supplies. The importance which manufacture assumes in the world's affairs is expressed in the number of exhibit palaces devoted to this use in the Panama-Pacific International Exposition. The Palace of Manufactures and the Palace of Varied Industries, containing the exhibits of the Department of Manufactures, adjoin the Tower of Jewels on the east, and facing the Avenue of Palms, form a quarter of the main group of Exhibit Palaces, the facade of each palace being of different design, to harmonize with the Court effect connecting the various palaces.

The interior construction is especially designed with regard to the requirements of exhibitors in the display of their products. The aisle plan is that of city blocks, all avenues running east and west; streets north and south.

The specific lines of trade represented in this mammoth display are manifold, covering hundreds of industries, including not only the goods one would find in the principal retail shops of a large city, but also everything that goes into the interior finish and decoration of public and private dwellings, including the plumbing, heating and ventilating, lighting, art wares, and certain forms of machinery.

The following classification, each item carrying numerous subdivisions, represents the general scope of products embraced in the Department of Manufactures and Varied Industries:

Stationery, Desk Accessories, Artists' Materials. Cutlery, Silversmiths' and Goldsmiths' Ware. Jewelry, Clock and Watch Making. Objects of Ornamental Design. Glass. Brushes, Fine Leather Articles, Fancy Articles and Basket Work. Traveling and Camping Articles. India Rubber and Gutta Percha Industries.

Hunting Equipment and Products of Hunting. Fishing Equipment and Products. Toys. Permanent Decoration and Fixed Furniture, Office and Household Furniture and Utilities. Mortuary Monuments and Undertakers' Furnishings. Hardware and Woodenware. Electro-Thermal Apparatus. Insulating Materials for Electricity. Paper Hanging. Carpets, Tapestries and Fabrics for Upholstery. Upholsterers' Decorations. Ceramics. Plumbing and Sanitary Materials. Glass and Crystal. Heating and Ventilating Apparatus and Processes. Gas in Various Phases. Lighting Methods and Apparatus. Textile Materials, Spinning and Rope Making. Equipment and Processes in Textile Manufacturing. Equipment and Processes for Finishing Textiles. Sewing Equipment and Processes. Threads and Cotton Fabrics. Threads and Fabrics of Flax, Hemp, etc. Cordage, Yarns and Fabrics of Animal Fibres. Silk and Silk Fabrics. Laces, Embroidery, Trimmings. Industries Producing Wearing Apparel. Furs and Skins, Fur Clothing. Leather, Boots and Shoes. Various Industries Connected with Clothing. Safety Appliances.

In the Palace of Manufactures proper, where the idea of utility controls, there are two great divisions; one inclusive of heating, hardware, glass, lighting and merchandise in woods and metals; in the other, clothing, textiles, etc. In the Palace of Varied Industries, where ornamentation of the beautiful controls, are installed the articles which add to use, such as the contents of the House Beautiful.

Of the total vast area embraced within the spacious confines of these great structures, 55 per cent of the floor space is given over to the exhibition of the products of American manufacturers, and 45 per cent to those of the foreign nations. The United States exhibits are arranged in industrial groups, while the foreign displays are classified according to nationality.

HOW TO LOCATE AN EXHIBIT

The Palace of Manufactures is laid out in blocks, which are consecutively numbered from 1 to 33, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Eighth) running north to south, and as avenues (A to D), from east to west. To locate an exhibitor refer to the name, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisles location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Manufactures, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace | Mch. Pal. |
| Transportation Palace | Trns. Pal. |
| Agriculture Palace | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF MANUFACTURES

Official Classification of Exhibits

DEPARTMENT E

GROUP 44

STATIONERY, DESK ACCESSORIES, ARTISTS' MATERIALS

- Class 216. Equipment for and processes used in making or preparing stationery, account books, copy books, envelopes, bags, wrappers.
- Class 217. Made-up paper and card-board; ruled, bordered or ornamented paper, note paper, envelopes, pockets, bags; school copy books, memorandum books, note books, letter-copying books, account books, book covers; menu cards, playing cards, paper boxes, cases; packages of cigarette papers, etc.
- Class 218. Desk furnishings, inks, pens, pencils, penholders, crayon holders, wax and wafers, paper weights, ink stands, letter presses, etc.
- Class 219. Artists' materials for painting, architecture, sculpture, pyrography, and drawing; canvases, panels, crayons, brushes, hair pencils; mathematical instruments for architects, etchers, engravers, burners, sculptors; tracing papers and cloths; parchments; colors, varnishes, charcoals, pastels, stumps, lay figures, easels; color boxes and other artists' material not named above.

GROUP 45

CUTLERY

- Class 220. Special equipment for the manufacture, grinding and polishing of cutlery.
- Class 221. Table cutlery, pocket knives, knives with fixed blades.
- Class 222. Cutlery for gardens, and for various trades.
- Class 223. Scissors and work-box accessories.
- Class 224. Razors of all kinds.
- Class 225. Fine cutlery in polished steel.
- Class 226. Small silversmiths' ware.
- Class 227. Side arms of all kinds.

GROUP 46

SILVERSMITHS' AND GOLDSMITHS' WARE

(Appliances, Processes and Products.)

- Class 228. Special equipment for manufacture, hand tools; outfits for casting machinery (lathes, scales, etc.); outfits for electro-plating, etc. Methods of work.
- Class 229. Goldsmiths' and silversmiths' work for religious or common uses in gold, silver, bronze or other metal; plated ware; articles gilt or silver-plated by any process.
- Class 230. Enameled work; goldsmiths' enamel; enamels painted upon metal.

GROUP 47

JEWELRY

(Equipment, Processes and Products.)

- Class 231. Special equipment. Methods of work.
- Class 232. Fine jewelry; gold and silver jewelry; jewelry in platinum, aluminum, etc.; jewelry set with precious stones; jewelry in debased gold for exportation.
- Class 233. Lapidary work; diamond cutting; cutting of gems; engraving of fine stones; engraving of hard cameos and of shells.
- Class 234. Imitation lapidary work. Imitation of precious stones, pearls, etc.
- Class 235. Gilt jewelry; imitation jewelry in copper and other metals; steel jewelry; mourning jewelry in jet and glass; jewelry in coral, amber, mother-of-pearl, etc.

GROUP 48

CLOCK AND WATCH MAKING

(Equipment, Processes and Products.)

- Class 236. Special equipment for manufacturing clocks and watches; hand tools; machine tools (lathes and other tools); measuring instruments.
- Class 237. Preparation of various metals used by watch and clock makers; separate parts of watch and clock work; springs; watch cases in precious or common materials; holes and fittings in rubies or in other jewels; enameled or other dials, etc.
- Class 238. Clocks for churches and public buildings, time recorders.
- Class 239. Astronomical clocks. Marine chronometers.
- Class 240. Clocks moved by electricity, air or water.
- Class 241. Ornamental clocks and timekeepers; regulators; alarm clocks.
- Class 242. Watches, pocket chronometers; watchmen's time registers.
- Class 243. Metronomes, various recording instruments. Clepsydras and hour glasses.
- Class 244. Chimes connected with clock work.

GROUP 49

OBJECTS EXHIBITED MORE FOR THEIR ORNAMENTAL DESIGN THAN FOR THEIR UTILITY

- Class 245. Special designs and patterns in glass.
 Class 246. Special designs in earthenware, pottery or porcelain.
 Class 247. Special designs in metal.
 Class 248. Special designs in leather.
 Class 249. Special designs in wood.
 Class 250. Special designs in textiles.

GROUP 50

ORNAMENTAL PRODUCTIONS IN MARBLE, BRONZE, CAST IRON AND WROUGHT IRON

(Equipment, Processes, and Products.)

- Class 251. Special equipment for the manufacture of ornamental metal objects; types of roundries; patterns and moulds. Outfit for and specimens of repousse work; processes for mechanical reduction.
 Class 252. Reproductions of works of art in marble, stone, plaster, terra cotta, wax, etc. Ornaments stamped and damascened metals.

GROUP 51

LEADED, STAINED AND MOSAIC GLASS

- Class 253. Glass for churches, public buildings and private dwellings. Specimens of various kinds of glass used for decorative windows. Special enamels.

GROUP 52

BRUSHES, FINE LEATHER ARTICLES, FANCY ARTICLES AND BASKET WORK

(Equipment, Processes and Products.)

- Class 254. Equipment and methods used in the manufacture of brushes, fine leather articles, fancy articles and basket work.
 Class 255. Brushes; toilet brushes designated as fine brushes; brushes for household, harness and stable use, etc., designated as coarse brushes; brushes for house painting, designated as paint brushes; leather brushes; brooms; floor brushes.
 Class 256. Fine leather goods; saccorards, portmonnaies, portfolios, toilet cases, note book covers, cigar cases, small objects and fancy articles in skins; clasps for portmonnaies and handbags.
 Class 257. Fancy articles; work boxes and small fancy furniture; liquor cases, glove boxes, jewel cases; turned articles, engine turned, carved, engraved in ivory, tortoise shell, mother-of-pearl, etc., pipes and smokers' articles, snuff boxes; toilet and other combs in ivory, tortoise shell, horn, celluloid, boxwood, etc.; various articles in lacquer work, small bronzes.
 Class 258. Basket work; basket and hampers for common use; fancy baskets for confectioners, for household use, traveling, etc.

GROUP 53

ARTICLES FOR TRAVELING AND FOR CAMPING. INDIA RUBBER AND GUTTA PERCHA INDUSTRIES

- Class 259. Trunks, valises, bags, satchels, baskets, dressing and traveling cases; packing cases and boxes; sawl straps, etc. Locks and other fittings for trunks, valises, etc. Cushions. Alpenstocks, grapnels, parasols. Various requisites for travelers.
 Class 260. Portable equipment specially prepared for traveling and for scientific expeditions; outfits for geologists, mineralogists, naturalists, colonists, pioneers, explorers, etc.
 Class 261. Tents and accessories. Beds, hammocks, seats, folding chairs, and other camp furniture and equipment. Portable houses.
 Class 262. Tents and furniture of military types.
 Class 263. Equipment and methods used in the manufacture of India rubber and gutta percha goods.
 Class 264. Commercial products of the India rubber and gutta percha industry. Waterproof clothing and boots and shoes. Rubber floor covering. Substitutes for rubber.

GROUP 54

HUNTING EQUIPMENT AND PRODUCTS OF HUNTING

- Class 265. Sportsmen's and trappers' arms and accessories; sportsmen's ammunition.
 Class 266. Hunting equipment; appliances for training dogs.
 Class 267. Material, dress and equipment for games and sports. Sporting goods and supplies; tracks paraphernalia.
 Class 268. Skins and furs in the rough; skins prepared for the furrier. Taxidermists' work.
 Class 269. Horn, ivory, bone, tortoise shell.

GROUP 55

FISHING EQUIPMENT AND PRODUCTS

- Class 270. Floating appliances used in fishing. Nets, tackle, boats; devices and implements for sea fishing. Nets, traps and appliances for fresh water fishing.
 Class 271. Anglers' apparel, rods, reels and lines.
 Class 272. Machines and equipment for making nets.
 Class 273. Sea and fresh water pearls; pearl shells and mother-of-pearl; sponges; corals.

GROUP 56

TOYS

- Class 274. Equipment and processes used in the manufacture of toys.
- Class 275. Playthings: dolls, talking dolls and accessories, playthings in metal, dolls' dinner and tea services, children's watches, mechanical toys, arms and equipment for children, musical instruments, dolls' furniture, horses, animals, carts, toys in India rubber and in gold beaters' skin, scientific and educational toys. Games, Children's books.

GROUP 57

PERMANENT DECORATION AND FIXED FURNITURE FOR BUILDINGS AND DWELLINGS

- Class 276. Plans, drawings and models of interior decorations.
- Class 277. Carpentry; models of frame work, roof work, vaults, domes, wooden partitions, etc.
- Class 278. Ornamental joiner work; doors, windows, panels, inlaid floors, organ cases, choir stalls, etc.
- Class 279. Permanent decorations in marble, stone, plaster, papier-maché, carton pierre, etc.
- Class 280. Ornamental carvings and pyrographics.
- Class 281. Iron work and locksmiths' work applied to decoration; grill work and doors in cast or wrought iron; doors and balustrades in bronze; roof decoration in lead, copper, zinc; dormers, spires, finials, vanes; crest and ridge work.
- Class 282. Decorative paintings on stone, wood, metal, canvas or other surfaces. Signs of all varieties.
- Class 283. Mosaic decorations in stone or marble for flooring; enameled mosaic for walls and vaulted surfaces.
- Class 284. Various applications of ceramics to the permanent decoration of public buildings and dwellings. (See also Ceramics.)

GROUP 58

OFFICE AND HOUSEHOLD FURNITURE AND UTILITIES

- Class 285. Sideboards, bookcases, tables, stands, beds, mirrors, desks, files, filing systems, cabinets, wardrobes, chiffoniers, chairs, settees, couches and lounges, billiard tables, etc.; vacuum cleaners, carpet sweepers, washing machines, etc.

GROUP 59

MORTUARY MONUMENTS AND UNDERTAKERS' FURNISHINGS

- Class 286. Marble, stone and metal monuments; mausoleums and fittings.
- Class 287. Coffins, caskets and undertakers' furnishing goods.

GROUP 60

HARDWARE AND WOODENWARE

- Class 288. Special tools (not included in the class of machine tools) used by smiths, farriers, bolt makers, screw cutters, wire drawers, nail makers, buckle makers, chain makers, copper-smiths, tin-smiths, edge tool makers, iron founders, ironmongers, locksmiths, model makers, etc.
- Class 289. Hardware not otherwise provided for, made of plates, forgings, or castings. Fittings, cocks, taps, etc. Bells; buckles; machine-made bronzes; shoes for horses and for other animals; flatirons, etc.
- Class 290. Bolts, nuts and screws for wood or metal.
- Class 291. Products of nail making and wire drawing; nails, brads, tacks, staples; wire ropes, barbed wire, wire fencing, wire cloth, and wire gauze; wire springs; rings and hooks.
- Class 292. Chain making products and kindred industries.
- Class 293. Metal plates, flanged, stamped, decorated, perforated, etc., builders' work in sheet metals.
- Class 294. Enameled plates and castings for buildings, household and general use.
- Class 295. Hollow ware (cast or pressed) plain, polished, japanned, enameled, granitized or porcelain lined. Metal household utensils.
- Class 296. Articles from the re-manufacture of sheet metals, produced by cutting, drawing, stamping, spinning; including caps, ferrules, small boxes, cans, metal vessels, lamp shades, etc.
- Class 297. Woodworking hand tools; axes, adzes, hatches, chisels, planes, boring tools, saws, hammers, etc.
- Class 298. Builders' and upholsterers' hardware; fittings and fastenings for doors, windows, etc.; casters, clamps, brackets, pulls, etc.
- Class 299. Safes, safety vaults and accessories; safe locks.
- Class 300. Metal work (cast, wrought, or wire) for stair railings, balusters, gratings, balconies, grill work, etc.
- Class 301. Metal work (plated, enameled, etc.) for bedsteads, gas and electric light fixtures, store fixtures, cash carriers, etc.
- Class 302. Summer houses and pavilions in metal; lawn bird cages, aviaries, awnings, awning fittings, verandas.
- Class 303. Metal shutters for windows, doors; screens and Venetian blinds.

- Class 304. Various products of exact rolling or of beating of gold, silver and tin; metallic foils.
- Class 305. Various hardware products of gilding, silver-plating, copper-plating, bronzing, galvanizing, nickel-plating, electro-plating.
- Class 306. Woodenware for household use. Miscellaneous manufactured articles of wood not otherwise classified. Baskets and boxes of split wood.

GROUP 61

ELECTRO-THERMAL APPARATUS

- Class 307. Electric cooking devices, clothes pressing irons, air heaters, etc.

GROUP 62

INSULATING MATERIALS FOR ELECTRICITY

- Class 308. Insulating materials of mica, glass, rubber, porcelain and other substances; insulating compounds and fabrics. (For devices made of insulating materials see Class 510.)

GROUP 63

PAPER HANGING

(Raw Materials, Equipment, Processes and Products.)

- Class 309. Special raw materials used in the manufacture of wall paper.
- Class 310. Machinery for printing wall paper and fancy papers. Machines for engraving printing rollers. Flat wood blocks or copper plates, engraved by hand. Drawing pens. Machines for varnishing, glazing, calendering, embossing, gilding, flocking, rolling and cutting.
- Class 311. Special brushes and cloths used in the laying of wall paper.
- Class 312. Stained papers, printed papers. Flocked, marbled, veined, gilt, enameled and glazed paper. Imitations of wood, leather and tapestry.

GROUP 64

CARPETS, TAPESTRIES AND FABRICS FOR UPHOLSTERY

(Materials, Equipment, Methods and Products.)

- Class 313. Special machinery for the manufacture of carpets and tapestry; high warp looms, low warp looms, bobbin-winders, etc.
- Class 314. Carpets, moquette, tapestry, brussels, or velvet. Felt carpets, mats, etc.
- Class 315. Furniture and wall covering materials in silk, wool, cotton, linen, jute, ramie, grass, plain, mixed, brocaded, printed, embroidered. Horse-hair cloths, vegetable leather, moleskin, etc. Leather for hangings and for covering furniture. Oil cloths, linoleums and similar floor coverings.

GROUP 65

UPHOLSTERERS' DECORATIONS

- Class 316. Decoration for public and private festivals, for religious services, etc. Bunting, flags.
- Class 317. Bed furnishings; upholstered chairs; canopies, curtains, window shades and fittings; hangings of cloth or tapestry; frames, etc.

GROUP 66

CERAMICS

(Raw Materials, Equipment, Processes and Products.)

- Class 318. Raw materials, particularly chemical products used in ceramic industries.
- Class 319. Equipment and methods used in the manufacture of earthenware; machines for turning, pressing and moulding earthenware; furnaces, kilns, muffles, and baking apparatus for earthenware; appliances for preparing and grinding enamels.
- Class 320. Various porcelains.
- Class 321. Bisque of porcelain and of earthenware.
- Class 322. Earthenware of white or colored body, with transparent or tin glazes. Faience.
- Class 323. Earthenware and terra cotta for agricultural purposes.
- Class 324. Stoneware, plain and decorated.
- Class 325. Tiles, plain, encaustic and decorated; mosaics, tiles and bricks for floors. (See also Group 153.)
- Class 326. Fire-proof materials. (See also Group 153.)
- Class 327. Statuettes, groups and ornaments in terra cotta.
- Class 328. Enamels applied to ceramics.
- Class 329. Borders for fireplaces and mantels.

GROUP 67

PLUMBING AND SANITARY MATERIALS

- Class 330. Sanitary earthenware; bathing apparatus and attachments, lavatory fittings, laundry tubs, basins, cocks, draws, etc.; sewerage apparatus, plumbers' appliances.

GROUP 68

GLASS AND CRYSTAL

(Raw Materials, Equipment, Processes and Products.)

- Class 331. Raw materials and particularly chemical products used in the manufacture of glass.
- Class 332. Equipment and processes used in the manufacture of glass and crystal; equipment for the preparation of raw materials; furnaces; blowing apparatus; moulds; lathes for engraving and shaping; apparatus for cutting and for casting, etc.
- Class 333. Window glass, white or colored, fluted, curved, enameled, etc. Glass for photography.
- Class 334. Plate glass, rough or polished. Silvered glass. Glass for pavements. Mirrors for projections. Glass with surface in relief.
- Class 335. Table glass; glass crystal, white or colored, cut or engraved; glassware and glass apparatus for scientific uses.
- Class 336. Ornamental glass. Fused quartz products.
- Class 337. Bottles.
- Class 338. Enamels; their application to glass.
- Class 339. Mosaics of glass. (Architectural mosaics excepted.)
- Class 340. Imitation of precious stones.
- Class 341. Watch glasses.
- Class 342. Glass used for optical purposes; spectacle glass. Lens grinding machinery.

GROUP 69

APPARATUS AND PROCESSES FOR HEATING AND VENTILATION

- Class 343. Plans and models showing methods of heating buildings, including public buildings, factories, dwelling houses. Plans and models for sanitation and ventilation of kitchens and small living rooms.
- Class 344. Methods of conveying and distributing steam, hot water and hot air, used separately or in combination.
- Class 345. Plans, methods and equipment for natural ventilation; ventilation by exhaustion; updraft ventilators; ventilators operated by wind or by difference of temperature; ventilation by mechanical means and their combination.
- Class 346. Stoves, furnaces and boilers, peculiar to the various systems of hot air, hot water and steam heating. Heating stoves using wood, coal, gas or other fuel. Fittings for same.
- Class 347. Radiators of heat used in connection with heating systems.
- Class 348. Kitchen ranges and fittings, steam cooking ranges, hot water boilers, combined cooking and heating stoves, special forms of cooking stoves and apparatus. Ranges and other kitchen equipment for preparing food in large quantities. Cooking utensils.
- Class 349. Accessories to heating and ventilation. Measuring and registering apparatus; ordinary and self-registering thermometers, pyrometers, anemometers; regulators of temperature, of draft, of pressure; automatic drip cocks and air cocks, cocks especially fitted for heating apparatus, electric thermostats.
- Class 350. Chimney fittings. Dampers for chimneys, flue stoppers, special sheet iron chimney pots. Openings for hot air and ventilation; gratings and plates.
- Class 351. Stoves and chimneys in earthenware. Fireplace and chimney pottery. Earthenware and refractory materials for heaters, stoves and chimneys.
- Class 352. Hearth furnishings; fire lighters; ash sifters; utensils for cleaning and repairing heaters and stoves; other accessories.

GROUP 70

MANUFACTURE, DISTRIBUTION AND USES OF GAS FOR LIGHT AND FUEL

- Class 353. Manufacture of gas: processes and apparatus for manufacturing gas from coal; processes and apparatus for manufacturing water gas; processes and apparatus for manufacturing oil gas; apparatus and materials for the physical and chemical cleansing of gas; apparatus for testing crude materials and manufactured gas.
- Class 354. Distribution of gas: pipe, pipe fittings, valves, pressure-regulating apparatus; tools used in laying mains or services; meters and gas measuring apparatus; appliances for the transmission of gas, including exhausters and compressors. (See Class 464.)
- Class 355. Uses of gas: incandescent gas lamps and mantels, gas burners, and appliances for gas lighting; appliances for cooking by gas; appliances for heating by gas, including water heaters and hot air furnaces; appliances for utilizing gas for industrial purposes.

GROUP 71

APPARATUS AND METHODS FOR LIGHTING, NOT OTHERWISE CLASSIFIED

- Class 356. Lighting by means of vegetable or mineral oils, petroleum, shale heavy oil, heavy oil sprayed. Lamps, burners, wicks, lamp chimneys, and other accessories. Apparatus for domestic, industrial and public lighting.
- Class 357. Lighting by acetylene gas or vaporized gasoline, alcohol, etc. Lamps, burners, chimneys, and other accessories and apparatus for domestic, industrial and public lighting.
- Class 358. Accessories to lighting: lighters, glasses, globes, shades, reflectors; screens, smoke consumers, chandeliers and fixtures.

GROUP 72

TEXTILE MATERIALS, SPINNING AND ROPE MAKING*

- Class 359. Machinery and apparatus used in preparing and spinning textile materials. Specimens of materials showing progress of work.
- Class 350. Detached parts of spinning machinery and special machines for their manufacture.
- Class 361. Apparatus used in subsequent operations; spooling, winding, twisting, throwing. Mechanical finishing of goods.
- Class 362. Apparatus for sorting, testing and registering. Apparatus for perfecting. Equipment for making cordage.

GROUP 73

EQUIPMENT AND PROCESSES USED IN THE MANUFACTURE OF TEXTILE FABRICS*

*Textile machinery not in operation as part of a process exhibit will be installed in Machinery Hall.

- Class 363. Apparatus used in operations preliminary to weaving; machines for warping, cop winders. Card preparing machines.
- Class 364. Hand and power looms for weaving plain cloths. Looms for weaving brocaded and embroidered fabrics, box looms.
- Class 365. Knitting machinery for hosiery. Machinery for making lace and tulle. Machinery for making trimmings.

GROUP 74

EQUIPMENT AND PROCESSES USED IN BLEACHING, DYEING, PRINTING AND FINISHING TEXTILES IN THEIR VARIOUS STAGES

- Class 366. Apparatus for singeing, brushing and shearing textile fabrics.
- Class 367. Apparatus for washing in lye, scouring, washing, drying and moistening various textile materials, whether matted, combed in thread or in web.
- Class 368. Apparatus for boiling and staining dye stuffs and stuffs for thickening fabrics.
- Class 369. Equipment for engraving in relief, or in incised work patterns, for printing on textiles.
- Class 370. Machines for starching, dyeing or printing. Apparatus for steaming.
- Class 371. Machinery of all kinds for finishing goods, for fulling, and for teasing; tenter-frames, calenders, machines for glazing, watering, embossing, beetling. Machines for measuring, folding, etc.
- Class 372. Appliances used for dyeing silks, for beating, shaking up, pinning out, lustering, etc.
- Class 373. Sweating boxes for thickening, apparatus for spotting, apparatus for bleaching by electricity.
- Class 374. Equipment and processes for laundry work. Washing and rinsing, bluing, drying, bleaching, ironing and finishing.
- Class 375. Industry of the dyers and scourers; dry cleaning by benzine and by other substances; cleaning by wet process; dyeing, pressing.
- Class 376. Specimens of textile materials bleached or dyed before spinning.
- Class 377. Specimens of threads or yarns of cotton, linen, wool, silk, etc., pure or mixed, bleached, dyed or mottled.
- Class 378. Specimens of textile fabrics bleached, dyed or printed.
- Class 379. Specimens of threads, yarns or fabrics which have been sized.
- Class 380. Specimens of chemical thickening of textile materials before they have been spun or woven.

GROUP 75

EQUIPMENT AND PROCESSES USED IN SEWING AND MAKING WEARING APPAREL

- Class 381. Common implements used in needle work.
- Class 382. Machines for cutting cloth, skins and leathers.
- Class 383. Machines for sewing, stitching, hemming, embroidering, etc.
- Class 384. Machines for making button-holes; for sewing gloves, leather, etc.; for plaiting straw.
- Class 385. Tailors' geese, flatirons and equipment.
- Class 386. Busts and figures for trying on garments.
- Class 387. Machines for plaiting straw for hats and making hats of straw, felt, etc.

GROUP 76

THREADS AND FABRICS OF COTTON

- Class 388. Cotton prepared and spun.
- Class 389. Fabrics of cotton, pure or mixed, plain or figured, unbleached, dyed or printed.
- Class 390. Cotton velvets.
- Class 391. Cotton ribbons.
- Class 392. Counterpanes.

GROUP 77

THREADS AND FABRICS OF FLAX, HEMP, ETC.; CORDAGE

- Class 393. Thread of flax, hemp, jute, ramie and other vegetable fibers.
 Class 394. Plain and figured canvas. Ticking. Damask linen. Cambrics and lawns. Plain and fancy handkerchiefs.
 Class 395. Fabrics of flax, or hemp, mixed with cotton or silk.
 Class 396. Fabrics and vegetable fibres other than cotton, flax, hemp, jute or ramie.
 Class 397. Cordage, cables, rope, twine, etc.

GROUP 78

YARNS AND FABRICS OF ANIMAL FIBERS

- Class 398. Combed animal fibers. Yarn of combed animal fibers.
 Class 399. Carded animal fiber. Rovings unbleached or dyed. Yarn of carded animal fibers.
 Class 400. Cloths of combed or carded animal fibers.
 Class 401. Cloths for ladies' wear, made from animal fiber.
 Class 402. Dress goods of combed or carded animal fibers, mixed with cotton or silk.
 Class 403. Muslin delaine, tweeds, merinos, china-satins, serges, mohairs, etc.
 Class 404. Fabrics of carded animal fibers, not fullled or slightly fullled; flannels, tartans, molletons, etc.
 Class 405. Knitted stuffs in combed or carded animal fibers.
 Class 406. Shawls of animal fibers, pure or mixed. Cashmere shawls.
 Class 407. Ribbons and braids of animal fibers, pure or mixed with cotton, flax, silk or floss silk.
 Class 408. Fabrics of hair, pure or mixed.
 Class 409. Blankets.
 Class 410. Felts of animal fibers for carpets, hats, boots and shoes, etc.

GROUP 79

SILK AND FABRICS OF SILK

- Class 411. Silk raw, thrown, twisted.
 Class 412. Floss silk and silk waste.
 Class 413. Threads of floss silk and silk waste.
 Class 414. Artificial silks.
 Class 415. Fabrics of pure silk, silk floss, or silk waste; fabrics of silk or silk floss mixed with gold, silver, wool, cotton, thread, etc., plain, figured, or brocaded, unbleached, dyed or printed.
 Class 416. Velvets and plushes.
 Class 417. Ribbons of silk, or silk floss, pure or mixed.
 Class 418. Shawls of silk or silk floss, pure or mixed.

GROUP 80

LACES, EMBROIDERY AND TRIMMINGS

- Class 419. Lace made by hand; laces, blonde or guipure, wrought on pillow or with the needle or crochet, made of flax, cotton, silk, wool, gold, silver or other threads.
 Class 420. Laces made by machinery; tulle, plain or embroidered; imitation lace, blonde and guipure, in thread of every kind.
 Class 421. Embroidery made by hand; embroidery by needle or crochet with thread of every kind, on all kinds of grounds (fabric, net, tulle, skin, etc.) including needle work upon canvas as well as embroidery appliqué, or ornamented with gems, pearls, jet, spangles of metal, or other material, feathers, shells, etc.
 Class 422. Embroidery made by machinery, with the foundation preserved, or with the foundation cut or burned away.
 Class 423. Trimmings: galloons, lace or braids, fringes, tassels, all kinds of appliqué and ornamental work, hand-made or woven, for millinery or garments, ecclesiastical vestments, civil or military uniforms; for furniture, saddlery, carriages, etc. Threads and plates of metal, gold or silver, real or imitation, spangles, chenilles, and all other articles used for trimmings.
 Class 424. Church embroidery; church ornaments and linen; altar cloths, banners and other objects for religious ceremonies in fabrics, ornamented with lace, embroideries and trimmings.
 Class 425. Curtains with lace, guipure, or embroidery, upon tulle or fabrics; blinds, screens, portieres, lambrequins, and other draperies, ornamented with lace, embroidery and trimmings.

GROUP 81

INDUSTRIES PRODUCING WEARING APPAREL FOR MEN, WOMEN AND CHILDREN

- Class 426. Clothing to measure for men and boys; ordinary costumes, suits for hunting and riding, leather breeches and similar articles, suits for gymnastic uses and games, military and civil uniforms, campaign clothing of special types, robes and costumes for magistrates, members of the bar, professors, ecclesiastics, etc., liveries, various costumes for children.
 Class 427. Clothing, ready made for men and boys.
 Class 428. Clothing to measure for women and girls; dresses, vests, jackets, cloaks (made by ladies' tailors, dress makers, or cloak makers), riding habits, sporting suits.
 Class 429. Clothing ready made for women and girls. Patterns.

GROUP 82

FURS AND SKINS, FUR CLOTHING; LEATHER, BOOTS AND SHOES

- Class 430. Furs and skins, dressed and tanned.
- Class 431. Fur clothing, caps, hats, hoods, gloves, boots, etc.
- Class 432. Fur mats and robes; fur trimmings.
- Class 433. Leather in every variety; tanned, curried, enameled, patent leather, wash leather, etc.
- Class 434. Machines for cutting and preparing parts of boots or shoes; machines for sewing boots or shoes; machines for lasting, pegging, nailing, screwing.
- Class 435. Boots and shoes, for men, women and children; boots, bootees, shoes, slippers, pumps, overshoes, soles, accessories, etc.; gaiters.
- Class 436. Military and naval campaign footwear.
- Class 437. Gloves made of skins.

GROUP 83

VARIOUS INDUSTRIES CONNECTED WITH CLOTHING

- Class 438. Hats; hats of felt, wool, straw, or silk; caps; trimmings for hats.
- Class 439. Artificial flowers for dressing the hair, for dress, and for all other uses. Feathers. Millinery. Hair: coiffures, wigs and switches.
- Class 440. Shirts and underclothing for men, women and children.
- Class 441. Hosiery and gloves of cotton, wool, silk and floss silk, etc., knitted hosiery; cravats and neck-ties.
- Class 442. Corsets.
- Class 443. Elastic goods, suspenders, garters, belts.
- Class 444. Canes, whips, riding whips, sun-shades, parasols, umbrellas.
- Class 445. Buttons: buttons of china, metal, cloth and silk, mother-of-pearl, and other shell, ivory-nut, horn, bone, papier-maché, etc.
- Class 446. Buckles, eyelets, hooks and eyes, pins, needles, etc.
- Class 447. Fans and handscreens.

GROUP 84

SAFETY APPLIANCES

- Class 448. Safety appliances and devices for protection of those engaged in manufacturing work and processes, not exhibited in connection with machines. (See also Classes 472 and 476.)

GROUP 44

Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. Electric Eraser Outfits. Mch., 4th St., bet. Avs. E & F., 2nd and 4th St., bet. Avs. C & C2.

GROUP 45

CUTLERY

Simmons Hardware Company, St. Louis, Mo., Manufacturers. 5th St. cor. Av. C. Manufacturers and distributors of Keen Kutter Tools, Cutlery and Hardware. 80,000 items cataloged.

GROUP 52

BRUSHES, FINE LEATHER ARTICLES, FANCY ARTICLES AND BASKET WORK

Bissell Carpet Sweeper Co., The, Gd. Rapids, Mich. Cpt. Swprs. Mfr., 8th St. & Av. D. Cassard, Hamilton, Baltimore, Md. Broom & Brush Sewing Mches. Mfr., 8th St. & Av. D. Hoag Duster Company, The, Monticello, Ia. Feather Dusters. Mfr., 8th St. & Av. D. Levenson Company, San Francisco, Cal. Brooms and Brushes. Mfr., 8th St. & Av. D.

Malm, C. A. & Co., S. F., Cal. Mfrs 7th St., bet. Avs. B&C. Portfolios, toilet cases, etc. National Veneer Products Company, Mishawaka, Ind. Bags, Suitcases, etc. Mfr., Av. B, cor. 8th St. "Indestructo" Sanitary Hampers.

O-So-Ezy Mop Co., Detroit, Mich. Polish mops, dusting dusters. Mfr., 7th St., cor. Av. D. Ox Fibre Brush Co., Frederick, Md. Brushes. Mfr., 8th St. & Av. D.

Reese, Fred W., Paris, Ill. Broom winding & trimming machines. Mfr., 8th St. & Av. D. Wizard Products Company, Chicago, Ill. Mops, dusters, brushes. Mfr., 8th St. & Av. D.

GROUP 53

ARTICLES FOR TRAVELING AND FOR CAMPING. INDIA RUBBER AND

GUTTA PERCHA INDUSTRIES

Ceresit Waterproofing Co., Chicago, Ill. Waterproofing materials. Mch. Pal., 5th St. & Av. I. Parrott & Co., S. F., Coast Representative. See ad on front cover of Machinery Catalogue.

Graton & Knight Mfg. Co., Worcester, Mass. Trunk and suitcase accessories. Block 13, Palace of Machinery.

Hartmann Trunk Co., The, Racine, Wis. Mfr. Av. B, cor. 7th St. Trunks, etc. Malm, C. A. & Co., San Francisco, Cal. Mfr., 7th St., bet. Avs. B & C. Trunks, etc.

National Veneer Products Company, Mishawaka, Ind. Trunks, etc. Mfr., Av. B, cor. 8th St. "Indestructo" trunks, luggage and Veneer specialties. Traveling bags, suitcases; N. V. P. trunks.

Union Oil Company of California, San Francisco, Cal. Min. Pal., 6th St. & Av. B. Asphalt as rubber substitute.

Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa. Trans. Pal., 5th St. & Av. C. Vulcanizer.

GROUP 54

HUNTING EQUIPMENT AND PRODUCTS OF HUNTING

Brunswick-Balke-Collender Co., The, of California, S. F., Cal. Mfr., Av. A, cor. 6th St. Hercules Powder Company, San Francisco, Cal. Explosives. Min. Pal., Av. B & 7th St. Black sporting powder. Smokeless sporting powder. See exhibit in Section 30, in Palaece of Mines & Metallurgy.

National Veneer Products Company, Mishawaka, Ind. Trunks, etc. Mfr., Av. B. cor. 8th St. "Indestructo" Golf Bags.

Remington Arms-Union Metallic Cartridge Co., Bridgeport, Conn. Mfr. Av. C, cor. 7th. Remington Arms.

Winchester Repeating Arms Co., New Haven, Conn. Mfr., bet. Avs. C & D, 7th St. Sportsman's arms & ammunition.

GROUP 55

FISHING EQUIPMENT AND PRODUCTS

Owen Bucket Co., Cleveland, Ohio. Clam shell buckets. Mch. Pal., 5th St. & Av. I. Parrott & Co., S. F., Cal., Representatives. See ad on front cover of Machinery Catalogue.

GROUP 57

PERMANENT DECORATION AND FIXED FURNITURE FOR BUILDINGS AND DWELLINGS

National Veneer Products Company, Mishawaka, Ind. Veneer panels. Mfr., Av. B, cor. 8th.

Paraffine Paint Company, The, San Francisco, Cal. Roofing Felt. Mines & Metallurgy, Av. B & 7th St. Imitation of wood; floor covering. Deadening felt, roofing felt.

GROUP 58

OFFICE AND HOUSEHOLD FURNITURE AND UTILITIES

American Radiator Co., Chicago, Ill. Mfr., Av. D & 6th St. Vacuum Cleaners. The Arco Wand.

Bissell Carpet Sweeper Co., The, Gd. Rapids, Mich. Mfr. 8th St. & Av. D. Suction Clnrs. Brunswick-Balke-Collender Co., The, of Calif., S. F., Cal. Mfr. Av. A, cor. 6th St.

Brunswick-Balke-Collender Company, The, of California. Mfr., Av. A, cor. 6th St. Billiard supplies, billiard and pocket billiard tables; bowling alleys and supplies; bar, cigar, and soda counters; Backus Ten-pin Setting Machines.

Continental Bedding Manufacturing Co., S. F., Cal. Mfr., 5th, bet. Avs. B & C. Library furniture.

Doten-Dunton Desk Co., Cambridge, Mass. Mfr., 5th St., Av. A & 6th St. Commercial furniture.

Gunn Furniture Co., The, Grand Rapids, Mich. Mfr. Av. A & 6th St. Sectional bookcases.

Hartman Trunk Co., The, Racine, Wis. Mfr. Av. B, cor. 7th. Hartman Wardrobe Spec.

Home Washing Machine Co., Brooklyn, N. Y. Washing machines. Mch. 1st St. & Av. D.

Hoover Suction Sweeper Co., The, New Berlin, Ohio. Suction Sweepers. Mfr., 8th St., bet. Avs. B & C. San Francisco Representative, W. A. Hawley, Office, 320 Market St.

Innovation Electric Co., N. Y. Portable & suction cleaners. Mch. 1st St. & Av. D.

Karpen, S. & Bros., Chicago, Ill. Mfr. 5th St., cor. Av. A. Upholstered Furniture.

Kewanee Private Utilities Company, Kewanee, Ill. Vacuum Clnrs. Mch., 1st & 2nd Sts. & Av. E.

Marland, W. J., Oakland, Cal. Washing Machines. Mch. Coll. Exh. 1st St. & Av. D.

Peck & Hills Furniture Co., Chicago, Ill. Home Furnishings. Mfr., 5th St., bet. Avs. A & B. Branch offices in New York, San Francisco, Oakland, Los Angeles and Denver.

Singer Sewing Machine Co., New York, N. Y. Household Furniture. 1st St., Av. D, 2nd St. & Av. E, V. I. Pal., Sewing Machines and supplies.

Spencer Turbine Cleaner Co., The, Hartford, Conn. Vacuum cleaning apparatus. Mfr. 7th St., Av. B & 8th St.

Van Dorn Iron Wks. Co., Cleveland, O. Metal Furniture. Min. Pal. Com. with U. S. Steel Corp'n. Exhibit. "1900" Washer Co., The, Binghamton, N. Y. Washing Machines. Mfr. 8th St. & Av. D.

GROUP 60

HARDWARE AND WOODENWARE

- American Pulley Co., The, Philadelphia, Pa. Mch. Pal., 4th St. & Av. L. Pressed metal sash pulleys; miscellaneous pressed and drawn metal shapes; sash pulleys.
- Am. Bridges Co., Pittsburg, Pa. Nuts, bolts, clevises, etc. Min. Pal.
- Am. Sheet & Tin Plate Co., Pittsburgh, Pa. Steel roofing & siding sheets. Min. Pal.
- Am. Steel & Wire Co., Chicago, Ill. Fencing, nails, wire products, horseshoes. Min. Pal.
- Atkins, E. C. & Co., Indianapolis, Ind. Saws. Mfr. 5th St., bet. Avs. C & D.
- Bliss Company, E. W., Brooklyn, N. Y. Steel pinions. Mch., 3rd St. & Avs. F & G.
- Broderick & Bascom Rope Co., St. Louis, Mo. Wire Rope. Mfr. Av. C, cor. 6th St. Yellow Strand "Powersteel" Rope.
- California Redwood Burl Co., Eureka, Cal. V. L., Av. B, cor. 3rd St. Novelties.
- Disston, Henry & Sons, Inc., Philadelphia, Pa. Mfr. Av. C, cor. 6th St. Tools.
- Graton & Knight Mfg. Co., Worcester, Mass. Belt Makers' Tools. Block 13, Palace of Machinery.
- Hermann Safe Co., The, San Francisco, Cal. Mfr., 6th St., bet. Avs. C & D. Safes.
- Lukenheimer Co., The, Cincinnati, O. Pal. of Machinery. 1st St. & Av. G. Ground Key Work.
- Meurer Eros. Co., Brooklyn, N. Y. Mfr. Av. D, bet. 6th & 7th Sts. Tin roofing.
- Mitts & Merrill, Saginaw, Michigan. Mfr. 6th St., bet. Avs. C & D. A giant key seater made in eight sizes for cutting key seats in all sizes of holes, from 1-2 inch up. Key seats ranging in width from 1-16 to 4 inches wide.
- National Tube Co., Pittsburgh, Pa. Seamless Tube, Exh. & Photos. Mines Palace.
- Niagara Mach. & Tool Wks., Buffalo, N. Y. Sheet metal workers' tools. Mch., 3rd & G2.
- Oster Manufacturing Co., The, Cleveland, O. Stocks & Dies. Mch. 4th St. & Av. C-2.
- Owen Bucket Co., Cleveland, O. Clam shell buckets. Mch. Pal., 5th St. & Av. I. Parrott & Co., S. F. Cal., Repres. See ad on front cover of Machinery Catalogue.
- Simmons Hardware Company, St. Louis, Mo. Mfr., 5th St., cor. Av. C. Manufacturers and distributors of Keen Kutter Tools, Cutlery and Hardware. 80,000 items cataloged.
- Simonds Manufacturing Co., Fitchburg, Mass. Mfr., 6th St., bet. Avs. C & D. Tools.
- Stanley Works, The, New Britain, Conn. Shelf hardware. Mfr., 6th St., bet. Avs. C & D. Wrought builders & shelf hardware. Box strapping and cold-rolled strip steel.
- Universal Caster & Foundry Co., New York, N. Y. Mfrs. 6th St., bet. Avs. C & D.
- Weyer Extension Ladder Co., Stockton, Cal. Extension Ladders. Mfr. 8th St. & Av. D.
- Wells Brothers Company, Greenfield, Mass. Mfr., 5th St., Av. D & 6th St. Hardware.

GROUP 61

ELECTRO-THERMAL APPARATUS

- General Electric Co., Schenectady, N. Y. Electric cooking devices. 7th St., Av. B & 8th St.
- Marland, W. J., Oakland, Cal. Electro-Thermal Appliances Coll. Exh. Mch. 1st & Av. D.
- Slaughter Co., W. E., Chicago, Ill. Electro-Thermal Appliances. Mch. 1st St. & Av. D.
- Westinghouse Electric & Manufacturing Company, Pittsburg, Pa. Mch. Pal., 2nd St. & Av. C2. Electric Heating Devices. Sad irons, laundry irons, toaster stoves, disc stoves, chafing dishes, percolators. Samovars, saute pans, frying pans, air heaters,

Cozy Glow and luminous radiators. Electrotherms, curling irons, disc heaters, Bayonet heaters.

GROUP 62

INSULATING MATERIALS FOR ELECTRICITY

- General Electric Co., Schenectady, N. Y. Insulating Material, Fibrox. 7th St., Av. B & 8th St.
- Paraffine Paint Co., The, San Francisco. Pal. of Mines & Metallurgy. Av. B & 7th St. Insulating Tapes & Compounds.
- Standard Underground Cable Co., Pittsburgh, Pa. Elec. Ins. Mat. Mch. 3rd St. & Av. D.
- Union Oil Company of California, San Francisco. Min. Pal., 6th St. & Av. B. Asphalt for insulating.
- Westinghouse Electric & Manufacturing Company, Pittsburg, Pa. Trns. Palace, 5th St. & Av. C. Insulating Material.

GROUP 64

CARPETS, TAPESTRIES AND FABRICS FOR UPHOLSTERY

- Crex Carpet Co., New York, N. Y. Crex Covering. Mfr. Av. A, cor. 7th St.
- Lackawanna Leather Co., Hackettstown, N. J. Leather. Mfr., 7th St., bet. Avs. B & C. Spanish and Morocco Upholstery Leather.

GROUP 65

UPHOLSTERERS DECORATIONS

- Continental Bedding Manufacturing Co., S. F., Cal. Mattresses & bedding. 5th St., bet. Avs. B & D.

GROUP 67

PLUMBING AND SANITARY MATERIALS

- Crave Co., Chicago, Ill. Plumbing Materials. Mfr. Av. C, cor. 7th St.
- Simonds Mfg. Co., Fitchburg, Mass. Steel Discs. Mfr. 6th St., bet. Avs. C & D.

GROUP 69

APPARATUS AND PROCESSES FOR HEATING AND VENTILATION

- American Radiator Co., Chicago, Ill. Mfr. Av. D, bet. 5th & 7th Sts. The Ideal Boilers. The American Heat Radiators. Working Exhibit of Ideal Boilers and American Radiators in Horticultural Building. This building is heated entirely by our system. Inspection invited at Power Plant in Horticultural Gardens.
- Am. Sheet & Tin Plate Co., Pittsburgh, Pa. Stove & Range Sheets. Mines Palace.
- Bristol Co., The, Waterbury, Conn. Recording Thermometers & Pyrometers. Mch. 2nd St. & Av. D.
- Cleveland Foundry Co., The, Cleveland, O. Mfr., Av. D, bet. 5th & 6th Sts. Manufacturers of oil cooking stoves, oil heating stoves and cooking utensils. Perfection smokeless oil heaters. New Perfection oil cooking stoves. New Perfection fireless oil cooking stoves. Cabinets for New Perfection oil stoves. New Perfection yacht stoves. New Perfection water heater. New Perfection broiler. New Perfection toaster. New Perfection pancake griddle. New Perfection sadiron heater. New Perfection steel oven. The skill and experience of the world's largest manufacturer of oil burning devices is back of the Perfection line, the best materials, careful workmanship, standardized methods, constant inspection. The result—Perfection products give universal satisfaction and last indefinitely.
- Fess System Co., Inc., S. F., Cal. Burners for Heaters. Mch. 5th St. & Av. F.
- General Electric Co., Schenectady, N. Y. Electric Air Heater. 7th St. & Av. B & 8th St.

GROUP 69

Industrial Instrument Co., The, Foxboro, Mass. Recording Thermometers & Pyrometers. Mch. 3rd St. & Av. C-2.
 Lukenheimer Co., The, Cincinnati, O. Pal. of Mch. 1st St. & Av. G. Valves for steam use; Valves; Miscellaneous.
 Meurer Bros. Co., Brooklyn, N. Y. Ventilators. Mfr., Av. D, bet. 6th & 7th Sts.
 National Tube Co., Pittsburgh, Pa. Model of heating system. Mines Palace.
 Ray Mfg. Co., San Francisco, Cal. Burners for heaters. Mch. 5th St., bet. Avs. G & H.
 Robbins & Myers Co., The, Springfield, O. Exhaust Fans. Mch. 2nd St. & Av. C-2.
 U. S. Steel Corp'n & Subsy. Cos., N. Y. Coll. Iron & Steel Exhibit. Mines Palace.
 Weir Stove Co., Taunton, Mass. Mfr. Av. D & 6th St. Coal wood ranges, heating stoves, etc.
 Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. Electric Fans. 4th St., bet. Avs. E & F, 2nd & 4th Sts., Avs. C & O2.

GROUP 70

MANUFACTURE, DISTRIBUTION AND USES OF GAS FOR LIGHT AND FUEL

Bristol Co., The, Waterbury, Conn. Gas Meters. Mch. Pal., 2nd St. & Av. D.
 General Gas Light Company, San Francisco, Cal. Gas Arc Lamps. Mfr. Pal., 5th St. & Av. A. Humphrey Gas Arc Lamps; Humphrey Gas Mantles; Humphrey Semi-Indirect Fixtures; Humphrey Gas Irons; Gas Lighting Equipment of all kinds; Main Office & Factory. Kalamazoo, Mich. New York, London, E. C., and Wellington, New Zealand.
 Industrial Instrument Co., The, Foxboro, Mass. Gas Meters. Mch. Pal., 3d St., Av. C2.
 Meurer Bros. Co., Brooklyn, N. Y. Water Heaters. Mfr. Pal. Av. D, bet. 6th & 7th.
 National Tube Co., Pittsburgh, Pa. Pipe Fitting. Collective Exhibit. Min. Pal.
 U. S. Steel Corp'n & Subdy. Cos., N. Y. Coll. Iron & Steel Exh. Mines Pal.
 Utility Gas & Appliance Sales Co., N. Y. Gas Heaters. Mch. Pal., 3rd St. & Av. F.
 Weir Stove Company, Taunton, Mass. Gas Ranges. Mfr. Pal., Av. D & 6th St. "Coal, wood and gas ranges," "heating stoves and furnaces," "steam and water boilers."
 Chapman Valve Mfg. Co., Indian Orchard, Mass.
 Steam Valves; Water Valves and Hydrants; Gas Valves; Exhibit installed in the Division of the City of Springfield.

GROUP 71

APPARATUS AND METHODS FOR LIGHTING NOT OTHERWISE CLASSIFIED

Coleman Lamp Co., Wichita, Kan. Boulevard Lamps. Mfr. Pal., 7th St., bet. Avs. C & D.
 General Electric Co., Schenectady, N. Y. Shades, reflectors. 7th St., Av. B & 8th St.
 Hyde, Henry C. Co., San Francisco, Cal. Mch. Pal., 4th St., bet. Avs. E & F. Methods of Lighting.
 Safety Car Heating & Lighting Co., The, N.Y. Gas Lanterns. Mch. Pal., 1st St. & Av. D.
 Union Metal Mfg. Co., Canton, O. Metal Columns. Min. Pal. Combined with U. S. Steel Corp'n. Exh.
 Utility Gas & Appliance Sales Co., N. Y. Gas Heaters. Mch. Pal., 3rd St. & Av. F.
 Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa. Mch. Pal. Luxsolite Lamp Fixtures. 2nd St. & Av. C-2.

GROUP 72

TEXTILE MATERIALS, SPINNING AND ROPE MAKING

Graton & Knight Mfg. Co., Worcester, Mass. Mch. Pal., 2nd St. & Av. H. Mill Strapping.
 Tubbs Cordage Company, San Francisco, Cal. 8th St., bet. Avs. O & D.

GROUP 74

EQUIPMENT AND PROCESSES USED IN BLEACHING, DYEING, PRINTING AND FINISHING TEXTILES IN THEIR VARIOUS STAGES

American Laundry Machinery Company, The, New York, N. Y. Mfr., 7th, Av. D & 8th. Modern Laundry Machinery. Factories and Offices at Cincinnati, Chicago, and Rochester. Office at New York. Western Laundry Machinery Company, San Francisco and Los Angeles, Cal., Pacific Coast Agents.
 Botany Worsted Mills, Passaic, N. J. Worsted & Woolens. V. I., 2nd St., bet. Avs. D & E. Specimens of textile materials bleached or dyed before spinning. Specimens of threads or yarns of cotton, linen, wool, silk, etc., pure or mixed, bleached, dyed or mottled. Specimens of textile fabrics bleached, dyed or printed.

United States Hoffman Co., Syracuse, N. Y. Mfr., 8th St., bet. Avs. C & D. Sanitary Steam Clothes; Knit Goods, and Laundry Pressing Machinery.

GROUP 75

EQUIPMENT AND PROCESSES USED IN SEWING AND MAKING WEARING APPAREL

Atkins, E. C. & Co., Indianapolis, Ind. Leather Slitting Knives. Mfr. 5th St., bet. Avs. C & D.
 Disston, Henry & Sons, Inc., Philadelphia, Pa. Cloth Knives and Leather Splitting Knives. Mfr. Pal., Av. C, cor. 6th St.
 Eastman Machine Co., Buffalo, N. Y. Mfr., 7th & 8th Sts., bet. Avs. C & D. Manufacturers. Alternating and direct current reciprocating cloth cutting machine. Alternating and direct current rotary cloth cutting machine. W. & J. cuff-making machine.
 General Electric Company, Schenectady, N. Y. Electric Flatirons. 7th St., Av. B & 8th St.
 Lewis Blind-Stitch Machine Company, St. Louis, Mo. Mfr., 7th & 8th Sts., bet. Avs. C & D. Lock stitch and chain stitch blind-stitch sewing machines, for padding coat fronts and collars; filling linings in sleeves; waistband linings and curtains in trousers. Unlined coats and half-lined coats; trousers bottoms, plain and cuffs; overcoat facings and bottoms; cloak facings and bottoms.
 Universal Button Fastening & Button Co., Detroit, Mich. Mfr., 7th & 8th Sts., bet. Avs. C & D. All kinds of metal buttons; automatic button attaching machine; cloth pressing machine.

Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa. Mch. Pal., 2nd St. & Av. C-2. Tailors' Irons.

GROUP 77

THREADS AND FABRICS OF FLAX, HEMP, ETC.; CORDAGE

Tubbs Cordage Co., San Francisco, Cal. Cordage. Mfr., 8th St., bet. Avs. C & D.

GROUP 78

YARNS AND FABRICS OF ANIMAL FIBERS

Botany Worsted Mills, Passaic, N. J. Worsted & Woolens. V. I., 2nd St., bet. Avs. D & E. Yarns of combed animal fibers. Yarns of carded animal fibers. Cloths for ladies' wear, made from animal fiber. Muslin de-laine, serges, mohairs, etc. Fabrics of carded animal fibers not fully or slightly fulled; flannels, etc.

GROUP 81
INDUSTRIES PRODUCING WEARING AP-
PAREL FOR MEN, WOMEN
AND CHILDREN

Strauss, Levi & Co., San Francisco, Cal. Mfr. 7th & 8th Sts., bet. Avs. C & D. Overalls; Two Horse Brand; Coveralls; Two Horse Brand (Children's Play Garment) Coverall Nighties; Two Horse Brand Shirts; Sunset; Pants; Levi Strauss Make.

GROUP 82
FURS AND SKINS, FUR CLOTHING;
LEATHER, BOOTS AND SHOES

Assoc. Glove Mfrs. of Cal., S. F. Wkg. Exh. of gloves. Mfr. Av. B, cor. 6th St.
Bergmann, Theo., Shoe Mfg. Co., Inc., Port-land, Ore. Shoes. Mfr., 6th & 7th, bet. Avs. B & C.
Clapp, Edwin & Son, Inc., E. Weymouth. Mfr. 6th, bet. Avs. B&C, & 7th bet. Avs. B&C.
Cook, A. J. & J. R., San Francisco, Cal. Leather. Mfr. 7th St., bet. Avs. B & C.
Frank, S. H. & Co., San Francisco, Cal. Mfr. 6th St., cor. Av. B. Leather for shoes.
Graton & Knight Mfg. Co., Worcester, Mass. Pal. of Mch., 2nd St. & Av. H. Hand Leathers and Aprons.
Johansen Bros. Shoe Company, St. Louis, Mo. Mfr. 6th & 7th Sts., bet. Avs. B & C. Women's and children's shoes.
Keith Company, George E. Campello, Brock-ton, Mass. Mfr. Av. C & 6th St. Walk-Over Shoes, for Men and Women.
Legallet-Hellwig Tanning Co., S. F., Cal. Mfr. 7th St., bet. Avs. B & C. Leather.
Northwestern Leather Co., Boston, Mass. Leather. Pal. of Mfr., 7th St., bet. Avs. B & C. Chrome and bark tanned side upper leather.
Pfister & Vogel Leather Co., Milwaukee, Wis. Mfr., 6th St., bet. Avs. B & C. Tanners of a large variety of high-grade shoe uppers and sole, harness and glove leathers. Used the world over.
Reuping, Fred Leather Co., Fon du Lac, Wis. Leather. Pal. of Mfr., 7th St., bet. Avs. B & C. Chrome tanned calf and side-upper shoe leathers.
Rice & Hutchins, Inc., Boston, Mass. Mfr. Av. C, cor. 7th St. Manufacturers of Boots & Shoes.
Schmidt, Carl E. & Co., Inc., Detroit, Mich. Leather. Mfr. 7th St., bet. Avs. B & C. Black and colored calf skins.
United Shoe Machinery Co., Boston, Mass. Shoe-making Machinery. V. I., 4th St., Av. E & 5th St.
United States Leather Co., New York, N. Y. Leather. Mfr., Av. B, cor. 6th St. Sole Leather; Belting Leather; Harness Leather; Skirting Leather.

GROUP 83
VARIOUS INDUSTRIES CONNECTED
WITH CLOTHING

Stetson, John B., Company, Philadelphia, Pa. Mfr. Av. C, cor. 7th St. Hats, soft and stiff, of the finest quality of fur felt.
Strauss, Levi & Co., San Francisco, Cal. Mfr., 7th & 8th Sts., bet. Avs. C & D. Overalls; Two Horse Brand; Coveralls; Two Horse Brand, (Children's Play Garment) Coverall Nighties; Two Horse Brand; Shirts; Sunset; Pants; Levi Strauss Make.

Universal Button Fastening & Button Co., De-troit, Mich. Buttons. Mfr., 7th & 8th Sts., bet. Avs. C & D.

GROUP 84

SAFETY APPLIANCES

Atkins, E. C. & Co., Indianapolis, Ind. Saw Guards. Mfr. 5th St., bet. Avs. C & D.
Bristol Co., The, Waterbury, Conn. Safety Set Screws. 2nd St. & Av. D.
Graton & Knight Mfg. Co., Worcester, Mass. Pal. of Mch., 2nd St. & Av. H. Hand Leathers and Aprons.
International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Safety appliances and de-vices for protection of those engaged in manufacturing work and processes.
Patent Scaffolding Co., New York, N. Y. Pal. of Mch., 5th St. & Av. I. Safety Scaffolds. Parrott & Co., S. E. Coast Repres. See ad on front cover of Machinery Catalogue.
U. S. Steel Corp'n. & Subsdy. Cos., New York. Coll. Safety Appl. Exh. Min. Pal. American Bridge Co. American Sheet & Tin Plate Co. American Steel & Wire Co. Bunsen Coal Co. Carnegie Steel Co. Duluth, Missabe & Northern Ry. Co. H. C. Frick Coke Co. Illinois Steel Co. Oliver Iron Mining Co. National Tube Co. Tennessee Coal, Iron & R. R. Co.
Lunkenheimer Co., The, Cincinnati, O. Engi-neering Appliances. Mch. Pal., 1st St., Av. G-2. Valves for Steam Use; Valves; Mis-cellaneous; Ground Key Work. Exhibit in-stalled in Block 6, in Palace of Machinery.
American Pulley Co., The, Philadelphia, Pa. Sash Pulleys. Mch. Pal., 4th St. & Av. I. Pressed metal sash pulleys; miscellaneous pressed and drawn metal shapes. See Ex-hibit in Block 45, in Machinery Building.

GOVERNMENT EXHIBIT

United States Post Office Department—A Model Post Office will be maintained in the Mines Palace. Here all the workings of the service will be shown and the post facilities of the Exposition provided. Mail addressed in care of the Exposition will be delivered through the Model Post Office or held there subject to order. Carriers will deliver and collect mail throughout the Exposition Grounds. Mail boxes will be placed at convenient points; special de-livery, registry, parcel post, money order and postal savings service will be provided. There will be shown an exhibit of United States postage stamps of every issue since the adoption by the United States of this means of collecting postage. All workings of the Model Post Office will be carried on in full view of visitors. Motion pic-tures of all phases of mail handling opera-tions will be shown in the motion picture room of the Mines Palace. A standard steel Railway Post Office car will be shown in operation in the Transportation Building.

Foreign Section

NEW ZEALAND

GROUP 49

Barclay, Laura E., Auckland. Pyrography.
Aves. C & D, bet. 6th & 8th Sts.

GROUP 50

Parkinson, W. & Co., Auckland. Marble Sculpture.
Agr., Aves. C & D, bet. 6th & 8th Sts.

GROUP 58

Public Works Department, Wellington. Overmantel piece. Agr., Aves. C & D, bet. 6th & 8th Sts.

Winks & Hall, Auckland. Furniture. Agr.,
Aves. C & D, bet. 6th & 8th Sts.

GROUP 77

Donaghy's Rope & Twine Co., Ltd., Dunedir.
Ropes. Agr., Aves. C & D, bet. 6th & 8th Sts.

Madden Brothers, Christchurch. Rope. Agr.,
Aves. C & D, bet. 6th & 8th Sts.

Wellington Cordage Co., Ltd., Wellington.
Binder Twine. Agr., Aves. C & D, bet. 6th & 8th Sts.

GROUP 78

Mosgiel Woolen Factory Co., Ltd., Dunedir.
Woolen Robes. Agr., Aves. C & D, bet. 6th & 8th Sts.

GROUP 80

Bennett, Miss H. I., Tinarn, New Zealand.
Table Center. Agr., Aves. C & D, bet. 6th & 8th Sts.

Roche, Mrs. J., Otago. Lace. Agr., Aves. C & D, bet. 6th & 8th Sts.

Smith, Mrs. E. L., Te Puke. Laces. Agr.,
Aves. C & D, bet. 6th & 8th Sts.

PHILIPPINE ISLANDS

GROUP 58

Ahern, Geo. P., Manila. Home Furniture. Agr.,
Av. D & 2nd St.

Barber, J. R., Manila. Chairs. Agr., Av. D & 2nd St.

Fischer, A. F., Manila. 2 tables. Agr., Ave. D & 2nd St.

Harbord, Col. J. G., Manila. Desks, side boards, etc. Agr., Av. D & 2nd St.

Johnson, Justice Finley, Manila. Home Furniture. Agr., Av. D & 2nd St.

Klar, Frank, Cotaboto. Table. Agr., Av. D & 2nd St.

Pujalte, Miguel, Manila. Office Desk. Agr.,
Av. D & 2nd St.

Seaver, Capt., Manila. Tables. Agr. Av. D & 2nd St.

Schneider, E. E., Manila. Serving Table. Agr.,
Av. D & 2nd St.

Walker, Mrs. Barbour, Manila. Table. Agr.,
Av. D & 2nd St.

Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHARLES C. MOORE
President

Director-in-Chief
FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department **E**

VARIED INDUSTRIES

CHAS. H. GREEN, Chief

Preliminary Edition

Published for the Division of Exhibits by
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PALACE OF VARIED INDUSTRIES 0



COURT OF FLOWERS

AVENUE OF PROGRESS



AVENUE OF PALMS

FLOOR PLAN

PALACE OF VARIED INDUSTRIES
PANAMA-PACIFIC INTERNATIONAL EXPOSITION

OPENS FEBRUARY 20 SAN FRANCISCO U.S.A. 1915 CLOSES DECEMBER 4

HOW TO LOCATE AN EXHIBIT

The Palace of Varied Industries is laid out in blocks, which are consecutively numbered from 1 to 32, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Sixth), running north to south, and as avenues (A to E), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Varied Industries, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

GROUP 44

- Champion-Internat'l. Co., Lawrence, Mass. Papers. Lawr. Coll. Exh. V. I., 2nd St., Av. A & 3rd.
 Eaton, Crane & Pike Co., Pittsfield, Mass. Fine Stationery. 4th St., cor. Av. A.
 Faber, Eberhard, Brooklyn, N. Y. Lead pencils, pen holders, crayons. 4th, cor. Av. B.
 Nat'l Folding Box & Paper Co., The, New Haven, Conn. Folding Paper Boxes. Av. B & 2nd St.
 Novelty Cutlery Co., The, Canton, O. Desk furnishings, etc. (See Multiplex Display Fixtures). Av. A, cor. 2nd St.

GROUP 45

- Meriden Cutlery Co., Meriden, Conn. Cutlery. Av. A, bet. 3rd & 4th Sts.
 Novelty Cutlery Co., The, Canton, O. Cutlery. (See Multiplex Display Fixture.) Av. A, cor. 2nd St.
 Simmons Hardware Co., St. Louis, Mo., Keen Kutter Cutlery. Mfr. V. I., 5th St., cor. Av. C.

GROUP 46

- Baird-North Co., Providence, R. I. Silverware. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Baldwin Jewelry Co., San Francisco, Cal. Silverware. V. I., Av. B, cor. 4th St.
 Gorham Co., The, New York. Silver & plated ware, etc. V. I., 3rd St., Av. C & 4th St.
 International Silver Co., Meriden, Conn. Silversmiths. 4th St., bet. Avs. B & C, Sterling Silver, Hotel Silverware. Gold and Silver Plate. Ecclesiastical Ware. Out Glass. Salesrooms, New York, Chicago and San Francisco, 150 Post St.
 Regal Silver Mfg. Co., The, New Haven, Conn. Plated ware and coffee percolators. Av. B & 2nd St.

GROUP 47

- Baird-North Company, Providence, R. I. Jewelry. Collective Exh. V. I., 3rd St. Av. E & 4th St.
 California Gem Co., S. F., Cal. Precious and semi-precious stones. Av. B, cor. 4th St.
 Chapard Mfg. Co., Providence, R. I. Jewelry. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Low-Taussig-Karpeles Co., Providence, R. I. Jewelry. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Lyons Manufacturing Co., Providence, R. I. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Marden & Kettlety Co., Providence, R. I. Jewelry. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Wightman & Hough Co., Providence, R. I. Coll. Exh. V. I., 3rd St., Av. E & 4th St. elty Indian Blankets. Av. E & 3rd St.

GROUP 48

- Bristol Co., The, Waterbury, Conn. Electric Time Recorders. Mch., 2nd St. & Av. D.
 Herschede Hall Clock Co., The, Cincinnati, O., U. S. A. 3rd St., bet. Avs. B & C. Exclusive makers of high grade Chime Hall Clocks and Mantel Clocks; Chime Hall Clock Movements; Hall Clocks complete; Mantel Clocks complete; Hall and Mantel Clock cases, especially selected solid oak and mahogany, designed to harmonize with any surroundings in the home, institution or public building.
 Industrial Instrument Co., The, Foxboro, Mass. Elec. Time Recorders. Mch. 3rd St. & Av. C2.
 New Haven Clock Co., The, New Haven, Conn. Clocks & Watches. (New Haven Coll. Exh.) Av. B & 2nd St.

Waltham Watch Co., The, Waltham, Mass. Instruments and Instruments of Precision. 2nd St., Av. C & 3rd St.

Western Clock Co., La Salle, Ill. Av. B, cor. 3rd St. Makers of Alarm Clocks, Watches and Movements. "Made in La Salle, Ill., by Westclox"; Big Ben Alarm Clock; Baby Ben Alarm Clock; Sleepmeter Back Bell Alarm Clock; Sleepmeter Intermittent Alarm Clock; America Alarm Clock; The Lookout Alarm Clock; Ironclad Alarm Clock; Bingo Intermittent Alarm Clock; Boyproof Watch. Offices, La Salle, Ill.; Factories, Peru, Ill.; Pacific Coast Agents, Schloss Manufacturing Co., 42 Beale St., San Francisco, Cal.

GROUP 49

- California Redwood Burl Co., Eureka, Cal. Novelties from Sequoia or Redwood. V. I., Av. B, cor. 3rd St.
 Gorham Co., The, New York, N. Y. Bronzes. 3rd St., Av. C & 4th St.
 Oregon City Mfg. Co., Oregon City, Ore. Novelty Indian Blankets. Av. E and 3rd St.

GROUP 50

- Fulper Pottery Co., Flemington, N. J. Art Novelties. 2nd St., bet. Avs. B & C.
 Gorham Co., The, New York, N. Y. Bronzes. 3rd St., Av. C & 4th St.
 Vermont Marble Co., Proctor, Vt. Works of Art in Marble. Av. E & 2nd St.

GROUP 51

Gorham Co., The, New York, N. Y. Cathedral Windows. 3rd St., Av. C & 4th St.

GROUP 52

- Arlington Company, The, Arlington, N. J. Mfrs. V. I. Av. B, cor. 3rd St. Brushes for toilet use. Combs, dressing and fine combs. Mirrors for toilet use. Toilet goods and fancy goods. Pyralin Lacquers and Enamels. Arlington waterproof collars and cuffs. Transparent Pyralin Sheeting. Opaque Pyralin Sheeting in all colors.
 Baird-North Co., Providence, R. I. Leather Goods. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.
 Cal. Leather Novelty Wks., S. F., Cal. Purses & Leather Novelties. Av. A, cor. 2nd St.
 Fulper Pottery Co., Flemington, N. J. Fancy Articles. 2nd St., bet. Avs. B & C.
 Gorham Co., The, New York, N. Y. Fine Leather Goods. 3rd St., Av. C & 4th St.

GROUP 53

Faber, Eberhard, Brooklyn, N. Y. Rubber Bands & Rubber Erasers. 4th St., cor. Av. B.
 Tyler Rubber Co., Lawrence, Mass. Druggists' Rubber Sundries. (Lawrence Coll. Exh.) 2nd St. & Av. A & 3rd St.

GROUP 54

- Gantner & Mattern Co., San Francisco, Cal. Knit Goods. 4th St., cor. Av. E.
 Liebes, H. & Co., S. F., Cal. Rough and prepared furs, skins, etc. Av. D, cor. 3rd St.
 Oregon City Mfg. Co., Oregon City, Ore. Hunting and Outdoor Apparel. Av. E, & 3rd St.
 Pfister, J. J., Knitting Co., San Francisco, Cal. Knit Goods. Knit goods in Silk, Wool and Cotton, comprising Sweaters, Jerseys, Coat Sweaters, Gymnasium and Athletic Goods. Bathing Suits and Accessories. Infants' Hoods and Toques. Salesroom, 114 Sansome St., corner of Bush St. Mill at 8th and Parker Sts., Berkeley, Cal. Av. D, cor. 3rd St.
 Winona Mills, New Haven, Conn. Sweaters. (New Haven Coll. Exh.) Av. B' & 2nd St.

GROUP 55

Ashaway Line & Twine Mfg. Co., Providence, E. I. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.

GROUP 56

Mysto Mfg. Co., The, New Haven, Conn. Mechanical toys. (New Haven Coll. Exh.) Av. B & 2nd St.

GROUP 57

Fulper Pottery Co., Flemington, N. J. Ceramics for permanent decoration. 2nd St., bet. Avs. B & C.

Holt, Chas. L., Lawrence, Mass. Roof Connection & Expansion Joint. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

Vermont Marble Co., Proctor, Vt. Marble material for all purposes. Av. E & 2nd St.

GROUP 58

Peck & Hills Furniture Co., Chicago, Ill. Home Furnishings. V. I., 5th St., bet. Avs. A & B. Branch offices in New York, San Francisco, Oakland, Los Angeles, and Denver.

GROUP 59

Vermont Marble Co., San Francisco, Cal. Marble Monuments and Mausoleums. Av. E, 2nd.

GROUP 60

Ashaway Line & Twine Mfg. Co., Providence, E. I. Collective Exhibit. V. I., 3rd St., Av. E & 4th St.

California Redwood Burl Co., Eureka, Cal. Novelties. Av. B, cor. 3rd St.

Crescent Tool Co., Jamestown, N. Y. Pliers & Wrenches. (See Multiplex Display Fixtures.) Av. A, cor. 2nd St.

Sargent & Co., New Haven, Conn. Hardware Specialties. (New Haven Coll. Exh.) Av. B & 2nd St.

Watrous-Acme Mfg. Co., Des Moines, Ia. Fittings for doors, etc. (See Multiplex Display Fixtures.) Av. A, cor. 2nd St.

GROUP 64

Plymouth Mfg. Co., Lawrence, Mass. Rugs. (Lawrence Coll. Exh.) 2nd St., Av. A & 3d.

GROUP 65

California Cotton Mills Co., Oakland, Cal. Comforters. Av. E, cor. 2nd St.

Oregon City Mfg. Co., Oregon City, Ore. Woolen Bed Blankets, etc. Av. E & 3rd St.

GROUP 66

Friction Transfer Pattern Co., The, N. Y. Friction Transfer Patterns for China. 2nd St., bet. Avs. C & D.

Fulper Pottery Co., Flemington, N. J. Stoneware, plain and decorated. 2d, bet. B & C. Samish's Ceramic Art, San Francisco, Cal. Hand-Painted China. 2nd St., Av. B. Dinner ware, lamps, portraits, mantels. Studio, 230 Stockton St., opp. Union Square.

GROUP 67

Malleable Iron Fittings Co., New Haven, Conn. Collective Exhibit. Av. B & 2nd St.

Peck Bros. & Co., The, New Haven, Conn. Plumbers' Supplies. (New Haven Coll. Exhibit.) Av. B & 2nd St.

GROUP 68

International Silver Co., Meriden, Conn. Cut Glass. 4th St., bet. Avs. B & C.

GROUP 69

Fulper Pottery Co., Flemington, N. J. Cooking Utensils, Earthenware, etc. 2d, Avs. B & C.

GROUP 70

Sentinel Automatic Gas Appliance Co., The, New Haven, Conn. Gas Appliances. (New Haven Coll. Exh.) Av. B & 2nd St.

GROUP 71

De Laitte Automatic Gas Syndicate, San Francisco, Cal. Mch.

Fulper Pottery Co., Flemington, N. J. Lamps. 2nd St., bet. Avs. B & C.

GROUP 72

David Brown Co., Lawrence, Mass. Bobbins. (Lawrence Coll. Exh.) 2nd St., Av. A & 3d.

Moorehouse, A. D., Lawrence, Mass. Picker Straps. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

Robinson Bramley Co., Lawrence, Mass. Loom Pickers, etc. (Lawrence Coll. Exh.) 2nd, Av. A & 3rd.

Union Shuttle Co., Lawrence, Mass. Power Loom Shuttles. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

GROUP 74

Forsyth Dyeing Co., The, New Haven, Conn. Dyed Cotton Material. (New Haven Coll. Exh.) Av. B & 2nd St.

Singer Sewing Machine Co., New York, N. Y. Sewing Machines for attaching marking tapes to articles to be laundered and for name writing and darning on towels and other articles. 1st St., Av. D, 2nd St. & Av. E.

GROUP 75

Friction Transfer Pattern Company, The, New York, N. Y. Implements for Needlework. 2nd St., bet. Avs. C & D.

Greist Mfg. Co., The, New Haven, Conn. Sewing Machine Attachments. (New Haven Coll. Exh.) Av. B & 2nd St.

Singer Sewing Machine Company, New York, N. Y. Machines. 1st St., Av. D, 2nd St. & Av. E. Sewing machines for family use & for various kinds of manufacturing purposes requiring stitching processes, hemming, embroidering, etc.

GROUP 76

California Cotton Mills Co., Oakland, Cal. Toweling & Duck. Av. E, cor. 2nd St.

Everett Mills, Lawrence, Mass. Cotton Fabrics. 2nd St., Av. A & 3rd St. (Lawrence Collective Exhibit.)

Pacific Mills, Lawrence, Mass. Cotton Fabrics, 2nd St., Av. A & 3rd St. (Lawrence Collective Exhibit.)

Pacific Print Works, Lawrence, Mass. Cotton Fabrics. 2nd St., Av. A & 3rd St. (Lawrence Collective Exhibit.)

Tubular Woven Fabric Co., Pawtucket, E. I. Collective Exh. 3rd St., Av. E & 4th St.

GROUP 77

California Cotton Mills Co., Oakland, Cal. Damask, Jute Burlaps and Art Burlap. Fabrics of flax and hemp. Ropes & Twines. Av. E, cor. 2nd St.

International Harvester Company of America, Chicago, U. S. A. Agr., 4th St., bet. Avs. B & C. Cordage, cables, rope and twine.

Littwitz, Max, New York, N. Y. Hand spun linens. Av. D, cor. 2nd St.

Pemberton Mills, Lawrence, Mass. Tickings, Shirts and Awning Canvas. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

Smith & Dove Mfg. Co., Lawrence, Mass. Linen Thread, Yarn & Twine. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

GROUP 78

- Ayer Mills, Lawrence, Mass. Worsted Fabrics. (Lawrence Coll. Exh.) 2d, Av. A & 3d.
- Brightwood Mfg. Co., Lawrence, Mass. Worsted Fabrics. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.
- Gantner & Mattern Co., San Francisco, Cal. Knit Goods. 4th St. & Av. E.
- Pemberton Mills, Lawrence, Mass. Flannels. (Lawrence Coll. Exh.) 2nd St., Av. A & 3d.
- Oregon City Mfg. Co., Oregon City, Ore. Flannel cloths, etc. Av. E & 3rd St.
- Pacific Mills, Lawrence, Mass. Woolen Fabrics. (Lawrence Coll. Exh.) 2nd, Av. A & 3d.
- Pfister, J. J. Knitting Co., Inc., Berkeley, Cal. Knitted stuffs in combed or carded animal fibers. Av. D, cor. 3rd St.
- Washington Mills, Lawrence, Mass. Woolen & Worsted Fabrics. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.
- Wood Worsted Mills, Lawrence, Mass. Worsted Fabrics. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.
- Wright Mfg. Co., Lawrence, Mass. Braids & narrow fabrics. (Lawrence Coll. Exh.) Av. A & 2nd St.

GROUP 79

- Anderson Bros. Silk Co., Barnert Mill, Paterson, N. J. Broad Silks and Silk Novelties. Av. E, cor. 3rd St.
- Carlson Currier Co., Petaluma, Cal. Silk, raw, thrown; floss silk, silk fabrics, etc. Av. D, cor. 4th St.
- Gantner & Mattern Co., S. F., Cal. Knit goods. Silk shawls. 4th St., cor. Av. E.
- Silk Culture Society, Rutherford, Napa Co., Cal. Silks. 2nd St., Av. A.
- Wright Mfg. Co., Lawrence, Mass. Braids & narrow fabrics. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

GROUP 80

- Carlson Currier Co., Petaluma, Cal. Embroidery made by hand. Embroidery by needle or crochet with silk. Av. D, cor. 4th St.
- Friction Transfer Pattern Co., The, New York, N. Y. Friction Transfer Patterns for Embroidery. 2nd St., bet. Avs. C & D.
- Littwitz, Max, New York, N. Y. Hand-made laces and embroideries. V. I., Av. D, cor. 2nd St.
- Singer Sewing Machine Co., New York, N. Y. Lambrequins & Portieres, ornamented with embroidery, lace and trimmings. 1st St., Av. D & 2nd St. & Av. E.
- Wright Mfg. Co., Lawrence, Mass. Braids & narrow fabrics. (Lawrence Coll. Exh.) 2nd St., Av. A & 3rd St.

GROUP 81

- Butterick Publishing Co., New York, N. Y. 2nd St., Av. C & 3rd St. a. Butterick Patterns & Fashions. b. The Delineator. c. Butterick Designs for Embroidery, etc. Headquarters in London, Paris, Berlin.
- Gantner & Mattern Co., San Francisco, Cal. Knit Goods. 4th St., cor. Av. E.
- Liebes, H. & Co., S. F., Cal. Ready made clothing for women & girls. Av. D, cor. 3rd St.
- Oregon City Mfg. Co., Oregon City, Ore. Clothing for men & women. Av. E & 3rd St.
- Pfister, J. J. Knitting Co., Inc., Berkeley, Cal. Knit goods in cotton, wool & silk. Av. D, cor. 3rd St.
- Winona Mills, New Haven, Conn. Vests and Sweaters. (New Haven Coll. Exh.) Av. B & 2nd St.

GROUP 82

- Liebes, H. & Co., S. F., Cal. Furs and Skins, dressed & tanned, etc. Av. D, cor. 3rd St.

Singer Sewing Machine Co., New York, N. Y. Machine for sewing boots and shoes. 1st St., Av. D, 2nd St. & Av. E.

United Shoe Machinery Co., Boston, Mass. Shoe Making Machinery. 4th St., Av. E & 5th St. V. I.

GROUP 83

- American Mills Company, The, New Haven, Conn. Collective Exhibit. Av. B & 2nd St.
- Arlington Co., The, Arlington, N. J. "Pyralin" Prod. Collars & Cuffs. Av. B, cor. 3rd.
- Berger Bros. Co., New Haven, Conn. Corsets. (New Haven Coll. Exh.) Av. B & 2nd St.
- California Leather Novelty Works, San Francisco, Cal. Leather Belts. Av. A, cor. 2d St.
- Gantner & Mattern Co., San Francisco, Cal. Knit Goods. 4th St., cor. Av. E.
- Heineman, H. M. Sons, San Francisco, Cal. Cravats and Neckties. Av. D, cor. 2nd St.
- Newman, I. & Sons, New Haven, Conn. Corsets. (New Haven Coll. Exh.) Av. B & 2nd.
- Oregon City Mfg. Co., Oregon City, Ore. Clothing for hunting & outdoor use. Av. E & 3rd St.
- Pfister, J. J. Knitting Co., Inc., Berkeley, Cal. Knit goods in cotton, wool & silk. Av. D, 3d.
- Strouse, Adler & Co., New Haven, Conn. Corsets. (New Haven Coll. Exh.) Av. B & 2nd.
- United Lace & Braid Mfg. Co., Auburn, Providence, E. I. Collective Exh. 3rd St., Av. E & 4th St.
- Winona Mills, New Haven, Conn. Knit Goods. (New Haven Coll. Exh.) Av. B & 2nd St.

CALIFORNIA

COLLECTIVE EXHIBIT

V. I., 2nd St. & Av. A.

GROUP 45

Barr Brothers Co., Oakland Cal. Outlery.

GROUP 47

Miller, I., Oakland, Cal. Handwrought Jewelry.

GROUP 49

- Copper Shop, The, Oakland, Cal. Hand hammered copper.
- Miller, I., Oakland, Alameda, Co., Cal. Art Craft in Metals.
- Vinther & Jorgensen, Oakland, Cal. Hand-painted China.

GROUP 52

Walker, The, Misses, San Jose, Cal. Fancy Articles.

GROUP 65

- Pacific Shade Cloth Co., Oakland, Alameda Co., Cal. Shade Cloth. 2nd St. & Av. H. Hand-made shade cloths. The best only; opaque, duplex, triplex or light-proof; transparent or tint. Made in oil colors.
- Rubino Bros., Oakland, Cal. Shade Cloth.

GROUP 66

Vinther & Jorgensen, Oakland, Cal. Hand-painted China.

GROUP 75

- Barr Brothers Co., Oakland, Alameda Co., Cal. Needles.
- Cox, C. R., Berkeley, Alameda Co., Cal. Ironing Board.
- Mills, M. D. E., Oakland, Alameda Co., Cal. Ironing Board.

GROUP 82

Cahn, Nickelsburg & Co., Oakland, Cal. Boots and Shoes.

GROUP 83

Barr Brothers, Oakland, Cal. Needles.

INDIANA
GROUP 47

(Collective Exhibit.) 1st St., bet. Avs. B & C, V. I.
Blackledge, Mrs. Mary E., Indianapolis. Abalony necklace—original design; necklace in copper, necklace, maple design, stick pin.
Bowles, Janet Payne, Indianapolis. Breastpin, jewelry, necklace, pendant, metal work necklace.

GROUP 49

Overbeck Sisters Studio, Cambridge City, Ind.
Art Pottery. V. I., 1st St., bet. Avs. B & C.

GROUP 50

Goodwin, Miss Frances, Newcastle. 1 plaster cast. Bust—Rev. Stanley.
Sorenson, Clara B. Leonard, Indianapolis. Bas relief in plaster, Bubble Baby, Ready for the Bath, The Little Whistler, Duseas Francoscoda Runini, Portrait Sketch, This Little Pig Went to Market.
Washburn, Miss Mary, Rensselaer. Statuette—Philip Paul, The Belgian Refugee, Flowers, Consolation.

GROUP 52

Bowles, Janet Payne, Indianapolis. Jewelry box.
Carey, Miss Eleanor, Indianapolis. Decorated sewing basket.
Longcliff Hospital, Logansport. 4 Rafia baskets, reed basket.
Murphy, Minnie Coffin, Indianapolis. Serving tray.
Robinson, Susan, Peru. 5 spool case boxes.

GROUP 64

Shover, Lucy, Indianapolis, Ind. One rug design. V. I., 1st St., bet. Avs. B & C.

GROUP 66

Hadley, Mrs. Alice Ross, Indianapolis. Vase, plate and bowl.
Hibben, Miss Helen L., Indianapolis. Art Tiles.
O'Neill, Mrs. Laura H., Indianapolis. Pitcher, plate, hot water pot, cup and saucer, jardiniere, pitcher and 6 cups.
Orndorf, Mrs. J. H., Indianapolis. Bouillon cup and saucer, service plates, cup and saucer.
Overbeck Sisters' Studio, Cambridge City. Decorated tiles, fern dishes, tea set.

GROUP 68

Sparks, Mrs. Mollie, Valparaiso. Hexagonal vases, fruit plate, rose jar, sachet vase, square vase, bowl.
Stoddard, Mrs. W. H., 2315 Bellefontaine, Indianapolis. Bowl, 6 cups, pudding set 14 pieces, bowl with 6 plates, tea pot, 6 cups and saucers, 6 plates, bowl, 2 bowls.
Tompkins, Mrs. A. W., 2717 N. New Jersey, Indianapolis. 6 cups and saucers, 1 stein, 1 jar, bowl and 4 plates, 1 cup and saucer, pitcher.
Welch, Mrs. Sarah E., 2339 Broadway, Indianapolis. Chocolate set, pitcher, 6 cups and saucers, tea set 3 pieces.
Wilcox, Mrs. O. C., 2717 N. New Jersey, Indianapolis. 6 cups and saucers, 1 stein, 1 jar, bowl and 4 plates, 1 cup and saucer, pitcher.
Williams, Miss Clara, 2524 N. Illinois St., Indianapolis. 1 service plate.

GROUP 80

Albred, Miss Mary, Burrows, Ind. Tatted doily. 1st St., bet. Avs. B & C.
Anderson, Miss Marion, Bedford. Two handsome collars, 3 handkerchiefs.
Armstrong, Ido & Ora, Bedford. Tatting luncheon set, 13 pcs.; waist yoke, tatting; 10-point doily, tenerliffe lace collar.

Augspurger, Olive M., Woodburn. Embroidered doily.
Baker, Mrs. T. R., Indianapolis. Baby quilt, cross-stitch design.
Berryman, Mrs. W. L., Tipton. Centrepiece tinting and embroidered on net, child's point-lace dress and bonnet (christening robe), embroidered bed set.
Brown, Mrs. A. S., Clay City. Crochet piano scarf.
Builta, Mrs. Bessie Rhode, Morocco. Drawn-work tablecloth.
Caldwell, Mrs. Wm. L., Indianapolis. Point-lace berth.
Clark, Mrs. Robt. A., Attica. Lunch cloth.
Cole, Mrs. Edw. N., Kokomo. 1 crochet doll.
Convent of St. Benedict, Ferdinand. Battenburg butterfly-point lace.
Craft, Mrs. W. H., Indianapolis. Collar and cuff set, carickm across lace.
Cragmont-Southeastern Hospital for Insane, Madison. 1 crochet square, tatted collar and cuff set, samples of knitted lace, lunch cloth.
Curl, Mrs. Sadie, Petersburg. Woven Tenerliffe doily, point-lace doily, embroidered bed set.
De Grotte, Mrs. Fred, Mishawaka. Embroidered centerpiece (2), embroidered napkin.
De Latter, Mrs. Julia, Brazil. Baby Irish cap.
Demarie, Jennie, Vevay. Crochet and embroidered centerpiece, white embroidered piece-feather design.
Dreifus, Theresa, Delphi. Darned huck vest, Hardanger table cloth.
Findley, Mrs. M. A., Kokomo. Embroidered baby dress, pair hemstitched towels (cross-stitch design).
Fish, Miss Julia R., Indianapolis. Beaded card case.
Fish, Mrs. W. S., Indianapolis. Beaded bag (parrot design), card case (rose design).
Gifford, Mrs. M. R., Tipton. Hand-made baby dress, Battenberg centerpiece.
Gregg, J. C., Greenwood. Embroidered centerpiece.
Harris, Miss Florence E., Rising Sun. Four table mats.
Hart, Mrs. E. S., Greenfield. Crochet centerpiece (roll-stitch design), crochet centerpiece (pineapple and bean design).
Hendricks, Mrs. Chas. E., Greenfield. Duchess lace collar, point-lace collar, collar point lace, applique, doily (novelty braid design), point-lace handkerchief, embroidered lunch cloth, lunch set in Battenburg (13 pieces), 1 pair embroidered curtains on burlap.
Henry, Nellie E., Fort Wayne. Fillet insertion and fillet monogram.
Houck, Mrs. G. W., Kokomo. Beaded chain, horsehair chain, beaded belt.
Hunter, Miss Stella, Fort Wayne. Embroidered corset cover, handkerchief, child's apron, collars (2), and towel.
Johnson, Alfreda, West Point. Tenerliffe centerpiece, crochet centerpiece.
Johnson, Anna, West Point. Embroidered centerpiece.
Jeffers, Mrs. H. A., Bloomington. Crochet centerpiece.
Jones, Mrs. Winson, Lebanon. Embroidered pincushion, jabot, handkerchief, shirtwaist set, samples (button holes).
Kerr, Susan C., Union City. Hardanger lunch cloth.
Knight, Mrs. Mary, Rochester. Crochet centerpiece.
Kumph, Mrs. J. F. C., Brazil. Crochet pillow top.
Langford, Marguerite, Fort Wayne. Fillet collar, fillet yoke.
Lentz, Mrs. L. G., Tipton. Persian lunch cloth (drawnwork).

- Leonard, Miss A. M., Indianapolis. Embroidered pillow top.
- Longcliff Hospital, Logansport. Dresser scarf, dresser cover, table cover, handkerchief, crochet lace, and one piece crochet lace.
- McCord, Mrs. Harris, Rockville. Embroidered towel, tatting handkerchief.
- McFadden, Mrs. Mary, Indianapolis. Two tatted handkerchiefs, 2 jabots.
- Marion County Hospital for Incurable Insane, Juliette. Drawnwork squares (white and ecru).
- Meier, Mrs. Lewis, Indianapolis. Beaded bag (conventional design).
- Moler, Mrs. Angela, Indianapolis. Handwoven scarf.
- Morgel, Mrs. Geo., Brazil. Tatted doily.
- Nash, Mrs. Winona M., Tipton. Embroidered centrepiece (Battenburg border), dresser scarf, centrepiece (hand-made lace), one-half dozen embroidered napkins with monogram, embroidered lunch cloth.
- Pugsley, Mrs. P. J., Peru. One pair infant's crochet shoes.
- Rickey, Mrs. Ada M., Lebanon. Piece of Venetian crochet.
- Rubelt, Miss Ida C., Brazil. Ladies' waist (baby Irish lace).
- Rubey, Miss Ida, Winchester. French embroidered nightdress.
- Scott, Mrs. Ida Gray, Indianapolis. Silk Battenburg stole.
- Smeltzer, Ella, Pyemont. Dresser scarf.
- Smith, Adelpia, Delphi. Scarf (knitted lace).
- Stevenson, Mrs. Lawrence, Oaktown. Crochet centrepiece (roll stitch).
- Stone, Mrs., Westfield. Four-piece luncheon set.
- Strong, Mrs. Frank, Shelbyville. Embroidered wild-rose centrepiece.
- Strong, Mrs. R. H., Indianapolis. Drawnwork lunch cloth and dresser scarf.
- Turner, Miss Jennie, Lafayette. Beaded belt, point-lace handkerchief, drawnwork handkerchief.
- Waldemeyer, Mrs. Anna, Vevay. 1 fillet centrepiece (morning-glory pattern).
- Wahl, Mrs. Jacob, Vevay. Crochet daisy doily (original design, awarded medal at Manchester, England, 1914), crochet oval and round doily, fillet crochet centrepiece, large fillet crochet centrepiece of grapes, 2 small dollies, 1 medium, centrepiece and tray cloth, crochet block and bar doily, crochet doily (horn of plenty design), hexagon doily, crochet plate and tumbler doily, rib-pattern crochet doily, large crochet doily (diamond design) crochet centrepiece (diamond and star design), crochet oval in scroll-fillet design.
- Webster, Mrs. E. R., Bedford. Crochet collar and cuff set.
- Wilson, Bess, Delphi. Lunch cloth and fancy towel.
- Wilson, Mrs. John, Remington. Point-lace handkerchief, tie and Battenburg collar.
- Woman's Prison, Indianapolis. Cross-stitch towels, crochet belt, Mexican lunch cloth, drawnwork bed set, embroidered bed set, crochet bed set.
- Woodburn, Mrs. Howard, Bowling Green. Dark linen lunch cloth (crochet border).
- Yaggy, Prudence A., Woodburn. Tatted doily.
- Yeager, Alma, Shelbyville. 18 crochet mats, crochet bag.
- Yeakley, Mrs. Samuel, Burrows. Embroidered towel.

Foreign Section

DENMARK

GROUP 46

- Hertz, P., Copenhagen. Silver and goldsmith to his Majesty, the King of Denmark. Specialty, enamelled silver. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Jensen, George, Copenhagen. Handwrought silver, original design. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

GROUP 47

- Ericksen, Miss Bergitte, Copenhagen. Enamelled brooches, rings, etc., in handsome silver. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

GROUP 49

- Copenhagen Faience Factory, Copenhagen. Vases, Placques and Table Ware. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Enke, J. Ipsens, Copenhagen. Terra Cotta Manufacturer to his Majesty, the King of Denmark. Statuary and Vases, antique and modern. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Hjorth, L., Ronne. Statuettes and Vases in terra cotta and glazed stone ware. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Jensen, George, Copenhagen. Handwrought silver, original designs. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Kohler, Herman A., Naestved. Art. Pottery in lustre and underglaze decoration. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

- Westergaard, Miss Mette, Copenhagen. Handwoven works. Gobelins after Mohls designs. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

GROUP 50

- Enke, P. Ipsens, Copenhagen. Terra Cotta Manufacturer to his Majesty, the King of Denmark. Statuary and Vases, antique and modern. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Hjorth, L., Ronne. Statuettes and Vases in Terra Cotta and Glazed Stoneware. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

- Salgath, Mrs. L., Copenhagen. Bronze Work. Statuettes of famous racehorses modelled from life. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

GROUP 66

- Copenhagen Faience Factory, Copenhagen. Vases, Placques and Table Ware. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Hjorth, L., Ronne. Statuettes and Vases in Terra Cotta and Glazed Stoneware. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.
- Enke, P. Ipsens, Copenhagen. Terra Cotta Manufacturer to His Majesty, the King of Denmark. Statuary and Vases, antiques and modern. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

GROUP 80

- Hirsch, Mrs. Sarah, Copenhagen. Embroideries. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

Illum, A. C., Copenhagen. Embroideries. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

Larsen, Mrs. Ingleborg, Copenhagen. Tablecloth, Hedebo style. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

Sorensen, Miss Andrea, Copenhagen. Embroideries, old Hedebo style. (Danish Collective Exhibit.) V. I., 5th St. & Av. A, 6th St. & Av. B.

NETHERLANDS

GROUP 46

Koninklyke Utrechtsche Fabriek Van Zilverwerken, Van C. J. Begeer, Utrecht. Silverware. 5th St., Av. D, 6th St. & Av. E.

Niekerk Gebr., Schoonhoven. Silverware. 5th St., Av. D, 6th St. & Av. E.

GROUP 47

Koninklyke Utrechtsche Fabriek Van Zilverwerken Van C. J. Begeer, Utrecht. Jewelry. 5th St., Av. D, 6th St. & Av. E.

GROUP 51

Handoes, Gabriel, Utrecht. Stained Glass. 5th St., Av. D, 6th St. & Av. E.

GROUP 60

Deventer Capsulefabriek, Deventer. Metal caps. 5th St., Av. D, 6th St. & Av. E.

GROUP 64

Stoomweverijen, N. V., Voorheen Firma G. Van Besouw, J. Bzn., Goirle. Carpets and matting. 5th St., Av. D, 6th St. & Av. E.

GROUP 66

N. V. Arnhemsche, Fayencefabriek, Arnhem. Ceramics. 5th St., Av. D, 6th St. & Av. E.

E. Delftsch Aardwerf-fabriek, "De Porceleynse Fles," Delft. Ceramics. 5th St., Av. D, 6th St. and Av. E.

N. V. Fabriek Van Brouwer's Aaredewerk Voorheen Willem C. Brouwer, Leiderdorp. Ceramics. 5th St., Av. D, 6th St. & Av. E.

Jager, A., Hilversum. Painted Tiles. 5th St., Av. D, 6th St. & Ave. E.

N. V. Kunstaardewerf-fabriek "St. Lucas," Utrecht. Ceramics. V. I., 5th St., Av. D, 6th St. & Av. E.

Plateelbakkerij "De Distel," Amsterdam. Ceramics. V. I., 5th St., Av. D, 6th St. & Av. E.

Plateelbakkerij "Zuid-Holland," Gouda. Ceramics. 5th St. & Av. D, 6th St. & Av. E.

N. V. Steenfabriek, "Geldermalsen," Geldermalsen. Fire bricks. 5th St. & Av. D, 6th St. & Av. E.

Tichelaar Gebr., Makkum. Ceramics. 5th St. & Av. D, 6th St. & Av. E.

Van Hulst, J., Harlingen. Wall Tiles. 5th St. & Av. D., 6th St. & Av. E.

GROUP 68

Strykers, A. Tiel. Wicker-covered bottles. 5th St. & Av. D, 6th St. & Av. E.

N. V. Vereenigde Glasfabrieken, Vlaardingen. Bottles. 5th St. & Av. D, 6th St. & Av. E.

GROUP 71

W. J. Stokvis' Koninklyke Fabriek Van Metaalwerken, Arnhem. Lighting fixtures. 5th St. & Av. D, 6th St. & Av. E.

GROUP 76

Firma M. Van Dam & Zonen, Enschede. Tiles. 5th St. & Av. D, 6th St. & Av. D.

GROUP 82

Firma Frans Van DenAssum, Dongen. Leather boots. 5th St. & Av. D, 6th St. & Av. E.

SWEDEN

The exhibits of Sweden, classified in this Department, are installed in the Swedish Building, Avenue of Nations.



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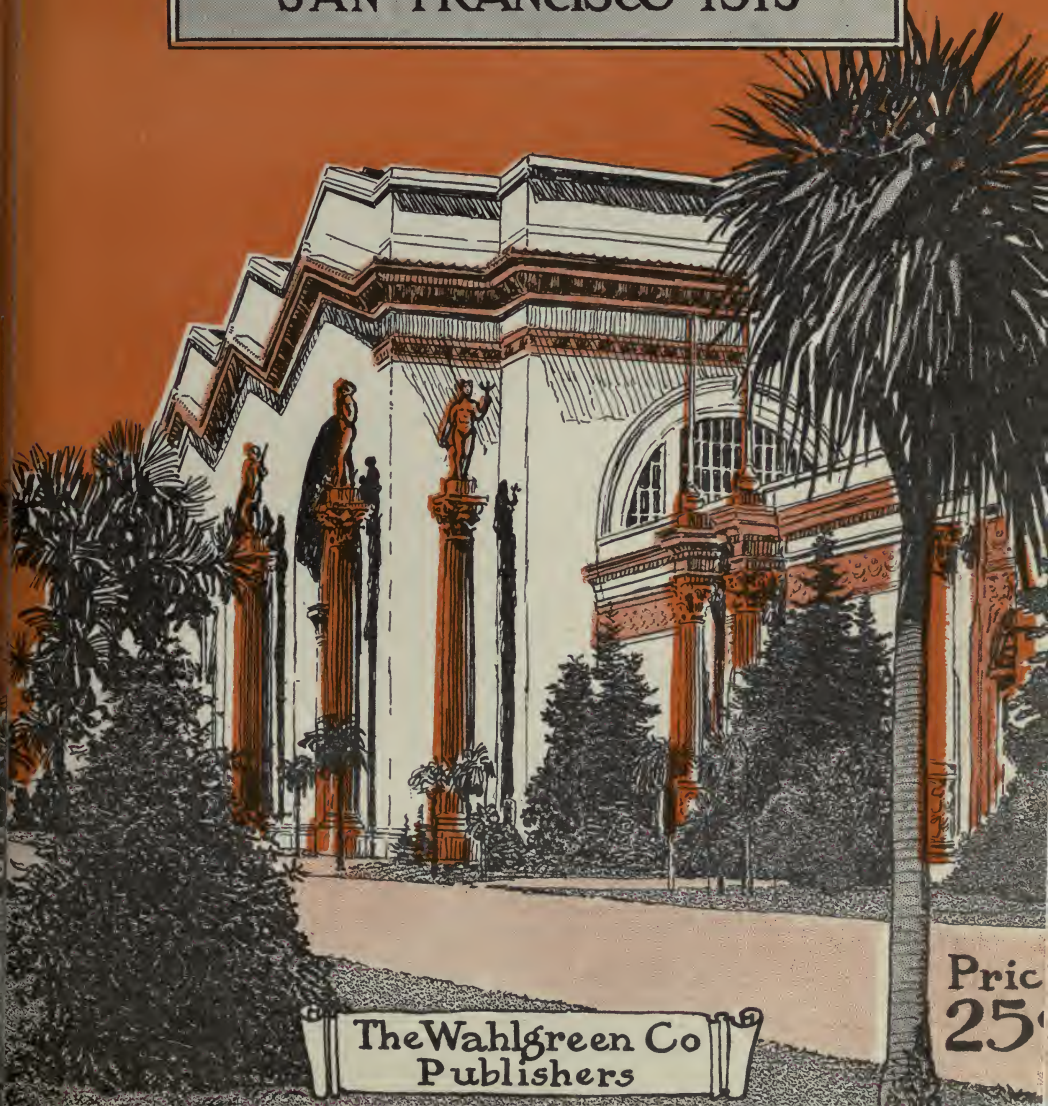
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MACHINERY

Official Catalogue of Exhibitors

PANAMA - PACIFIC
INTERNATIONAL EXPOSITION
SAN FRANCISCO 1915



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| Barber Asphalt Paving Co. | Philadelphia, Pa. | Roofing Material |
| Ceresit Waterproofing Co. | Chicago, Ill. | Waterproofing Material |
| C. H. & E. Mfg. Co. | Milwaukee, Wis. | Contractors' Equipment |
| Clyde Iron Works | Duluth, Minn. | Steam and Electric Hoists |
| Haslett Spiral Chute Co. | San Francisco, Cal. | Package Chutes |
| Iroquois Iron Works | Buffalo, N. Y. | Road Rollers |
| Muggley Differential Co. | New York, N. Y. | Differential Axles |
| Patent Scaffold Co. | New York, N. Y. | Safety Scaffolds |
| Owen Bucket Co. | Cleveland, Ohio | Clam Shell Buckets |
| Russell Grader Mfg. Co. | Minneapolis, Minn. | Road Machinery |
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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT.

July 10 1914.

To Whom It May Concern:

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.

Charles Wahlgreen
President.



Robert H. Hanson
Secretary.

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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915.

Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

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Division of Exhibits

ASHER CARTER BAKER, Director

Department F

MACHINERY

LIEUT. G. W. DANFORTH, Chief

Preliminary Edition

Published for the Division of Exhibits by

The Walgreen Company, Official Publishers
San Francisco, 1915

PREFACE

By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



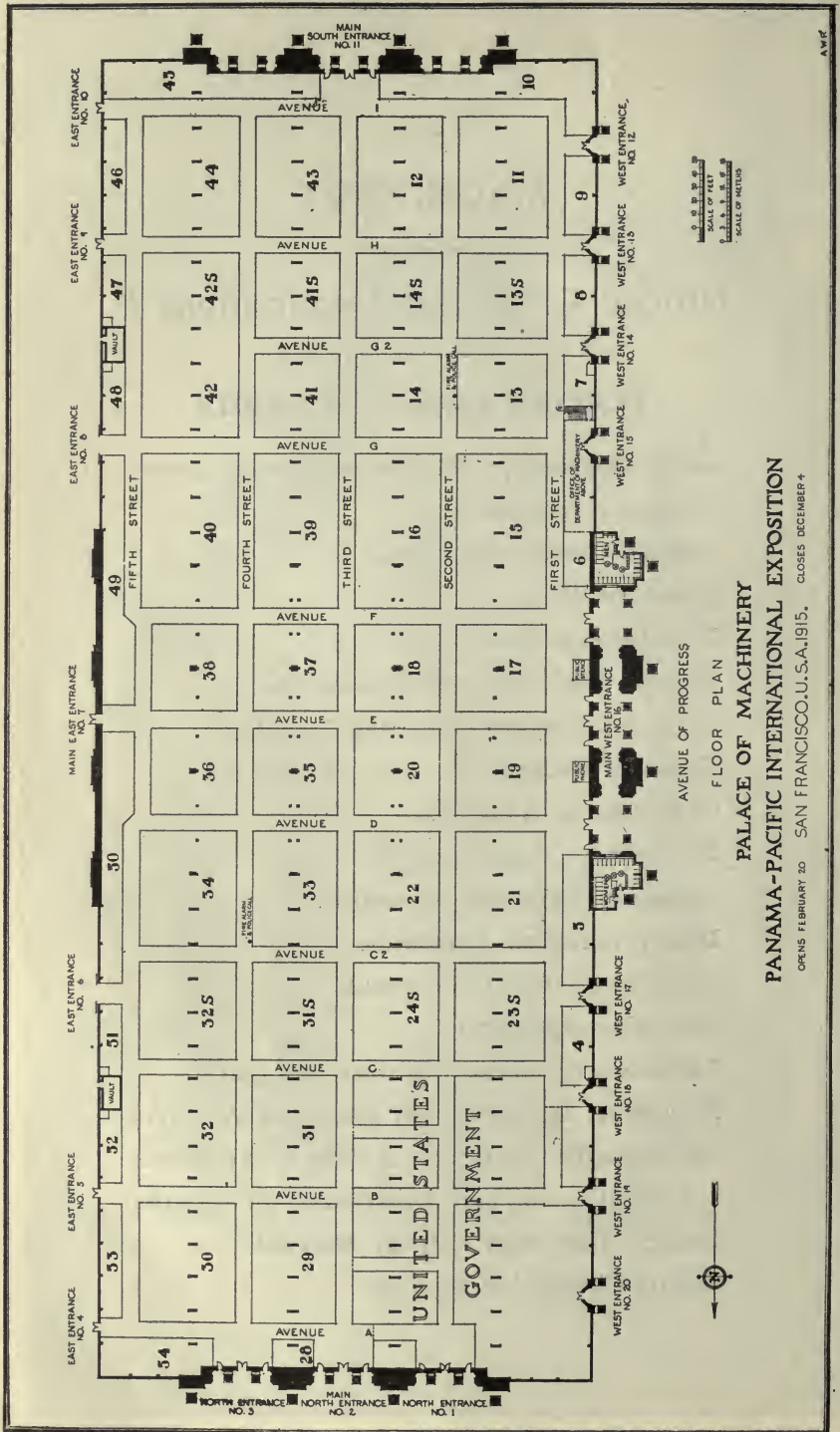
PALACE OF MACHINERY

MACHINERY

Official Catalogue Department F

CLASSIFICATION OF EXHIBITS

- Steam Generators and Motors Utilizing Steam.
- Accessory Appliances.
- Internal Combustion Motors.
- Hydraulic Motors.
- Miscellaneous Motors.
- General Machinery and Accessories.
- Tools for Shaping Wood and Metals.
- Electrical Groups.
- Commutating Apparatus.
- Synchronous Apparatus.
- Stationary Induction Apparatus.
- Rotary Induction Apparatus.
- Unipolar (Acyclic) Apparatus.
- Rectifying Apparatus.
- Luminous Apparatus (Sources of Light).
- Measuring, Indicating and Recording Apparatus.
- Apparatus for Protection of Electric Apparatus
and for Control and Distribution of Electric
Energy, other than Railway Material.
- Electro-Chemical Apparatus.



INTRODUCTION

Department of Machinery

BY

Lieut. G. W. Danforth, Chief

Mechanical and electrical genius has brought into practical use many machines and electrical appliances for manufacturing and transportation purposes, and has also supplied many useful and convenient machines and appliances for the home, the farm, and for miscellaneous needs.

Within the last decade engineers have made notable advancement in the types of engines which transform the energy of burning fuel into mechanical motion, and in the types of machines and electrical apparatus which apply this mechanical energy to industrial and domestic uses.

The practical and economical production of electric current is now accomplished by the employment of both engine and water power, and the problems of transmission, control and practical uses of this current have been worked out with great skill and ingenuity.

The great variety of machines and labor-saving devices now used is familiar to everyone. There has been notable advance in various machines and processes for the shaping of metals. These processes and the machines themselves are made possible by the skill of the metallurgist in producing pure metals and useful alloys.

In Machinery Palace will be shown machines and electrical apparatus which come under all of these classes, with many instruments and appliances related thereto. These exhibits are not only shown as commercial features of interest to the engineer and to the manufacturer, but special attention has been given to bringing out points of educational interest which will show and explain the fundamental principles, the essential features and the functions of these exhibits. Wherever practical, machinery and electrical apparatus will be shown in operation, also in many cases will be shown in parts or cut in sections, with such explanations as will enable anyone interested to study them.

The exhibits in Machinery Palace have been so selected and arranged that they will be of particular interest to the greatest number of visitors, including the scientist, the practical engineer, the mechanic, the electrician, the manufacturer, the student, the farmer and, last but not least, the housewife.

Many exhibits of machinery classified under other exhibit departments are placed in Machinery Palace. These include: Contractors, Road Making, Agricultural, Mining and Printing Machines, which are not listed in this Catalogue, but are listed in the catalogues of the departments to which they belong.

HOW TO LOCATE AN EXHIBIT

The Palace of Machinery is laid out in blocks, which are consecutively numbered from 1 to 54, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Fifth), running north to south, and as avenues (A to I), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Machinery, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

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|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF MACHINERY

Official Classification of
Exhibits

GROUP 85

STEAM GENERATORS AND MOTORS UTILIZING STEAM. ACCESSORY APPLIANCES

- Class 449. Steam engines and steam turbines; portable, semi-portable and stationary; valve gear, governors, lubricating apparatus, and accessories attached.
- Class 450. Boilers, stationary, marine, portable and semi-portable; boiler equipment, including furnaces, grate bars, smoke stacks, mechanical stokers, oil burners, oil and other fuel systems, mechanical flue and tube cleaners; forced and natural draft apparatus and equipment; fuel economizers, superheaters; boiler fittings; coal handlers and conveyors; ash handling systems and apparatus.
NOTE: Agricultural and road-making machinery is not included herewith.
- Class 451. Appliances for handling and purifying feed water: feed pumps and injectors, feed-water regulators, feed tanks; feed-water heaters; chemical and mechanical purifiers, oil extractors, scale removing appliances and compounds; water softening compounds. (See Class 462.)
- Class 452. Valve gear, governors and speed regulators for steam engines or turbines, not attached.
- Class 453. Equipment for transmission and control of steam: steam piping and piping systems, including pipe, valves, fittings, steam hose, traps, separators and exhaust heads.
- Class 454. Condensing apparatus: surface and jet condensers; air pumps, dry vacuum pumps, circulating pumps; cooling towers, cooling systems.
- Class 455. Methods and appliances for testing and recording the performances of engines, turbines, boilers, condensers, their auxiliaries, and other machinery: pyrometers, steam thermometers, calorimeters, steam meters, CO₂ recorders, flue gas analysis apparatus for steam power plants; counters, gages, indicators, tachometers, and dynamometers.

GROUP 86

INTERNAL COMBUSTION MOTORS

- Class 456. Internal combustion engines, gas turbines, and all motors in which internal combustion of the fuel takes place; apparatus and systems for supplying fuel for internal combustion motors.
NOTE: This group does not include motors attached to mobile devices (such as automobiles), nor does it include agricultural or road making machinery.

GROUP 87

HYDRAULIC MOTORS

- Class 457. Impulse wheels, turbines and other motors driven by water power, and apparatus for their regulation and control.

GROUP 88

MISCELLANEOUS MOTORS

- Class 458. Motors operated by heated air, or other means, not elsewhere classified.

GROUP 89

GENERAL MACHINERY AND ACCESSORIES

- Class 459. Appliances for handling heavy weights; overhead traveling and stationary cranes, operated by hand or power; hoisting engines, jacks, differential pulleys. (Marine and mining equipment not included.)
- Class 460. Conveying machinery: belt, bucket and movable table or roller conveyors; trolley conveyors. (For special apparatus in mining see Classes 750, 756 and 780.)
- Class 461. Power-transmitting and appliances: leather, fiber, chain, link and other belting; cable and rope drives; gearing, shafting, couplings, pulleys, clutches, hangers, and pedestals.
- Class 462. Apparatus for lifting and handling water and other liquids: hand, steam and power driven pumps, pulsometers, air lifts, hydraulic rams; water pipe and accessories; water meters. (See also Classes 451, 470, 530, 554, 559 and 751 for pumps for special uses.)
- Class 463. Fire engines, extinguishers and fire fighting apparatus. (See Class 183.)
- Class 464. Air and gas compressors and accessories. (See also Classes 354 and 749.)
- Class 465. Brick and tile making machinery. (Transferred to Class 765.)
- Class 466. Dredging and excavating machinery and appliances. (For railroad machinery see Class 520. For mining machinery see Class 759.)
- Class 467. Refrigerating machinery. (See also Classes 531 and 601.)
- Class 468. Packing, gaskets, heat insulating material, lubricators, lubricants, lubricating systems, metal for bearings.
- Class 469. General machinery not otherwise classified.

GROUP 90
TOOLS FOR SHAPING WOOD AND METALS

- Class 470. Steam forging hammers, hydraulic forging presses; hydraulic accumulators, intensifiers, pumps and accessories; extruding presses; hand and power shears, punches and blank cutters for metals; plate bending and planing machines; drop forging hammers; swaging presses; riveting machines. (See Class 462.)
- Class 471. Apparatus, equipment and compounds used in annealing, hardening, tempering, brazing and soldering metals.
- Class 472. Machine tools, lathes, planers, shapers; drilling, boring, milling, slotting and splining machines; bolt, nut and pipe machines; metal saws; forcing presses; polishing and finishing machines for metals; machines for rough grinding. All machine tool attachments; safety devices when attached to machines; portable power tools; tool grinding machines; machine shop accessories.
- Class 473. Machinery for grinding accurate surfaces; screw cutting machines; presses and spinning lathes for shaping sheet metals.
- Class 474. Hand tools for machinists: measuring tools; bench tools, etc.
- Class 475. Machines and tools for boiler shop and sheet metal shop work, not elsewhere classified.
- Class 476. Wood working machinery: power saws, wood lathes, planers and jointers, and other wood working power tools other than saw-mill equipment; equipment for bending or pressing wood; box and basket machinery. Attachments for wood-working machinery. Safety devices for wood working machinery when shown attached to machines. (See Class 448.)
- Class 477. Special machinery for various purposes, not otherwise classified.

ELECTRICAL GROUPS

GROUP 91
COMMUTATING APPARATUS

- Class 478. Direct-current commutating generators, all types.
- Class 479. Synchronous commutating machines, comprising synchronous converters, motor converters and double current generators.
- Class 480. Direct and alternating current commutating type motors.
- Class 481. Direct and alternating current commutating type railway motors.

GROUP 92
SYNCHRONOUS APPARATUS
(All Alternating Current)

- Class 482. Synchronous generators, all types.
- Class 483. Synchronous motors.
- Class 484. Synchronous condensers.
- Class 485. Synchronous frequency changers.
- Class 486. Synchronous rotary phase converters.

GROUP 93
STATIONARY INDUCTION APPARATUS

- Class 487. Transformers (including induction coils) and autotransformers, all types.
- Class 488. Potential regulators and reactances, all types.
- Class 489. Induction starters.

GROUP 94
ROTARY INDUCTION APPARATUS

- Class 490. Induction generators, all types.
- Class 491. Induction motors.
- Class 492. Induction condensers.
- Class 493. Induction frequency changers.
- Class 494. Induction rotary phase converters.

GROUP 95
UNIPOLAR (ACYCLIC) APPARATUS

- Class 495. Unipolar (Acyclic apparatus).

GROUP 96
RECTIFYING APPARATUS

- Class 496. Rotating commutators.
- Class 497. Electric valves (including mercury rectifiers).
- Class 498. Vibrating commutators.

GROUP 97
LUMINOUS APPARATUS (Sources of Light)

- Class 499. Arc lamps, all types.
- Class 500. Incandescent lamps, all types.
- Class 501. Vapor lamps, all types.
- Class 502. Vacuum lamps, all types.

GROUP 98

MEASURING, INDICATING AND RECORDING APPARATUS

(Not including instruments for pure science and research work.)

- Class 503. Instruments for switchboard use.
- Class 504. Instruments for mounting apart from switchboard.
- Class 505. Portable instruments.
- Class 506. Laboratory instruments.

GROUP 99

APPARATUS FOR PROTECTION OF ELECTRIC APPARATUS AND FOR CONTROL AND DISTRIBUTION OF ELECTRIC ENERGY, OTHER THAN RAILWAY MATERIAL

- Class 507. Complete switchboards.
- Class 508. Lightning arrestors and accessories.
- Class 509. Devices for opening and closing circuits and controlling flow of current therein.
NOTE: In class 509 will be placed such devices as are used in stations and on main circuits.
- Class 510. Devices and material used in distribution of current and control of distribution circuits other than in stations and on main circuits; including fuses and fuse holders, conduits, cables, wires, insulators, junction boxes, cabinets, cut-outs, sockets, fixtures, electric sign mechanism, and other subsidiary apparatus not otherwise classified. (See Class 308.)
- Class 510½ Electrical workers' tools and appliances.

GROUP 100

ELECTRO-CHEMICAL APPARATUS

- Class 511. Storage batteries.
- Class 512. Primary batteries.

GROUP 85

STEAM GENERATORS AND MOTORS
UTILIZING STEAM ACCESSORY
APPLIANCES

- Advance Pump & Compressor Co., Battle Creek, Mich. Power Pumps and Air Compressors. 5th St., cor. Av. D.
- American Pulley Co., The, Philadelphia, Pa. Pulleys. 4th St. & Av. I. Wrought steel belt pulleys.
- American Steam Pump Co., Battle Creek, Mich. Boiler Feed Pumps, Vacuum Pumps. 1st St. & Av. E. Simons Machinery Co., California Agents.
- Armstrong, L. D., San Francisco, Cal. Power Pumps and Air Compressors. (Coll. Exh.) 5th St., cor. Av. E.
- Ashton Valve Co., Boston, Mass. Safety Valves and Steam Gauges. (In Service.)
- Babcock & Wilcox Co., New York, N. Y. Boilers. 2nd & 3rd Sts. & Av. G. Marine and stationary boilers, superheaters, stokers. General Pacific Coast Offices: San Francisco, Portland, Tucson, Seattle, Salt Lake City, Los Angeles. Chas. C. Moore, Mgr.
- Badenhausen Co. of Philadelphia, Pa. Water Tube Boilers. 5th St., bet. Avs. F & G. L. D. Armstrong, Agt., 417 Market St., S. F.
- Bristol Co., The, Waterbury Conn. Recording and Testing Instruments. 2nd St. & Av. D.
- Crane Co., Chicago, Ill. Steam Valves and Fittings; Steam Plant Accessories. 3rd St., Avs. D & E.
- Crosby Steam Gauge & Valve Co., Boston, Mass. Recording Instruments. 4th St. & Av. F.
- Fess System Co., Inc., San Francisco, Cal. Crude Oil Burning Appliances. 5th St. & Av. F.
- Gas Engine & Power Co. & Chas. L. Seabury, Con., Morris Heights, N. Y. Water Tube Boilers. 4th St. & Avs. E. & F.
- General Electric Co., Schenectady, N. Y. Steam Flow Meters. (Power Plant, Hor. Pal.)
- Gold Car Heating & Lighting Co., New York, N. Y. Thermostats. 1st St. & Av. D. Steam, vapor, combination pressure and vapor, hot water and electric systems, Thermostate control for same, Cyclone and window ventilators. W. J. Marland, Rep. Mch. Pal., San Francisco, Cal.
- Goodyear Tire & Rubber Co., Akron, O. Steam & Fire Hose. The Mine.
- Harrison Safety Boiler Works, Philadelphia, Pa. Safety Boilers. 4th St. & Av. G. Cochrane Metering Feed Water Heaters & Independent V-Notch Meters. "Multiport" Back Pressure "Valves." Cochrane Steam & Oil Separators.
- Harron, Rickard & McCone, San Francisco, Cal. Water Handling Appliances. (Coll. Exh.) 4th & 5th Sts. & Avs. G & H.
- Hersey Mfg. Co., Boston, Mass. Water Meters. 2nd St. & Av. H. Pacific Coast Branch, 461 Market St., S. F., J. W. Blair, Mgr.
- Hill Pump Valve Co., Chicago, Ill. Patent Feed Pump Valves. 5th St., bet. Avs. F&G.
- Hoppes Mfg. Co. of Springfield, O. Water Heaters. 5th St., bet. F & G. Feed Water Heaters, V-Notch Recorders, Separators, Oil Eliminators.
- Hyde, Henry C. Co., San Francisco, Cal. Marine Engines. 4th St., bet. Avs. E & F. Marine Engines, Speedway; Water Tube Boilers, Seabury; Marine Engines, Waterman Two-Cycle; Uni-Electric, Gasoline-Electric Lighting System; Oil Engines, Diesel Type; Marine Engines, Holmes; Marine Engines, Peerless.
- Industrial Instrument Co., The, Foxboro, Mass. Recording & Testing Instruments. 3rd St. & Av. C2.
- Krogh Mfg. Co., San Francisco, Cal. Pumps. 3rd St., Av. H & I. Centrifugal pumps, turbine pumps, slime pumps.
- Lagonda Mfg. Co., Springfield, O. Boiler Fittings. 2nd St. & Av. G2. Tube Cleaners, Water Strainers, Automatic Steam Stop and Chuck Valves. Chas. C. Moore & Co., Engineers, Gen. Pacific Coast Agts.
- Locomotive Superheater Co., New York, N. Y. Marine Superheaters. 3rd St. & Av. H.
- Lunkenheimer Co., The, Cincinnati, O. Engineering Appliances. 1st St. & Av. G2. Boiler mountings and equipment, whistles, lubricators; oiling devices, oil cups, grease cups, injectors.
- McIntosh & Seymour, Corp., Auburn, N. Y. Engines. 3rd St. & Av. F. Diesel Oil Engines, Steam Engines. Chas. C. Moore Co., Engineers, Gen. Pacific Coast Agts.
- MacLeod Co., The, Cincinnati, O. Oil Burners. 1st St. & Av. I.
- Marland, W. J., Oakland, Cal. Thermostats. (Coll. Exh.) 1st St. & Av. D.
- Mine Safety Appliance Co., Pittsburg, Pa. Pressure and Recording Gauges. Min. Pal. "The Mine."
- National Meter Co., New York, N. Y. Water Meters. 1st St. & Av. H.
- National Tube Co., Pittsburg, Pa. Tubes, Pipes and Fittings. Min. Pal., Av. D.
- Nelson Valve Co., Philadelphia, Pa. Valves. 1st & Av. A.
- Neptune Meter Co., New York, New York. Water Meters. 1st St. & Av. C2.
- Olsen Testing Machine, Tinius, Philadelphia, Pa. Dynamometers and Machines. 3rd St. & Av. E.
- Pacific Tank & Pipe Co., San Francisco, Cal. Feed Water Tanks, etc. 6th St. bet. Av. A & B.
- Pelton Water Wheel Company, The, San Francisco, Cal., and New York. 4th & 5th Sts. Av. F. Water Wheels, Centrifugal Pumps, Recording Instruments.
- Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa. Flexible Metallic Tubing. 5th St. & Av. F.
- Pratt & Cady Co., Inc., Hartford, Conn. Boiler Valves. (In Service.)
- Ray Manufacturing Co., W. S., San Francisco, Cal. Oil-Burning Systems. 5th St. & Av. G2.
- Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y. Indicating & Recording Tachometer. 4th & 5th Sts. & Av. F.
- "S. C." Regulator Co., Fostoria Ohio. 5th St. bet. F & G. Feed Water Regulator.
- Simonds Machinery Co., San Francisco Cal. Feed Pumps. (Collective Exhibit.) 1st & 2nd Sts. & Av. E.
- Smith & Watson Iron Works, The, Portland, Ore. Oil Burning Equipment. 4th & 5th Sts., Av. C2.
- Weber Subterranean Pump Co., New York, N. Y. Air Lift Pumps. Mch Pal., Block 23 South.
- Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Steam Turbine & Auxiliaries. 4th St. bet. Avs. E & F, 2nd & 4th Sts., Avs. C & C2. Governor, valve gear, lubricating apparatus and other accessories on turbine. Small turbine (in United States Government Oil Well Exhibit). Condensing apparatus, including pump, pump turbine and accessories.
- Westinghouse Machine Co., East Pittsburg, Pa. Steam Turbines; Steam Condenser & Auxiliaries. 3rd & 4th Sts., Avs. C & C2.
- Worthington, Henry R., New York, New York. Power Pumps. (In Service.) Hor. Pal.

Yarnall-Waring Co., Philadelphia, Pa. Steam Valves. 1st St. & Av. D.

Young, C. J., Iron Works, Seattle Wash. Machinery 4th & 5th Sts. bet. Avs. C & C2.

INTERNAL COMBUSTION MOTORS

Armstrong, L. D., San Francisco, Cal. Internal Combustion Engines. (Collective Exhibit.) 5th St. cor. Av. E.

Bessemer Gas Engine Co., The, Grove City, Pa. Internal Combustion Engines. 4th St., Avs. D & E.

Buffalo Gasolene Motor Co., San Francisco, Cal. Internal Combustion Engines. 5th St. & Av. F.

Busch-Sulzer Bros. Diesel Engine Co., St. Louis, Mo. Internal Combustion Engines. 3rd St., Avs. D & E.

California State Collective Exhibit. Internal Combustion Engines. 4th St. & Av. F.

Doak Gas Engine Co., Oakland, Cal. Internal Combustion Engines. 4th St. & Av. F.

Fulton Manufacturing Co., Erie, Pa. Internal Combustion Engines. 4th St. & Av. E.

Gas Engine & Power Co. & Chas. L. Seabury, Con., Morris Heights, N. Y. Internal Combustion Engines. (Collective Exhibit.) 4th St., 5th St. & Avs. G & H.

Harron, Rickard & McCone, San Francisco, Cal. Internal combustion engines. (Collective Exhibit.) 4th & 5th Sts. & Avs. G & H.

Holmes Motor Co., Inc., The, Boston Mass. Internal Combustion Engines. 4th St., Avs. E & F.

GROUP 86

Hyde Co., Henry C., San Francisco Cal. Internal Combustion Engines. (Collective Exhibit.) 4th St., Avs. F & E.

Imperial Gas Engine Co., San Francisco, Cal. Internal Combustion Engines. 4th St. & Av. E. Marine gas engines. 1, 2, 3, 4 & 6 cylinder engines. Whistles and accessories. New style reversing gear. Factory located in San Francisco.

International Harvester Company of America, Chicago, U. S. A. Internal Combustion Engines. Apparatus and systems for supplying fuel for internal combustion motors. Agr. Pal. 4th St., bet. Avs. B & C.

Kewanee Private Utilities Co., Kewanee, Ill. Gasolene Storage System. 1st and 2nd Sts. & Av. E.

Loew-Victor Engine Co., Chicago, Ill. Internal Combustion Engines. 4th St. & Av. F.

Luckenheimer Co., The, Cincinnati, Ohio. Gas Engine Accessories. 1st St. & Av. G2.

McIntosh & Seymour Corporation, Auburn, N. Y. Internal Combustion Engines. 3rd St. & Av. F.

Mietz, August, New York, New York. Internal Combustion Engines. 4th St. & Av. D.

New London Ship & Engine Co., Groton, Conn. Internal Combustion Engines. 4th & 5th Sts. & Av. E.

Peerless Marine Motor Co., Buffalo, N. Y. Internal Combustion Engines. 4th St., Avs. E & F.

Standard Gas Engine Co., San Francisco, Cal. Internal Combustion Engines. 1st & 2nd Sts., Avs. E & F.

Venn-Severin Co., Chicago, Ill. Internal Combustion Motors. 4th St., bet. Avs. F & G.

Waterman Marine Motor Co., Detroit, Mich. Internal Combustion Engines. 4th St., Avs. E & F.

Western Gas Engine Corporation, Los Angeles, Cal. Gas Engines. Av. G., 1st & 2nd Sts. Gas, distillate and oil engines, portable and stationary; and mining hoists.

GROUP 87

HYDRAULIC MOTORS

Pelton Water Wheel Co., The, San Francisco, Cal. Water Wheels. 4th & 5th Sts., Av. F.

GROUP 88

MISCELLANEOUS MOTORS

Campbell, Allen G., San Diego, Cal. Sun Motor.

GROUP 89

GENERAL MACHINERY AND ACCESSORIES

Advance Pump & Compressor Co., Battle Creek, Mich. Steam and Power Pumps. 5th St., cor. Av. D.

Albright Excavator Co., Milwaukee, Wis. Excavating Machinery. 4th & 5th Sts. & Av. I. Parrott & Company, San Francisco, Cal., Representative. See ad on front cover.

Aldrich Pump Co., The, Allentown, Pa. 5th St., bet. Avs. F & G. Power Pumps.

American Cast Iron Pipe Co., Birmingham, Ala. Pipe. 2nd St. & Av. H. Pacific Coast Branch, 461 Market St., San Francisco, Cal. J. W. Blair, Manager.

American Clutch Co., Amesbury, Mass. 5th St., cor. Av. G. Friction Clutches, Pulleys and accessories.

American Hoist & Derrick Co., St. Paul, Minn. 5th St., bet. Avs. F & G. Steam Hoists.

American La France Fire Engine Co., Elmira, N. Y. (In Service.) Motor Fire-fighting Apparatus.

American Pulley Co., The, Philadelphia, Pa. 4th St. & Av. I. Wrought Steel Belt Pulleys and accessories.

American Steam Pump Co., Battle Creek, Mich. Pumps. 1st St. & Av. E. Boiler feed pumps and centrifugal pumps, vacuum air compressors. California, Simonds Machinery Co.

American Well Works, The, Aurora, Ill. 1st St., Avs. G & G2. Power Pumps.

Armstrong, L. D., San Francisco, Cal. 5th St., cor. Av. B. (Collective Exhibit.) Power Pumps and Air Compressors.

Bacon Co., Edward R., San Francisco, Cal. 4th & 5th Sts., Avs. C & C2. (Collective Exhibit.) Excavating Machinery.

Baker-Hansen Manufacturing Co., East Oakland, Cal. 4th St., Avs. E & F. Air Compressors.

Berger & Carter Co., San Francisco, Cal. 5th St. & Av. I. Collective Exhibit. Hydraulic Press for Extracting Oils and Juices.

Bessemer Gas Engine Co., Grove City, Pa. Gas & Oil Engines. 4th St. & Avs. D & E.

Bond Foundry & Machine Co., Manheim, Lancaster Co., Pa. 4th St. & Av. I. Power Transmitting Machinery and accessories.

Bond Company, Chas., Philadelphia, Pa. Manufacturers. 4th St. & Av. I. Leather Belting.

Bristol Company, The, Waterbury, Conn. 2nd St. & Av. D. Belt Lacings and Rivets.

Brown Portable Elevator Co., Chicago, Ill. 4th St. & Av. H. Conveying and Elevating Machinery.

Canadian Bond Hanger & Coupling Co., Ltd., Alexandria, Ont. Power Transmitting Machinery. 3rd St. & Av. I.

Chain Belt Co., Milwaukee, Wis. 3rd St., bet. Avs. H & I. Chain Belting, Elevator Buckets.

Chisholm & Moore Mfg. Co., The, Cleveland, Ohio. 1st St. & Av. I. Chain Hoists & Trolleys, Traveling Cranes. Berger & Carter Co., San Francisco, Agents.

- Clyde Iron Works, Duluth, U. S. A. Manufacturers. 5th St. & Av. H. Hoisting Machinery, Excavating Machinery. Logging Machinery. Represented by Parrott & Co., San Francisco. See ad on front cover of catalog.
- Cowan Truck Company, Holyoke, Mass. Trucks. Cor. 3rd St. & Av. H. Special trucks for handling heavy weights. Stock handling system for factory, warehouse, railway and wholesalers.
- Crane Company, Chicago, Ill. 2nd & 3rd Sts., Avs. D & E. Valves, Fittings and Water Handling Appliances.
- Cumberland Steel Co., Cumberland, Md. 3rd St., bet. Avs. H & I. Ground Shafting.
- Cyclops Iron Works, San Francisco, Cal. Overhead Traveling Cranes. In Service.
- Dodge Mfg. Co., Mishawaka, Ind. 5th St. & Av. H. Conveying Machinery, Oscillating Conveyors. Vibrating screens, Zimmer conveyors, flexible coupling, Solid Safety friction clutch. Transmission rope drive. Power transmission appliances. Herron, Rickard & McCone, representatives, San Francisco.
- Down, S. G., San Francisco, Cal. 3rd St. Avs. C2 and D. Collective Exhibit. Air Compressors and accessories.
- Economy Engineering Company, Chicago, Ill. Av. H, bet. 3rd and 4th Sts. Hoisting Machinery, Portable Elevators, Warehouse Equipment, Steel Barrel Racks, Barrel Storage System. 805 Monadnock Building, San Francisco office.
- Electrene Company, The, New York, N. Y. (In Service.) Fire Extinguishers.
- Falk Company, The, Milwaukee, Wis. 4th St. & Av. F. Power Transmitting Gears.
- Field Force Pump Co., Elmira, N. Y. Hor. Palace, Av. A and 2nd St. Pumps and Pressure Filters.
- Flory Manufacturing Company, Bangor, Pa. 4th St. & Av. D. Hoisting Engines.
- Fuller & Co., W. P., San Francisco, Cal. Min. Pa., Av. C & 3rd St. Lubricating Oils.
- Gas Engine & Power Co. & Chas. L. Seabury, Con., Morris Heights, N. Y. 4th St. & Avs. E & F.
- General Electric Co., Shenectady, N. Y. Battery Truck Cranes. (In Service.) Fabric Transmission Gears (Mfr. Pal)
- Goodrich Rubber Co., B. F., Akron, Ohio. Hor. Pal. 1st St., bet. Avs. C & D, Sanitary Belting for Canning Factories.
- Goodyear Tire & Rubber Co., Akron, Ohio. Air Drill Suction Hose. The Mine.
- Graton & Knight Mfg. Co., Worcester, Mass. Manufacturers. 2nd St. & Av. H. Flat, round and "V" leather belting, leather packings and gaskets.
- Harron, Rickard & McCone, San Francisco, Cal. 4th St., 5th St. & Avs. G & H. Collective Exhibit. Hoists, Pumps.
- Haslett Warehouse Company, San Francisco, Cal. 4th St. & Av. I. Package Chute. Parrott & Co., San Francisco, Cal. Representatives. See ad on front cover.
- Hersey Manufacturing Co., So. Boston, Mass. Water Meters. 2nd St. and Av. H. Pacific Coast Branch, 461 Market St., San Francisco. J. W. Blair, Mgr.
- Hill Publishing Co., New York, N. Y. 1st St., bet. Avs. C' & C2. Electric Mechanical Periodicals.
- Hyde Company, Henry C., San Francisco, Cal. 4th St., Avs. E & F. Collective Exhibit. Gasolene Electric Lighting Systems.
- Hydraulic Press Mfg. Co., The, Mt. Gilead, Ohio. 2nd St., Avs. H & I. Power Pumps and Valves.
- Ideal Stencil Machine Co., Belleville, Ill. 5th St. & Av. E. D. F. Mannion, Div. Sales Mgr., 417 Market St., San Francisco.
- International Acheson Graphite Co., Niagara Falls, N. Y. 3rd & 4th Sts. & Av. G2. Lubricants.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St. bet. Avs. B & C. Apparatus for Lifting and Handling Water, etc.
- Joyce-Cridland Co., Dayton, Ohio. 4th St. bet. Avs. F & G. Lifting Jacks.
- Kewanee Private Utilities Company, Kewanee, Ill. 1st & 2nd Sts. & Av. E. Water Supply for Country Homes.
- Keystone Driller Company, Beaver Falls, Pa. Pumps. 4th St., bet. Avs. F & G. Deep-well Pumps.
- Krog Manufacturing Company, San Francisco, Cal. Pumps. 3rd St., Avs. H & I. Centrifugal and Turbine Pumps.
- Lagonda Mfg. Co., The, Springfield, Ohio. 2nd St. & Av. G2. Water Strainers and Water-handling Appliances.
- Layne & Bowler Corporation, Los Angeles, Cal. Pumps. 2nd St. & Av. G2. Power pumps, deep-well pumps.
- Link Belt Co., Philadelphia, Pa. Chain Drives. 2nd & 3rd Sts., Avs. H & I. Link belt, silent chains, chain drives.
- Lucey Co., J. F., Pittsburg, Pa. Pumps. 5th St. & Av. F. Power pumps and deep-well pumps.
- Luitwieler Pumping Engine Co., Rochester, N. Y. Pumps. 1st and 2nd Sts. & Av. E. Deep-well pumps. Los Angeles Luitwieler Pumping Eng. Co.; San Francisco, Simonds Machinery Co.
- Lunkeheimer Co., The, Cincinnati, Ohio. Lubricators. 1st St. & Av. G2. Oiling devices; oil cups, grease cups.
- McGraw Publishing Co., Inc., New York, N. Y. Publications. 2nd St. & Av. C. Technical periodicals.
- Macleod Co., The, Cincinnati, Ohio. 5th St. & Av. I. Sand Blast Machines.
- Marland, W. J., Oakland, Cal. Valves. 1st St. & Av. D. Collective Exhibit. Water valves.
- Meesse & Gottfried Co., San Francisco, Cal. 2nd & 3rd Sts., Avs. H & I. Collective Exhibit. Conveying and Elevating Machinery, etc.
- Minnesota Manufacturers Association, N. St. Paul, Minn. 4th & 5th Sts. & Av. H. Conveying Machinery.
- Muggley Wheel Corporation, New York, N. Y. 4th St. & Av. I. Differential Wheels.
- National Brake & Electric Company, Milwaukee, Wis. Railway Equipment. 3rd St., Avs. C2 & D. Air compressors and accessories.
- National Meter Co., New York, N. Y. Water Meters. 1st St. & Av. H. For measuring water, oils and various kinds of liquids. 141 New Montgomery St., San Francisco, Cal. 411 South Main St., Los Angeles, Cal.
- National Tube Company, Pittsburg, Pa. Min. Pal., Avenue D. Tubing, Pipes and Fittings.
- Neptune Meter Co., New York, N. Y. Trident. Water Meters. 1st St. & Av. C2.
- New London Ship & Engine Company, Groton, Conn. 4th & 5th Sts. & Av. E. Air compressors.
- Owen Bucket Co., The, Cleveland, O. 4th St. & Av. I. Excavating machinery.
- Pacific Tank & Pipe Co., San Francisco, Cal. Min. Pal., 6th St., bet. Avs. A & B. Water tanks, piping and accessories.
- Parrott & Co., San Francisco, Cal. 4th & 5th Sts. & Av. I. Coll. exhibit hoisting engines.
- Pawling & Harnischfeger Co., Milwaukee, Wis. 4th & 5th Sts. & Av. C2. Excavating machinery and accessories.

- Pelton Water Wheel Co., The, S. F., Cal. 4th & 5th Sts. & Av. F. Coll. exhibit high-pressure pumps, centrifugal pumps.
- Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa. 5th St. & Av. E. Tanks and water-handling appliances.
- Plant Rubber & Supply Co., San Francisco, Cal. 5th St., nr. Av. F. Asbestos.
- Pnumerator Co., New York, N. Y. 1st St. & Av. C2. Water tank indicator.
- Pyrene Mfg. Co., New York, N. Y. 5th St. & Av. D. Fire extinguishers, parts and fittings.
- Redwood Manufacturers' Company, San Francisco. Farm equipment. 5th St. & Av. D. 15,000-gallon "Remco" redwood tank in operation. "Remco" machine-banded redwood stave pipe in operation. Miniature "Remco" redwood tank and tower. Sections of "Remco" pipe, machine-banded and continuous stave.
- Reeves Pulley Co., Columbus, Ind. 3rd St., bet. Avs. H & I. Variable speed transmission device.
- Robinson & Son Co., The, Wm. C., Baltimore, Md. Oils, 5th St. & Av. E. Robsoco lubricants, Antoline and Greoil, the oils and greases that "lubricate more and outlast others"; fifteen branches, distributors everywhere. Pacific Coast distributing office, 417 Market street, San Francisco, Cal.
- Saginaw Manufacturing Co., Saginaw, Mich. 3rd St., bet. Avs. H & I. Wood split pulleys.
- Sangamo Electric Co., Springfield, Ill. 2nd St. & Av. C2. Small electric lighting units.
- Schieren Co., Chas. A., New York, N. Y. 2nd St. & Av. G. Leather belting and accessories.
- Searles, Mailler, San Francisco, Cal. 3rd St. & Av. H. Coll. exhibit hoisting and conveying machinery.
- Shepard Electric Crane & Hoist Co., Montour Falls, N. Y. 2nd St. & Av. I. Electric cranes and hoists. Berger & Carter Co., San Francisco agents.
- Simonds Machinery Co., San Francisco, Cal. 1st & 2nd Sts. & Av. E. Coll. exhibit. Pumps and air compressors.
- Smith Manufacturing Co., The A. P., East Orange, N. J. 2nd St. & Av. G2. Tapping machines, valves, fittings.
- Standard Gas Engine Co., San Francisco, Cal. 1st & 2nd Sts., Avs. E & F. Hoisting engines.
- Standard Oil Company, San Francisco, Cal. Lubricants. 3rd St. & Avs. E & F. Lubricating oil for automobiles, air compressors, axles, ammonia, compressors, cream separators, gas engines, engines and machinery harness, harvesters, marine steam cylinders, turbines; lubricating greases for engines and machinery, automobile axles, lathes, planers, shapers, electric machinery. See general exhibit in Block 28, Palace of Mines and Metallurgy.
- Standard Pressed Steel Co., Philadelphia, Pa. 3rd St., bet. Avs. H & I. Steel shaft hangers and set collars.
- Standard Woven Fabric Co., Framingham, Mass. 3rd & 4th Sts. & Av. G2. Woven belting and friction brake lining.
- Star Drilling Machine Co., Akron, Ohio. 2nd St., Avs. F & G. Deep well pumps.
- Technical Publishing Co., San Francisco, Cal. Main West Entrance. Electrical publications.
- Union Oil Company of California, S. F. Producers and refiners petroleum. 2nd St. & Av. G2. Exhibiting also in Mines Palace. Crude petroleum, mineral fuel, residuum oil fuel, fuel oil for stoves and furnaces, fuel for Bisel engines, fuel for gas engines, oil for making gas, oil for heating orchards, oil for spraying trees, illuminating oils, kerosene, etc., lubricating oils for machines, lubricating oils for engines, floor oil, mineral turpentine, lubricating greases, lubricating oils for steam engine cylinders, lubricating oils for gas engine cylinders.
- Union Special Machine Company, of Chicago. Sewing machines. 2nd St. & Av. G2. Double needle, flat-bed sewing machine for felling; double needle, side-wheel sewing machine for felling; double needle, flat-bed sewing machine connected to pulling machine for attaching bib to bib-overalls. Over-edges trimming machine for finishing pockets; single needle, right-hand cylinder sewing machine for hemming bottom of leg of overalls. Various other styles in operation, but not described. Branch office for Pacific Coast, 682 Mission St., San Francisco, Cal.
- United Pump & Power Company, Milwaukee, Wis. Pumps. 3rd St., bet. Avs. C2 & D. Pneumatic water pumping and distributing system.
- Weber Subterranean Pump Co., New York, N. Y. 1st St. & Av. C2. Subterranean pumps.
- Westinghouse Air Brake Co., Pittsburgh, Pa. Air brakes. 3rd St., Avs. C2 & D. Air compressors and accessories.
- Westinghouse Electric & Mfg. Co., Pittsburgh, Pa. 4th St., bet. Avs. E & F, 2nd & 4th Sts., Avs. C & C2. Transmission gears, heat insulating material.
- Westinghouse Pacific Coast Brake Co., San Francisco, Cal. 3rd St., Avs. C2 & D. Air compressors and accessories, air brakes.
- Westinghouse Traction Brake Co., Pittsburgh, Pa. Air brakes. 3rd St., Avs. C2 & D. Air compressors and accessories.
- Wood, R. D. & Company, Philadelphia, Pa. Pipe. South Entrance. Cast iron water pipe, hydrants, valves, fittings, valve indicator posts with photos of pumping machinery, hydraulic tools, gas producers, gas holders and centrifugal pumps.
- Yarnall-Waring Company, Philadelphia, Pa. 1st St. & Av. D. Water valves.
- Young Iron Works, C. J., Seattle, Wash. 4th St. & Av. C2. Clam-shell excavator bucket.

GROUP 90

TOOLS FOR SHAPING WOOD AND METALS

- Acme Machinery Company, Cleveland, Ohio. 5th St., bet. Avs. G & H. Bolt and rivet-making machinery.
- Almond Manufacturing Co., T. R., Ashburnham, Mass. 3rd & 4th Sts. & Av. G2. Drill chucks.
- American Tool Works Co., The, Cincinnati, O. 3rd & 4th Sts. & Av. G2. Lathes.
- Ams Machine Company, The, Max, Mt. Vernon, N. Y. 1st St., Avs. H & I. Can-making and sheet metal working machinery. Berger & Carter Co., San Francisco agents.
- Andrew & Company, Jno. Hy., Ltd., Sheffield, Eng. 4th St., bet. Avs. G & G2. Drill steel, tool steel, wire drawing dies.
- Armstrong Bros. Tool Co., Chicago, Ill. 4th St. & Av. G2. Lather and planer tools, drills.
- Atkins & Company, E. C., Indianapolis, Ind. Mfr. Pal., 5th St., bet. Avs. C & D. Circular saws for cutting metal, band saws.
- Aurora Tool Works, The, Aurora, Ind. 4th St., bet. Avs. G & G2. Drill presses.
- Bailey & Blendinger, Woburn, Mass. 3rd & 4th Sts. & Av. G2. Machine knives.
- Beach Manufacturing Co., Montrose, Pa. 5th St. & Av. G. Light sewing machines (wood-working).
- Berger & Carter Company, San Francisco, Cal. 5th St. & Av. I. Collective exhibit sheet metal shaping presses.

- Bliss, E. W. & Co., Brooklyn, N. Y. Sheet metal machinery. 3rd St., Avs. F & G. Sheet metal working machinery, power presses for cutting, forming and embossing sheet metal goods.
- Builders' Iron Foundry, Providence, R. I. 4th St. & Av. G2. Grinding and polishing machinery.
- Carborundum Co., The, Niagara Falls, N. Y. 4th St. & Av. H. Grinding materials.
- C. H. & E. Mfg. Co., Inc., Milwaukee, Wis. 5th St., bet. Avs. H & I. Portable wood-sawing machines.
- Cincinnati Electrical Tool Company, Cincinnati, O. 3rd & 4th Sts., Av. G2. Electric driven tools.
- Cincinnati Iron & Steel Co., Cincinnati, O. 5th St., bet. Avs. G & H. Lathes.
- Crescent Machine Co., The, Leetonia, O. 4th St., bet. Avs. C & D. Wood working machinery.
- Dannemora Steel Works, Sheffield, England. 3rd & 4th Sts. & Av. G2. Tool steels.
- Detroit Twist Drill Co., Detroit, Mich. Tools. St. & Av. Twist drills, taper, straight, square, shanks, reamers, hand taper pin, carbon and high-speed twist drills.
- Disston & Sons, Inc., Henry, Philadelphia, Pa. Mfr. Pal., Av. C, cor. 6th St. Files and metal-cutting saws.
- Doig, Estate of W. S., Brooklyn, N. Y. 3rd & 4th Sts. & Av. G. Box nailing machines.
- Dreis & Krump Mfg. Co., Chicago, Ill. 3rd St. & Av. G2. Sheet metal working machinery.
- General Electric Company, Schenectady, N. Y. Mfr. Pal. Electric drills and grinding machines.
- Germantown Tool Works, Philadelphia, Pa. V. I. Pal., Av. A & 2nd St. Machinists' hammers.
- Gilro Machine Company, Oakland, Cal. 4th St. & Av. I. Power punch presses.
- Gould & Eberhardt, Newark, N. J. 3rd & 4th Sts. & Av. G2. Shapers and gear cutters.
- Grant Mfg. & Machine Co., Bridgeport, Conn. 5th St., bet. Avs. G & H. Riveting machines.
- Grinder Mfg. Co., The Luther, Milwaukee, Wis. 2nd St. & Av. I. Tool grinders.
- Hanchett Swage Works, Big Rapids, Mich. 3rd St. & Av. B. Power wood saws and saw fitting machinery.
- Harron, Rickard & McCone, San Francisco, Cal. 4th & 5th Sts., Avs. G & H. Collective exhibit iron and wood-working machinery.
- Henderson-Willis Company, St. Louis, Mo. 2nd St. & Av. F. Oxy-acetylene equipment.
- Horton & Son Co., The E., Windsor Locks, Conn. 3rd & 4th Sts., Av. G2. Lathe and drill chucks.
- Hydraulic Press Mfg. Co., The, Mt. Gilead, O. 2nd St., Avs. H & I. Hydraulic presses, pumps, valves. Berger & Carter Co., San Francisco agents.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Special machinery for grinding and shaping metals, etc.
- Jahnke Welding & Mfg. Co., San Francisco, Cal. South Entrance. Oxy-acetylene equipment.
- KempSmith Mfg. Co., The, Milwaukee, Wis. 3rd & 4th Sts. & Av. G2. Milling machines.
- Keystone Drill Co., Beaver Falls, Pa. Drilling machines. 4th St., bet. Avs. F & G. Drilling machines, portable, for water, oil and mineral prospecting; power pumps and equipment.
- Lagonda Mfg. Co., The, Springfield, Ohio, 2nd St. & Av. G2. Valve seating machines and die cutters.
- Lambie Steel Form Company, New York, N. Y. Builders' materials. 1st St. & Av. D. Lambie's interchangeable steel forms for concrete houses and buildings, basic patents all over the world. One complete story at one case. 299 Broadway, New York office.
- Landis Tool Company, Waynesboro, Pa. 4th St. & Av. G2. Grinding and boring machines.
- Lea-Countensy Co., Inc., New York, N. Y. 5th St., bet. Avs. G & H. Cold steel saws.
- Leaver Manufacturing Co., The, Oakland, Cal. 4th St. & Av. I. Lumber cut-off saws.
- MacLeod Co., The, Cincinnati, Ohio. Av. L & 1st St. Heaters, burners, and oxy-acetylene equipment.
- Marland, W. J., Oakland, Cal. 1st St. & Av. D. Collective exhibit pipe fitters' tools.
- Mitts & Merrill, Saginaw, Mich. 3rd & 4th Sts., Av. G2. Key seating machines.
- Morton Manufacturing Co., Muskegon Heights, Mich. 4th St., Av. G. Machine tools.
- Niagara Machine & Tool Works, Buffalo, N.Y. 3rd St. & Av. G2. Sheet metal working tools and machinery.
- Ohlen & Sons Saw Mfg. Co., J., Columbus, O. 4th St. & Av. G2. Pipe cutting and threading machines.
- Pacific Tank & Pipe Co., San Francisco, Cal. Min. Pal., 6th St., bet. Avs. A & B. Special lathes.
- Parker Machine Works, Riverside, Cal. 5th St. & Av. C. Box-nailing machinery.
- Parrott & Co., San Francisco, Cal. 4th & 5th Sts. & Av. I. Collective exhibit portable wood-sawing machinery.
- Quality Saw & Tool Works, Chicago, Ill. 3rd & 4th Sts. & Av. G2. Hack saws.
- Reed Manufacturing Co., Erie, Pa. Mfrs. 1st St. & Av. D. Bench vices, pipe vices, stocks and dies, pipe cutters.
- Rockford Machine Tool Co., Rockford, Ill. 3rd & 4th Sts. & Av. G2. Drill presses.
- Schleuter, M. L., Chicago, Ill. 3rd St., bet. Avs. B & C. Floor surfacing machines.
- Simonds Manufacturing Company, Fitchburg, Mass. Mfr. Pal., 6th St., bet. Avs. C & D. saws, metal cutting.
- Smith Mfg. Co., The A. P., East Orange, N.J. Supplies. 2nd St. & Av. G2. Tapping machines, fittings and supplies for water works; machines for making connections to mains under pressure; machines for inserting cocks; machines for inserting valves under pressure; machines for testing meters, all sizes; machines for cutting pipe, no waste; machines to locate underground pipe; hydrants for warm and cold climates; hydrants for high-pressure service; hydrants for filling sprinkling carts; fittings for use with tapping machines; furnaces for melting lead with kerosene; valves for all kinds of service; removable cast iron plugs; corporation cocks for all machines; curb cocks, all kinds and styles; brass goods for water and gas works.
- Smith & Mills Co., The, Cincinnati, O. Machine tools. 4th St. & Av. G2. Machine tools, shaping machines. See exhibit installed in Block 61, in Palace of Machinery.
- Spear & Son, Co., Aldean, Boston, Mass. 3rd & 4th Sts. & Av. G2. Grinding and abrasive materials.
- Standard Underground Cable Company, Pittsburgh, Pa. 3rd St. & Av. D. Wire braiding machines.
- Stockbridge Machine Co., Worcester, Mass. 4th St. & Av. G2. Machine tools.
- Summer Iron Works, Everett, Wash. 3rd & 4th Sts., Avs. A & B. Shingle mill machinery.
- Superior Corundum Wheel Co., Waltham, Mass. 3rd & 4th Sts., Av. G2. Grinding and abrasive materials.

Temco Electric Motor Co., The, Leipsic, O. 1st St. & Av. I. Electric-driven tools, buffers, grinders. Berger & Carter Co., San Francisco representative.

Union Caliper Co., Orange, Mass. 3rd & 4th Sts. & Av. G2. Mechanics' hand tools.

U. S. Electrical Tool Co., The, Cincinnati, O. 4th St. & Av. G2. Electric hand drills and grinders.

U. S. Steel Corporation, Pittsburg, Pa. Min. Pal., Av. D. Collective exhibit tool steels.

Ward & Son, Fred, San Francisco, Cal. 3rd and 4th Sts. & Av. G2. Collective exhibit.

Warner & Swasey Company, The, Cleveland, O. 3rd St. & Av. G. Machine tools, special lathes.

Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn. 2nd St. & Av. E. Drop-forging machinery.

Watson-Stillman Co., The, New York, N. Y. V. I. Pal., Av. A & 2nd St. Hydraulic packing.

Western Tool & Mfg. Co., The, Springfield, O. 4th St. & Av. H. Machine shop accessories.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Axle bearings. 4th St., bet. Avs. E & F. 2nd St. & 4th St., Avs. C & C2. Electric welding display; small motors with attachments; small motors with chucks; carbondrum wheels, buffing wheels, brush wheels; pulleys, tool rests.

Williams & Co., J. H., Brooklyn, N. Y. 2nd St. & Av. E. Drop-forged tools.

Williams Tool Company, Erie, Pa. 5th St., bet. Avs. G & H. Pipe-threading machines.

ELECTRICAL GROUPS

GROUP 91

COMMUTATING APPARATUS

Berger & Carter Co., San Francisco, Cal. Commutating motors (collective exhibit). 5th St. & Av. I.

Century Electric Co., St. Louis, Mo. Commutating motors. 1st St. & Av. C.

Electro-Dynamic Co., Bayonne, N. J. Direct-current motors. 4th & 5th Sts. & Av. E.

General Electric Co., Schenectady, N. Y. Direct-current generator, etc. 4th St. & Av. F.

Shepard Electric Crane & Hoist Co., Montour Falls, N. Y. Commutating motors. 2nd St. & Av. I.

Temco Electric Motor Co., The, Leipsic, O. Small motors. 1st St. & Av. I.

Western Electric Co., San Francisco, Cal. Electric generators. 1st & 2nd Sts., Avs. E. & F.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Trns. Pal., 4th St., bet. Avs. E. & F.; 2nd & 4th Sts., Avs. C & C2. Direct-current interpole generator (in Busch Sulzer-Diesel Engine Company's exhibit); D. C. generator (in U. S. Govt. Oil-Well exhibit; motor generator sets; direct and alternating current commutating type; railway motors; pressed steel frame railway motor; direct and alternating current commutating type motors.

GROUP 92

SYNCHRONOUS APPARATUS

General Electric Co., Schenectady, N. Y. Synchronous motors. Mfr. Pal.

Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Synchronous generators, etc. 4th St., bet. Avs. E & F; 2nd & 4th Sts., Avs. C & C2.

GROUP 93

STATIONARY INDUCTION APPARATUS

General Electric Company, Schenectady, N. Y. Transformers and transformer vault. Mfr. Pal.

Moloney Electric Co., St. Louis, Mo. Transformers. 1st St. & Av. C. Subway transformers; potential transformers; current transformers; variable voltage transformers; sign lamp transformers.

Pacific Electric Manufacturing Co., San Francisco, Cal. Electric switches. 1st St. & Av. C. Indoor oil brake switches; outdoor oil brake switches; poletop air brake switches; isolating links; current breakers; remote control switches; outdoor sub-stations.

Sangamo Electric Co., Springfield, Ill. Current and potential transformers and resistance ducts.

Thordarson Electric Mfg. Co., Chicago, Ill. Special transformers. 1st & 2nd Sts. & Av. D.

Western Transformer Co., East Oakland, Cal. Electric transformers. 2nd St., bet. Avs. C & C2.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Transformers. 4th St., bet. Avs. E & F; 2nd & 4th Sts., Avs. C & C2. Transformers and auto-transformers; potential and constant current regulators; auto-starters.

GROUP 94

ROTARY INDUCTION APPARATUS

Century Electric Co., St. Louis, Mo. Induction motors. 1st St. & Av. C.

Denver Engineering Works, The, Denver, Colo. Induction Motors. Min. Pal., "The Mine."

General Electric Co., Schenectady, N. Y. Induction motors. Mfr. Pal.

Neuland Electric Co., San Francisco, Cal. Electric generators. 1st St., bet. Avs. C2 and D.

Robbins & Myers Co., The, Springfield, Ohio. Induction motors. 2nd St. & Av. C2.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Induction motors. 4th St. bet. Avs. E & F; 2nd & 4th Sts., Avs. C & C2. Induction motors of various types; induction motor driving turntable.

GROUP 96

RECTIFYING APPARATUS

General Electric Co., Schenectady, N. Y. Mercury arc and vibratory rectifiers. Mfr. Pal.

Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Mercury rectifiers. 4th St., bet. Avs. E & F; 2nd & 4th Sts., Avs. C & C2. Mercury rectifiers (arc and vibrating).

GROUP 97

LUMINOUS APPARATUS (Sources of Light)

Central Telephone & Electric Co., St. Louis, Mo. Electric hand lanterns. 1st St. & Av. D.

General Electric Co., Schenectady, N. Y. Searchlight projectors. (In service.)

General Electric Co., Schenectady, N. Y. Arc and incandescent lamps, etc. Mfr. Pal.

Hanovia Chemical & Mfg. Co., Newark, N. J. Electric lamps. 1st St. & Av. D.

International Acheson Graphite Co., Niagara Falls, N. Y. Graphite electrodes. 3rd & 4th Sts., Av. G2.

Inter-State Electric Novelty Co., New York, N. Y. Electric lamps. Av. A & 2nd St.

Marland, W. J., Oakland, Cal. Electric hand lanterns. (Collective exhibit.) 1st St. & Av. D.

Mohrlite Co., San Francisco, Cal. Electric lamps and lighting system. 1st St., bet. Avs. C & C2.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Lamps. 4th St., bet. Avs. E & F; 2nd & 4th Sts., Avs. C & C2. Arc lamps, Mazda lamps.

Westinghouse Lamp Co., Bloomfield, N. J. Av. C & 2nd St. Mazda lamps.

GROUP 98

MEASURING, INDICATING AND RECORDING APPARATUS

(Not including Instruments for Pure Science and Research Work.)

- Bristol Co., The, Waterbury, Conn. Electric indicating and recording instruments. 2nd St. & Av. D.
- General Electric Co., Schenectady, N. Y. Volt meters, ammeters, watt meters, portable and stationary. Mfr. Pal.
- Industrial Instrument Co., The, Foxboro, Mass. Electric indicating and recording instruments. 3rd St. & Av. C2.
- Marland, W. J., Oakland, Cal. Collective exhibit. Flow meters and ammeters. 1st St. & Av. D.
- Pignolet, Louis M., New York, N. Y. Flow meters and ammeters. 1st St. & Av. D.
- Sangamo Electric Co., Springfield, Ill. Electric measuring and recording instruments. 2nd St. & Av. C2.
- Smith Manufacturing Co., The A. P., East Orange, N. J. Electric pipe locating machines. 2nd St. & Av. G2.
- Thordarson Electric Mfg. Co., Chicago, Ill. Electric measuring and recording apparatus. 1st & 2nd Sts. & Av. D.
- Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Switchboard instruments. 4th St., Avs. E & F; 2nd & 4th Sts., Avs. C & C2. Instruments for switchboard use; instruments apart from switchboards; portable instruments; laboratory instruments.

GROUP 99

APPARATUS FOR PROTECTION OF ELECTRIC APPARATUS AND FOR CONTROL AND DISTRIBUTION OF ELECTRIC ENERGY, OTHER THAN RAILWAY MATERIAL.

- American Bridge Co., Pittsburg, Pa. Steel tower and poles. Min. Pal., Av. D.
- American Pulley Co., The, Philadelphia, Pa. Steel reels and spools. 4th St. & Av. I.
- American Sheet and Tin Plate Co., Pittsburg, Pa. Sheet metals for electric uses. Av. D, Min. Pal.
- American Steel & Wire Co., Chicago, Ill. Electric wire and cables. Min. Pal., Av. D.
- Baruch Electric Controller Corporation, San Francisco, Cal. Electric circuit breakers and thermo relays. Av. C & 1st St.
- Bowie Switch Co., The, San Francisco, Cal. Electric switches and accessories. 2nd St., bet. Avs. C & C2.
- Diamond Expansion Bolt Co., New York, N. Y. Electric line material. Cor. Av. C & 8th St.
- D. & W. Fuse Co., Providence, R. I. Electric fuses. Av. A & 2nd St.
- Economy Fuse & Mfg. Co., Chicago, Ill. Electric fuses. 1st St. & Av. D.
- Electric Products Co., Cleveland, O. Battery charging apparatus. 5th St. & Av. C2.
- General Electric Co., Schenectady, N. Y. Switchboards, oil switches, circuit breakers (Mfr. Pal.); lightning arresters, industrial electric control device (Trans. Pal.)
- Germantown Tool Works, Philadelphia, Pa. Lineman's axes. Av. A & 2nd St.
- Gest, G. M., Ltd., Conduit Engineer and Contractor, Montreal, Winnipeg, Vancouver (Head office, Power Bldg., Montreal). 3rd St., bet. Avs. C & D.
- Gest, G. M., Conduit Engineer and Contractor. 3rd St., bet. Avs. C & D. New York, Cincinnati, San Francisco. Executive offices, Woolworth Bldg., New York.
- Gest, Guion M., New York, N. Y. Underground electric conduit systems. 3rd St., bet. Avs. C & D.
- Moloney Electric Co., St. Louis, Mo. Sign lamp transformers. 1st St. & Av. C.

Pacific Electric Mfg. Co., San Francisco, Cal. Electric switches, circuit breakers, etc. 1st St. & Av. C.

Standard Underground Cable Co., Pittsburg, Pa., and Associate Canadian Company of Hamilton, Ont. Wires and cables. Cor. Av. D. & 3rd St. Electric wires and cables, bare and insulated; cable terminals; junction boxes; jointing materials, etc.; cables in various stages of manufacture, from rough copper ingot or bar to finished product. Copper wire bars used as posts, and large bare-copper cable as railing of space enclosure. Two braiding machines in operation weaving cotton insulating braid on conductors. Samples of early types of cables made 25 years ago. Cable terminals used in Panama Canal Zone. Cables and junction boxes installed in underground conduits and manholes. In the booth of G. M. Gest, adjoining that of the Standard Underground Cable Co., there is shown an actual installation of these cable accessories in power, transformer and telephone manholes.

Temco Electric Motor Co., The, Leipsic, O. Portable electric buffers, grinders, small motors. Berger & Carter Co., San Francisco agents.

Thomas & Sons Co., R., East Liverpool, Ohio. High and low tension insulators, etc. 1st St. & Av. C2.

Trumbull Electric Mfg. Co., Plainville, Conn. Electric insulation material. Av. A & 2nd St.

U. S. Light & Heating Co., Niagara Falls, N. Y. 1st St., cor. Av. D, Mach. Pal. U. S. L. electric starter and lighter for automobiles; U. S. L. electric home lighting plants; U. S. L. storage batteries for all purposes. See Sangamo Electric Co.'s exhibit of U. S. L. lighting equipment for railroad cars.

U. S. Steel Corporation, Pittsburg, Pa. Electric line material. Av. D.

Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Switchboards, etc. 4th St., Avs. E & F; 2nd & 4th Sts. Avs. C & C2. Complete switchboards; switchboard (in Busch-Diesel Engine Co.'s exhibit); lightning arresters and accessories; devices for opening and closing circuits; fuses, fuse holders, insulated wire, etc.; glue pots, blow torches, soldering materials, treated cloth, etc.

GROUP 100

ELECTRO-CHEMICAL APPARATUS

- Edison Storage Battery Co., East Orange, N. J. Storage batteries. 1st St. & Av. D.
- Electric Products Co., Cleveland, O. Storage batteries. 5th St. & Av. C2.
- Inter-State Electric Novelty Co., New York, N. Y. Flashlight batteries. Av. A & 2nd St.

**OFFICIAL CLASSIFICATION OF EXHIBITS
U. S. GOVERNMENT EXHIBITS.**

- Department of the Navy.
- Department of War.
- Department of the Treasury:
Revenue Cutter Service.
- Department of Agriculture:
Office of Public Roads.
- Department of Commerce:
Bureau of Lighthouses.
- Motion Picture Exhibit.
- These exhibits located in northwest part of Machinery Palace.

Foreign Section**SWEDEN**

The exhibits of Sweden, classified in this Department, are installed in the Swedish Building, Avenue of Nations.

NEPTUNE METER CO.

90 West Street, New York

320 Market Street, San Francisco

"TRIDENT" WATER METERS ARE USED EXCLUSIVELY BY THE EXPOSITION IN CONNECTION WITH ITS WATER SYSTEM ON THE EXPOSITION GROUNDS.



VISIT BOOTH 23. SOUTH MACHINERY PALACE

There is a type of "Trident" Water Meter specially designed for every form of service

NEPTUNE METER CO.

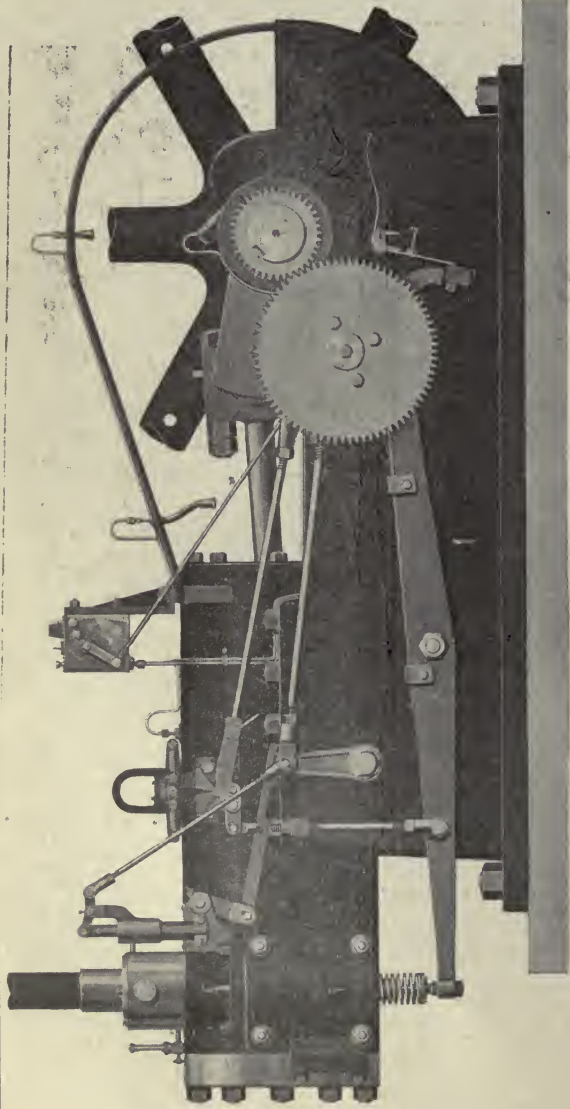
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Less Money”

**WESTERN
ENGINES**
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DURABILITY
AND
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Best and most modern cheap fuel engine in the world. Sizes, 12 to 200 H. P. Single cylinder four cycle horizontal. For all purposes of engines of its class. Uses cheapest fuel and less of-it.
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FOREIGN AGENTS WANTED

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Official Catalogue Palace of TRANSPORTATION EXHIBITS

PANAMA - PACIFIC
INTERNATIONAL
EXPOSITION
SAN FRANCISCO 1915

THE LORD OF DAY
TREADS FROM THE
EAST HIS KINGLY
ROAD OF GOLD

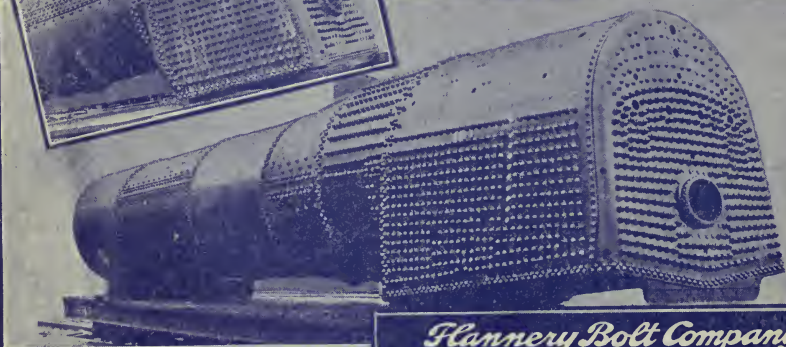
VNTO NERVANA · HE · IS · ONE WITH LIFE
YET LIVES NOT HE IS BLEST CEASING
TO BE ON PLANE PADME ONT THE
DEWDROP SLIPS INTO THE SWINDING SEA

WHY QUESTON
THE WORDS
THAT WITHIN
EDGES BEANS

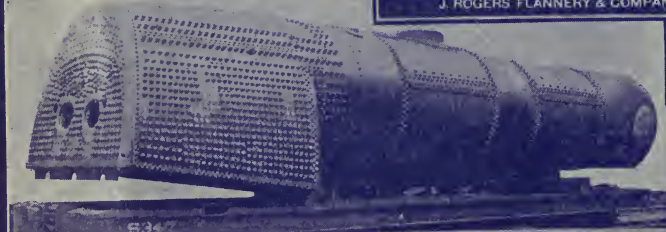
Price
25¢



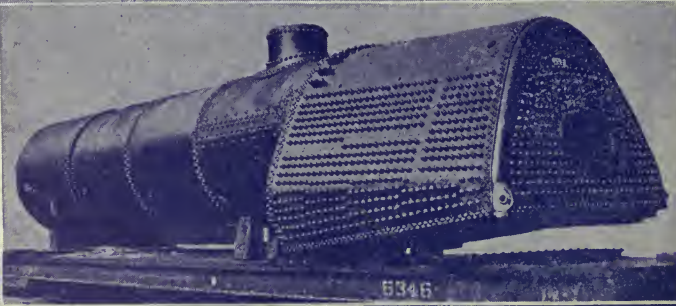
Palace of Transportation Exhibits



Flannery Bolt Company
 PITTSBURGH, PA., U. S. A.
 GEN'L OFFICE, VANADIUM BUILDING E. E. D. STAFFORD, GEN'L. MANAGER
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 SOUTHEASTERN TERRITORY
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TYPICAL INSTALLATIONS OF THE TATE FLEXIBLE STAYBOLTS, APPLIED TO LOCOMOTIVE FIREBOXES

Official Catalogue of
PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT

July 10 1914.

To Whom It May Concern:-

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.

Charles H. Chase
President.



Richard Strauss
Secretary.

Copyright
PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915

Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

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Division of Exhibits

ASHER CARTER BAKER, Director

Department **G**

TRANSPORTATION

BLYTHE H. HENDERSON, Chief

Preliminary Edition

Published for the Division of Exhibits by
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San Francisco, 1915

PREFACE

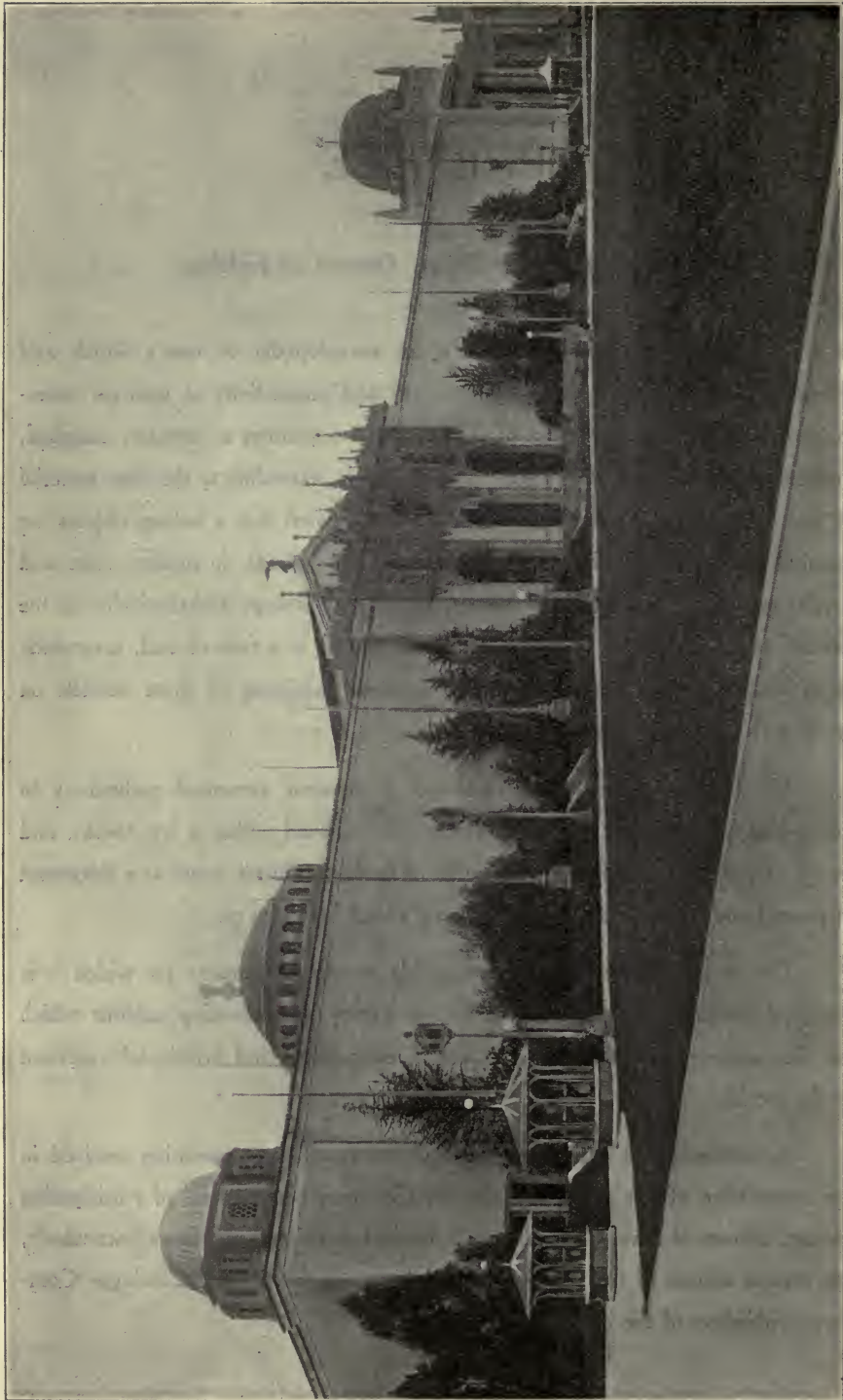
By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF TRANSPORTATION

TRANSPORTATION

Official Catalogue Department G

CLASSIFICATION OF EXHIBITS

Carriages, Wheelwright's Work, Automobiles
and Cycles.

Saddlery, Harness.

Railways.

Material Equipment used in the Mercantile Marine.

Material Equipment of Naval Service; Naval and
Military Ordnance; Aerial Navigation.

Dirigibles.

Spherical Balloons.

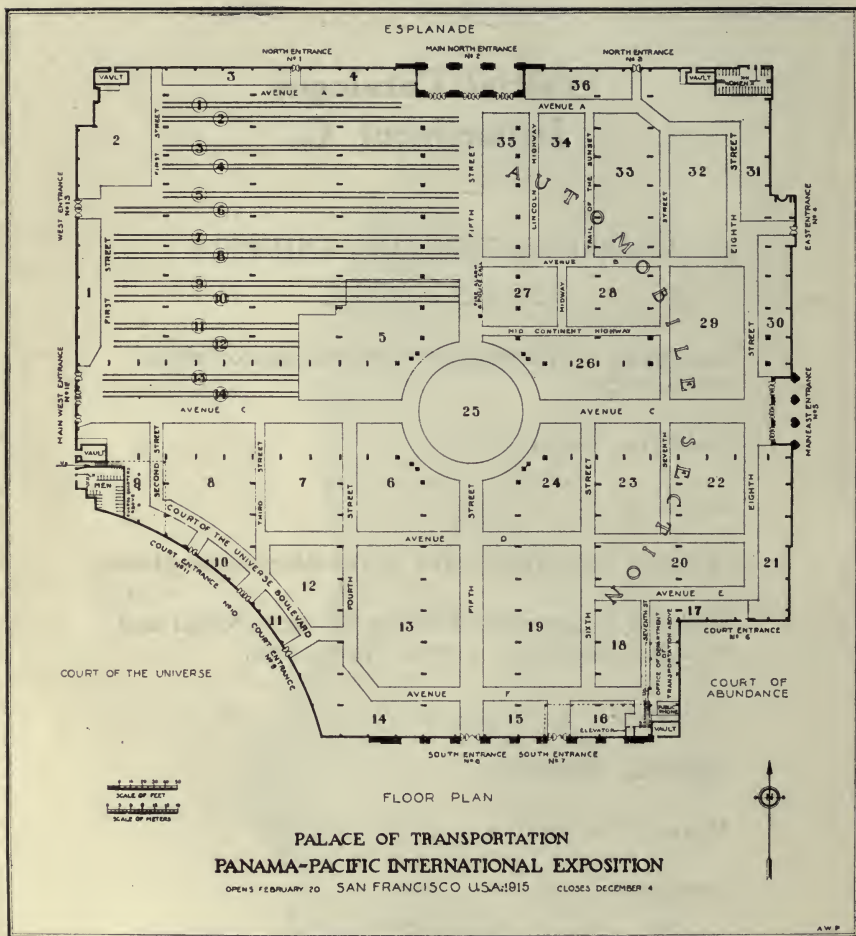
Military Ballooning.

Aeroplanes.

Gases.

Motors.

Literature.



FLOOR PLAN

**PALACE OF TRANSPORTATION
PANAMA-PACIFIC INTERNATIONAL EXPOSITION**

OPENS FEBRUARY 20 SAN FRANCISCO U.S.A.:1915 CLOSES DECEMBER 4

INTRODUCTION

Department of Transportation

By

BLYTHE H. HENDERSON,

Chief.

With the first step of man, transportation had its birth. Through countless ages the conquest of the world has continued and will continue as long as human activity is extant. Transportation has made possible every human endeavor and conquest, for without this vital energy, development would cease. Man's desire to see and penetrate the unknown is the key to success. Transportation is symbolical of this key which opens the treasure chest of knowledge.

Chicago, Paris and St. Louis have told the story of past progress and to a certain extent have foretold some of the developments to come. The Panama-Pacific International Exposition deals with the advance and improvements accomplished during the decade 1905-1915.

Transportation on land, on water and under water and through the air have today reached a point which might appear to be the acme of perfection. Notwithstanding the great achievements to date, the master minds of today are solving yet more difficult problems and these solutions when reached will make not only probable, but possible, greater advances in the future. The transportationist of today can well say "the world is mine"; but the transportationist of tomorrow will say "the universe is mine."

In the Palace of Transportation there will be shown motive power for land transportation, both steam and electric. Rolling stock that is used for passenger and freight traffic; construction material and methods used under the best practice; expeditious handling of mail and express; safety devices; routes of travel; pictures, views and spectacular presentations of world renowned points of interest.

Marine travel is fully illustrated through models of ships; photographs, full size sections of modern merchant vessels; charts and other methods. In Machinery Palace, yet having a place in this department, are the latest types of marine engines and motor boat appliances. Oversea travel, both domestic and foreign, are shown.

The automobile, which is the flexible unit of transportation and which is a great factor in the development of the country, is seen in all the varied types and body styles known to the motoring world. The exhibits of limousines, Berlin and Sedan types of closed cars and the numerous open car designs are given an artistic setting within a rose garden and amid beautiful pictured scenes of rustic, wooded, lake, river and mountain beauty spots in graceful profusion. The motor truck interests are placed in a handsomely appointed structure, built especially for their needs.

The exhibits typify every phase of development in modes of modern transportation and faithfully record the marvelous advances thus made in recent years.

INTRODUCTION

Department of Transportation

HOW TO LOCATE AN EXHIBIT

The Palace of Transportation is laid out in blocks, which are consecutively numbered from 1 to 30, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Eighth) running north to south, and as avenues (A to F) from east to west. In addition are the Court of Honor Boulevard, in the southwest portion of the building, and the Lincoln Highway, Trail of the Sunset and the Midway, streets running north to south in the Automobile Section, and the Mid Continent Highway, from east to west in the same section. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle locations following each name. Street and Avenue signs are erected at their intersections on the corners of all blocks.

All Exhibits entered in this catalogue are located in the Palace of Transportation **unless otherwise indicated** after the entry. The following are abbreviations used in this catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF TRANSPORTATION

Official Classification of
ExhibitsDEPARTMENT G
GROUP 101

CARRIAGES AND WHEELWRIGHTS' WORK, AUTOMOBILES AND CYCLES

- Class 513. Pleasure carriages and sleighs, sedan chairs.
- Class 514. Public carriages; ambulances; hearses; carriages for invalids and infants.
- Class 515. Carts and wagons for all purposes; trucks and drays, farm wagons and carts.
- Class 516. Vehicles driven by mechanical motors; motorcycles; automobiles.
- Class 517. Bicycles. Velocipedes.
- Class 518. Detached parts, material and inventions pertaining to carriage building, wheelwrights' work, automobiles or cycles.

GROUP 102

SADDLERY AND HARNESS

- Class 519. Equipment for horses and other animals, attached to carriages, mounted, or in the stable. Harness for pleasure carriages, saddles, bridles; harness for public service or for draught. Parts of harness, materials and inventions pertaining to saddlery and harness making. Military equipment.

GROUP 103

RAILWAYS

- Class 520. Way and structures of railways. Means and methods of construction; grading; ballast, ties, rails and other track materials; grades and change of alignment; bank protection; removal of and protection from snow, ice and sand; tunnels; bridges; trestles; culverts; crossings; fences, cattle guards and signs; signals and interlocking plants; telegraph and telephone plants as applied to railways; buildings, fixtures and grounds; docks and wharves; roadway tools and supplies; steam shovels, wrecking derricks and other work equipment. (See also Class 466.)
- Class 521. Railway equipment. Steam and electric locomotives; passenger-train cars; freight-train cars; electric equipment of cars; building and repair shop equipment. Locomotive cranes.
- Class 522. Railway traffic. Handling of passengers, ticket offices, tickets, baggage handling; industrial, immigration and colonization bureaus. Handling of freight, tariffs, way-bills, means of weighing; fast freight traffic methods. Literature, lectures, photographic work, advertising, and other methods of promoting traffic.
- Class 523. Railway transportation. Time tables; methods of despatching trains; operation of depots, stations and freight houses; weighing and car-service associations; operation of stock yards, grain elevators, coal and ore docks; operation of yards and engine houses, fuel and water supply; lubricants; operation of trains, including trainmen's signals; cleaning, heating, lighting, ventilating, icing and watering, refrigeration and pre-cooling of cars; drawbridge operation; operation of floating equipment; express and special service; loss of and damage to freight, baggage, property, or stock on right of way; methods for preventing injuries to persons and insuring safety. Apparatus and methods of testing the power and efficiency of locomotives and other railway equipment.
- Class 524. Street railways. Urban and interurban railways for freight or passenger traffic; elevated and subway railways; rack, cable, mono-rail and aerial railways; equipment for these, including track and equipment, motive power, rolling stock, and equipment and methods employed in their operation.
- Class 525. Special methods of transportation, similar to railways. Transportation of ships over railways. Trackless trolley lines. Moving platforms. Scenic and gravity railways for amusement parks.
- Class 526. General. Bibliography, statistics, history, special maps and drawings, and various publications relative to railways. Joint track, detour, and other agreements. Organization, law, insurance, hospitals, club houses, libraries, railroad Y. M. C. A., relief department, pensions, with reference to railways.

GROUP 104

MATERIAL AND EQUIPMENT USED IN THE MERCANTILE MARINE

- Class 527. Raw material and material specially used in the construction and fitting out of ships and boats.
- Class 528. Special tools and implements used in ship-building yards.
- Class 529. Drawings and models of all kinds of vessels or boats for navigating seas and rivers. Illustrations showing the arrangement of such vessels or boats. Drawings and models of tugs and tow boats. Launches and small craft propelled by machinery, by wind, or by oars.
- Class 530. Motive power for vessels and boats (drawings, model and specimens.) Boilers, water heaters, filters for feed water; engines, condensers, propellers, machinery auxiliary to main engines, pumps, governors, indicators of speed and direction, engine counters, and other machinery specifically for the propulsion of vessels. Arrangement for the prevention of fires in holds, storerooms and passages. (See Class 462.)

- Class 531. Marine equipment: winches, tackle blocks, chains, anchors, hawsers, cables, etc. Steering apparatus, order transmitters, machinery for working sails, ship's lights and signals, fresh water evaporators and condensers, apparatus for lighting, heating, supplying air and ventilation. Special apparatus for the generation and use of electricity, refrigerating apparatus, special instruments for determining position and time, flags, furniture, etc. Equipment for loading and unloading merchandise. (See also Class 467.)
- Class 532. Light houses and equipment; buoys, beacons, ranges and other aids to navigation. Application of electric lighting to navigation.
- Class 533. Pleasure craft; yachts, steam, sail or power boats, row boats, out-riggers, skiffs, etc., and their accessories (drawings, models and specimens).
- Class 534. Submarine navigation.
- Class 535. Equipment for saving of lives and vessels at sea, boats, line carriers, lines, trawlers, safety belts and jackets, etc. Humane societies. Spreading of oil upon the sea. Equipment for raising wreckage, and for submarine operations for saving sunken material.
- Class 536. Swimming: apparatus and equipment for swimmers or swimming instruction.
- Class 537. Statistics, special charts and publications relative to navigation for commerce or for pleasure.

GROUP 105

- Class 538. Models, or copies thereof, of early English, Spanish and French vessels; pictures, documents and original items illustrating their voyages.

GROUP 106

MATERIAL AND EQUIPMENT OF NAVAL SERVICES; NAVAL AND MILITARY ORDNANCE

- Class 539. Models, designs, drawings, descriptions, specifications, photographs, paintings, of warships and public vessels of special character.
- Class 540. Material used in the construction and fitting out of ships-of-war and public craft; deck and engine-room outfits; signal gear; naval furniture; electrical equipment installed with reference to battle conditions; safety appliances.
- Class 541. Motive power for government vessels.
- Class 542. Marine and military arms and ornaments, ordnance, and their equipments; telescopic sights, range finders, shop plotters, etc.; torpedoes, fixed dirigible, and automobile; naval signals.

AERIAL NAVIGATION

GROUP 107

DIRIGIBLES

- Class 543. Construction: fabrics, cars, dirigibles, war cruisers and touring cruisers, anchors, grapnels, valves, netting, screw-propellers, etc.

GROUP 108

SPHERICAL BALLOONS

- Class 544. Construction: fabrics (cotton or silk, rubberized); cars; netting cordage, balloons for the study of the atmosphere and for making scientific observations of air currents, clouds, temperature at great heights, optical phenomena, etc.
- Class 545. Stoscopes, thermometers, anemometers, tachometers, recording barometers.

GROUP 109

MILITARY BALLOONING

- Class 546. Military balloons, captive and free, and their accessories; winding drums; transport wagons; apparatus for inflation; scientific instruments, etc.

GROUP 110

AEROPLANES

- Class 547. Monoplanes; biplanes; triplanes; military aeroplanes; frames; parachutes. Screw propellers, aeroplane carriages, speedometers, steering wheels, reservoirs, cables, compasses, buffers, stabilizers, rigging screws, clothing for aviators; toys, kites, etc.
- Class 548. Hydro-aeroplanes.

GROUP 111

GASES

- Class 549. Generation and preservation of hydrogen and other light gases for balloon use.

GROUP 112

MOTORS

- Class 550. Motors for dirigibles and aeroplanes; carbureters; magnetos, etc.

GROUP 113

LITERATURE

- Class 551. Drawings, maps of journeys; diagrams; photographs, etc.

TRANSPORTATION

GROUP 101

(Carriages and Wheelwrights' Work, Automobiles and Cycles.)

- American Taximeter Co., New York, N. Y. Accessories. Av. F, bet. 5th & 6th Sts.
- Apple Electric Co., Newark, N. J. Accessories. Av. E, bet. 7th & 8th Sts.
- Arlington Company, The, Arlington, N. J. Accessories. V. I. Pal. Av. B, cor. 3rd St. Harness mounting; martingale rings; transparent Pyralin sheeting for automobile trade.
- Atterbury Motor Car Co., Buffalo, N. Y. Automobiles. 8th St., bet. Avs. B & C.
- Bacon Co., Edw. B., San Francisco, Cal. Dump wagons. Av. C, bet. 4th & 5th Sts. Mch. Pal.
- Bowser & Co., San Francisco, Cal., and Fort Wayne, Ind. Oil equipment. South 8th St.
- Braunsdorf-Mueller Co., Elizabeth, N. J. Accessories. Mfr. Pal. Av. A, cor. 2nd St.
- Briscoe Motor Co., Inc., Jackson, Mich. Automobiles. 7th St., bet. Avs. A & B.
- Bristol Co., The, Waterbury, Conn. Accessories. 2nd St., cor. Av. D. Mch. Pal.
- Buick Motor Co., Flint, Mich. Automobiles. Trail of Sunset.
- Cadillac Motor Car Co., Detroit, Mich. Automobiles. Trail of Sunset.
- Chalmers Motor Company, Detroit, Mich. Automobiles. Lincoln Highway. "Sixes" exclusively. All the essential parts of Chalmers cars are built completely in the great Chalmers plant by over 4,000 men trained in the Chalmers principle of "Quality First." Chalmers quality is a thing made definite by Chalmers methods of manufacture and the Chalmers rigid inspection of the materials used. And because Chalmers "Sixes" are built right, are right weight, properly balanced, and of the finest materials, they give longer and more continuous service at lowest cost. They are the most economical cars to run because they "stay put." Chalmers "Sixes" have superior smoothness, flexibility, silence and an unusual amount of reserve power. San Francisco Office, 1400 Van Ness Av.
- Cook Railway Signal Co., Denver, Colo. Accessories. Av. F, bet. 6th & 7th Sts.
- Cowan Truck Company, Holyoke, Mass. Trucks. Mch. Pal. Cor. 3rd St. & Av. H. Stock handling system for factory, warehouse, railway and wholesalers.
- Davis Sewing Machine Co., Dayton, O. Motorcycles. Trans. Pal. Av. F, cor. 6th St. Bicycles; Dayton, motorcycles; fire apparatus, Dayton, 785-787 Mission St., San Francisco.
- Dusenberry & Co., Louis, New York, N. Y. Accessories. Av. F, bet. 6th & 7th Sts.
- Edison, Thos. A., East Orange, N. J. Accessories. Trans. Pal. North 8th St.
- Electric Products Co., Cleveland, O. Accessories. Tracks 11 & 12.
- Excelsior Motor Mfg. Co., Chicago, Ill. Motorcycles. Av. F, West of 7th St.
- Ford Motor Company, Detroit, Mich. Automobiles. Cor. Av. A & 7th St.
- Fryer Company, Chas. H., Providence, R. I. Accessories. 3rd St., Av. E & 4th St., V. I. Pal.
- General Motors Co., Detroit. Automobiles. South 8th St.
- General Motor Truck Co., Detroit, Mich. Motor trucks. 1st St., bet. Avs. B & C. Mtr. Trs.
- Harley-Davidson Motor Co., Milwaukee, Wis. Motorcycles. Av. F, cor. 7th St.
- Harron, Rickard & McCone, San Francisco, Cal. Collective Exhibit. 4th & 5th Sts., Avs. G & H. Mch. Pal.
- Hendee Manufacturing Co., Springfield, Mass. Motorcycles and accessories. Av. E, cor. 7th St. Motorcycles, Indian; sidecars, motorcycles for both commercial and pleasure uses.
- Hudson Motor Car Co., Detroit, Mich. Automobiles. 5th St., cor. Av. A.
- Hupp Motor Car Co., Detroit, Mich. Automobiles. Av. B, bet. 7th & 8th Sts. A sight that will be familiar to most of the visitors to this building is the Hupmobile, which is on exhibition here. The "Car of the American Family," as it is known all over the United States, is in daily service in almost every city, town and village. It is liked everywhere—especially by its owners—and has a reputation for satisfaction, because it is one of the most economical, reliable and durable of American motor cars.
- Industrial Instrument Co., Foxboro, Mass. Accessories. 3rd St., cor. Av. C2. Mch. Pal.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal. 4th St., bet. Avs. B & C. Carts, wagons, trucks, drays, motor trucks.
- Interstate Electric Novelty Co., New York, N. Y. Accessories. Av. A, cor. 2nd St. V. I. Pal.
- Jeffery Company, The, Thos. B., Kenosha, Wis. Automobiles. Av. C, cor. 7th St.
- Kissell Motor Co., Hartford, Wis. Automobiles. 7th St., bet. Avs. A & B.
- Locomobile Co. of America, Bridgeport, Conn. Automobiles. Av. D, bet. 6th & 7th Sts.
- Lunkenheimer Co., The, Cincinnati. Accessories. 1st St., cor. Av. G2. Mch. Pal.
- Maxwell Motor Sales Corp., Detroit, Mich. Automobiles. Av. B, cor. Midway.
- McQuay-Norris Co., St. Louis, Mo. Accessories. Av. F, cor. 7th St.
- Metz, Co., Waltham, Mass. Automobiles. S. 8th St.
- Mitchell Motor Car Co., Racine, Wis. Automobiles. 5th St., bet. Avs. A & B.
- Moline Automobile Co., East Moline, Ill. Automobiles. 7th St., cor. Av. B.
- Motometer Co., New York, N. Y. Accessories. Av. F, bet. 5th & 6th Sts.
- National Carbon Co., Cleveland, O. Accessories. 8th St., cor. Av. C.
- Oakland Motor Car Co., Pontiac, Mich. Automobiles. Av. B, cor. 7th St.
- Ohio Electric Car Co., Toledo, O. Automobiles. Av. E, cor. 7th St.
- Olds Motor Works, Lansing, Mich. Automobiles. Cor. Av. B & 7th St.
- Packard Motor Car Co., Detroit, Mich. Automobiles. Av. C, bet. 5th & 7th Sts.
- Paige-Detroit Motor Car Co., Detroit, Mich. Automobiles. Lincoln Highway.
- Pathfinder Motor Car Mfg. Co., Indianapolis, Ind. Automobiles. Av. C, bet. 7th & 8th Sts.
- Poyer Co., D. F., Menominee, Mich. Motor Trucks. Cor. Av. A & 7th St. Manufacturers of the "Menominee."

- Pierce-Arrow Motor Car Co., Buffalo, N. Y. Automobiles. Av. C, bet. 7th & 8th Sts.
- Reo Motor Car Co., Lansing, Mich. Automobiles. 7th St., bet. Avs. B & C.
- Sangamo Electric Co., Springfield, Ill. Accessories. 2nd St., cor. Av. C2. Mch. Pal.
- Saxon Motor Car Co., Detroit, Mich. Automobiles. Lincoln Highway.
- Schrader's Son Co., Inc., Philadelphia, Pa. Accessories. Lib. Arts Pal. 3rd St., cor. Av. C.
- Standard Underground Cable Co., Pittsburg, Pa. Accessories. 3rd St., cor. Av. D. Mch. Pal.
- Standard Woven Fabric Co., Framingham, Mass. Accessories. Av. G2, bet. 3rd & 4th Sts. Mch. Pal.
- Service Recorder Co., Cleveland, O. Accessories. Mfr. Pal. Av. A, cor. 2nd St.
- Splitdorf Electrical Co., Newark, N. J. Accessories. Av. E, bet. 7th & 8th Sts.
- Standard Oil Company of California, San Francisco, Cal. Oils and lubricants. North 8th St. Gasoline, lubricating greases, lubricating oils, liquid gloss. See General exhibit in Block 28, Mines Palace.
- Sternberg Mfg. Co., Milwaukee, Wis. Automobiles. Av. E, bet. 7th & 8th Sts.
- Studebaker Corporation of America, South Bend, Ind. Automobiles. East Av. A.
- Sumter Electric Co., Sumter, S. C. Accessories. Av. E, bet. 7th & 8th Sts.
- Troy Wagon Works, Troy, Ohio. Dump wagons. Mch. Pal. Av. C, bet. 4th & 5th.
- Universal Caster & Foundry Co., New York, N. Y. Accessories. 6th St., bet. Avs. C & D. Mfrs. Pal.
- U. S. Light & Heating Co., Niagara Falls, N. Y. Accessories. 1st St., cor. Av. D. Mch. Pal.
- Watson Wagon Co., Canastota, N. Y. Dump wagons. 4th St., cor. Av. D. Mch. Pal.
- Westinghouse Electric & Mfg. Co., East Pittsburg, Pa. Accessories. Rotunda of building.
- White Co., The, Cleveland, O. Automobiles. Av. C, bet. 5th & 6th Sts.
- Williams & Co., J. H., Brooklyn, N. Y. Accessories. 2nd St., cor. Av. E. Mch. Pal.
- Willys-Overland Co., Toledo, O. Automobiles and motor trucks. Av. B, cor. 5th St. Motor cars. Overland: motor delivery cars, Overland; Willys-Utility Motor Trucks.
- Winton Motor Car Co., Cleveland, O. Automobiles. 5th St., bet. Avs. A & B.
- Wisconsin Motor Mfg. Co., Milwaukee, Wis. Accessories. Av. F, bet. 6th & 7th Sts.
- American Pulley Co., Philadelphia, Pa. Railway equipment. 4th St., cor. Av. I. Mch. Pal.
- Automatic Transportation Co., Buffalo, N. Y. Railway equipment. Tracks 11 & 12.
- Bacon Co., Edw. R., San Francisco, Cal. Locomotive crane. Av. C, bet. 4th & 5th Sts. Mch. Pal.
- Baldwin Locomotive Works, Philadelphia, Pa. Motive power. Tracks 5 & 6.
- Bliss Co., E. W., Brooklyn, N. Y. Railway equipment. 3rd St., bet. Avs. F & G. Mch. Pal.
- Brill & Co., J. G., St. Louis, Mo. Railway equipment. Av. C, bet. 2nd & 3rd Sts.
- California Dispatch Line, San Francisco, Cal. Wine tank car. Track 4. 20,000,000 gallons of California wines were transported in these cars during the year 1914.
- Canadian Pacific Railway Co., Winnipeg, Man. Traffic promotion. Pavilion B.
- Copper River & Northwestern Railway, Seattle, Wash. Traffic promotion. 3rd St., bet. Avs. D & F.
- Denver & Rio Grande E. R. Co., Denver, Colo. Collective railroad exhibit. North 1st St.
- Dibble Air Brake Co., Oakland, Cal. Railway equipment. West Av. A.
- Down, S. G., San Francisco, Cal. Railway equipment. 3rd St., bet. Avs. C2 & D. Mch. Pal.
- Flannery Bolt Company, Pittsburg, Pa. Railway equipment. Court of Universe Blvd. Samples of all Tate Flexible Stay-Bolts for locomotive fireboxes; photographic views of installations of Tate Flexible Stay-Bolts applied to locomotive fireboxes. Adjustable Tate Flexible Crown Stays. Tate Flexible Radical Stay-Bolts; Tate Flexible Stay-Bolts; Standard Water Space Stays. Tools for applying Tate Flexible Stay-Bolts. Stay-Bolts, flexible for locomotive firebox boilers.
- Galena-Signal Oil Co., Franklin, Pa. Signal oils. Cor. Av. F & 5th St.
- General Electric Co., Schenectady, N. Y. Motive power. Av. C, cor. 2nd St., Track 14.
- German American Car Co., Chicago, Ill. Tank cars. Tracks 3 & 4.
- Gold Car Heating & Lighting Co., New York, N. Y. Car equipment. Mch. Pal., 1st St. & Av. D. Steam, vapor, combination pressure and vapor, hot water and electric systems; thermostat control for same; cyclone and window ventilators. W. J. Marland, representative, Palace of Machinery.
- Grand Trunk Railway System, Montreal, Que. Traffic Promotion. Pavilion A.
- Great Northern Railway Co., St. Paul, Minn. Traffic promotion. Pavilion C.
- Griffin Wheel Co., Tacoma, Wash. Railway equipment. Av. D, cor. 3rd St.
- Hale & Kilbourn, Philadelphia, Pa. Car equipment. Av. F., cor. Entrance 7.
- Hewitt Co., The, New York, N. Y. Railway equipment. Av. A, cor. 1st St.
- Hickey, W. J., Reno, Nev. Railway equipment. West Av. A.
- Hupp Automatic Mail Exchange System, Washington, D. C. Automatic mail car, Track 13. An automatic mechanism exhibited here in action which attached to any mail car, automatically exchanges mail in quantity between running train and station. Albert Hupp, Inventor and Exhibitor, Woodward Bldg., Washington, D. C.

TRANSPORTATION

GROUP 102

(Saddlery and Harness)

- Singer Sewing Machine Co., New York, N. Y. Sewing machines for manufacturing. V. I. Bldg. 1st St. & Av. D. 2nd St. & Av. E. Harness and saddlery machines; machines for harness and saddlery stitching.

GROUP 103

(Railways)

- American Brake Shoe & Foundry Co., Chicago, Ill. Railway equipment. West Av. D.
- American Locomotive Co., New York, N. Y. Motive power. Tracks 11 & 12.

- International Harvester Company of America, Chicago, U. S. A.** Agr. Pal 4th St., bet. Avs. B & C. Equipment for construction and maintenance of railways.
- Locomotive Superheater Co., New York, N. Y.** Railway equipment. 3rd St. & Av. H. Mch. Pal.
- MacLeod Co., The, Cincinnati, O.** Railway equipment. Av. I, cor. 1st. Mch. Pal.
- Marland, W. J., Oakland, Cal.** Car equipment. 1st St., cor. Av. D. Mch. Pal.
- McCloud River Railroad Co., San Francisco, Cal.** Motive power and equipment. Track 2.
- Moreland Motor Truck Co., Los Angeles, Cal.** Motor trucks. 1st St., bet. Avs. C & D, Mfr. Pal.
- National Automatic Train Stop Co., Spokane, Wash.** Railway equipment. 7th St., cor. Av. F.
- National Brake & Electric Co., Milwaukee, Wis.** Railway equipment. Mch. Pal. 3rd St. & Avs. C2 & D. Air compressors; installed in Machinery Hall, Block 33.
- National Malleable Casting Co., Cleveland, O.** Railway equipment. Track 4. Couplers—Sharon, Tower, Climax, Latrobe for freight, passenger and engine service. Cast steel coupler yokes. Engine coupler pockets with supporting shelf to prevent drooping. Uncoupling apparatus. Journal boxes. Brake beam fulcrums, adjustable. Hand brake mechanism, rail anchors; rail braces; car door fasteners; malleable iron washers and castings. John H. Jaschka, Sales Agt., 705 Monadnock Bldg, San Francisco, Cal.
- National Signal Co., San Francisco, Cal.** Railway equipment. West Av. A.
- New York Air Brake Co., New York, N. Y.** Railway equipment. Av. C, cor. 6th St. Electro pneumatic brakes; air and vacuum brakes; equipment for urban and interurban railways.
- Nuttall Company, R. D., San Francisco, Cal.** Gears. Rotunda of Building. Gears, pinions, trolleys.
- Ohio Locomotive Crane Co., Bucyrus, O.** Railway equipment. Mch. Pal. 4th & 5th Sts., bet. Avs. C & C2. See our locomotive crane in service on Exposition Grounds.
- Pennsylvania Steel Co., Philadelphia, Pa.** Railway equipment. 1st St., South Av. C.
- Pennsylvania System.** Educational railroad exhibit. Av. C, cor. 5th St. Relief map of system; models of New York City showing Pennsylvania Station one block from Broadway. Models of Union Station at Washington. The proposed terminal at Chicago and Hell Gate Bridge. Motion picture theater constructed of two Pennsylvania standard all steel coaches. Block signals of latest design in operation. Illustrated booklet describing this system and exhibit under direction of traffic department. The exhibit is in charge of Mr. H. T. Wilkins. The Pennsylvania System is the standard railroad of America and consists of the Pennsylvania Railroad, General Office, Philadelphia, Pa.; The Pennsylvania Lines, General Office, Pittsburg; and affiliated lines. San Francisco Offices, 40 Powell Street.
- Rail Joint Co., The, New York, N. Y.** Railway equipment. West Av. A.
- Railway Motor Car Co., Marion, Ind.** Railway equipment. Tracks 7 & 8.
- Safety Car Heating and Lighting Co., New York, N. Y.** Car equipment. 1st St., cor. Av. D. Mch. Pal.
- Sangamo Electric Co., Springfield, Ill.** Car equipment. 2nd St., cor. Av. C2. Mch. Pal.
- Service Recorder Co., Cleveland, O.** Recording devices. Av. A, cor. 2nd St. Mfrs. Pal.
- Southern Pacific Co., San Francisco.** Motive power and equipment. Tracks 1, 3, 8, 9, 10.
- St. Louis Steel Foundry Co., St. Louis, Mo.** Track work. Mch. Pal. 4th & 5th Sts. & Av. I. Parrott & Co., San Francisco, Coast Representatives. See Ad on front cover of Machinery catalog.
- St. Louis Car Co., St. Louis, Mo.** Street railway equipment. Track 7.
- Taylor Portable Steel Derrick Co., Chicago, Ill.** Railway equipment. Track 7. Loading and unloading gondola cars.
- Taylor Wharton I and S., Co., Highbridge, N. J.** Track work. 3rd St., North of Av. F.
- Union Oil Company of California, San Francisco, Cal.** Lubricants. Mch. Pal. 2nd St., cor. Av. G2. Lubricating oils for all vehicles; fuel oil for power and heat.
- United States Postoffice Department, Washington.** Steel postoffice car. Track 3.
- Union Switch & Signal Co., The, Swissvale, Pa.** Railway equipment. Av. C, cor. 5th St. Railway signals.
- United States Steel Products Co., San Francisco, Cal.** Railroad turntable. Rotunda of Building.
- Wells, Fargo & Co., San Francisco, Cal.** Express service. North 1st St.
- Westinghouse Air Brake Co., Pittsburg, Pa.** Air brakes. Mch. Pal. Air compressors, installed in Machinery Hall, Block 33.
- Westinghouse Electric & Mfg. Co., Pittsburg, Pa.** Railway equipment; motive power. Rotunda of Building. Electric locomotives (See Pennsylvania R. R. locomotive on turntable). Railway motors and control; devices of all kinds for both electric locomotives and cars. Pressed steel frame motor. Electrical equipment of various kinds for urban and interurban railroads. Specifications, publications, drawings, relative to electric railways, photographs and illustrations, blue-prints, wheel lathe motor and control.
- Westinghouse Pacific Coast Brake Co., San Francisco, Cal.** Railway equipment. Mch. Pal. 3rd St., bet. Avs. C2 & D.
- Westinghouse Traction Brake Co., Pittsburg, Pa.** Air brakes. Mch. Pal. Installed in Machinery Palace, Block 33.
- United States Department, Railway Mail Service.** Track 3. Standard all steel, fully equipped postal car. Railway postal clerks will demonstrate how mails are distributed on trains during transit between post offices.
- Mines Building, Model Postoffice.** Here all the workings of the service will be shown and the postal facilities of the Exposition provided. Mail addressed in care of the Exposition will be delivered through the Model Postoffice or held there subject to order. Carriers will deliver and collect mail throughout the Exposition grounds. Mail boxes will be placed at convenient points; special delivery, registry, parcel post, money order and postal savings service will be provided. There will be shown an exhibit of United States postage stamps of every issue since the adoption by the United States of this means of collecting postage. All workings of the Model Postoffice will be carried on in full view of visitors. Motion pictures of all phases of mail handling operations will be shown in the motion picture room of the Mines Palace.

**MATERIAL AND EQUIPMENT USED IN
THE MERCANTILE MARINE**

GROUP 104

- Alaska Steamship Co., Seattle, Wash. Traffic promotion. 3rd St., bet. Avs. D & F.
- National Carbon Co. Accessories. 8th St., cor. Av. C. Storage and dry batteries; carbon products; flashlights and novelties.
- American-Hawaiian Steamship Co., New York, N. Y. Marine travel. Av. C, cor. 1st St.
- Babcock & Wilcox Co., New York. Marine equipment. Mch. Pal. Av. G, bet 2nd & 3rd Sts.
- Brown, A., Elmira, N. Y. Marine equipment. Mch. Pal.
- Cowan Truck Co., Holyoke, Mass. Marine equipment. Mch. Pal. 3rd St., cor. Av. E.
- Doman Co., H. C., Oshkosh, Wis. Marine engines. Mch. Pal. 4th St., bet. Avs. E & F.
- Gorden Propeller Co., The, Cleveland, O. Marine equipment. Mch. Pal. 5th St., cor. Av. D. Reversible, weedless and feathering propellers; stuffing boxes and struts.
- Hyde, Henry C., Co., San Francisco, Cal. Marine engines. Mch. Pal. 4th St., bet. Avs. E & F. See exhibit of marine engines in Block 37, Machinery Hall.
- Holland-American Steamship Co., Rotterdam, Holland. Marine travel. 3rd St., cor. Av. C.
- International Mercantile Marine Co., New York and San Francisco. Models of ships. Av. C, bet. 2nd & 3rd Sts. American Line, Atlantic Transport Line, Leyland Line, Panama-Pacific Line, Red Star Line, White Star Line, White Star Dominion Line. Office, 319 Geary St., San Francisco, Cal.
- Imperial Gas Engine Co., San Francisco, Cal. Marine engines. Mch. Pal. 4th St., cor. Av. E.
- Loew-Victor Engine Co., Chicago, Ill. Marine engines. Mch. Pal. 4th St., cor. Av. F.
- Marine Efficiency Co., New York, N. Y. Marine equipment. Mch. Pal. 1st St., cor. Av. G2.
- Marland, W. J., Oakland, Cal. Marine equipment. Mch. Pal. 1st St., cor. Av. D.
- Pacific Coast Steamship Co., San Francisco, Cal. Marine travel. Av. F, cor. 5th St.
- Peerless Marine Motor Co., Buffalo, N. Y. Marine engines. Mch. Pal. 4th St., bet. Avs. E & F.
- Pneumercator Co., New York, N. Y. Marine equipment. Mch. Pal. 1st St., cor. Av. C.
- Safety Car Heating and Lighting Co., New York, N. Y. Marine equipment. Mch. Pal. 1st St., cor. Av. D.
- Shepard Electric Crane & Hoist Co., Montour Falls, N. Y. Marine equipment. Mch. Pal. 2nd St., cor. Av. I.

Standard Gas Engine Co., San Francisco, Cal. Marine engines. Mch. Pal. 1st & 2nd Sts.

Union Oil Company of California, San Francisco. Marine equipment. Mch. Pal. 2nd St., cor. Av. G2.

Waterman Marine Boat Co., Detroit, Mich. Marine engines. Mch. Pal. 4th St., bet. Avs. E & F.

Western Machinery Mfg. Co., Milwaukee, Wis. Marine engines. Av. F, bet. 6th & 7th Sts.

Western Motor Mfg. Co., Milwaukee, Wis. Marine engines. Av. F, bet. 6th & 7th Sts.

Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Marine equipment. Rotunda of Building. Motors and control suitable for propelling boats; electrical apparatus suitable for operation on shipboard. Reduction gear, electrical apparatus suitable for operation on shipboard. Mch. Pal.

GROUP 106

**MATERIAL AND EQUIPMENT OF NAVAL
SERVICES—NAVAL AND MILITARY
ORDNANCE**

Bliss Company, E. W., Brooklyn, N. Y. Marine ordnance. Mch. Pal. 3rd St., bet. Avs. F & G.

Winchester Repeating Arms Co., New Haven, Conn. Arms and armament. Mch. Pal. 7th St., bet. Avs. C & D.

GROUP 110

AEROPLANES

Fowler, Robt. G., San Francisco, Cal. Aeroplanes. East Av. C.

GROUP 113

LITERATURE

- California State Automobile Association, San Francisco, Cal. Automobile literature. Cor. Av. A & 5th St.
- Cook & Son, Thos., London, England. Travel literature. Cor. Av. D & 2nd St.
- Oregon, State of, Salem, Ore. Travel literature. 8th St., cor. Av. C.
- Statistics and Immigration, Bureau of, Olympia, Wash. Travel literature. 7th St., cor. Av. F.

Foreign Section

SWEDEN

The exhibits of Sweden, classified in this Department, are installed in the Swedish Building, Avenue of Nations.

American Hawaiian Steamship Co.

"The Panama Canal Line"

OPERATING **26** STEAMSHIPS
UNDER THE AMERICAN FLAG

Express Freight Service

COAST TO COAST

INCLUDING
10,000 TONS REFRIGERATING SPACE

Seattle
Tacoma
Portland
San Francisco
Los Angeles
San Diego



Boston
New York
Philadelphia
Norfolk
Charleston

First Class Passenger Service

WILLIAMS DIMOND & CO.
General Agents for Pacific Coast
310 Sansome St. San Francisco

DEARBORN & LAPHAM
General Agents
8 Bridge St. New York



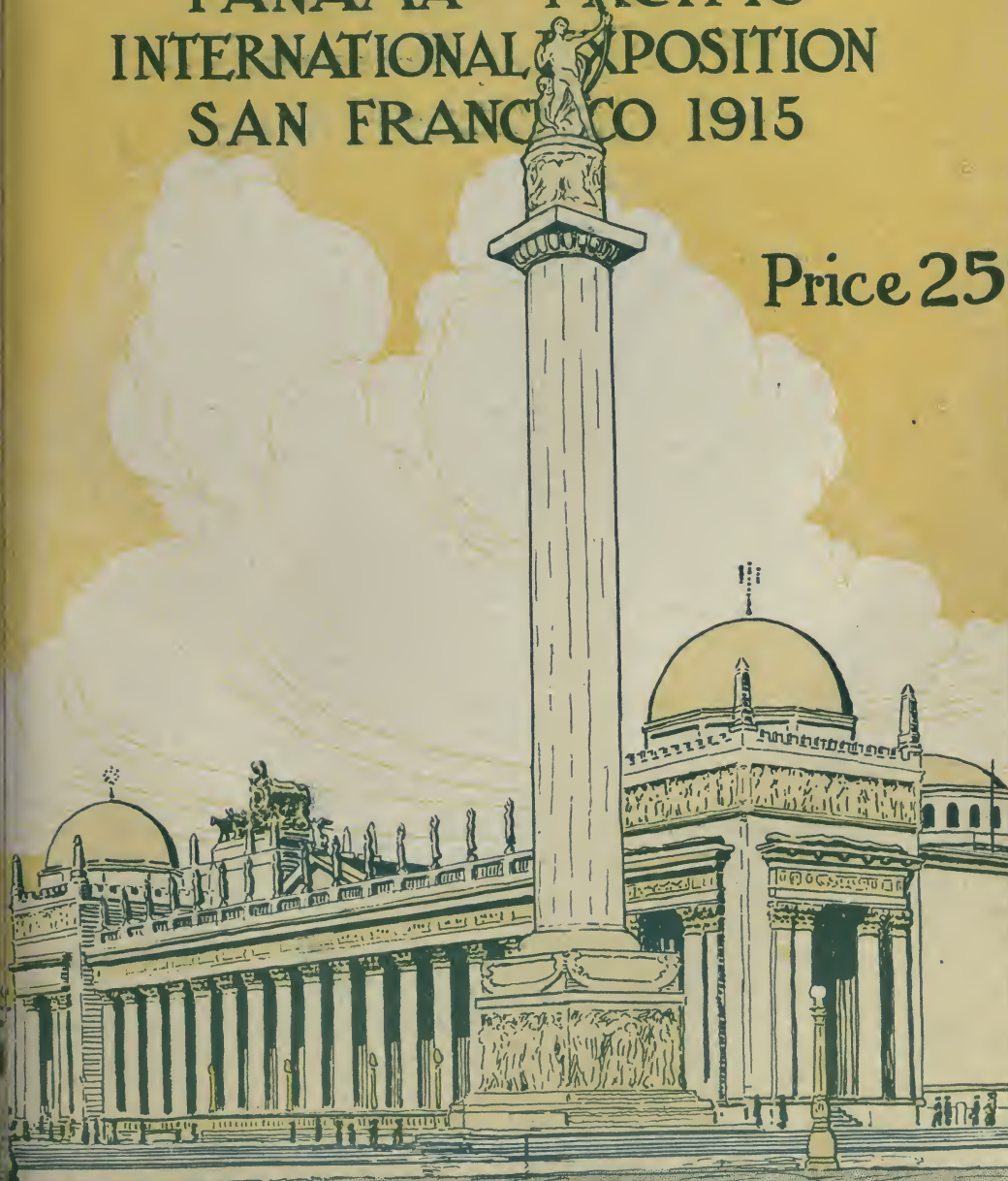
SEE OUR EXHIBIT IN TRANSPORTATION BUILDING

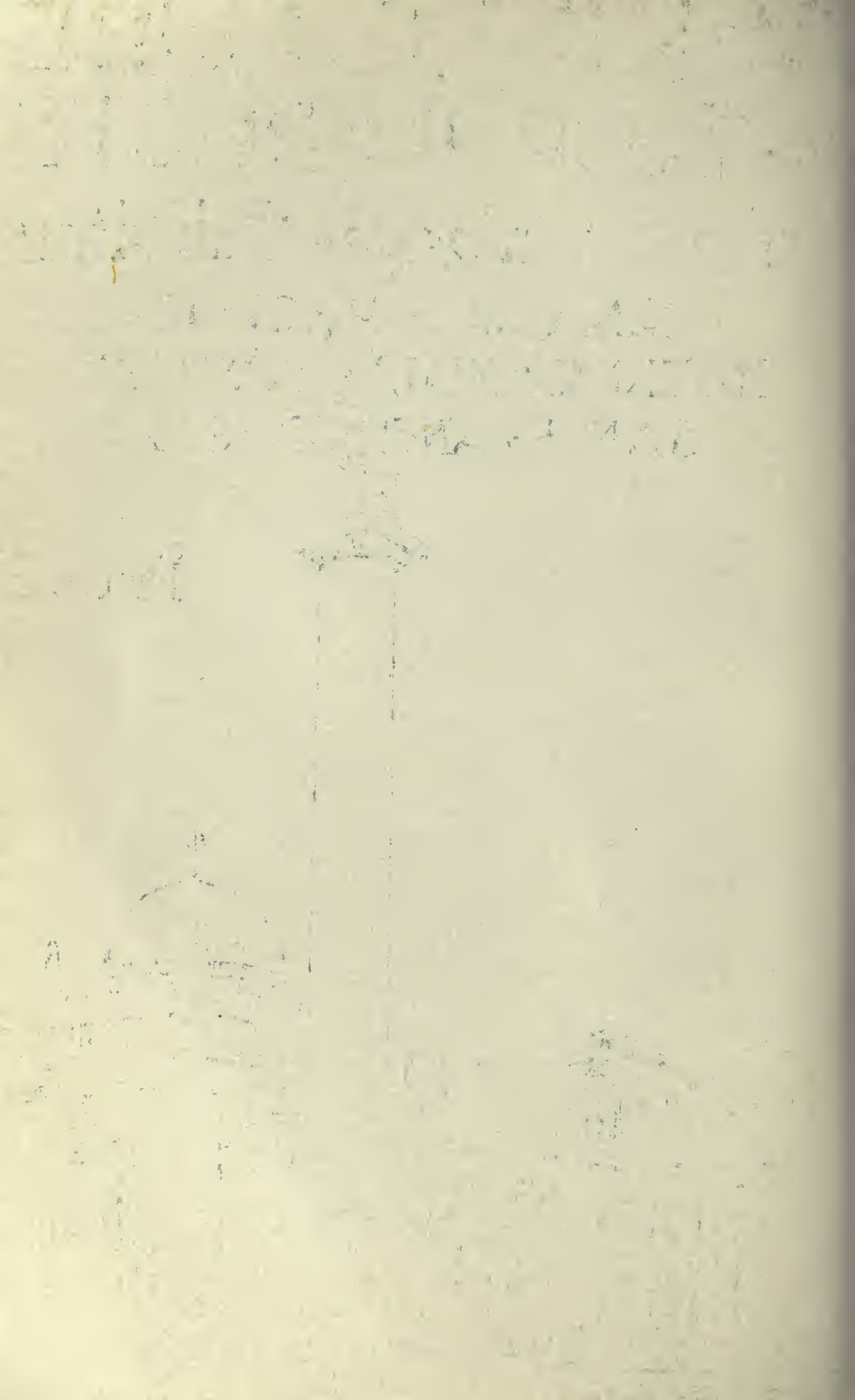
AGRICULTURE *and* FOOD PRODUCTS

Official Catalogue of Exhibitors

PANAMA - PACIFIC INTERNATIONAL EXPOSITION SAN FRANCISCO 1915

Price 25¢



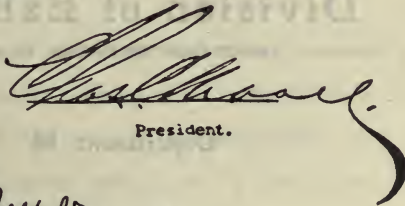


PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT

July 10 1914.

To Whom It May Concern:-

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.


President.




Secretary.

Copyright
PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915

Official Catalogue of
Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHARLES C. MOORE
President

Director-in-Chief
FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department **H**

AGRICULTURE

T. G. STALLSMITH, Chief

Preliminary Edition

Published for the Division of Exhibits by
The Walgreen Company, Official Publishers
San Francisco, 1915

PREFACE

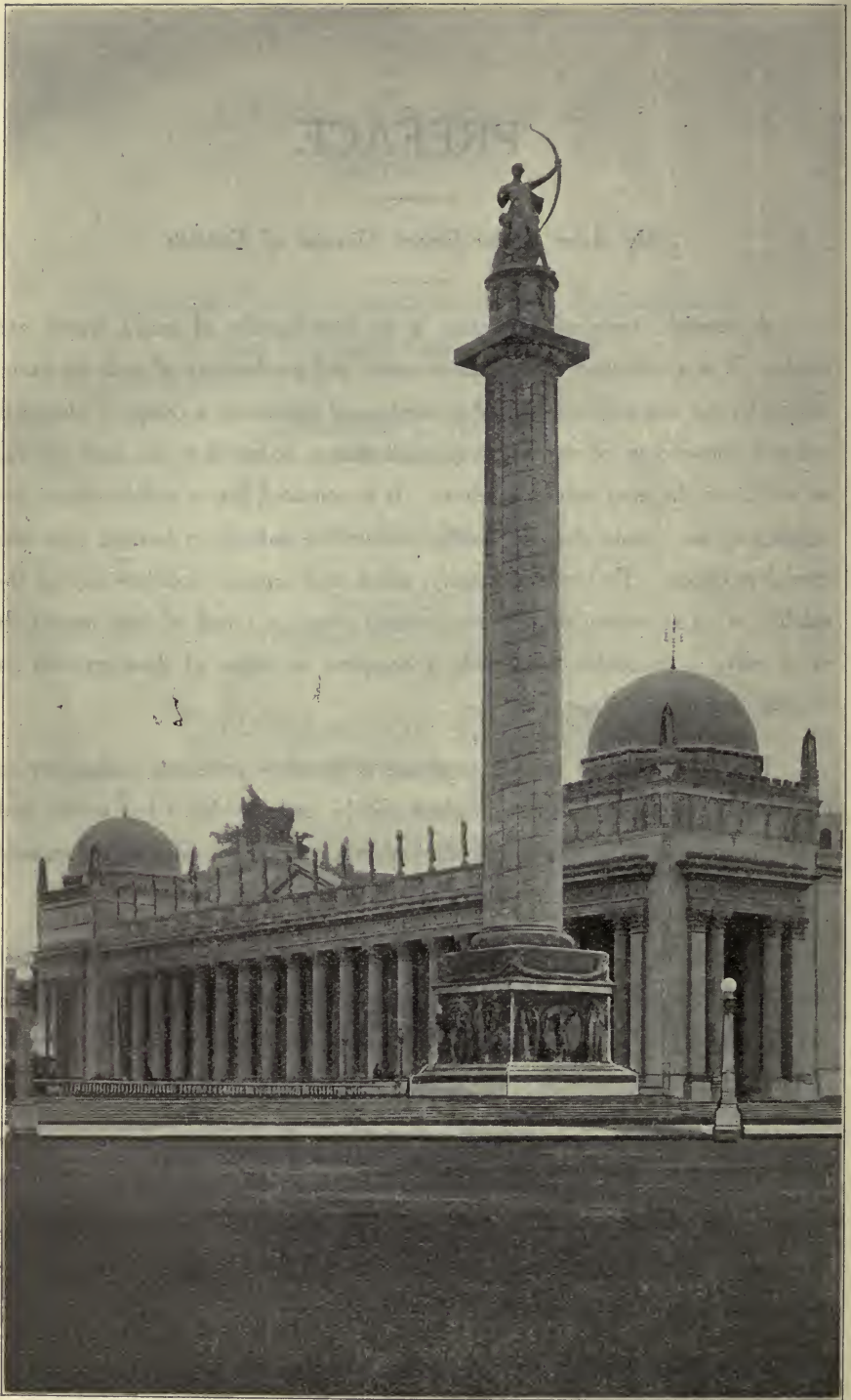
By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF AGRICULTURE

AGRICULTURE

Official Catalogue Department H

CLASSIFICATION OF EXHIBITS

Farm Equipment and Methods of Improving
Lands.

Agricultural Implements and Farm Machinery.

Fertilizers.

Tobacco.

Appliances and Methods Used in Agricultural
Industries.

Theory of Agriculture and Agricultural Statistics.

Vegetable Food Products and Agricultural
Seeds.

Appliances for Gathering Wild Crops and
Products Obtained.

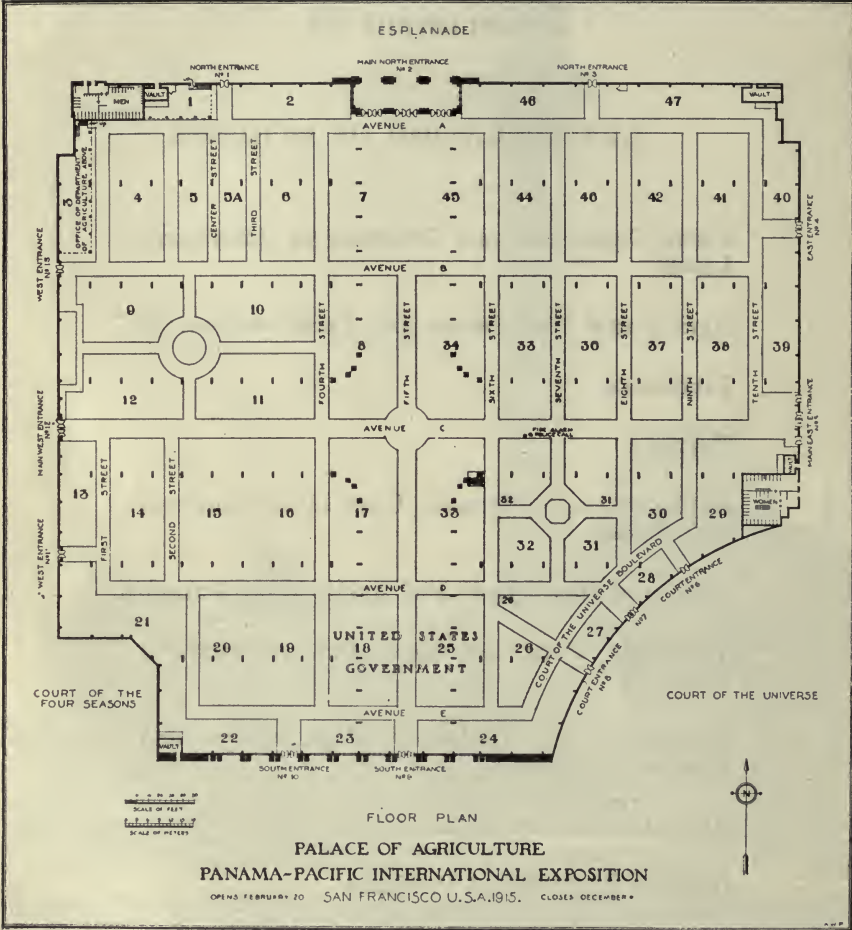
Animal Food Products.

Inedible Agricultural Products.

Useful Insects and Their Products, Injurious
Insects and Plant Diseases.

Forestry.

Forest Products.



ESPLANADE

NORTH ENTRANCE NO. 1

MAIN NORTH ENTRANCE NO. 2

NORTH ENTRANCE NO. 3

WEST ENTRANCE NO. 1

HANDICAP ENTRANCE

WEST ENTRANCE NO. 2

EAST ENTRANCE NO. 1

HANDICAP ENTRANCE

EAST ENTRANCE NO. 2

COURT OF THE FOUR SEASONS

COURT OF THE UNIVERSE

SOUTH ENTRANCE NO. 4

SOUTH ENTRANCE NO. 5



FLOOR PLAN

PALACE OF AGRICULTURE
PANAMA-PACIFIC INTERNATIONAL EXPOSITION

OPENS FEBRUARY 20 SAN FRANCISCO U.S.A. 1915. CLOSED DECEMBER 4



INTRODUCTION

Department of Agriculture

Installation of Exhibits

Palace of Agriculture, Palace of Food Products, House of Hoo
Hoo, Redwood Bungalow, Oregon Fir Bungalow,
Pacific Coast Condensed Milk Company Pavilion.

By **THOMAS G. STALLSMITH**
Chief of Department

As Agriculture is the most fundamental and varied of the Industries, the exhibition of all that pertains to agricultural pursuits and the production of food products is planned on a scale of magnitude and diversity that reflects its importance and multiform character.

The exhibits are contained principally in two Palaces—the Palace of Agriculture—embracing a floor area of over seven acres, and the Palace of Food Products covering about five and one-fourth acres. All of the exhibits are of the most interesting and instructive character. All the features are of extreme interest and importance in their bearing on the agricultural systems existing in all agricultural countries of the world.

Modern intensive, scientific agriculture in all branches is shown in comprehensive instructive detail.

From agriculture comes the products—the foodstuffs—that build the temple that enshrines the soul. The reduction of primary agricultural products to prepared nourishing foods, under the most scientific and sanitary methods is shown instructively, and the possibilities of educational value therefrom are incalculable.

Each Group, numbering twenty-two, and each Class, numbering one hundred and sixteen, covering the entire field of primary agriculture, food products, and forestry, are fully shown.

INTRODUCTION

Department of Agriculture

HOW TO LOCATE AN EXHIBIT

The Palace of Agriculture is laid out in blocks, which are consecutively numbered from 1 to 47, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Tenth), running north to south, and as avenues (A to E), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Agriculture, unless otherwise indicated after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF AGRICULTURE

Official Classification of Exhibits

GROUP 114

FARM EQUIPMENT AND METHODS OF IMPROVING LANDS

- Class 552. Specimens of various systems of farming.
 Class 553. Plans and models of farm buildings; general arrangement of stables, sheep-folds, barns, pig-sties, poultry-houses, breeding-grounds; special arrangements for breeding and fattening cattle; granaries and silos; furniture for stables, barns, kennels, etc.
 Class 554. Material and appliances used in agricultural engineering; reclaiming of marshes; drainage; irrigation. (See Class 462.)

GROUP 115

AGRICULTURAL IMPLEMENTS AND FARM MACHINERY

- Class 555. Implements, machines and appliances for agricultural preparation: machetas, axes, mattocks, grubbing hoes, spades, shovels, hand plows, etc.; walking plows, sulky plows, gang plows, etc.; rakes, rollers, harrows, clod crushers, etc.; stalk cutters, stalk rakes; stump pullers; manure spreaders.
 Class 556. Implements, machines and appliances for seeding; corn planters, seed drills, cotton planters, grain drills, broadcast seeders, etc.
 Class 557. Implements, machines and appliances for cultivation: hoes, cultivators, riding cultivators, cultivators propelled by steam or electricity.
 Class 558. Implements, machines and appliances for harvesting: sickles, scythes, grain cradles, reapers, binder twine, headers, mowers, corn harvesters, potato diggers, combined reapers and threshers propelled by animals, by steam or by electricity; machines and implements for threshing and cleaning, fanning mills, threshers and separators, clover hullers, corn shellers, threshers and separators with stationary or traction engines; wind stackers; fodder shock compressors, bunchers, etc.
 Class 559. Miscellaneous: farm wagons and farm carts; feed cutters, feed grinders, cider mills, machines for ginning and baling cotton, hay baling machinery; horse clipping machines; sheep shearing machines; wind mills, tanks, pumps and other water lifting apparatus for agricultural uses; machines for use on farms for grinding, weighing, etc. (See Class 462.)
 Class 560. Portable agricultural power generating machines; engines, horse powers, agricultural machinery moved by animals, water, air, or electricity. Internal combustion motors for agricultural purposes. Motor driven farm trucks and wagons.
 Class 561. Apparatus for preparing food for animals. Stock foods.

GROUP 116

FERTILIZERS

- Class 562. Preparing and preservation of manures. Commercial fertilizers. Use of sewage.

GROUP 117

TOBACCO

(Equipment, Processes and Products.)

- Class 563. Tobacco culture; raw material in stalk, leaf and seed.

GROUP 118

APPLIANCES AND METHODS USED IN AGRICULTURAL INDUSTRIES

- Class 567. Types of agricultural factories connected with farming: dairies; creameries; cheese factories; etc.
 Class 568. Oil mills; margarin factories. Grain elevators and appliances.
 Class 569. Workshops for the preparation of textile fibers.
 Class 570. Equipment for the breeding of birds and for the artificial hatching, raising or fattening of poultry. Poultry foods. Methods of and appliances for packing and transporting.
 Class 571. Market gardening. Buildings and appliances for growing, gathering, packing and marketing vegetables. Processes and equipment employed in the forced culture of vegetables and plants, with specimens of products.

GROUP 119

THEORY OF AGRICULTURE AND AGRICULTURAL STATISTICS

- Class 572. Studies relating to soil and water from an agricultural point of view.
 Class 573. Agronomic charts, climate charts, various agricultural charts. Registers of land tenures.
 Class 574. Rural population. Division of cultivated territory. Yield and returns. Census of farm animals.
 Class 575. Progress, especially since 1905. History of agriculture in its successive changes. History of fluctuations in prices of land, rents, labor, live stock, crops and animal products.
 Class 576. Institutions for the promotion and advancement of agriculture. Methods and products of experiment stations and laboratories. Societies, agricultural communities and associations. Loans on land. Agricultural insurance.
 Class 577. Legislative and administrative measures.
 Class 578. Books, papers, statistics, diagrams, periodical publications.

GROUP 120

VEGETABLE FOOD PRODUCTS AND AGRICULTURAL SEEDS

- Class 579. Cereals: wheat, rye, barley, maize, millet, oats, rice, buckwheat and other cereals in sheaves or in grain.
- Class 580. Legumes and their seeds: beans, peas, lentils, etc.
- Class 581. Tubers and roots and their seeds: potatoes, beets, carrots, turnips, radishes, etc.
- Class 582. Miscellaneous vegetables and their seeds: cabbages, peppers, artichokes, mushrooms, cresses, etc.
- Class 583. Sugar producing plants and their products: beets, cane, sorghum, etc.
- Class 584. Miscellaneous plants and their products: coffee, tea, cocoa, etc.
- Class 585. Oil producing plants and their products.
- Class 586. Forage, growing, green, cured or in silos; fodder for cattle; forage, grass and field seeds.

GROUP 121

APPLIANCES FOR GATHERING WILD CROPS AND PRODUCTS OBTAINED

- Class 587. Methods and implements for gathering the products of the soil obtained without culture.
- Class 588. Mushrooms; truffles; edible wild fruits.
- Class 589. Plants, roots, barks, leaves, fruits obtained without cultivation and used by herb-alists, in pharmacy, for dyeing, manufacture of paper, oils, or for other purposes.
- Class 590. India rubber; gutta percha. Gums and resins.

GROUP 122

ANIMAL FOOD PRODUCTS

- Class 596. Dairy fittings and appliances, churns, butter workers, cans, pails, cheese presses, vats, separators, testers, pasteurizers, etc., including all fittings and appliances for the preparation, preservation, transportation, distribution and delivery of milk for the supply of cities and towns.

GROUP 132

INEDIBLE AGRICULTURAL PRODUCTS

- Class 646. Textile plants: cotton; flax and hemp in the straw, scutched or unscutched; ramie, phormium, tenax, vegetable fibers of all kinds.
- Class 647. Oil producing plants, in stalk or in seed.
- Class 648. Non-edible vegetable fats and oils.
- Class 649. Plants containing tannin, weeds and noxious plants.
- Class 650. Plants containing dyes, medicinal plants.
- Class 651. Hops, teasels, broomcorn, etc.
- Class 652. Wool, raw, washed or unwashed.
- Class 653. Packing house by-products.
- Class 654. Feathers, down, hair and bristles, etc.

GROUP 133

USEFUL INSECTS AND THEIR PRODUCTS, INJURIOUS INSECTS AND PLANT DISEASES

- Class 655. Systematic collections of useful and injurious insects.
- Class 656. Systematic collections of vegetable parasites from plants and animals.
- Class 657. Bees. Silkworms and other bombycids. Cochineal insects.
- Class 658. Appliances for rearing and keeping bees and silk worms. Bee and silkworm products; honey, wax, cocoons.
- Class 659. Appliances and processes for destroying plant diseases and injurious insects.

GROUP 134

FORESTRY

- Class 660. Forest geography: maps, statistics and general literature. Geographical distribution of forests, of forest types and tree species. Botanical collections: seeds, bark, foliage, flowers, fruit, bark and wood sections.
- Class 661. Planting: equipment and processes for tree collection; nursery practice, field planting and field sowing.
- Class 662. Management and utilization; equipment and processes for protection from fire, insects and disease; organization of protective forces, ranger stations, trail and telephone systems. Logging methods and equipment: transportation of logs; systems of cutting.
- Class 663. Indirect uses of forests: watershed protection; effect on climate and public health; prevention of erosion and shifting sand; use for windbreaks, for recreation purposes and as refuge for game.

GROUP 135

FOREST PRODUCTS

- Class 664. Lumber: equipment and processes used in cutting logs into lumber; drying, dressing and grading of lumber. Lumber grading rules.
- Class 665. Saw-mill and planing-mill products from re-manufacture of lumber: furniture woods, wagon stock, cooperage, boxes, pickets, shingles, doors, etc. Veneering and veneer-cutting machinery.
- Class 666. Forest by-products: tan bark and extract, naval stores, oils and distillates, charcoal, cork, dye woods, medicinal and textile barks, kiln dried wood, wood fuels, wood wool.

GROUP 114

FARM EQUIPMENT AND METHODS OF
IMPROVING LANDS

- American Rolling Mills Co., Middletown, O. Model farm & silos. Min. Pal., 7th, bet. C&D
- Am. Sheet & Tin Plate Co., Pittsburgh, Pa. Roof. prod. & Mod. Farm. Av. D, Min. Pal.
- Am. Steel & Wire Co., Chicago, Ill. Wire fencing. Working Exh. Live Stock Dept.
- Armeo Iron Culvert Manufacturers Association, Middletown, Ohio. Irrigation Gates and Pipe; Lennon Metal Flumes. Min. Pal., 7th St., bet. Avs. C & D.
- Armstrong Cork & Insulation Co., Pittsburgh, Pa. Cork Brick installed in Dairy Bldg., Live Stock Dept.
- Bacon Co., Edw. R., S. F. Cal. Col. Exh. Irrigation Mach. Mch. Pal., 4th & 5th, Avs. C&D.
- Champion Mfg. Co., Cedar Rapids, Ia. Farm Gates. Working Exh. Live Stock Dept.
- Columbia Steel Tank Co., Kansas City, Mo. Farm Utilities. Wkg. Exh. Live Stock Dept.
- De Laval Dairy Supply Co., San Francisco, Cal. Exhibit 3rd St., bet. Avs. A & B. Ideal green feed silo. Workg. Exh. Lv. Stk. Dept.
- Edwards, E. H. Co., S. F. Poultry Fence. Working Exhibit Live Stock Dept.
- Iron Clad Silo Co., Portland, Ore. Silo. Working Exhibit Live Stock Dept.
- James Manufacturing Co., Fort Atkinson, Wis. Exhibit 3rd St., bet. Avs. A & B. De Laval Dairy Supply Co., San Francisco agents. Barn equipment, stalls, stanchions and carriers. Working exhibit Live Stock Dept.
- Maytag Co., The, Newton, Ia. Automatic Waterers. Wkg. Exh. Live Stock Dept.
- McClure Lumber Co., Saginaw, Mich. Silo. Working Exhibit Live Stock Dept.
- Nevada, State of. Model Dairy Farm. Av. A, bet. 9th & 10th Sts.
- Norwich Automatic Feeder Co., New London, Conn. Feeding Apparatus. Live Stk. Dept.
- Pacific Tank & Pipe Co., San Francisco, Cal. Pacific Redwood and Fir Plain Silos. Working Exhibit in Live Stock Dept. Irrigation Wood Pipe and Tanks. Min. Pal., 6th St., bet. Avs. A & B.
- Pawling & Harnischfeger Co., Milwaukee, Wis. Mch. Pal., 4th & 5th Sts., bet. Avs. C & D. Drainage Machinery Equipment.
- Pickett, A. B., Houston, Texas. Patent Gate. Agriculture, outside space.
- Pittsburgh Steel Co., Pittsburgh, Pa. Wire fencing. Working Exh. Live Stk. Dept.
- Redwood Manufacturers Company, San Francisco. Farm Equipment. 15,000 gallon "Remco" Redwood Tank in operation; "Remco" Machine Banded Redwood Stave Pipe in operation; Miniature "Remco" Redwood Tank & Tower; Sections of "Remco" Pipe, Machine Banded & Continuous Stave. Installed in Block 36, Machinery Pal. Farm Equipment. Two 16x36-foot "Remco" Redwood Stave Silos. (Located at Dairy Barns opposite Stock Barns, in actual use.) Workg. Exh. Live Stock Dept. Farm Equipment. Miniature Tank and Silo in Contra Costa County Exhibit.
- Rock Island Mfg. Co., Rock Island, Ill. Live Stk. Waterers. Wkg. Exh. Live Stk. Dept.
- Spratt's Patent, Ltd., Newark, N. J. Kennel Furniture. Fd. Pr. Pal., 5th St., bet. Avs. D&E.

- U. S. Steel Corp. & Subsid. Cos., New York. Col. Iron & Steel Exh. Min. Pal., Av. D.
- Wood Bros. Silo & Mfg. Co., Lincoln, Neb. Silo Working Exhibit Live Stock Dept.

GROUP 115

AGRICULTURAL IMPLEMENTS AND
FARM MACHINERY

- Alexander Fan & Propellor Co., Oakland, Cal. Windmill. Agriculture, outside space.
- American Seeding-Machine Co., The, Richmond, Ind. Grain drills, corn planters, seed drills, cotton planters. Av. C, cor. 4th St.
- Associated Manufacturers' Co., Waterloo, Ia. Gasoline engines. Av. B, cor. 2nd St.
- Bessemer Gas Engine Co., Grove City, Pa. Machinery Palace, 4th St., bet. Avs. D & E. Kerosene Motors for farms. Gas and Kerosene engines. Mch. Pal., 4th St., bet. Avs. D & E.
- Best Gas Traction Company, C. L., Oakland, Cal. Gas traction engines. Av. B, cor. 2nd St. Round wheel self-laying track types. Steel castings, carbon chrome, nickel and manganese.
- Carnegie Steel Co., Pittsburgh, Pa. Cotton Col. Iron & Steel Exh. Min. Pal., Av. D.
- Disston, H. & Sons, Inc., Philadelphia, Pa. Agricul. knives. Mfr. Pal., Av. C, cor. 6th St.
- Fairbanks-Morse Co., Chicago, Ill. Scales. Working exhibit in all Palaces and Live Stock.
- Famous Water Elevator Co., Denver, Colo. Irrigation device. 1st St., bet. Avs. A & B. Water elevator for irrigation purposes.
- Farquhar, A. B. & Co., Ltd., York, Pa. Agri. implements. Farm Mch. Av. A & 3d St.
- Frick Co., Waynesboro, Pa. Traction Engines, Threshing machines. Agr. Outside space.
- Graton & Knight Manufacturing Co., Worcester, Mass. Harvester Straps. Block 13, Palace of Machinery.
- Hercules Powder Company, San Francisco, Cal. Stump Pullers. Min. Pal., Av. B & 7th St. Explosives for stump blasting and tree pulling. Earth Augers, Subsoiling Bars.
- Hog Motor Company, Minneapolis, Minn. Stock feeding machine. Agr. outside space.
- Holt Manufacturing Company, The, Stockton, Cal. Manufacturers. Avs. A & B, bet. 4th & 5th Sts. Caterpillar farm and military tractors, Caterpillar wagons, Caterpillar harvesters; combined harvesters and threshers; land levelers and scrapers; horse and engine plows, disc and mold-board; disc and tooth harrows; sage brush plows.
- Hyde, Henry C. Company, San Francisco, Cal. Farm Lighting Machinery. See exhibit, Block 37, Machinery Hall.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Plows, Rakes, Rollers, Harrows, Clod Crushers, Stalk Cutters, Stalk Rakes, Manure Spreaders, Corn Planters, Seed Drills, Cotton Planters, Grain Drills, Broadcast Seeders, Walking Cultivators, Riding Cultivators, Reapers, Tedders, Mowers, Corn Harvesters, Combined Reapers and Threshers, Threshing Machinery, Corn Shellers, Binder Twine, Headers, Feed Cutters, Feed Grinders, Hay Baling Machinery, Pumps, Water Lifting Apparatus, Engines and Tractors.

- Invincible Grain Cleaner Co., Silver Creek, N. Y. Grain Cleaning Machines. Mch. Pal.
- Junior Monarch Hay Press Co., San Leandro, Cal. Hay Press, etc. 1st St., bet. Avs C&D.
- Lauson Mfg. Co., John, New Holstein, Wis. Exhibit 3rd St., bet. Ave. A & B. De Laval Dairy Supply Co., San Francisco agents. Gasoline, kerosene and distillate engines.
- Rotary Tractor Co., Los Angeles, Cal. Electric farm tractors. Agr. outside space.
- Rusnak, A. D., Philadelphia, Pa. Potato digging machine. Av. A & 2nd St.
- Sanders, Newell, Plow Co., Chattanooga, Tenn. Plows. Av. B, cor. 2nd St.
- Sigurd, C. G., San Jose, Cal. Weed cutter and mulcher. Av. A & 2nd St.
- Simonds Mfg. Co., Fitchburg, Mass. Cane Knives. Mfr. Pal., 6th St., bet. Avs. C & D.
- Smalley Manufacturing Co., Manitowoc, Wis. Ensilage cutter. Wkg. Exh. Live Stock Dept.
- South Bend Chilled Plow Co., South Bend, Ind. Plows. Av. B, cor. 2nd St. Agricultural implements, plows, cultivators, planters, etc. Special attention given to making of special styles for export.
- Sperry Flour Co., S. F., Cal. Stock foods. Fd. Pr. Pal., Avs. C & D, bet. 2nd & 3rd Sts.
- Spratt's Patent, Ltd., Newark, N. J. Pet stk. foods. Fd. Pr. Pal., 5th St., bet. Avs. D & E.
- Standard Gas Engine Co., S. F. Gasoline engines. Mch. Pal., Avs. E & F, bet. 1st & 2nd.
- U. S. Steel Corp. & Subsid. Cos., New York. Collective exhibit. Min. Pal., Av. D.
- Viking Pump Co., The, Cedar Falls, Ia. 3rd St., bet. Avs. A & B. Rotary pumps. De Laval Dairy Supply Co., San Francisco agents.
- Warren Axe & Tool Co., Warren, Pa., U.S.A. Axes and edged tools. Av. A, cor. 1st St. Axes and logging tools of all kinds.

UNITED STATES SECTION AGRICULTURE
GROUP 117

TOBACCO CULTURE; RAW MATERIAL
IN STALK, LEAF AND SEED

- Kansas, State of. Collective exhibit of tobacco. Av. C, bet. 5th & 6th Sts.
- Louisiana, State of. Collective exhibit of tobacco. Avs. B & C, bet. 8th & 10th Sts.
- Virginia, State of. Tobacco exhibit. Av. A & 8th St.

GROUP 118

APPLIANCES AND METHODS USED IN
AGRICULTURAL INDUSTRIES

- Electric Specialty Co., Salt Lake City, Utah. Elec. incubators. 10th St., bet. Avs. A & B.
- Jordan & Chapman Mfg. Co., Inc., Staunton, Va. Poultry trap nests. Wkg. Exh. Live Stock Dept.
- Lo-Glo Electric Incubator Co., N. Y. Electric incubators. Mch. Pal., 1st St. & Av. D.
- Marland, W. J., Oakland, Cal. Col. exh. Elec. incubators. Mch. Pal., 1st St. & Av. D.
- Nevada, State of. Garden crops, photographs of dairy farms, etc. Av. A, bet. 9th & 10th.
- Norwich Automatic Feeder Co., New London, Conn. Poultry Hoppers. Live Stk. Dept.
- Rock Island Mfg. Co., Rock Island, Ill. Poultry waterers. Wkg. Exh. Live Stk. Dept.
- Sperry Flour Co., S. F., Cal. Poultry foods. Fd. Pr. Pal., Avs. C & D, bet. 2d & 3d Sts.

Spratt's Patent, Ltd., Newark, N. J. Poultry foods & appliances. Fd. Pr. Pal., 5th St., bet. Avs. D & E.

- Standard Electric Incubator Co., N. Y. Electric Incubators. Mch. Pal., 1st St. & Av. D.
- Victor Incubator Co., Decoto, Cal. Incubators and brooders. Av. A & 10th St.

GROUP 119

THEORY OF AGRICULTURE AND AGRICULTURAL STATISTICS

- Barrett Mfg. Co., Frankford, Phil. Fertilizing results. Min. Pal., 7th St.
- International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Charts depicting changes in farming and development of farm machines and implements, methods and products of experiment stations, Societies, Agricultural Communities and Associations.
- Louisiana, State of. Collective exhibit of maps, soil, samples, charts, etc. Avs. B & C, bet. 8th & 10th Sts.
- Nevada, State of. Agricultural Experiments, Maps, etc. Av. A, bet. 9th & 10th Sts.

GROUP 120

VEGETABLE FOOD PRODUCTS AND
AGRICULTURAL SEEDS

- Dickinson, The Albert Co., Chicago, Ill. Agricultural seeds. Av. A, cor. 2nd St.
- Idaho, State of. Collective exhibit of agricultural products. Avs. B & C, bet. 6th & 7th.
- Illinois, State of. Collective agricultural exh. of grains & grasses. Av. C, bet. 4th & 5th.
- Kansas, State of. Collective exh. of cereals, grasses, etc. Av. C, bet. 5th & 6th Sts.
- Louisiana, State of. Collective exh. of grains and grasses. Avs. B & C, bet. 8th & 10th Sts.
- Montana, State of. Collective exh. of agricultural products. Avs. A & B, bet. 8th & 9th.
- Nevada, State of. Collective exh. of agricultural products. Av. A, bet. 9th & 10th Sts.
- Oregon, State of. Collective exh. of agricultural products. Av. D, bet. 4th & 6th Sts.
- Virginia, State of. Agricultural exhibit of grains and grasses. Av. A & 8th St.
- Wisconsin, State of. Collective exh. of agricultural products. Av. A, bet. 6th & 7th Sts.

GROUP 122

ANIMAL FOOD PRODUCTS

- Associated Manufacturers' Co., Waterloo, Ia. Cream Separators. Av. B, cor. 2nd St.
- "Calf-Way" Milker Co., Chicago, Ill. Milking Machines. Av. B, cor. 1st St.
- Creamery Package Mfg. Co., Chicago, Ill. Dairy Equipment. Av. A, cor. 2nd St.
- Davis Milk Mach. Co., N. Chicago, Ill. Bottle fillers and cappers. 2d St., bet. Avs. A & B.
- De Laval Separator Co., The, New York, N. Y. 3rd St., bet. Avs. A & B. Farm and factory sizes of: De Laval Cream Separators, De Laval Milk Clarifiers, De Laval Milking Machine, De Laval Emulsor, Ideal Sanitary Cream Coolers. De Laval Dairy Supply Co., San Francisco agents.
- De Laval Dairy Supply Co., San Francisco, Cal. Exhibit. 3rd St., bet. Avs. A & B. Dairy Supplies & Equipments. Ideal Sanitary Cream Cooler.
- Ford, The J. B. Co., Wyandotte, Mich. Cleaning materials for dairies, etc. Av. A, cor. 3d St.
- Harris, Arthur & Co., Chicago. Milk Evap. apparatus. Pac. Coast Cond. Milk Co. Pav.

Hinman Milking Machine Co., Oneida, N. Y. Milking Machines. 2d St., bet. Avs. A & B.

Idaho, State of. Collective exhibit of cheese. Agr. Pal., Avs. B & C, bet. 6th & 7th Sts.

International Harvester Company of America, Chicago, U. S. A. Agr. Pal., 4th St., bet. Avs. B & C. Dairy Fittings and Appliances. Cream Separators, including all fittings and appliances for the separation, preservation and transportation of milk.

Mehring, Wm. M., Keymar, Md. Milking Machines. Av. A & 2nd St.

Skidd, The Chas. Mfg. Co., Chicago. Milk Cooler. Pac. Coast Cond. Milk Co.'s Pav.

Vermont Farm Machine Co., Bellows Falls, Vt. Dairy Equipment. Av. A, cor. 4th St.

GROUP 132

INEDIBLE AGRICULTURAL PRODUCTS

Louisiana, State of. Collective exhibit of cotton and fibre crops. Avs. B & C, bet. 8th & 10th Sts.

Nevada, State of. Collective exhibit of wool and cotton. Av. A, bet. 9th & 10th Sts.

GROUP 134

FORESTRY

Bacon Co., Ed. R., S. F., Cal. Collective Exhibit Logging Blocks & Hooks. Mch. Pal., 4th & 5th Sts., Avs. C & D.

Clyde Iron Works, Duluth, U. S. A. Logging Machinery. Exhibit installed in Palace of Machinery, 5th St. & Av. H.

Simonds Mfg. Co., Fitchburg, Mass. Logging Tools. Mfr. Pal., 6th St., bet. Avs. C & D.

Warren Axe & Tool Company, Warren, Pa. Axes & Logging Tools. Av. A, cor. 1st St. Cant hooks, chains, and edged tools.

Washington, State of. Photos, maps, etc. Av. A, bet. 6th & 7th Sts.

Young, C. J., Iron Works, Seattle, Wash. Machinery Pal., 4th & 5th Sts., bet. Avs. C & D. Logging Blocks and Equipment.

GROUP 135

FOREST PRODUCTS

California Barrel Company, San Francisco, Cal. General Cooperage. Av. C, cor. 4th St. Manufacturers and Exporters of Barrels, Kegs, Kits and Pails of all sizes for Dry or Liquid Products. Also High Grade Shooks made from North American Pacific Coast Hard Douglas Fir.

California Redwood Assn., S. F., Cal. Finished Lumber in Bldg. in Hort. Gardens.

California Sugar & White Pine Co., S. F., Cal. Finished Lumber in Bldg. in Hort. Gardens.

Disston, Henry & Sons, Inc., Phil., Pa. Lumbering Saws. Mfr. Pal., Av. C, cor. 6th St.

Louisiana, State of. Collective exhibit of forest products. Avs. B & C, bet. 8th & 10th Sts.

Simonds Mfg. Co., Fitchburg, Mass. Saws for Lumber Mills. Mfr. Pal., 6th, bet. Avs. C&D.

Singer Sewing Machine Company, New York, N. Y. Woods for Veneering. Veneering laminated woods and finishing of same as expressed in sewing machine cabinet work. See exhibit, Varied Industries Building, 1st St., Av. D, 2nd St., Av. E.

Washington, State of. Collective Exhibit of mfg. lumber products. Av. A, bet. 6th & 7th.

West Coast Lumber Mfr's Assn., Tacoma, Wash. Finished Lumber in Hort. Gardens.

STATES' EXHIBIT SECTION

ARKANSAS.

Location: Av. B, bet. 6th & 7th Sts.

The complete list of exhibits from Arkansas in the Department of Agriculture will appear in revised edition of the Catalogue.

CALIFORNIA.

Location: Avs. A & B, bet. 7th & 8th Sts.

The complete list of exhibits from California in the Department of Agriculture will appear in revised edition of the Catalogue.

COLORADO.

Location: Av. B. bet. 5th & 6th Sts.

The complete list of exhibits from Colorado in the Department of Agriculture will appear in revised edition of the Catalogue.

IDAHO

Location: Avs. B & C, bet. 6th & 7th Sts.

GROUP 120

Aberdeen Expm't. Station—Aberdeen. Wheat.

Adams, A.—Julietta. Wheat.

Ainscaugh, Wm.—Preston. Barley, Oats.

Allen, Brent, Teton.—Timothy.

Allen, J. H. Seed Co.—St. Anthony. Wheat.

Aled, M. A.—Mapleton. Oats.

Anderson, C. B.—Caldwell. Oats.

Anderson, J. G.—Winchester. Alfalfa, Grass.

Anderson, R. K.—Cambridge. Barley, Wheat.

Anderson, W.—Moscow. Timothy.

Austin, A. S.—Twin Falls. Potatoes.

Babb, D. T.—Rock Flat. Grass.

Balbach, Wm.—New Meadows. Alfalfa, Oats.

Ballinger, Ansell—Fruitland. Corn.

Ballinger, Amsey—Fruitland. Corn.

Barrenger, T. C.—Weiser. Corn.

Barnhill, E. W.—Rock Flat. Oats.

Bartholomew, J. A.—Parma. Rye.

Barley, A. L.—Cambridge. Oats.

Beasley, J. H.—Idaho Falls. Oats, Potatoes.

Beck, E. A.—Twin Falls. Potatoes, Wheat.

Bice, G. W.—Twin Falls. Wheat.

Beaty, Sam—Kimberly. Wheat.

Bhunk, L. A.—Murphy. Corn.

Berrier, G. W.—Athol. Grain.

Bonwell, M.—Curry. Potatoes.

Boone, A. C.—Twin Falls. Potatoes.

Brown—New Meadows. Peas.

Buhl, Leslie—Cambridge. Wheat.

Busch, G. W.—Midvale. Wheat.

Eusk, A.—Athol. Wheat.

Burroughs, Chas.—Athol. Wheat.

Bullock, J. H.—Pocatello. Wheat.

Buckle, J.—Hayden Lake. Wheat.

Bubb, Fred—Belmont. Timothy.

Burnett, H.—Idaho Falls. Potatoes.

Butler, Wm.—Twin Falls. Potatoes.

Buel, W. O.—Filer. Potatoes.

Burton, O. C.—Richfield. Oats.

Bubb, C. W.—New Meadows. Alfalfa.

Buckhalter, C. S.—Kimberly. Barley.

Busling, Mrs.—Payette. Barley, Oats, Wheat.

Butterfield Live Stock Co.—Weiser. Corn.

Callert, E. J.—Twin Falls. Wheat.

Campbell, C.—New Meadows. Wheat.

Campbell, O. H.—Bonners Ferry. Potatoes.

Chamberlin, F. E.—Twin Falls. Potatoes.

Cheek, Wm.—Kimberly. Potatoes.

Church, B. E.—Richfield. Grain.

Costello, J.—Twin Falls. Potatoes.

- Craig, Mt. Lumber Co.—Winchester. Barley.
 Davis, A. A.—Twin Falls. Potatoes.
 Day, W. E.—Greenleaf. Corn.
 Dailey, J.—Oakley. Wheat.
 Dewey, J. C.—Emmett. Corn.
 Dewey, H. R.—Emmett. Corn.
 Donnou, D.—Weiser. Corn.
 Dove, E.—Richfield. Wheat.
 Dunham, J. W.—Cambridge. Wheat.
 Dunnaway, J. H.—Twin Falls. Potatoes.
 Durfee, J. F.—Filer. Potatoes.
 Duster, C.—Moscow. Oats, Wheat.
 Eckley Ranch—Winchester. Wheat.
 Edgerton, R. L.—Emmett. Corn.
 Engle, D.—Richfield. Alfalfa, Wheat.
 Engle, J.—Richfield. Wheat.
 Erhart, G. A.—Filer. Potatoes.
 Erwin, T.—Twin Falls. Barley, Clover.
 Fargo Farmers' Club—Fargo. Alfalfa Seed.
 Ferrel, E.—Weiser. Oats.
 Fike, F.—Nez Perce. Wheat.
 Fitzpatrick, J.—Bonners Ferry. Potatoes.
 Fletcher, J.—Richfield. Wheat.
 Foster & Co.—Richfield. Oats.
 French, Permeal—Richfield. Oats.
 Frohm, Wm.—Star. Corn.
 Gamage, C. L.—Emmett. Fetireta.
 Gabel, S.—Twin Falls. Oats.
 Gearhart, W.—Star. Corn, Potatoes.
 Gilbert, C. F.—Homedale. Clover.
 Gilden, J. S.—Cambridge. Barley.
 Gilmore, W. B.—Payette. Potatoes.
 Glenn, S.—Boise. Oats.
 Gooding Experiment Station—Gooding. Oats.
 Gordon, N.—Payette. Wheat.
 Gorren, J. F.—Cambridge. Barley.
 Green, Jos. A.—Richfield. Oats.
 Hackett, T.—Athol. Alfalfa.
 Hammond, C. C.—Parks. Corn.
 Hanson, Jas. R.—Tetonia. Clover.
 Harding, P. M.—Nez Perce. Clover.
 Hark, J.—Twin Falls. Potatoes.
 Hardin, W. F.—Kimberly. Wheat.
 Haskin, F. S.—Aberdeen. Barley.
 Hawarth, C.—Star. Corn, Potatoes.
 Hawks, Wm.—Preston. Oats, Potatoes.
 Hayes, B. F.—Twin Falls. Clover.
 Hazel, J.—Kimberly. Wheat.
 Heck, F.—New Meadows. Clover.
 Henry, J. J.—Twin Falls. Potatoes.
 Heron, J.—Twin Falls. Potatoes.
 Heritage, J. F.—Athol. Corn.
 Hewitt, D. J.—Winchester. Barley, Oats.
 Hibner, W. E.—Preston. Oats.
 Hills, A.—Filer. Potatoes.
 Horner, Wm.—Twin Falls. Potatoes.
 Hoops, G. S.—Richfield. Oats.
 Hoover, Walter—Nez Perce. Oats, Wheat.
 Hughes, James—Twin Falls. Potatoes.
 Idaho Insane Asylum—Blackfoot. Clover.
 Idaho Industrial Training School—St. Anthony. Oats, Potatoes, Corn.
 Ireland, H. A.—Caldwell. Corn.
 Irwin, T. E.—Wheat.
 Jackey, W. A.—Twin Falls. Potatoes.
 Jackson, C. J.—Parma. Corn, Wheat.
 Jacobson, A.—Richfield. Wheat.
 Jacobson, R.—Richfield. Wheat.
 Jacobs, T. F.—Nez Perce. Barley, Wheat.
 Jagler, J. H.—Coeur d'Alene. Oats, Wheat.
 James, Walter—Bonners Ferry. Potatoes.
 Jinkens, T. B.—Richfield. Barley.
 Johnson, A. A.—Winchester. Clover, Oats.
 Johnson & Anderson—Winchester. Grain.
 Johnson, Chester A.—Richfield. Alfalfa.
 Johnson, G.—Richfield. Barley.
 Johnson, Ray—Caldwell. Corn.
 Johnson, John P.—Twin Falls. Potatoes.
 Johnson, Mark—Richfield. Wheat.
 Johnson, Quiet—Richfield. Barley, Timothy.
 Jones, D.—Idaho Falls. Oats.
 Jones, J. W.—Twin Falls. Potatoes.
 Keene, L.—Moscow. Timothy.
 Keene, La Fayette—Kendrick. Oats, Wheat.
 Kent, A. J.—Bonners Ferry. Potatoes.
 Kent, M. L.—Moscow. Wheat.
 Kern, Robt. & Matt—Wheat.
 Kincaid, Lewis—Ido. Barley.
 Kingsbury, Percy—Twin Falls. Potatoes.
 Kissinger, J. B.—Viola. Alfalfa.
 Kneutsen, A.—Harrison. Oats, Timothy.
 Kneutsen Ranch—Harrison. Alfalfa, Clover.
 Laferty, Charley—Bonners Ferry. Potatoes.
 Larsen, John A.—Preston. Oats.
 Law, J. O.—Oakley. Potatoes.
 Leagers, A.—Wheat.
 Leger, Thos.—Midvale. Wheat.
 Leichter, J. B. & Sons—Twin Falls. Potatoes.
 Leslie, Henry—Star. Corn, Potatoes.
 Lewis, J. L.—Cambridge. Barley, Wheat.
 Lewis, L. L.—Cambridge. Barley.
 Lind, Vance—Twin Falls. Potatoes.
 Larkin, Eugene—Barley.
 Madsen, E. W.—Payette. Wheat.
 Machey, John—Wheat.
 Madsen, E. W.—Payette. Oats.
 Manthey, Robert J.—Nez Perce. Barley.
 Maples, Henry—Barley.
 Martin, Earl—Star. Potatoes.
 Martens, T. E.—American Falls. Wheat.
 Martin, Simon—Idaho Falls. Barley, Wheat.
 Meemas, F. V.—Winchester. Grain, Vetch.
 Matheny, J. G.—Midvale. Wheat.
 McKnight, Wm.—American Falls. Wheat.
 McOmber, A. H.—Perma. Corn.
 McWalters, Jerome—Potatoes.
 Michewaite, M. W.—Twin Falls. Barley.
 Mesa Orchards—Mesa. Potatoes.
 Moji, W. F.—Athol. Oats.
 Mullens Ranch—Iona. Oats.
 Muller, Gus—American Falls. Wheat.
 Musser, H. E.—Filer. Potatoes.
 Nelson, S.—Barley, Wheat.
 Nelson, Warren T.—New Plymouth. Corn.
 Nicola, I. M.—Nampa. Wheat.
 Olsen, E.—Barley.
 Osborne, J. C.—Winchester. Clover.
 Parker, J. C.—Rye.
 Partiner, L. G.—Aberdeen. Potatoes.
 Parma Milling & Elevator Co.—Parma. Alfalfa, Clover.
 Paulson, C. O.—Richfield. Clover, Wheat.
 Payne, Chas.—Caldwell. Corn, Millet.
 Peckman Bros.—Wilder. Grain.
 Perrine, Chas.—Twin Falls. Peas.
 Peterson Bros.—Richfield. Wheat.
 Pierce, J. M.—Berger. Grain.
 Powell, Joe—New Meadow. Barley.
 Preston, C. H.—Churchill. Potatoes.
 Reagan, S. A.—Boise. Rye.
 Redman, D.—Twin Falls. Barley, Beans.
 Redman, H. W.—Twin Falls.
 Richards, T.—Wheat.
 Robinson, W. S.—Alfalfa, Clover.
 Root, M. L.—Athol. Alfalfa, Clover, Oats.
 Royston, Lafe—Fruitland. Corn.
 Rucker, Mrs. P. & Son—Parma. Oats, Wheat.
 Sessions, J. W.—Richfield. Wheat.
 Shaw, James—Weiser. Corn.
 Shaw, S. D.—Twin Falls. Corn.
 Shaw, A.—Oats.
 Shubert, J. F.—Winchester. Rye.
 Simans, J. W.—Pocatello. Timothy.
 Smith, Andrew—Payette. Corn.
 Smith, Ray—Star. Corn, Potatoes.
 Snyder Farm—Twin Falls. Potatoes.
 Snyder, L. A.—Twin Falls. Potatoes.
 Snyder, A. J.—Springfield. Grain.
 Spainbower, Floyd—Fruitland. Corn, Oats.
 Sparks, Grant L.—Moscow. Wheat.
 Starr, W. S.—Twin Falls. Potatoes, Grain.
 Straun, Clarence—Fruitland. Corn.
 Strecker, C. A.—Antelope. Barley.
 Taylor, Joe—Idaho Falls. Oats, Potatoes.
 Taylor, W. C.—Richfield. Oats.
 Teton High School—Teton. Grain, Potatoes.
 Thomas, C. B.—Weiser. Corn.

Thomas, Chas. F.—Nez Perce. Barley, Wheat.
 Thometz, M. A.—Twin Falls. Wheat.
 Thometz & Son—Twin Falls. Potatoes, Grain.
 Thompson, J. P.—Moscow. Wheat, Timothy.
 Tobey, C. A.—Twin Falls. Potatoes.
 Tobias, C. C.—Caldwell. Corn, Wheat.
 Twin Falls Expt. Station—Twin Falls. Wheat.
 Twin Falls High School—Twin Falls. Potatoes.
 Utah Idaho Sugar Co.—Idaho Falls. Oats.
 Vahlberg, David—Emmett. Corn.
 Vance, Harry—Twin Falls. Potatoes.
 Vystrcil, A. F.—Roberts. Grain, Potatoes.
 Wallen, Frank—Moscow. Oats.
 Ware, Frank—Idaho Falls. Oats.
 Walters, H. B.—Filer. Potatoes.
 Wells, E. N.—Alfalfa, Barley.
 Weiser Grain & Feed Co.—Weiser. Grain.
 White, Bob—Caldwell. Wheat.
 Whiffen, C. W.—Caldwell. Wheat.
 Whitting, J. H.—Wheat.
 Wiley, H. K.—Springfield. Alfalfa.
 Wilson, Alex.—Boise. Corn.
 Williams Bros.—Barley.
 Wilson, Kirt—Kimberly. Potatoes.
 Wilson, J. T.—Blackfoot. Peas.
 Willis, J.—Wheat.
 Williams, M. J.—Athol. Rye.
 Winters, H. C.—Twin Falls. Potatoes.
 Winslow, Merle—Greenleaf. Corn.
 Winslow, W. J.—Greenleaf. Clover, Corn.
 Wones, M. A.—Thornton Falls. Wheat.
 Woodward, Ivan—Franklin. Oats.
 Worthington, S. P.—Wheat.
 Wylie, A. H.—Aberdeen. Potatoes.
 Yost, Joe—Midvale. Wheat.
 Youkum, Hue—New Meadows. Oats.
 Young, C. W.—Payette. Oats.
 Young, C. W.—Fruitland. Corn.
 Young, Lambert—Fruitland. Corn.
 Young, L. L.—Nampa. Grain, Potatoes.

GROUP 122

Clover Leaf Cheese Factory—Buhl. Cheese.
 Meridian Cheese Factory—Meridian. Cheese.
 Parma Cheese Factory—Parma. Cheese.

INDIANA

Location: Ave. B, bet. 9th & 10th Sts.

GROUP 120

Brown, C. A.—Franklin. Corn.
 Byers, E. E.—Shadeland. Corn.
 Carter, M. M.—Greensburg. Corn.
 Carter, O. E.—Seymour. Corn.
 Constable, R. L.—Goodland. Oats.
 Donmoyer, R. W.—South Bend. Corn.
 Drybread, J. Walter—Edinburgh. Corn.
 Egnew, Arthur S.—Chrisney. Corn.
 Enmundson, L. W.—Balbek. Corn.
 Fitch, W. H.—Spades. Corn.
 Fisher, Eugene—La Grange. Grasses, grains.
 Gast, A. A.—Akron. Corn.
 Gleason, M. K.—Indianapolis. Grasses.
 Hahan, Louis—Spades. Sugar cane.
 Henry, W. B.—Winamac. Corn.
 Hollingsworth, P. O.—New Augusta. Broom corn, millet.
 Hudson, P. E.—Howe. Oats.
 Isley, Joseph C.—Flat Rock. Corn.
 Isley, Louis M.—Flat Rock. Corn.
 Jessup, Wallace—Friendswood. Corn.
 Johnson, R. E.—Dale. Wheat.
 Kerlin, Frank—Rockfield. Corn.
 Kerlin, G. L.—Franklin. Corn, wheat.
 Kerlin, J. W.—Rockfield. Corn, wheat.
 Kerlin & Snoeberger—Rockfield. Corn.
 Kerlin, W. F.—Rockfield. Corn.
 Livingston, Wm.—Worthington. Corn.
 Lux, Ed.—Shelbyville. Corn.
 Lux, John—Plainfield. Corn.
 Lux, Peter—Shelbyville. Corn.

McKinney, Glenn—Wingate. Corn.
 McMullen, Guy—Idaville. Corn.
 Mazingo, H.—Greensburg. Corn.
 Mundell, Jacob—Thorntown. Corn.
 Mundell, J. O.—Thorntown. Wheat.
 Mundell, M. A.—Rhoentown. Oats.
 Neff, Joseph—Marion. Corn.
 Orme, Hence—Greenwood. Corn.
 Pruitt, Chas. F.—Edinburg. Corn.
 Pruitt, A. W.—Edinburg. Corn, wheat.
 Pruitt, M. D.—Edinburg. Corn.
 Reddit, Albert—Arlington. Corn.
 Rodgers, Will—Edinburg. Corn.
 Saerman, Geo. J.—Crown Point. Grain, grasses.
 Short, Chas. S.—Greensburg. Corn.
 Sefton, Elmer—Greensburg. Corn.
 Smith, C. A.—Whiteland. Corn.
 Smith, E. E.—Franklin. Corn.
 Smiley, W. G.—Greensburg. Corn.
 Steinbrook, Everett—Franklin. Corn.
 Steinbrook, Geo. W.—Franklin. Corn.
 Steinbrook, James—Franklin. Corn.
 Steinbrook, E. L.—Edinburg. Corn.
 Stephens, Homer—La Fontaine. Oats.
 Steinbrook, V. P.—Shelbyville. Corn.
 Stout, Ira—Sulphur Springs. Oats.
 Swain, W. O.—Arlington. Corn.
 Swallow, Mel.—Rockport. Corn.
 Swallow, Frank—Rockport. Corn.
 Thornburg, Ernest—Winchester. Grain.
 Tilson, Harry—Franklin. Corn.
 Troyer, A. F.—La Fontaine. Corn.
 Troyer, C. E.—La Fontaine. Corn.
 Tritch, Arthur J.—Corunna. Wheat, oats.
 Ulrey, W. J.—New Richmond. Corn.
 Vogler, L. A.—Hope. Corn.
 Vogler, L. A.—Hope. Corn.
 Vogler, L. M.—Hope. Corn.
 Wilson, John E.—Wingate. Corn.
 Wilson, John M.—Brown Valley. Corn.

ILLINOIS

Location: Ave. C, bet. 4th & 5th Sts.

GROUP 120

Illinois, State of—Agricultural exhibit of grains and grasses.
 Illinois Corn Growers—Putnam Co. Complete agricultural exhibit of cereals.
 University of Illinois—Champaign. Complete agricultural exhibit of cereals.

IOWA

Location: Av. C, bet. 4th & 5th Sts.

The complete list of exhibits from Iowa in the Department of Agriculture will appear in revised edition of the Catalogue.

KANSAS

Location: Ave. C, bet. 5th & 6th Sts.

GROUP 117

Leavenworth County—Tobacco.
 Shawnee County—Tobacco.

GROUP 120

Kansas, State of—Collective exhibit of the following counties, consisting of cereals, grasses, vegetables, roots and tubers, legumes, etc.:
 Allen County.
 Barber County.
 Butler County.
 Clark County.
 Cowley County.
 Crawford County.
 Elk County.
 Ellis County.
 Ford County.
 Gray County.

Harper County.
 Harvey County.
 Kingman County.
 Kiowa County.
 Labette County.
 Lyons County.
 Mead County.
 Montgomery County.
 Morton County.
 Pawnee County.
 Pratt County.
 Reno County.
 Rice County.
 Riley County.
 Sedgewick County.
 Summer County.
 Woodson County.
 Experiment Station — Manhattan, Kan.
 Cereals.

LOUISIANA.

Location: Avs. B & C, bet. 8th & 10th Sts.

The complete list of exhibits from Louisiana in the Department of Agriculture will appear in the revised edition of the Catalogue.

MASSACHUSETTS.

Location: 10th St., bet. Avs. B & C.

The complete list of exhibits from Massachusetts in the Department of Agriculture will appear in revised edition of the Catalogue.

MONTANA

Location: Avs. A & B, bet. 8th & 9th Sts
 GROUP 120

Allard, Joseph—Ignatius. Oats.
 Applebury, C.—Corvallis. Wheat
 Applebury, James—Corvallis. Wheat.
 Axtel, C. E.—Salesville. Bromus inermis.
 Bailey & Dorr—Hamilton. Oats, peas.
 Bair, James—White Sulphur Springs. Clover, alfalfa.
 Baker, M. H.—Libby. Clover.
 Barnes, C. M.—Hamilton. Potatoes.
 Bartlett, J. D.—Simms. Wheat.
 Bartlett, J. D.—Troy. Clover
 Beck, John—Bozeman. Wheat.
 Beck & Smith—Bozeman. Wheat.
 Beckwith, George—St. Ignatius. Flax.
 Billings Polytechnic Institute — Billings.
 Beans, millet, corn.
 Bennett, James—Warm Springs. Timothy.
 Benninger, Wm.—Anaconda. Timothy. Clover, alfalfa.
 Bisson, Wm.—Missoula. Wheat.
 Blakesly, S. F.—White Sulphur Springs. Alfalfa.
 Bohart, W. O.—Bozeman. Blue grass.
 Bohn, H. O.—Warm Springs. Oats.
 Bolin, C. F.—Rosebud. Wheat, oats.
 Bowman, A. H.—Hardin. Timothy.
 Burch, G. F.—St. Ignatius. Wheat.
 Burns, A. H.—Libby. Timothy.
 Briggs, H.—Victor. Wheat.
 Carney, Pat.—Waterloo. Clover, wheat, potatoes, alfalfa, native grasses.
 Carney, T. E.—Waterloo. Wheat.
 Cechlovsky, Jos.—Libby. Clover.
 Chamberlain, Jos.—White Sulphur Springs. Clover, timothy.
 Cog Dell, Douglas—Whitehall. Rye.
 Collins, Rich.—White Sulphur Springs. Alfalfa.
 Cordry, Ed.—Bozeman. Wheat.
 Cottrell, Mrs. Ida—Florence. Potatoes.
 Cunningham, J. R.—St. Ignatius. Wheat, oats, barley.
 Cunningham, G. E.—St. Ignatius. Oats.
 Daley, Elmer—Bynum. Flax, wheat.
 Daniels, Jr., D. C.—Canton. Wheat.
 Dart, Hugh—Dillon. Potatoes.
 Delmoe, Vincent—Whitehall. Clover, bromus inermis, timothy.
 Deschamps, Tony—Missoula. Oats.
 Deschamps, R.—Missoula. Wheat.
 Donohue, J. F.—Whitehall. Alfalfa, clover.
 Douglas, Bert—Rexford. Potatoes.
 Dyer, J. L.—Helena. Flax, clover, potatoes.
 Early, Noah—Lavina. Wheat.
 Edinger, Carter—Dillon. Potatoes.
 Edinger, George—Dillon. Oats, wheat, barley.
 Eichorn, Jos.—Miles City. Timothy, clover.
 Eiker, E. E.—Huntley. Timothy, corn.
 Ekman, Ed.—Rollins. Potatoes.
 Emmelcamp, Thos.—Manhattan. Barley.
 Fairweather, George—Deer Lodge. Clover.
 Ferguson, J. C.—Reichle. Potatoes.
 Disher, Robert—Deer Lodge. Oats.
 Fitter, Henry—Lima. Timothy.
 Flaherty, John—Cold Spring. Clover, timothy.
 Fleming, G. F.—Suffolk. Wheat.
 Fleming, Wm.—Bozeman. Timothy, clover.
 Fowle, George—White Sulphur Springs. Wheat.
 Franklin, Charles—Wise River. Clover.
 Fredericks, John—Libby. Alfalfa.
 Gattis, Robert H.—Creston. Potatoes.
 Gilbertson, H. M.—Kalispell. Wheat.
 Goodall, Charles W.—Park City. Wheat.
 Gordon, J. H.—Silver Star. Flax, rye.
 Grady, J. A.—Terry. Potatoes.
 Grant Bros.—Salesville. Clover, alfalfa, wheat.
 Grenier, Jcs.—St. Ignatius. Oats, wheat.
 Hackman, Charles—Missoula. Wheat.
 Hallford, J. F.—Bozeman. Oats, wheat, clover.
 Hamel, Pete—Missoula. Wheat.
 Hamilton, Viola—Libby. Clover.
 Hansen, C. A.—Eureka. Clover.
 Hardman, D. E.—Simms. Alfalfa.
 Hartman, W. J.—Bozeman. Wheat.
 Haynes, O. G.—Miles City. Wheat.
 Haynes, Thos.—Creston. Alfalfa, vetch, potatoes, wheat.
 Herbst, A. C.—Libby. Timothy, clover, flax, orchard grass.
 Hines, L. E.—Bozeman. Timothy.
 Hogan, Geo. R.—Bozeman. Timothy, clover, clover seed.
 Ingram, Mrs. D.—Dillon. Barley.
 James, J. W.—Anaconda. Wheat.
 Jennings, L. D.—Salesville. Clover.
 Jergenson, Jas. A.—Whitehall. Alfalfa, clover, oats.
 Johnson, Mrs.—Hamilton. Wheat.
 Jones, Mrs. J. O.—Bozeman. Oats.
 Jones, Orville—Bozeman. Wheat.
 Jones, Robert—Wisdom. Clover, blue grass, timothy, native grasses.
 Jones, W. C.—Wise River. Clover.
 Karman, F. W.—Saco. Potatoes.
 Keifer, John—Bozeman. Bromus inermis, blue grass.
 Kennison, John—Dell. Timothy.
 Kirchner, Fred—Lewistown. Wheat, oats, grasses, clover.
 Kleinhessellink, D. J.—Big Timber. Timothy.
 Lang, J. E.—Salesville. Timothy, blue grass.
 Legerene, John—Helena. Wheat.
 Lewis, Mrs. J. K.—White Sulphur Springs. Oats, wheat.
 Lewis, G. A.—Bozeman. Clover, timothy.
 Lindsay, George—St. Ignatius. Oats.
 Long, Clark R.—Carter. Wheat.
 Lounsbury, A.—Libby. Alfalfa.
 Magee, Phil.—Lolo. Oats.
 Mangar, Rich.—White Sulphur Springs. Alfalfa, timothy.
 Manis, T. J.—Big Timber. Oats.
 Martinell, E. M.—Dell. Clover.
 Matt, H.—Arles. Oats.
 Meany, W. M.—Plains. Wheat.
 Meloy, P. J.—Townsend. Wheat.

Miles, George—Bozeman. Timothy, barley.
 Miller & McCann.—Stacey. Oats.
 Miller, U. S.—Hardin. Flax.
 Milne, R.—Big Timber. Potatoes.
 Monforton, Ernest—Salesville. Wheat.
 Moore, Dall—Wise River. Clover.
 Mysse, C.—Reed Point. Flax.
 McDonald, Fred—White Sulphur Springs.
 Wheat.
 McDonnell, Ernest—Bozeman. Clover, timothy.
 McFayden, J. L.—Dillon. Wheat.
 Nash & Wassenaar—Bozeman. Barley.
 Nash, J. P.—Bozeman. Wheat, oats.
 Nelson, Theo.—Dillon. Oats.
 Newgard, Fred—Ronau. Potatoes.
 Norris, R. L.—Simms. Alfalfa, flax, wheat,
 barley.
 Overstreet, E. W.—Salesville. Timothy.
 Packard, Dr. L. R.—Whitehall. Alfalfa.
 Palmer, Mrs. Chas.—Eureka. Potatoes.
 Parker, Thos.—Anaconda. Orchard grass,
 bromus inermis.
 Perkin, Alfred—Warm Springs. Barley.
 Phillips, James—Dillon. Potatoes.
 Platt, Herman—Como. Potatoes.
 Platt, H. & Sons—Como. Potatoes.
 Plummer, F. M.—Libby. Clover.
 Popham, E. L.—Victor. Wheat.
 Potts, Jos.—Wise River. Clover, timothy.
 Rader, Chas. T.—White Sulphur Springs. Al-
 falfa.
 Ravette, J. H.—Bozeman. Wheat.
 Reed, Val.—White Sulphur Springs. Clover.
 Reider, Jacob—Missoula. Rye, alfalfa, peas.
 Richlie, Ernest—Missoula. Potatoes.
 Ringling, John—White Sulphur Springs. Clo-
 ver.
 Robinson, Frank—Dillon. Potatoes.
 Robinson, Roy—Cardwell. Blue grass, clover.
 Rock, Wm.—Lolo. Wheat.
 Rossman, J. J.—Bozeman. Wheat.
 Roub, H. D.—Hinsdale. Potatoes.
 Runnell Bros. & Scott—Eureka. Timothy,
 clover.
 Savage, Wm.—Troy. Clover.
 Scott, P. D.—White Sulphur Springs. Blue
 grass, timothy, clover.
 Scott, W. E.—Eureka. Potatoes.
 Scollard, D. A.—Bozeman. Wheat.
 Seigling, Gus—Armington. Buckwheat, wheat,
 barley, rye, oats, alfalfa, bromus inermis,
 vetch, flax.
 Sheridan, Thos.—Helena. Alfalfa.
 Sherman, Chas.—White Sulphur Springs. Oats.
 Sibley, John—White Sulphur Springs. Clover,
 alfalfa.
 Smith, Wm.—Cardwell. Barley.
 Stafferson, Wm.—White Sulphur Springs.
 Timothy, alfalfa, clover, oats.
 Stafford, A. H.—Bozeman. Wheat.
 Stephens, D. J.—Wisdom. Bromus inermis,
 native grasses.
 Stewart, W. H.—Boulder. Rye.
 Story, T. B.—Bozeman. Wheat.
 Sumner, F. C.—Clyde Park. Flax, wheat,
 barley, alfalfa, orchard grass, bromus in-
 ermis, clover, flax seed, peas, buckwheat,
 rye, clover seed, alfalfa seed, brome grass
 seed, orchard grass seed, millet seed, tim-
 othy.
 Talbott, W. V.—Armington. Grain, millet,
 timothy, orchard grass, clover, alfalfa,
 seeds, peas, potatoes.
 Thomas, B. M.—Libby. Alfalfa, timothy.
 Thompson, W. S.—Townsend. Clover.
 Tolliver, Mrs. E. L.—Monarch. Blue grass,
 native grasses, timothy, millet, alfalfa.
 Trueman, Dick—Wise River. Clover.
 Turnage Bros.—St. Ignatius. Alfalfa.
 Valinum, C. H.—Bridger. Beans.
 Vallance, John—Hamilton. Potatoes.
 Verwolf, John—Manhattan. Wheat.

Voges, C. W.—Big Timber. Oats.
 Vote, F. W.—St. Ignatius. Flax.
 Walters, Cab.—White Sulphur Springs. Clo-
 ver.
 Wentworth, C. L.—Lewistown. Wheat, bar-
 ley, flax, alfalfa, timothy, clover.
 West, Thos. W.—Ilavre. Potatoes.
 Whitecraft, Durel—Deer Lodge. Wheat.
 White, Geo. A.—Helena. Alfalfa, timothy.
 White, Geo. M.—Birdseye. Blue grass, clover.
 White, Mat. W.—Bozeman. Bromus inermis.
 Whitney, G. M.—Bozeman. Clover, bromus
 inermis, wheat, oats.
 Willard, E. A.—Hardin. Flax, wheat, clover,
 corn.
 Williams, Dr. W. M.—Harlem. Alfalfa seed.
 Williams, W. O.—Jefferson City. Barley.
 Willis, C. C.—Plains. Clover.
 Winslow, C. W.—Whitehall. Clover, wheat.
 Wisner, Montgomery—Bozeman. Wheat.
 Wood, George—Bozeman. Wheat.
 Wood, George—Bozeman. Wheat.
 Wood, J. T.—Victor. Potatoes.
 Wood, N. S.—Ravelli. Clover.
 Youngblut, Henry—Helena. Wheat.
 Zehntner, Jacob—White Sulphur Springs.
 Oats, clover.

MISSOURI

Location: Ave. C, cor. 6th St.

GROUP 117

Cunningham, J. A.—Caruthersville. Tobacco.
 Henry County—Tobacco.

GROUP 120

Missouri—State of—Agricultural exhibit of
 grains and grasses.
 Baumgartner, S.—Pierce City. Agricultural
 exhibit, grains, grasses.
 Clark, F. E.—Pierce City. Wheat, millet.
 Cunningham, J. A.—Caruthersville. Sorghum,
 alfalfa.
 Grifferds, Al.—Urich. Oats.
 Grove, Chas.—Princeton.
 Henry County—Agricultural exhibit of grains
 and grasses.
 McCay, Robt.—Urich. Oats, clover, grasses.
 Smith, Sherman—Princeton. Broom corn.
 Smith, Chris.—Bunceton. Agricultural exhibit
 of grains and grasses.

GROUP 132

Cunningham, J. A.—Caruthersville. Cotton.

NEVADA

Location: Av. A, bet. 9th & 10th Sts.

GROUP 114

Nevada, State of—Reno, Nev. Model dairy
farm.

GROUP 118

Nevada, State of—Reno, Nev. Nevada cream-
eries & dairy farms shown by photographs;
specimens of garden crops.

GROUP 119

Nevada, State of—Reno, Nev. Experiments,
maps, charts, photographs, statistics, etc.,
pertaining to the advancement of agricul-
ture. Collective exhibit of soils.

GROUP 120

Antelope Land & Cattle Co.—Yerington. Veg-
etables.

Anker, Peter—Loveloek.
 Badt, M. & Co.—Wells. Wheat.
 Barlow, A. H.—Mason. Potatoes.
 Barrett, Geo.—Yerington. Potatoes.
 Fiddleman, Geo.—Reno. Potatoes.
 Power, G. M.—Tamoille. Wheat, Rye, Oats.
 Boyer, R. C.—Mason. Timothy.
 Bradshaw, J. D.—Paradise. Alfalfa Seed.
 Carson Valley Improvement Club—Vegetables.

Chillen, A.—Reno. Potatoes.
 Casey, J. A.—Loveland. Alfalfa.
 Churchill Co. Chamber of Com.—Vegetables.
 Cirac, C. F.—Stillwater. Sugar Beets.
 Colombo, G. B.—Reno. Vegetables.
 Conway Co., P. J.—Wabuska. Alfalfa Seed.
 Cordry, B. F.—Mason. Oats.
 Cross, E.—Yerington. Wheat.
 Dabney, W. S.—Reno. Vegetables, Onions.
 Dangberg, H. F.—Minden. Wheat.
 Dapoli, John—Dayton. Sugar Beets.
 Deitz, Wm.—Northam. Sugar Beets.
 Dolf, Thos.—Fallon. Sugar Beets.
 Dominco, P.—Yerington. Barley.
 Dominici, P.—Mason. Barley.
 Eason, R. W.—Mason. Alfalfa.
 Elko Development League—Elko. Vegetables.
 Elko Dry Farm—Blaine. Barley, Oats, Rye.
 Ferguson, J. W.—Fallon. Sugar Beets.
 Fernley Water Users' Assn.—Fernley. Vegetables.

Freedhoff, Geo.—Yerington. Potatoes.
 Ghileri, A.—Reno. Potatoes.
 Griffith, Edw.—Las Vegas. Root Crops.
 Hascall, C. A.—Fallon. Root Crops, Wheat.
 Henningsen, Geo.—Minden. Barley, Timothy.
 Kaeding, G. L.—Battle Mtn. Alfalfa Seed.
 Kent, Chas.—Stillwater. Sugar Beets.
 Kent, C. E.—Fallon. Wheat.
 Langford, W. L.—Fallon. Wheat, Oats.
 Langford, W. L.—Stillwater. Timothy.
 Las Vegas Chamber of Commerce—Las Vegas. Vegetables.
 Lye, E. J. & Sons—Paradise. Timothy, Barley.
 Lyon County Improvement Club—Vegetables.
 Mason Valley—Grasses.
 Mattley, John—Reno. Potatoes.
 McGowan, J.—Yerington. Wheat.
 McLeod, C. A.—Yerington. Wheat.
 McLogan, D.—Mason. Alfalfa.
 Menke, Wm.—Reno. Potatoes.
 Mianchi, B.—Yerington. Barley.
 Penrose, Wm.—Wabuska. Alfalfa Seed.
 Perrazo, L.—Glendale. Root Crops, Potatoes.
 Pyramid Indians—Pyramid. Oats, Timothy.
 Pyramid Indian School—Pyramid. Barley.
 Oar, Frank—Fallon. Sugar Beets.
 Raffetto, Louis—Glendale. Potatoes.
 Ruddell, W. C.—Loveland. Barley.
 Reno Commercial Club—Reno. Vegetables.
 Shields, E. C.—Yerington. Wheat.
 Semenza, A.—Reno. Onions.
 Shields, R.—Mason. Millet.
 Shields, R. V.—Yerington. Wheat.
 Shiappacasse, A.—Reno. Potatoes.
 Snyder, J.—Yerington. Wheat.
 Springmeyer, Chas.—Minden. Timothy.
 Station Farm—Reno. Timothy.
 Sturla, J. B.—Wadsworth. Potatoes.
 Strosnider, I. A.—Yerington. Barley, Alfalfa.
 Tamagini, A.—Yerington. Barley.
 University of Nevada—Reno. Alfalfa, Barley.
 Vannoy, O. J.—Fallon. Vegetables.
 Walts Bros.—Reno. Vegetables.
 Werner, Otto—Reno.
 Williams, W. H.—Fallon. Sugar Beets.
 Wilson, G. E.—Nurdyke. Oats.

GROUP 132

Adams & McGill—McGill. Nevada Wool.
 Buol, P.—Las Vegas. Cotton.
 Griffith, E. W.—Las Vegas. Cotton.
 Jenkins, W. T. Co.—Battle Mountain. Wool.
 Hellonwell Jones Co.—Boston, Mass. Wool.
 Leavitt, J. D.—St. Thomas. Cotton.
 McBride, J. A.—Elko. Wool.
 Nevada Cal. Land & Stock Co.—Reno. Wool.
 Talbot, J. F.—Reno. Wool.
 Taylor, J. G.—Loveland. Wool.
 University of Nevada—Reno. Wool.
 Wheeler, D. C., Inc.—Reno. Wool.

NEW YORK.

Location Av. B, bet. 4th & 5th Sts.

The complete list of exhibits from New York in the Department of Agriculture will appear in revised edition of the Catalogue.

OHIO

Location: Av. A, bet. 8th & 9th Sts.

The complete list of exhibits from Ohio in the Department of Agriculture will appear in revised edition of the Catalogue.

OREGON

Location: Ave. D, bet. 4th & 6th Sts.

GROUP 120

Achillis, Fred—Oregon City. Corn, alfalfa.
 Ames, W.—Eugene. Oats.
 Anderson, H. S., Judge—Oregon City. Oats.
 Bachman, Jos.—Clarkomas. Onion seeds.
 Boege, H.—Wilsonville. Oats.
 Bynon, F. S.—Salem. Corn.
 Califf, C. S.—Eugene. Clover, Alfalfa.
 Chindgren, O. P.—Mulino. Wheat.
 Columbia Land & Produce Co.—The Dalles. Wheat.
 Cottage Grove Grange—Cottage Grove. Grain.
 Creswell Grange—Creswell. Oats.
 Daugherty Bros.—Molalla. Wheat, oats.
 Davis, W. H.—Houton. Wheat.
 Davies, O. M.—Oregon City. Wheat, oats.
 Dennis, E.—The Dalles. Wheat.
 Dimrick, G. B.—Oregon City. Corn.
 Edwards, J. K.—Junction City. Wheat.
 Funk, L.—Oregon City. Wheat, corn.
 Gribble, A. D.—Macksburge. Wheat.
 Guthrie, H.—Monmouth. Wheat.
 Harlow, M. Eugene—Orchard grass.
 Hughes, L.—St. Paul. Pop corn.
 Hyde, M.—Albany. Corn.
 Ingram, Geo.—Oregon City. Wheat.
 Johnston Bros.—Milwaukie. Onions.
 Klaskanie Commercial Club—Klaskanie. Potatoes.
 Koon, C.—Eugene. Clover, orchard grass.
 Kruse, H. O.—Wilsonville. Wheat.
 Lawton, W. B.—Oregon City. Barley.
 Leek, E.—Oregon City. Wheat.
 Loncoy—Milwaukie. Clover, rye.
 Lowe, D. M.—Ashland. Alfalfa, grain, clover, broom grass.
 Martin, A. W.—Albany. Corn.
 McClanahan, E. J.—Eugene. Alfalfa.
 Merrick, A. N.—Clackamas. Oats, wheat.
 Minor, A. C.—Heppner. Grain.
 Minor, O. W.—Heppner. Broom corn.
 Muller, F. W.—Oregon City. Barley, wheat.
 Nairn, C. D.—Amity. Oats, wheat.
 Peck, B. H.—Heppner. Wheat.
 Pelzold, O.—Eugene. Oats.
 Riskey, J.—Milwaukie. Wheat.
 Roadannell Bros.—Milwaukie. Onions.
 Rodman, J.—Aurora. Barley.
 Schatz, Wm.—Wilsonville. Oats, wheat.
 Scramlin Grocer Co.—Macksburg. Oats.
 Smead, W. W.—Heppner. Wheat.
 Smith, J. W.—Macksburg. Grain.
 Sovern, J.—Junction City. Oats, wheat.
 Stanley, H.—Oregon City. Barley.
 Steiner, F.—Oregon City. Wheat.
 Taylor, W. A.—Macleay. Corn.
 Warren, E. M.—Eugene. Grain, clover, grasses.
 Willa Kenzie Grange—Eugene. Grasses, clover, wheat.
 Wilson, Capt. F.—Eugene. Wheat.
 Wise, J.—Milwaukie. Rye.
 Young, C. M.—Oats.
 Young, W.—Eugene. Wheat.

UTAH

Location: Av. A & 10th St.

The complete list of exhibits from Utah in the Department of Agriculture will appear in revised edition of the Catalogue.

VIRGINIA

Location: Av. A & 8th St.

GROUP 120

Bellwood, James—So. Richmond. Complete agricultural exhibit of grains, grasses, etc. Virginia, State of—Tobacco exhibit.

WASHINGTON

Location: Ave. A, bet. 6th & 7th Sts.

GROUP 120

Benton County Grange and Commercial Clubs—Corn, agricultural products.

Chamber of Commerce, by C. W. H. Heide-man—Spokane. Pedigree seeds.

Clallam County Fair Association—Port Angeles. Grains, grasses, potatoes, vegetables.

Island County Fair Association—Oak Harbor and Soupeville. Wheat, barley, oats.

North Yakima Commercial Club—North Yakima. Grains and grasses.

Olympic Peninsula Fair Association—Port Townsend. Collective exhibit:

Engle, C. T.—Port Townsend. Barley.

Gastineau, A. M.—Port Townsend. Barley.

Hooker, J. E.—Port Townsend. Wheat.

Hutchinson, J. M.—Port Townsend. Rye.

Nailor, E. J.—Port Townsend. Oats.

Searry, Mrs. H.—Port Townsend. Wheat.

Ritzville Commercial Club—Ritzville. Grain, alfalfa, feterita.

Skagit County Fair Association—Burlington. Collective exhibit:

Benson, Ben—Burlington. Oats.

Chase, J. L.—Burlington. Clover, wheat.

Connor, F. J. S.—La Connor. Alfalfa.

Downey, Fater—La Connor. Oats.

Gear, L.—La Connor. Oats.

Hansen, C. C.—La Connor. Oats.

Hall, J. W.—Burlington. Alfalfa.

Johnson, Ole—Burlington. Oats.

Knight, Grant—La Connor. Oats.

Knutzen, C.—Burlington. Oats, rye, vetch.

La Connor Land Co.—La Connor. Oats.

Hunzicker, K.—Burlington. Clover.

Polson, Alfred—Burlington. Clover.

Sampson, Ray—Burlington. Alfalfa.

Scott, S. C.—Burlington. Alfalfa.

Ovemle, T. M.—Burlington. Barley.

Nelson & Smith—Burlington. Wheat.

Tyersland, Ben—O'Connor. Oats.

Snohomish County Fair Association—Everett. Grains and grasses.

Southwestern Washington Fair Association—Lewis County. Collective exhibit:

Anderson, F. O.—Centralia. Wheat, timothy.

Albred, Sol—Centralia. Timothy.

Bush, J. C.—Chehalis. Timothy.

Boatman, M.—Centralia. Orchard grass.

Carney, Ed—Centralia. Grass.

Crown, Ed—Chehalis. Orchard grass.

Degeler, F. A.—Centralia. Rye, oats, wheat.

Degeler, Mrs. F. A.—Centralia. Grass.

Davis, S. S.—Centralia. Timothy.

Esham, W.—Centralia. Wheat.

Edwards, W. H.—Centralia. Wheat.

Goodrich, C. E.—Centralia. Oats.

Gibson, N. H.—Chehalis. Orchard grass.

Hilford Bros.—Centralia. Barley.

Hensen, J. E.—Centralia. Buckwheat, flax, field peas.

Jensen, H.—Centralia. Oats.

Lehman, F. F.—Chehalis. Wheat.

Mattson, John—Chehalis. Wheat.

Millem, J. E.—Chehalis. Garden Peas.

Myers, A.—Centralia. vetch.

Nelson, Nels—Centralia. Wheat.

Orten, L. H.—Centralia. Oats.

Raybon, H.—Centralia. Oats.

Rimapel, K.—Chehalis. Orchard grass.

Shaffer Bros.—Centralia. Wheat.

Thacker, J. G.—Centralia. Timothy.

Wall, W. E.—Centralia. Timothy.

Walters, J. W.—Centralia. Clover.

Woods, F. M.—Centralia. Timothy.

Young, Ed—Centralia. Timothy, orchard grass.

Spokane Chamber of Commerce—Spokane.

Inland Empire grain and grass exhibit:

Sunnyside District—Collective exhibit:

Barnes, Wm.—Sunnyside. Potatoes.

Sparsaddle, F. J.—Sunnyside. Corn.

Eby, D. B.—Sunnyside. Corn.

Greece, Chas.—Sunnyside. Potatoes.

Goemmer, Mr.—Sunnyside. Potatoes.

Harrison, W. H.—Sunnyside. Corn.

Ogata, E.—Sunnyside. Potatoes.

Pratt, Wm.—Sunnyside. Potatoes.

Rowland, C.—Sunnyside. Corn.

Roady, Ed—Sunnyside. Potatoes.

Skinner, M. Q.—Sunnyside. Potatoes.

Sheller, Roscoe—Sunnyside. Corn.

Simpson, J. W.—Sunnyside. Corn.

Sutherland, Mr.—Sunnyside. Onions.

Turner, A. C.—Sunnyside. Corn.

Walla Walla Commercial Club—Walla Walla.

Grain, alfalfa, timothy.

Washington State College—Pullman. Agricultural exhibit.

Whitman County Federation of Commercial Clubs—Pullman, Wash. Grain, grasses.

Collective exhibit:

Arten, H. M.—Pullman. Wheat.

Bryant, M.—Pullman. Wheat.

Clark, J.—Pullman. Wheat.

Durham, Ezra—Pullman. Wheat.

Higgins, Vance—Pullman. Wheat.

Jarron, W.—Colfax. Wheat.

McCroskey, Geo.—Palouse. Wheat.

Slagle, E. M.—Pullman. Wheat.

Whitelow, M. W.—Pullman. Wheat.

GROUP 134

Washington, State of—Photos, maps, data, etc., pertaining to the lumber industry.

Day Lumber Co.—Seattle. Shingles.

Gillespie, J. B.—Hoquiam. Table.

Schuneman, W. C.—Hoquiam. Table.

West Coast Lumber Manufacturers Assn.—Tacoma. Commercial Lumber products in varieties of finish.

WISCONSIN

Location: Av. A, bet. 6th & 7th Sts.

GROUP 120

SEEDS, CEREALS, GRASSES

Bell, F. E.—Columbus. Wheat.

Benedict, E. L.—Beloit. Corn, Clover.

Bohl, E. T.—Beaver Dam. Corn, Barley.

Block, H. J.—Burlington. Corn, Wheat.

Brueckner, H. C.—Jefferson. Corn.

Brunker, J. E.—Ridgeway. Corn.

Clingman, E. E.—Reedsburg. Corn, Rye.

Dengel, Peter—La Crosse. Oats.

Dettwiler, John—Monroe. Corn.

Draheim, H. T.—Gotham. Grain and Hay.

Ellickson, A. C.—Arlington. Corn, Oats.

Freehoff, E. E.—Coon Valley. Corn, Seed.

Getchman, Chas. N.—Freedom. Oats, Seeds.

Gorsege, M. E.—Haven. Soy Beans.

Grebe, Fred—Fox Lake. Corn, Hay.

Groth, Louis—Cedarburg. Rye.

Haney, O. A.—Lone Rock. Corn.

Hans, J.—Jefferson. Grain, Clover.

Hans, Enoch—Rochester. Clover, Alfalfa.

Hanson, L.—Eleva. Timothy.

Hemmy, P. A.—Humbird. Clover.

Hecketsweiler, O. J.—Alma Center. Corn.

Hintz, H. S.—Oak Field. Corn.
 Howitt, C. H.—Randolph. Grain, Alfalfa.
 Hubbard, L.—Evanville. Rye.
 Joos, Frank—Alma Center. Corn.
 Jung, J. W.—Randolph. Corn and Seeds.
 Kaltenberg & Sons—Wauwaukee. Corn.
 Katel, W. C.—Kewaunee. Rye.
 Kelly, A. N.—Mineral Point. Corn, hay.
 Klein, Alfred—Lomira. Barley, oats.
 Kneeland, Peter—Windsor. Beans.
 Koltes, Jas.—Dane. Oats, clover, seed.
 Krause, J. L.—Beaver Dam. Grain, clover.
 Leonard, Geo. H.—Jefferson. Corn, grain.
 Leonard, Wm.—Jefferson. Popcorn, grain.
 Lindly, F. J.—Fox Lake. Clover.
 Messerschmidt, S. H.—Madison. Corn.
 Miritz, O. F.—Fond du Lac. Corn, oats.
 Moos, Wm.—Onalaska. Oats.
 Ochsner, A.—Plain. Clover.
 Paulson, P. A.—Hudson. Alfalfa.
 Pommerening, E. C.—Oshkosh. Oats.
 Popp, Arthur—Jefferson. Grain, alfalfa.
 Raessler, N.—Beloit. Grain.
 Ristow, C. S.—Black River Falls. Corn.
 Rodwell, E.—Baraboo. Corn.
 Rosenow, H. E.—Oconomowoc. Corn.
 Russell, A. G.—Janesville. Oats.
 Schmidt Bros.—Foxboro. Clover.
 Schoenbeck, H.—Enterprise. Barley.
 Schwandt, Wm.—Deer Park. Corn.
 Sehon, S.—Westby. Clover seed and hay.
 Steinhoff, W.—Platteville. Clover.
 Swarz Bros.—Waukesha. Alfalfa.

Thompson, A.—Black River Falls. Corn.
 Thorpe, E. B.—Monroe. Corn.
 Thorpe, J. E.—Tavera. Grain and clover.
 Van Loon, J.—La Crosse. Corn.
 Ward, R.—Ft. Atkinson. Grain.
 Ward, T.—Ft. Atkinson. Grain.
 West, H. P.—Ripon. Grain.
 Wichern, A.—Baraboo. Corn.
 Wichern, W.—Baraboo. Corn.
 Weilinga, J., Midway, Wis. Agriculture. Av.
 A, bet. 6th & 7th Sts. Corn, State In-
 spected Golden Glow, Wis., No. 12, Seed
 Corn for sale, grown by a specialist.
 Zachar—Racine. Oats, rye.

UNITED STATES GOVERNMENT EXHIBIT PALACE OF AGRICULTURE

Location: Ave. D. bet. 4th & 6th Sts.

UNITED STATES DEPARTMENT OF AGRICULTURE

Bureau of Animal Industry.
 Bureau of Biological Survey.
 Bureau of Chemistry.
 Bureau of Plant Industry.
 Forest Service.
 Office of Experiment Stations.
 Weather Bureau.

A complete list of the exhibits of the De-
 partment will appear in the revised edition of
 the catalogue.

FOREIGN SECTION AGRICULTURE

ARGENTINE

Location: 6th St., bet. Aves. D & E.

The complete list of exhibits from Argen-
 tine in the Department of Agriculture will
 appear in revised edition of the Catalogue.

CHINA

The complete list of exhibits from China in
 the Department of Agriculture will appear in
 the revised edition of the Catalogue.

CUBA

Location: Av. D & 8th St.

The complete list of exhibits from Cuba in
 the Department of Agriculture will appear in
 the revised edition of the Catalogue.

HONDURAS

Location: 1st St. & Av. D

The complete list of exhibits from Hon-
 duras in the Department of Agriculture will
 appear in the revised edition of the Catalogue.

JAPAN

Location: Aves. C & D, bet. 1st & 2nd Sts.

GROUP 119

Noshomusho Suisan Kyoku—Models of fishing
 boats, fishery. Specimens of aquatic prod-
 ucts. Statistics.
 Noshomusho Nomukyoku—Specimens of agri-
 cultural products. Annual statistics.
 Taiwan Sotokufu Shokusan Kyoku—Map
 showing the distribution of principal prod-
 ucts in Formosa. Specimens of products.

GROUP 120

Misaburo Kinbara—Tokyo. Camellia Oil.
 Torajiro Inoue—Hyogo. Bean Oil.
 Hirano Daizu Kogyo Kabushiki Kaisha—
 Hyogo. Bean Oil.
 Hoiji Hiraso—Hyogo. Sesame Oil.
 Daizu Hyohaku Kabushiki Kaisha—Aichi.
 Bean Oil.
 Sugiji Shokai—Aichi. Bean Oil.

Saburo Oguri—Aichi. Bean Oil.
 Kamomatsu Okuda—Aichi. Bean Oil.
 Soiyu Seimai Kabushiki Kaisha—Aichi. Bean
 Oil.
 Ono Yusho Kabushiki Kaisha—Aichi. Vege-
 table Oil.
 Pukuiken Seiyugyo Kumiai—Fukui. Paulowina
 Oil.
 Yoshizo Honma—Chiba. Paulowina Oil.
 Minosuko Tsuchiya—Chiba. Paulownia Oil.
 Yoshizo Watanabe—Chiba. Paulownia Oil.
 Bunichi Kitagaki—Shinano. Paulownia Oil.
 Kamejiro Ishibashi—Shinano. Paulownia Oil.
 Chujiro Yagi—Saga. Camellia Oil.
 Shinsaburo Nonaka—Saga. Camellia Oil.
 Taniya Gomeikaisha Shucchosho—Fukuoka.
 Vegetable Oil.
 Settsu Seiyu Kabushiki Kaisha—Osaka. Veg-
 etable Oil.
 Sadajiro Yoshiwara—Osaka. Vegetable Oil.
 Kagoshimaken Seiyu Kabushiki Kaisha—Kag-
 oshima. Vegetable Oil.
 Shinjiro Nishimura—Kagoshima. Vegetable
 Oil.
 Goshikaisha Yokkaichi Seiyu-Jo—Miye. Veg-
 etable Oil.
 Goshikaisha Notogowa Seiyu-Jo—Shiga. Vege-
 table Oil.
 Otaru Seiyu Kabushiki Kaisha—Hokkaido.
 Vegetable Oil.
 Hokkai Seiyu Kabushiki Kaisha—Hokkaido.
 Vegetable Oil.
 Nozawagumi—Kanagawa. Vegetable Oil.
 Yesaku Hori—Nagano. Silkworm Oil.
 Yugon Sokinin Shinyo Hanbai Kobai Kumiai
 Yoda Gumi—Nagano. Silkworm Oil.
 Suezoo Akaboshi—Kumamoto. Camellia Oil.
 Kahei Uyeda—Kumamoto. Camellia Oil.
 Kazuma Ishii—Nagasaki. Camellia Oil.
 Tomihei Kamakuchi—Nagasaki. Camellia Oil.
 Eizo Mizoye—Nagasaki. Camellia Oil.
 Yosaku Nagamatsu—Nagasaki. Camellia Oil.
 Chukichi Furuyama—Osaka. Sorghum.
 Yosuko Koga—Osaka. Sorghum.
 Toyo Shubyo Shokai—San Francisco. Seeds.

Torojiro Watase—Tokyo. Seeds. Hort. Pal.,
Av. A, cor. 4th St.

GROUP 121

Matsuye Umimatsusho Kumiai—Shimane. Sea
Weed.
Shizuoka Shoga, Hechima, Togarashi Rakkasei
Dogyo Kumiai—Shizuoka. Gourd.
Nozawa Gumi—Kanagawa. Gourd.
Sabei Ukida—Okayama. Gold Nuts.
Yasujiro Sumikawa—Yamaguchi. Gold Nuts.
Kumano Sanrinkai—Wakayama. Gold Nuts.
Higashi Murogun Ringyokai—Wakayama.
Gold Nuts.

GROUP 126

Tomoyasu Hirano—Tokyo. Fish Oil.
Chitaro Ito—Osaka. Cod Liver Oil.
Kogyo Goshikaisha—Osaka. Cod Liver Oil.
Kyoto, Osaka, Hyogo, Kanton Suisan Kumiai—
Osaka. Isinglass.
Nozawa Gumi—Kanagawa. Fish Oil.
Shinno Kanton Suwa Suisan Kumiai—Nagano.
Isinglass.

GROUP 132

Abe Shoton—Kanagawa. Feathers.
Nippon Hiko Kabushiki Kaisha—Tokyo.
Feathers.
Giransho Nokai—Giran. Taro Hemp.
Shinchiku Sho Nokai—Shinchiku. Taro Hemp.
Tainancho Nokai—Tainan. Taro Hemp.

GROUP 134

Noshomusho Sanrin Kyoku—Model showing
the distribution of forests in Japan. Speci-
mens of principal woods in Japan. Speci-
mens of products.

GROUP 135

Mitsui Bussan Kaisha—Tokyo. Lumber.
Takesei Goshikaisha—Tokyo. Bamboo.
Cho Yui—Tokyo. Marquetry.
Moritaro Takeichi—Tokyo. Lumber.
Chujiro Aiba—Tokyo. Lumber.
Kyoto Takesho Kumiai—Kyoto. Bamboo.
Masuda Goshikaisha—Kanagawa. Lumber.
Taisuke Osada—Hyogo. Bamboo.
Kobe Seichiku Kabushiki Kaisha—Hyogo.
Bamboo.
Harunosuke Shima—Ebaragi. Charcoal.
Kickijiro Asano—Aichi. Veneer Wood.
Nippon Gakki Seizo Kabushiki Kaisha—Shi-
zouka. Veneer Wood.
Chujiro Segawa—Shiga. Bamboo.
Hagi Chikuzai Kabushiki Kaisha—Yamagun-
chi. Bamboo.
Hidakagun Mokutan Dogyo Kumiai—Waka-
yama. Charcoal.
Nishimurogun Mokutan Dogyo Kumiai—Wa-
kayama. Charcoal.
Hidaka Kokuchiku Hanbai Kumiai—Waka-
yama. Black Bamboo.
Juijro Tamai—Taihoki. Wood Fibre.
Yugen Sekinin Taiko Boseki Kobai Hanbai
Kumiai—Taichu. Wood Fibre.
Oitaken Mokuro Dogyo Kumiai—Oita. Wood
Wax.
Chikugo Mokuro Dogyo Kumiai—Fukuoka.
Wood Wax.
Chikuzen Mokuro Dogyo Kumiai—Fukuoka.
Wood Wax.
Bunson Mokuro Dogyo Kumiai—Fukuoka.
Wood Wax.
Hizen Mokuro Dogyo Kumiai—Saga. Wood
Wax.
Kitagumi Kawachi Gomei Kaisha—Hyogo.
Wood Wax.
Eisuko Shimizu—Hyogo. Wood Wax.
Higo Seiro Kabushiki Kaisha—Kumamoto.
Wood Wax.
Chojiro Murakami—Ehime. Wood Wax.
Dejiro Nakagawa—Ehime. Wood Wax.
Yoshikichi Mineci—Ehime. Wood Wax.

PHILIPPINE ISLANDS.

Location: Av. D, 2nd, 3rd & 4th Sts.

GROUP 114.

Government of the Philippine Islands. Manila,
P. I. Farm house.

GROUP 115.

Government of the Philippine Islands. Manila,
P. I. Farm machinery and agricultural im-
plements.

Heing, A. Manila, P. I. Farm cart.

GROUP 117.

Alhambra Cigar Factory, Manila, P. I. Leaf
tobacco, cigars and cigarettes.

Catubusan Cigar Factory. Manila, P. I.
Cigars.

Compania General de Tabacos de Filipinas.
Manila, P. I. Leaf tobacco & mfg. products.

Department of Mindanao and Sulu. Zam-
beanga, Mindanao, P. I. Leaf tobacco.

Germinal Cigar Factory. Manila, P. I. Leaf
tobacco, cigars and cigarettes.

Government of the Philippine Islands. Manila,
P. I. Leaf tobacco, tobacco seeds.

La Insular Cigar Factory. Manila, P. I.
Cigars.

Manila Commercial Company. Manila, P. I.
Leaf tobacco, cigars and cigarettes.

Province of Isabela, Philippine Govt. Ilagan,
Isabela, P. I. Leaf tobacco.

GROUP 118.

Government of the Philippine Islands. Manila,
P. I. Apparatus for stripping and cleaning
abaca.

GROUP 119.

Government of the Philippine Islands. Manila,
P. I. Statistical charts, agricultural publi-
cations.

GROUP 120.

Compania General de Tabacos de Filipinas.
Manila, P. I. Cocoanuts, oil and fiber.

Dept. of Mindanao and Sulu, Philippine Govt.
Zamboanga, Mindanao, P. I. Rice, cacao,
coffee, mangoes, cocoanuts, oil, copra.

Government of the Philippine Islands. Manila,
P. I. Complete agricultural exhibit of seeds,
grasses, etc.

J. T. Fena, Mgr. Rio Grande Rubber Estate.
Cotabato, Mindanao, P. I. Peanuts and
peanut oil.

Patalon Plantation Co. Zamboanga, Minda-
nao, P. I. Maize.

Province of Laguna, Philippine Govt. Santa
Cruz, P. I. Cocoanuts, copra and oil.

Vegetable Oil Co. Manila, P. I. cocoanut
oil.

GROUP 121.

Government of the Philippine Islands. Manila,
P. I. Para rubber.

Fenner, J. T. Cotabato. Gutta percha.

GROUP 132.

Government of the Philippine Islands. Manila,
P. I. Complete exhibit of textile plants and
their products.

Dept. of Mindanao and Sulu, Philippine Govt.
Mindanao, Zamboanga, P. I. Kapoc.

German & Co. Manila, P. I. Knotted abaca
(Manila hemp).

Lutz & Co. Manila, P. I. Rolls of knotted
abaca (Manila hemp).

The Manila Commercial Co. Manila, P. I.
Rolls and bobbins of knotted abaca braid.

MacLeod & Co. Manila, P. I. Abaca (Manila
hemp) and maguey in bales.

Pacific Commercial Co. Manila, P. I. Abaca,
kapoc seed.

W. F. Stevenson & Co. Manila, P. I. Abaca
and Maguey in bales.

Smith, Bell & Co. Manila, P. I. Abaca and
maguey in bales.

O. V. Wood. Mailie, Davao, Mindanao, P. I.
Abaca fiber.

GROUP 133.

Government of the Philippine Islands. Manila, P. I. Collections of useful and injurious insects. Appliances for destroying injurious insects.

GROUP 134.

Government of the Philippine Islands. Manila, P. I. A complete forestry exhibit.

Government of the Philippine Islands. Manila, P. I. Mfg. and rough lumber of all descriptions.

AGRICULTURE.

GROUP 135.

Born, S. A. & Co. San Francisco, Cal. Section of house with interior finish.

Cadwallader Gibson Lumber Co. Manila, P. I. Flooring, lumber.

Cailles, Juan. Sta. Maria, Laguna, Lumber. Davis Hardwood Co. San Francisco, Cal. Flooring and doors.

Elgar, James. New York. Window and casing.

Fenner, J. T. Cotabato, P. I. Lumbang oil and meal, etc.

Insulae Lumber Co. Manila, P. I. Lumber, flooring.

Kolambagan Lumber Co. & Development Co., The. Misamis. Flooring, rough lumber.

Lyan & Co. Zamboanga. Lumber. Mindanao Lumber Co. Zamboanga. Flooring. Pacific Sash & Door Co. Los Angeles, Cal. Doors and panels.

Pichel, Jose. Zamboanga. Lumber. Philippine Negros Lumber Co. (Occidental Negros). Cadiz. Lumber.

Port Banga Lumber Co. Zamboanga. Lumber. Pujalte & Co. Manila. Lumber, flooring.

Western Hardwood Lumber Co. Los Angeles, Cal. Veneer flitches and veneer.

NEW ZEALAND

Location: Avs. C & D, bet. 6th & 8th Sts.

The complete list of exhibits from New Zealand in the Department of Agriculture will appear in revised edition of the Catalogue.

PORTO RICO.

Location: 4th St., Avs. C & D.

The complete list of exhibits from Porto Rico in the Department of Agriculture will appear in the revised edition of the Catalogue.

SWEDEN

The exhibit of Sweden classified in this Department is installed in the Swedish Building, Avenue of Nations.

Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHAS. C. MOORE
President

Director-in-Chief
FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department **H**

FOOD PRODUCTS

T. G. STALLSMITH, Chief

Preliminary Edition

Published for the Division of Exhibits by
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San Francisco, 1915



FOOD PRODUCTS

Official Catalogue Department H

CLASSIFICATION OF EXHIBITS

Equipment and Methods Employed in the
Preparation of Foods and Beverages.

Vegetable Food Products and Agricultural Seeds.

Farinaceous Products and Their Derivatives.

Bread and Pastry.

Animal Food Products.

Preserved Meat, Fish, and Vegetables.

Tobacco.

Sugar and Confectionery, Condiments and
Relishes; Nut and Fruit Foods.

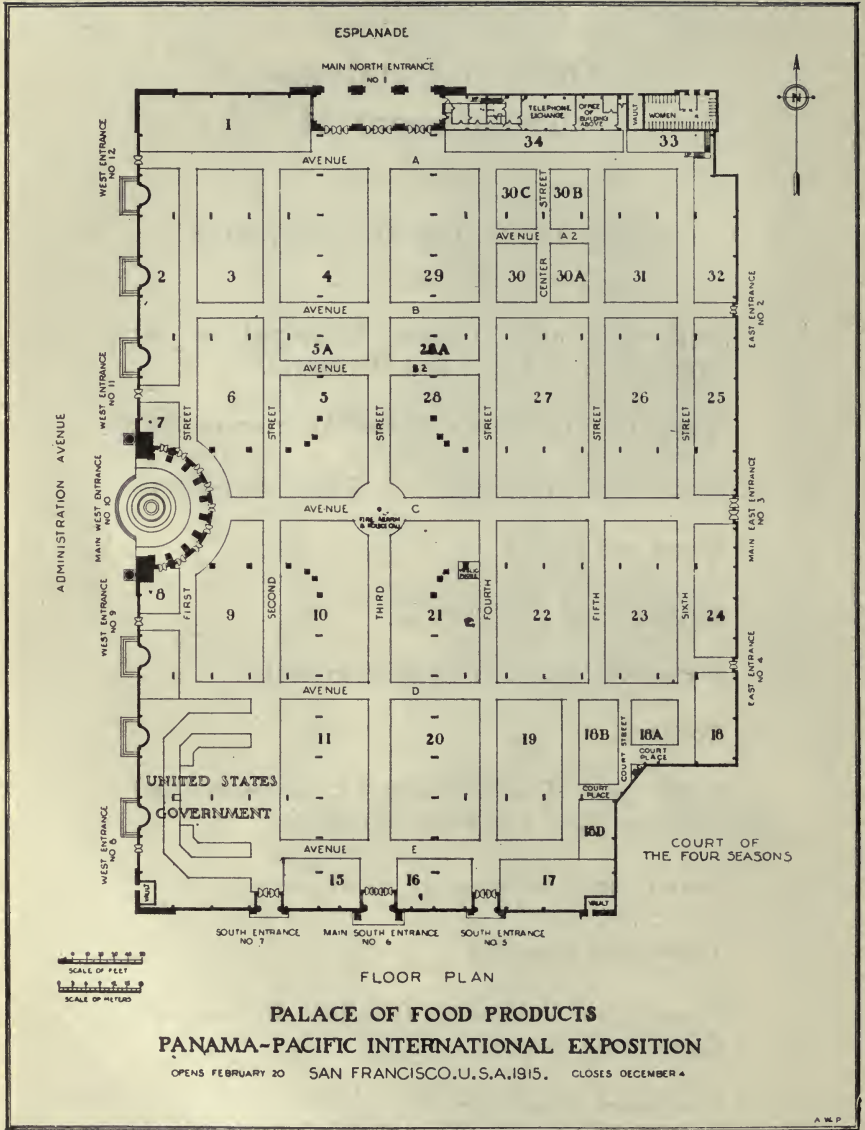
Waters and Unfermented Fruit Juices.

Wines and Brandies.

Syrup, and Liquors, Distilled Spirits and
Commercial Alcohol.

Fermented Beverages.

Useful Insects and Their Products.



HOW TO LOCATE AN EXHIBIT

The Palace of Food Products is laid out in blocks, which are consecutively numbered from 1 to 34, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Sixth), running north to south, and as avenues (A to E), from east to west. To locate an exhibitor refer to the name, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisles location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Food Products, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF AGRICULTURE
Palace of Food Products
Official Classification
of Exhibits

GROUP 117**TOBACCO**

(Equipment, Processes and Products.)

- Class 564. Equipment for manufacture. Construction of tobacco factories.
 Class 565. Laboratory appliances.
 Class 566. Manufactured products.

GROUP 122**ANIMAL FOOD PRODUCTS**

- Class 591. Refrigerated fresh meats, poultry, game and fish; edible animal fats and oils, gelatines.
 Class 592. Milk and cream, fresh or condensed; sterilized milk.
 Class 593. Butter in all forms.
 Class 594. Cheese in all forms.
 Class 595. Eggs; albuminoid foods and preparations.

GROUP 123**EQUIPMENT AND METHODS EMPLOYED IN THE PREPARATION OF FOODS AND BEVERAGES**

- Class 597. Flour mills. Factories for the production of glucose and starch.
 Class 598. Manufacture of food pastes.
 Class 599. Bakeries: kneading machines, mechanical ovens; manufacture of ship biscuit.
 Class 600. Pastry works.
 Class 601. Methods and appliances for the utilization of refrigeration in food preservation. Refrigerators and household refrigerating machines.
 Class 602. Equipment and methods used for preserving fresh meats, game, fish, etc.
 Class 603. Factories for canning or curing meat, fish, vegetables and fruit.
 Class 604. Sugar manufactories and refineries.
 Class 605. Manufacture of chocolate and confectioneries.
 Class 606. Preparation of ices and sherbets.
 Class 607. Decortication and roasting of coffee, peanuts, etc.
 Class 608. Vinegar or pickling works.
 Class 609. Distilleries; distillers' machinery and supplies.
 Class 610. Wineries; methods and equipment employed in wine making; wine ferments; wine blending; wine preservatives.
 Class 611. Breweries; brewers' machinery and supplies, etc.
 Class 612. Manufacture of aerated waters; bottling works and machinery.
 Class 613. Various industries for the preparation of foods.
 Class 614. Olive oil presses and clarifying apparatus.

GROUP 124**FARINACEOUS PRODUCTS AND THEIR DERIVATIVES**

- Class 615. Flour from cereals; grain from which the hulls have been removed, groats, potato starch, rice flour, flour from lentils or beans, gluten; prepared cereals.
 Class 616. Tapioca, sago, arrowroot, various starches, malt. Mixed farinaceous products.
 Class 617. Italian pastes: semolina, vermicelli, macaroni, noodles. Home-made pastes.
 Class 618. Infants' and invalids' foods.

GROUP 125**BREAD AND PASTRY**

- Class 619. Breads, with or without yeast, fancy breads and breads in moulds, compressed breads for travelers, military campaigns, etc. Ship biscuits. Yeasts. Baking powders.
 Class 620. Pastry of various kinds peculiar to each country. Ginger bread and dry cakes for keeping.

GROUP 126**PRESERVED MEAT, FISH AND VEGETABLES**

- Class 621. Meat preserved by any process. Salted meats, canned meats. Meat and soup tablets. Meat extracts, soups. Various pork products.
 Class 622. Fish preserved by any process. Salt fish, fish in barrels, cod, herring, etc. Fish preserved in oil; tunny, sardines, anchovies. Fish products; oil, roes, isin-glass, spermaceti, etc.
 Class 623. Canned lobster, canned oysters, canned shrimp, canned turtle, canned terrapin.
 Class 624. Vegetables preserved by various processes.
 Class 625. Army and navy commissary stores and equipment.

GROUP 127

SUGAR AND CONFECTIONERY, CONDIMENTS AND RELISHES; NUT AND FRUIT FOODS

- Class 626. Sugar. Glucose. Syrups.
 Class 627. Confectionery. Chocolate. Glacé fruits.
 Class 628. Foods made from nuts or fruits.
 Class 629. Coffee, tea, substitutes for coffee; mate, chicory and sweet acorns.
 Class 630. Vinegar.
 Class 631. Table salt.
 Class 632. Spices and their derivatives: pepper, cinnamon, allspice, flavouring extracts.
 Class 633. Mixed condiments and relishes: pickles, mustard, curries, sauces.

GROUP 128

WATERS AND UNFERMENTED FRUIT JUICES

- Class 634. Artificially aerated, carbonated or mineral waters, ginger ale, and other non-alcoholic beverages. Soda fountains, carbonating machinery, apparatus and fixtures; filters and methods of purifying water for home use.
 Class 635. Cider and other unfermented fruit juices.

GROUP 129

WINES AND BRANDIES

- Class 636. Dry wines, red and white.
 Class 637. Sweet wines: sherry, madeira, port, angelica, etc.
 Class 638. Sparkling wines.
 Class 639. Brandies.
 Class 640. Grape juice, fermented.

GROUP 130

SYRUPS AND LIQUORS, DISTILLED SPIRITS AND COMMERCIAL ALCOHOL

- Class 641. Syrups and sweet liqueurs: anisette, curacao, ratafia, benedictine, chartreuse, etc.
 Class 642. Aperients having alcohol or wine as a base: absinthe, bitters; vermouth, myrrh, etc.
 Class 643. Commercial alcohols: alcohol made from beets, molasses, grains, potatoes, etc.
 Class 644. Various distilled spirits, whiskey, gin, rum, vodka, kirschwasser, saké, etc.

GROUP 131

FERMENTED BEVERAGES

- Class 645. Cider and perry. Ale, beer, porter and other malt liquors. Pulke, Koumiss and other fermented drinks low in alcohol.

GROUP 133

USEFUL INSECTS AND THEIR PRODUCTS, INJURIOUS INSECTS AND PLANT DISEASES

- Class 655. Systematic collections of useful and injurious insects.
 Class 656. Systematic collections of vegetable parasites from plants and animals.
 Class 657. Bees. Silkworms and other bombycids. Cochineal insects.
 Class 658. Appliances for rearing and keeping bees and silkworms. Bee and silkworm products; honey, wax, cocoons.
 Class 659. Appliances and processes for destroying plant diseases and injurious insects.

GROUP 117

TOBACCO

- Alhambra Cigar & Cigarette Mfg. Co., Manila, P. I. Mfg. products. Av. E, bet. 3rd & 4th.
 Croger Cigar Co., Seattle, Wash. Mfg. products. Av. A & 4th St.
 Cuesta, Rey & Co., Tampa, Florida. Havana Cigars. Av. A & 4th St.
 De Nobili Cigar Co., Long Island, N. Y. Cigars. Av. E & 5th St.
 Falk Tobacco Co., New York, N. Y. Mfg. Products. Av. E, bet. 3rd & 4th Sts.
 Frankel, Gerdtz & Co., S. F., Cal. Cigars and their manuf. Av. A & 4th St.
 M. A. Gunst & Co., Inc., New York, N. Y. Mfg. products. Av. E, bet. 3rd & 4th Sts.
 Moreda & Co., Inc., New York, N. Y. Cigars. Av. E, bet. 3rd & 4th Sts.
 Petri Italian American Cigar Co., San Francisco, Cal. Cigars. Av. A, cor. 5th St.
 United Cigars Mfrs. Co., New York, N. Y. Cigars. Av. E, bet. 3rd & 4th Sts.
 West Indies Cigar Co., Inc., The, New York, N. Y. Cigars. Av. E, bet. 3rd & 4th Sts.

GROUP 120

VEGETABLE FOOD PRODUCTS AND AGRICULTURAL SEEDS

- Southern Cotton Oil Co., New York, N. Y. Oil, edible. 3rd St., bet. Avs. D & E.

GROUP 122

ANIMAL FOOD PRODUCTS

- Alpine Evaporated Cream Co., San Francisco. Evaporated Milk. 3d St., bet. Avs. B & C.
 Alpine Milk. Plants at Hollister and Gonzales, California. San Francisco Offices, 268 Market Street.
 Borden's Condensed Milk Co., New York. Condensed Milk. 3d St., bet. Avs. C & D.
 Borden's Eagle Brand Condensed Milk;
 Borden's Evaporated Milk; Borden's Malted Milk; Borden's Sterilized Natural Milk.
 The Johnson-Locke Mercantile Co., San Francisco, Pacific Coast Representatives.
 California Central Creameries, S. F. Dairy Products. Av. E, cor. 3rd St.
 Citizens' Wholesale Supply Co., Columbus, O. Gelatine, etc. 4th St., bet. Avs. D & E.

- Genesee Pure Food Co., Le Roy, N. Y. Gelatine ice cream powders. Av. D, cor. 3d St.
- Idaho, State of. Col. Exhibit of Cheese. Agr. Pal. Avs. B & C, bet. 6th & 7th Sts.
- Jamison Cold Storage Door Co., Hagerstown, Md. Dairy Equip. Av. B, cor. 6th St.
- Libby, McNeill & Libby, Chicago, Ill. Canned Goods. Fd. Pr. Pal., Av. E, cor. 2nd St. Evaporated Milk, Condensed Milk.
- Minute Tapioca Co., Orange, Mass. Gelatine. Av. D & 4th St. Minute Gelatine, Measured for use.
- Nevada, State of. Collective Exh., Dairy Products. Agr. Pal., Av. A, bet. 9th & 10th Sts.
- Pacific Coast Condensed Milk Co., Seattle, Wash. Evaporated Milk. Carnation Milk. Evaporated, Sterilized Milk. Avs. D & E, bet. 3d & 4th Sts.
- Rowe's, E. J., Boston. Collective Exh. Pure Foods. Avs. D & E, bet. 3d & 4th Sts.

GROUP 123

EQUIPMENT AND METHODS EMPLOYED
IN THE PREPARATION OF FOODS
AND BEVERAGES

- Airseal Vacuum Jar Co., New York, N. Y. Jar used for canning. 4th St., bet. Avs. D & E.
- Alaska Packers Association, San Francisco, Cal. Av. C, bet. 1st & 2nd Sts. Illustrating the Salmon Industry; Vessel and Salmon Cannery Models. Salmon Eggs and Fry. Mounted Salmon. Canned Salmon and Salmon Paste.
- American Chiclet Co., Portland, Ore. Mfg. of Chewing Gum. Av. D, cor. 3rd St.
- Anderson-Bargrover Manufacturing Co., San Jose, Cal. Hort. Pal., Av. E. Fruit grader, Canning Tables, Distributing Systems, Slicer, Can Marker; Syruper, Exhausters and Lye Pealer. Continuous Agitating Cooker & Cooler for canned foods, copper kettle, pulper; Tomato washer, scalding and conveyor.
- Automatic Candy Machine Co., Seattle, Wash. Candy Making Mach. 3d St., bet. Avs. D & E.
- Automatic Refrigerating Co., Hartford, Conn. Refrg. Mach. Hort. Pal., 8th St., cor. Av. A.
- Ayars Machine Company, Salem, N. J. Canning Machinery. Avs. B & D, between 1st & 2nd Sts. Tomato Filling Machine; Canning Machinery.
- Bakers Weekly, New York, N. Y. Publications. Avs. C & D, bet. 2nd & 3rd Sts. A newspaper of interest to the bakers' trade, published weekly.
- Berger & Carter Co., S. F. Collective Exh. Hydraulic Press. Mch. Pal., 5th St. & Av. I.
- Bernheim Distilling Co., Louisville, Ky. Distilling Mch. 4th St., bet. Avs. D & E.
- Bliss, E. W. & Company, Brooklyn, N. Y. Machinery. Automatic machinery for making sanitary cans; automatic machines for forming, beading and flanging round and oval tin cans. See exhibit, Block 16, Machinery Building.
- Born, H. A. & Co., Chicago, Ill. Refrigerating Machinery. Av. A & 6th St.
- Brandenstein, M. J. & Co., S. F., Cal. Av. E, cor. 3rd St. Coffee roasting and demonstrating; tea packing and demonstrating.
- Brunswick-Balke-Collender Co., The, of Cal., S. F. Refrg. Mfr. Pal., Av. A, cor. 6th St.
- Columbia Feed Governor Co., Minneapolis, Minn. Avs. C & D, bet. 2nd & 3rd Sts.
- De Laval Separator Co., The, New York, N. Y. Agr. Pal., 3rd St., bet. Avs. A & B. De Laval Clarifier and Filter, De Laval Sediment Clarifier, De Laval Yeast Separator. De Laval Dairy Supply Co., San Francisco agents.
- Dickerson, F. G., Chicago, Ill. Canning Mach. Pac. Coast Cond. Milk Co.'s Pavilion.
- Economic Machy. Co., Worcester, Mass. Can Labeling Mch. 6th St., bet. Avs. C & D.
- Government of the Philippine Islands, Manila, P. I. Coconut oil press, apparatus for preparing chocolate, corn mill, rice mill.
- Grand Rapids Refrigerator Co., Grand Rapids, Mich. 2nd St., bet. Avs. D & E. Leonard Cleanable Refrigerators, "Like a Clean China Dish."
- Heppe, L. A., Boston, Mass. Mfr. of Confectionery. Av. E, cor. 4th St.
- Hobart Manufacturing Co., The, Troy, O. Coffee Refiner. Av. E, cor. 3rd St. Electric Coffee Mills and Refiners. Jas. H. Stoddard, Sales Agent, 326 Market St., San Francisco; 377 12th St., Oakland.
- Howes, The S. Company, Silver Creek, N. Y. Mill Machinery. Avs. C & D, bet. 2nd & 3rd Sts. "Eureka" Grain Cleaning Machinery for Flour. Corn & Cereal Mills, Flour & Feed Packers. Bran Dusters, Dust Collectors, Wheat Washers & Dryers, Feed Mixers, Rice & Coffee Hullers & Separators.
- Hughes Electric Heating Co., Chicago, Ill. Avs. C & D, bet. 2nd & 3rd Sts. Electric Stoves, Ranges, Ovens, etc.
- Hydraulic Press Mfg. Co., The, Mt. Gilead, O. Oil Press. Mch. Pal., 2nd St., Avs. H & I.
- Jamison Cold Storage Door Co., Hagerstown, Md. Refrig. Apparatus. Av. B, cor. 6th St.
- Kewanee Water Supply Co., Kewanee, Ill. Refg. Plants. Mch. Pal., 1st & 2d Sts., Av. E.
- Loetscher-Ryan Mfg. Co., Dubuque, Ia. Refrg. Mach., etc. 5th St., bet. Avs. D & E.
- McClaren, L. L., S. F., Cal. Cook Book. Av. B2, cor. 3rd St.
- Meade, L. S., San Francisco, Cal. Packing Devices. Av. D, cor. 2nd St.
- Middleby-Marshall Oven Co., Chicago, Ill. Ovens. Avs. C & D, bet. 2nd & 3rd Sts.
- National Canners' Assn., Wash., D. C. Collective Exh. Avs. B & D, bet. 1st & 2nd Sts.
- National Ice Cream Co., S. F., Cal. Mfgs. of Ice Cream. Av. A & 6th St.
- Nevada, State of. Paste food & sugar factories. Av. A, bet. 9th & 10th Sts., Agr. Pal.
- Pacific Ammonia & Chemical Co., Seattle, Wash. Ammonia. Av. B, cor. 6th St.
- Pappas Candy Co., San Francisco, Cal. Mfg. of candy. 3rd St., bet. Avs. D & E.
- Pennsylvania Flexible Metallic Tubing Co., Phil., Pa. Mch. Pal., 5th St. & Av. F.
- Potato Chip Co., San Jose, Cal. Potato chips. Av. B, bet. 2nd & 3rd Sts.
- Quaker Oats Co., The, Chicago, Ill. Prepared Cereals. Av. E, bet. 6th & 7th Sts.
- Read Machinery Co., York, Pa. Machinery. Avs. C & D, bet. 3rd & 4th Sts. A complete line of bakers' machinery. See it operating.
- Refrigeration Plants Mfg. Co., Los Angeles, Cal. Refrg. Mach. Av. B2, 2nd & 3rd Sts.
- Remington Machine Co., Wilmington, Del. Refrigeration Plant. Av. D & 1st St.
- Richardson Scale Co., Passaic, N. J. Scales. Avs. C & D, bet. 2nd & 3rd Sts. Scales used in weighing wheat to mill rolls and flour to packing bins.

Rowe's, E. J. Collective exhibit of pure foods. Avs. D & E, bet. 3rd & 4th Sts.

Shredded Wheat Co., The, Niagara Falls, N.Y. Cereals. Av. C, cor. 4th St. Shredded wheat biscuit and triscuit.

Sprague Canning Machy. Co., Chicago, Ill. Avs. B & D, bet. 1st & 2d Sts.

Union Sanitary Rack Mfg. Co., Albion, Mich. Av. B2, bet. 2nd & 3rd Sts.

Vulcan Iron Works, San Francisco, Cal. Refrigerating Machinery. Avs. C & D, bet. 7th & 8th Sts. Refrigerating and Ice Plants of any desired capacity. Special Class Small Machines. Special Marine Type Machines. Works: Francisco & Kearny Sts.

Washington, State of. Collective Exhibit of salmon canning mchy. 6th St., bet B & C.

White Frost Refrigerator Co., Jackson, Mich. Refrigerators. Av. D, cor. 3rd St.

Wolf Co., The, Chambersburg, Pa. Flour Mill Mach. Avs. C & D, bet 2nd & 3rd Sts.

York Manufacturing Co., York, Pa. Refrigerating Machinery. Av. B, cor. 6th St. Appliances of any desired capacity for the refrigeration and preservation of food. Ice Making Plants. Ammonia fittings and supplies. Special class small machines.

GROUP 124

FARINACEOUS PRODUCTS AND THEIR DERIVATIVES

Albers Bros. Milling Co., San Francisco, Cal. Prepared Cereals. Av. C, cor. 3rd St. Albers Flapjack Flour; Albers Buckwheat Flour; Albers Corn Meal; Albers Peacock Family Flour; Albers Pearls of Wheat; Albers Pearl Barley; Albers Steel Cut Oat Meal; Albers Rolled Oats; Albers Wheat Flakes; Carnation Wheat Flakes; Carnation Rolled Oats; Carnation Granulated Wheat. Mills and offices at Portland, Tacoma, Seattle, Oakland, San Francisco and Los Angeles.

Brandenstein, M. J. & Co., San Francisco, Cal. Av. E, cor. 3rd St. Rices, Foreign and Domestic.

Citizens' Wholesale Supply Co., Columbus, O. Cereals, etc. 4th St., bet. Avs. D & E.

Government of the Philippine Islands, Manila, P. I. Rice, tapioca, sago, starches, arrow-root.

Heinz, H. J. & Co., Pittsburgh, Pa. Italian Pastes. Av. C, cor. 3rd St.

Idaho, State of. Flour exhibit. Avs. B & C, bet. 6th & 7th Sts.

Louisiana, State of. Collective exhibit of Italian pastes. Avs. B & C, bet. 8th & 10th Sts., Agr. Pal.

Minute Tapioca Co., Orange, Mass. Tapioca. Av. D & 4th St. Minute Tapioca—Requires no soaking.

Mueller, C. F. Co., New York, N. Y. Italian pastes. 4th St., bet. Avs. C & D.

Nevada, State of. Collective exhibit of Flour. Av. A, bet. 9th & 10th Sts., Agr. Pal.

Pacific Cereal Association, San Francisco, Cal. Prepared Cereals. Av. C, cor. 3rd St.

Quaker Oats Co., The, Chicago, Ill. Prepared Cereals. Av. E, bet. 6th & 7th Sts.

Rowe's, E. J., Bostn, Mass. Collective exh. of Pure Foods. Avs. D & E, bet. 3rd & 4th. Shredded Wheat Co., The, Niagara Falls, N.Y. Prepared Cereals. Av. C, cor. 4th St.

Sperry Flour Co., S. F., Cal. Prepared cereals, flour, etc. Avs. C & D, bet. 2nd & 3rd Sts.

GROUP 125

BREAD AND PASTRY

American Biscuit Co., San Francisco, Cal. Crackers. 2nd St., bet. Avs. D & E. Royal Soda Crackers in cartons and bulk; Crackers and Cakes in cartons and bulk; Fiesta Sugar Wafers and Yosemite Creams; Pilot Bread; Army and Navy Hard Bread; Dainty Chips; Snowflakes; Water Wafers; Panama Creams; High Teas; Tango Chips; Exquisite Wafers—Cheese Sandwiches.

Citizens' Wholesale Supply Co., Newark, N. J. Baking Powder. 4th St., bet. Avs. D & E.

Crescent Manufacturing Co., Seattle, Wash. Baking Powder. Av. B2, cor. 2nd St.

Jones-Thierbach Co., S. F., Cal. Baking Powder. Av. C, cor. 2nd St.

Sperry Flour Co., S. F., Cal. Bread, etc. Avs. C & D, bet. 2nd & 3rd Sts. Bread & Pastry of various countries.

Washington, State of. Food Products Exhibit. 6th St., bet. Avs. B & C.

GROUP 126

PRESERVED MEAT, FISH AND VEGETABLES

Agencias de Berna, S. F. Preserved vegetables and fruits. 6th St., bet. Avs. B & C.

Ainsworth & Dunn, Seattle, Wash. Canned salmon. 1st St., cor. Av. C.

American Kitchen Products Co., New York, N. Y. Av. E, cor. 4th St. Makers of "Sterro" Cubes "A cube makes a cup." Just add boiling water. Delicious wholesome Bouillon instantly. Improves flavor of Soups, Sauces & Gravies. Visit Exhibit in Pal. of Pure Foods. A cup of Hot "Sterro" served free.

Alaska Fish Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.

Alaska Pacific Fisheries Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.

Alaska Packers Association, San Francisco, Cal. Av. C, bet. 1st & 2nd Sts. Illustrating the salmon industry; vessel and salmon cannery; models; salmon eggs and fry; mounted salmon; Canned Salmon and Salmon Paste. Local Office, Wells Fargo Building, San Francisco.

Alaska Portland Packers Assn., Portland, Ore. Canned salmon. 1st St., cor. Av. C.

Alaska Salmon Co., S. F. Canned salmon. 1st St., cor. Av. C.

Alaska Sanitary Packing Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.

Andreas, Mrs. A. L., Jamaica, N. Y. Collective Exhibit. 4th St., bet. Avs. D & E.

Apex Fish Co., Anacortes, Wash. Canned salmon. 1st St., cor. Av. C.

Astoria & Puget Sound Packing Co., Bellingham, Wash. 1st St., cor. Av. C.

Barnes, F. C. & Co., Portland, Ore. Canned salmon. 1st St., cor. Av. C.

Bellingham Canning Co., Bellingham, Wash. Canned salmon. 1st St., cor. Av. C.

Blaine Packing Co., Blaine, Wash. Canned salmon. 1st St., cor. Av. C.

Booth Fisheries Co., Astoria, Ore. Canned salmon. 1st St., cor. Av. C.

Bristol Bay Packing Co., San Francisco, Cal. Canned salmon. 1st St., cor. Av. C. "Bristol," "Battle Ax," "Frost King," "Morse Queen," "Alaska Bear," "Paramita," "New Year," "Silver Net."

Cal. Fruit Cannery Assn., S. F., Cal. Preserved Vegetables. Av. B, bet. 1st & 2nd.

- Citizens' Wholesale Supply Co., Columbus, O. Beef Extracts. 4th St., bet. Avs. D & E.
- Columbia River Packers' Assn., Astoria, Ore. Canned salmon. 1st St., cor. Av. C.
- Coquille River Fishermen's Co-Op Pkg. Co., Prosper, Ore. Canned salmon. 1st, cor. C.
- Deep Sea Salmon Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Everett Packing Co., Everett, Wash. Canned salmon. 1st St., cor. Av. C.
- Fidalgo Island Packing Co., Anacortes, Wash. Canned salmon. 1st St., cor. Av. C.
- Friday Harbor Packing Co., Friday Harbor, Wash. Canned salmon. 1st St., cor. Av. C.
- Gorman & Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Harbor Packing Co., Pt. Blakeley, Wash. Canned salmon. 1st St., cor. Av. C.
- Hawk Fish Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Heinz, H. J. Co., Pittsburgh, Pa. Soups, Preserved Meats, etc. Av. C, cor. 3rd St.
- Hoonah Packing Co., Port Townsend, Wash. Canned salmon. 1st St., cor. Av. C.
- Key City Packing Co., Port Townsend, Wash. Canned salmon. 1st St., cor. Av. C.
- Klamath River Packing Co., Requa, Cal. Canned salmon. 1st St., cor. Av. C.
- Libby, McNeill & Libby, Chicago, Ill. Canned Meats. Pd. Pr. Pal., Av. E, cor. 2nd St. Cooked Corned Beef, Roast and Cottage Beef, Ox Tongues, Boneless Chicken, Veal, Beef and Ham Loaf, Chicken Loaf, Frankfurter Bratwurst, Sliced Bacon, Corned Beef Hash, Roast Beef Hash, Chop Suey, Tripe, Lunch Tongues, Lamb Tongues, Dried Beef, Hamburger Steak & Onions, Pigs' Feet, Pork & Beans, Vienna Sausage, Soups, Extract of Beef, Brisket Beef, Pork Sausage, Club House Sausage, Chili Con Carne, Deviled Ham, Potted Ham, Deviled Meats, Potted Meats, Roast Mutton, Stewed Kidneys, Mince Collops, Mince Steak, Oxtails, Boiled Beef, Irish Stew, Oxford Sausage, Soup Bouilli, Mince Meat, Tamales, Bouillon Cubes, Beef and Vegetables, Canned Salmon, Canned Vegetables, California Asparagus, Spinach, Tomatoes, String Beans, Beets, Cabbage, Sweet Potatoes, Carrots, Squash, Sauer Kraut.
- Libby, McNeill & Libby, Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Louisiana, State of. Collective exhibit of canned fish and vegetables. Avs. B & O, bet. 8th & 10th Sts., Agr. Pal.
- Lummi Bay Packing Co., Bellingham, Wash. Canned salmon. 1st St., cor. Av. C.
- MacLeay Estate Co., Rogue River, Ore. Canned salmon. 1st St., cor. Av. C.
- Martin, E. C., Auburn, N. Y. Vegetables. Hort. Pal., 2nd St., cor. Av. D. Preserved vegetables and fruit; brandied and pickled peaches.
- McGowan, P. J. & Sons, McGowan, Wash. Canned salmon. 1st St., cor. Av. C.
- Megler, J. G. & Co., Brookfield, Wash. Canned salmon. 1st St., cor. Av. C.
- Monterey Packing Co., S. F. Canned sardines, -canned shad & canned shad roe. 1st & Av. D.
- Myers, Geo. T. & Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Naknek Packing Co., San Francisco. Canned salmon. 1st St., cor. Av. C.
- Nevada, State of. Processed vegetables. Agr. Pal., Av. A, bet. 9th & 10th Sts.
- N. Alaska Salmon Co., San Francisco. Canned salmon. 1st St., cor. Av. C.
- N. Pacific Trading & Packing Co., S. F. Canned salmon. 1st St., cor. Av. C.
- Northwestern Fisheries Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Oregon Fisheries Co., Bay City, Ore. Canned salmon. 1st St., cor. Av. C.
- Pacific Am. Fisheries, Bellingham, Wash. Canned salmon. 1st St., cor. Av. C.
- Pacific Fisheries Packing Co., Aberdeen, Wash. Canned clams. Av. C, bet. 1st & 2nd Sts.
- Pierce, C. E. Co., Inc., San Francisco, Cal. Preserved fish. Avs. C & D, bet 1st & 2nd.
- Pillar Bay Packing Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Pillar Rock Packing Co., Portland, Ore. Canned salmon. 1st St., cor. Av. C.
- Pt. Warde Packing Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Red Salmon Canning Co., San Francisco. Canned salmon. 1st St., cor. Av. C.
- Richardson & Robbin Co., Dover, Del. Chicken products, ham. 4th St., bet. Avs. D & E.
- Rowe's, E. J., Boston, Mass. Collective Exh. of Pure Foods. Avs. D & E, bet. 3rd & 4th.
- Sanborn, Cram & Co., Astoria, Ore. Canned salmon. 1st St., cor. Av. C.
- Sanborn, Cutting Co., Astoria, Ore. Canned salmon. 1st St., cor. Av. C.
- San Juan Canning Co., Friday Harbor, Wash. Canned salmon. 1st St., cor. Av. C.
- San Juan Fish Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Seufert Bros., The Dalles, Ore. Canned salmon. 1st St., cor. Av. C.
- Sims, E. A., Port Townsend, Wash. Canned salmon. 1st St., cor. Av. C.
- Smiley, J. L. & Co., Blaine, Wash. Canned salmon. 1st St., cor. Av. C.
- Starr, Collinson Packing Co., Portland, Ore. Canned salmon. 1st St., cor. Av. C.
- Sunny Point Packing Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Taku Canning & Cold Storage Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Tallant, Grant Packing Co., Astoria, Wash. Canned salmon. 1st St., cor. Av. C.
- Thlinket Packing Co., Portland, Ore. Canned salmon. 1st St., cor. Av. C.
- Union Fish Co., San Francisco, Cal. Codfish. Avs. C & D, bet. 1st & 2nd Sts.
- Union Fishermen's Co-Op Packing Co., Astoria, Ore. Canned salmon. 1st St., cor. C.
- Warren Packing Co., Portland, Ore. Canned salmon. 1st St., cor. Av. C.
- Washington, State of. Collective exhibit of canned fish. 6th St., bet. Avs. B & C.
- Waise Packing Co., Seattle, Wash. Canned salmon. 1st St., cor. Av. C.
- Willapa Harbor Fish Co., Willapa, Wash. Canned salmon. 1st St., cor. Av. C.
- Workman Packing Co., San Francisco, Cal. Tamales. 4th St., bet. Avs. C & D.

GROUP 127

SUGAR AND CONFECTIONERY, CONDIMENTS AND RELISHES; NUT AND FRUIT FOODS

- Andrea, Mrs. A. Louise, Jamaica, N. Y. Collective exhibit of standard food products and modern kitchen equipment. 4th St., bet. Avs. D & E.

- Baker, Walter & Co., Ltd., Boston, Mass. Chocolate, cocoa. Av. C, bet. 3rd & 4th Sts. Chocolate unsweetened, chocolate sweetened. Johnson-Locke Mercantile Co., San Francisco, Coast representative.
- Blanke, C. F. Tea & Coffee Co., St. Louis, Mo. Tea & coffee. 6th St., bet. Avs. B & C.
- Borden's Condensed Milk Co., New York, N.Y. Borden's Confectionery. 3rd St., bet. Avs. C & D. The Johnson-Locke Mercantile Co., San Francisco, Pacific Coast representative.
- Brandenstein, M. J. & Co., S. F., Cal. Coffee, Tea. Coffee roasting and demonstrating; tea packing and demonstrating. Av. E, cor. 3rd St.
- Cal. Fruit Cannery Assn., S. F. Sauce and catsup. Av. B, bet. 1st & 2nd Sts.
- Citizens' Wholesale Supply Co., The, Columbus, O. Food products. 4th, bet. Avs. D & E.
- Compania General de Tabacos de Filipinas, Manila, P. I. Sugar from cane.
- Crescent Mfg. Co., Seattle, Wash. Flavoring. Av. B2, cor. 2nd St.
- Curtis, Emma E., Melrose, Mass. Confectionery. Direct Imp. Av. E & 3rd St.
- J. A. Folger & Company, San Francisco, Cal. 4th St., bet. Avs. B2 & C. Coffee, teas, spices, baking powder and flavoring extracts.
- Garritt, F. E., San Mateo, Cal. Mixed condiments, etc. Av. B2, cor. 3rd St.
- Ghiradelli, D. Co., San Francisco, Cal. Chocolate, cocoa. Av. D, cor. 4th St.
- Government of the Philippine Islands, Manila, P. I. Sugar, coffee, chocolate, vinegar, pepper, etc.
- Granadafig Co., Santa Clara, Cal. Confectionery. Av. B & 2nd St.
- Heinz, H. J. Co., Pittsburgh, Pa. Relishes, etc. Av. C, cor. 3rd St.
- Heppe, L. A., Boston, Mass. Confectionery, etc. Av. E, cor. 4th St.
- Hills Bros., San Francisco, Cal. Coffee, tea & spices. Av. D, cor. 2nd St. Red can Vacuum Packed Coffee.
- Jones-Thierbach Co., San Francisco, Cal. Tea, coffee, spices. Av. C, cor. 2nd St.
- Lady Betty, Inc., Brookline, Mass. Relishes. Av. B, cor. 3rd St.
- Libby, McNeill & Libby, Chicago, Ill., San Francisco, Cal. Condiments, canned goods. Av. E, cor. 2nd St. Mixed condiments and relishes; sweet pickles, chow chow, sour pickles, pickled onions, sweet relish, tomato catsup, Worcestershire sauce, Chili sauce, pepper sauce, salad dressing, mustard tomato chutney, evaporated horse radish, mixed pickles.
- Louisiana, State of. Collective exhibit of sugar and condiments and relishes. Avs. B & C, bet. 8th & 10th Sts.
- Lowney, The Walter M. Co., Boston, Mass. Confectionery. Avs. D & E, bet. 3rd & 4th Sts. Chocolate, cocoa and bon bons.
- Lyon's California Glace Fruit Co., San Francisco, Cal. Glace Fruits. Av. C, cor. 5th St.
- Martin, E. C., Auburn, N. Y. Pickles. Hort. Pal., 2nd St., cor. Av. D.
- McCormick & Company, Baltimore, Md. Teas, Spices. Teas, Banquet Brand, Spices, Bee Brand, Extracts, Bee Brand. Green Seal Salad Dressing, Banquet Mayonnaise Dressing. 3rd St., bet. Avs. C & D.
- Banquet Tea, Bee Brand Spices and Flavoring Extracts.
- Morton Salt Co., Chicago, Ill. Table Salt. 4th St., bet. Avs. D & E.
- Nevada, State of. Collective exhibit of food products. Agr. Pal., Av. A, bet. 9th & 10th.
- Pacific Coast Syrup Co., San Francisco, Cal. Syrups. Hort. Pal., 4th St., cor. Av. D.
- Palisade Mfg. Co., The, West Hoboken, N. J. Extracts. 4th St., bet. Avs. D & E.
- Pappas, A. Candy Co., San Francisco, Cal. Candy. 3rd St., bet. Avs. D & E.
- Porter, Mrs. M. A., Seattle, Wash. Salad Dressing. Av. B2 & 3rd St. Mrs. Porter's Mayonnaise & Peanut Butter.
- Reynolds Chocolate Co., Boston, Mass. Chocolate, cocoa, candy, etc. Av. E & 3rd St.
- Ridgways, Inc., New York, N. Y. Tea. Av. C, cor. 4th St. India and Ceylon Teas. Established 1836. Chief Offices United States: New York, 111-113 Hudson St.; Chicago, 352-354 North Michigan Av.; San Francisco, Haas Bros., distributors.
- Rowe's E. J., Boston, Mass. Collective Exhibit. Pure Foods. Avs. D & E, bet. 3rd & 4th Sts.
- Sauer, C. F. Company, Richmond, Va. Flavouring extracts. 3rd St., bet. Avs. D & E. Flavouring extracts also at 5th St., bet. Avs. B & C.
- Urquijo, Zuloagay Escobi, Iloilo, P. I. Sugar from cane.
- Warner & Barnes Co., Manila, P. I. Sugar from cane.
- Wright, E. A., Oakland, Cal. Sauces. Hort. Pal., Av. D, cor. 7th St.

GROUP 128

WATERS AND UNFERMENTED FRUIT JUICES

- Am. Steel & Wire Co., Chicago, Ill. Sulphate of iron exhibit. Min. Pal., Av. D.
- Castilla Hot Springs Co., Castilla, Utah. Mineral Water. Av. A, cor. 6th St.
- Forbes & Co., J. P., Alameda, Cal. Mineral Water. Av. A & 5th St.
- Louisiana, State of. Collective exhibit of carbonated waters. Avs. B & C, bet. 8th & 10th Sts., Agr. Pal.
- Missouri State Commission, Aurora, Mo. Tripoli Filters. Min. Pal., Av. A & 6th St.
- National Pure Water Co., Kansas City, Mo. Water purifying mach. Av. B, cor. 5th St.
- Rowe's, E. J., Boston, Mass. Collective Exh. of pure foods. Avs. D & E, bet. 3d & 4th Sts.
- Seumenicht, R., Inc., Scranton, Pa. Beverages. 5th St., bet. Avs. B & C. Solosekt, Apple wine, de-alcoholized; Templarale, Fruit Juice & Carbonic Water; Nonparella, Clarified Grape Juice, Appella, Refined Cider, Carbonated. Write for free copy "Beverage Question."
- U. S. Steel Corp'n. Subsid. Co's., N. Y. Collective iron & steel exh. Min. Pal., Av. D.
- Welch Grape Juice Co., The, Westfield, N. Y. Grape juice. Av. D & 4th St.
- Witter Medical Springs Co., San Francisco, Cal. Mineral Water. Av. A, bet. 5th & 6th.
- Wright, E. A., Oakland, Cal. Fruit Nectar. Hort. Pal., Av. D, cor. 7th St.

GROUP 129

WINES AND BRANDIES

- Agencias de Berna, S. F. Cal. Sweet Wines. 6th St., bet. Avs. B & C.
- Arnhold, B., & Co., Inc., S. F. Cal. Cal. dry, sweet and sparkling wines. 4th St., bet. Avs. C & D.

Ayala Distillery, Manila, P. I. Commercial alcohol, wine, gin, made from sugar.

Beringer Bros., St. Helena, Cal. Cal. dry wines and brandy. 4th St., bet. Avs. C & D.

Brun & Chaix, Messrs., Oakville, Cal. Dry Wines. 4th St., bet. Avs. C & D.

Cal. Viticultural Exhibit Ass'n, S. F. Avs. C & D, bet. 4th & 5th Sts. Col. Wine Exh.

Cal. Wine Ass'n, S.F., Cal. Cal. dry and sweet wines & brandy. 4th St., cor. Av. C.

Cal. Winery Co., Sacramento, Cal. Cal. dry and sweet wines. 4th St., bet. Avs. C & D.

Calwa Dist. Co., S. F. Cal. dry and sweet wines & brandies. 4th St., bet. Avs. C & D.

Chauche & Bon, S. F. Cal. dry and sparkling wines. 5th St., bet. Avs. C & D.

Compania General de Tabacos de Filipinas, Manila, P. I. Commercial alcohol, wine, gin, made from sugar.

Cresta Blanca Wine Co., S.F. Cal. Dry & Sweet Wines, Brandies & Champagnes. Av. D, 4th.

Da Roza Estate, Elk Grove, Cal. Dry & sweet wines. 5th St., bet. Avs. C & D.

Dresel C. & Company, Sonoma, Cal. Dry Wines & Brandy. Av. C & 5th St.

Finkes' Widow, A., S.F., Cal. Cal. dry, sweet & spkgl. wines & brandy. 5th St., bet. Avs. C & D.

French American Wine Co., S.F., Cal. Cal. dry wines & brandy. 5th St., bet. Avs. C & D.

Fulton Winery Co., S. F. Cal. Dry Wines. 5th St. & Av. C.

Gier, Theo., Oakland, Cal. Cal. dry and spkgl. wines. Av. D, bet. 4th & 5th Sts.

Grau & Werner, Irvington, Cal. Cal. dry wines. 4th St. & Av. D.

Gundlach-Bundschu Co., S. F. Cal. dry and sweet wines. 5th St., bet. Avs. C & D.

Guasti, S., Los Angeles, Cal. Cal. dry and sweet wines. 4th St., bet. Avs. C & D.

Italian Swiss Colony, S. F. Cal. dry & sweet spkgl. wines & brandies. 5th St., cor. Av. C.

Korbel, F. & Bros., Guerneville, Cal. Cal. dry wines; champagne, brandy. 5th St., cor. D.

Krug, Chas. Winery, St. Helena, Cal. Cal. dry wines. 4th St., bet. Avs. C & D.

Kunde, Louis, Glen Ellen, Cal. Dry Wines. Av. D & 4th St.

Lachman & Jacobi, S. F. Cal. dry & sweet wines. Av. D, bet. 4th & 5th Sts.

Lancel & Co., E. H., S. F. Dry Wines. Av. D & 4th St.

Lint, P. F., Los Gatos, Cal. Cal. dry and sweet wines; brandy. 4th St., bet. Avs. C & D.

Madera Vineyard & Wine Co., S. F. Sweet Wines & Brandies. 5th St., bet. Avs. C & D.

Masson, Paul Champagne Co., San Jose, Cal. Champagne. 4th St., cor. Av. D.

Mattie, A., Malaga, Cal. Cal. dry & sweet wines; brandy. 4th St., bet. Avs. C & D.

Mt. Diablo Vineyard & Wine Co., S. F. Dry Wines. 5th St., bet. Avs. C & D.

Mt. Hamilton Vineyard, San Jose, Cal. Dry Wines. Av. C & 5th St.

Repsold, A. Co., S. F. Cal. dry and sweet wines and cognac. 4th St., bet. Avs. C & D.

Rixford, E. H., S. F. Cal. dry wines. 5th St., Av. D.

Rosenblatt Co., The, S. F. Cal. wines and brandies. Av. C, cor. 6th St.

Sacto. Valley Winery, Sacramento, Cal. Cal. dry & sweet wines. 5th St., bet. Avs. C & D.

Salmira, F. & Co., St. Helena, Cal. Cal. dry wines. 4th St., bet. Avs. C & D.

Shilling, C. & Co., S. F. Cal. dry & sweet wines. 4th St., bet. Avs. C & D.

Sonoma Wine & Brandy Co., Stockton, Cal. Dry & Sweet Wines. 4th St., bet. Avs. C & D.

Tokalon Vineyard Company, Napa, Cal. Dry Wines. 4th St., bet. Avs. C & D.

Wegner, Wm., Evergreen, Cal. Cal. dry wines. 5th St., bet. Avs. C & D.

West & Son, Geo., Stockton, Cal. Dry & Sweet Wines. 4th St., bet. Avs. C & D.

GROUP 130

SYRUPS AND LIQUORS, DISTILLED SPIRITS AND COMMERCIAL ALCOHOL

Bernheim Distilling Co., Louisville, Ky. Whiskey. 4th St., bet. Avs. D & E.

Bouvier Specialty Co., Louisville, Ky. Gin. Av. A, bet. 4th & 5th Sts.

Hamburger Distillery, Ltd., Pittsburgh, Pa. Rye Whiskey. Av. A & 6th St.

Large Distilling Co., The, Pittsburgh, Pa. Rye Whiskey. 6th St., bet. Avs. B & C.

Louisiana, State of. Collective exhibit of syrups and liquors, alcohol. Avs. B & C, bet. 8th & 10th Sts., Agr. Pal.

Rosenblatt Co., The, San Francisco, Cal. Cordials. Av. C, cor. 6th St.

Van Bergen, N. & Co., San Francisco, Cal. Hufeland Tonic Bitters. Av. D, cor. 5th St.

GROUP 131

FERMENTED BEVERAGES

Government of the Philippine Islands, Province of Ilocos Sur, Vigan, Ilocos-Sur, P. I. Basi (made from juice of sugar cane).

Mountain Province, Lepanto, M. Province, P. I. Tapuy (made from rice).

Seattle Brewing & Malting Co., Seattle, Wash. Bottled & draught beer. Av. C, cor. 6th St.

GROUP 133

USEFUL INSECTS AND THEIR PRODUCTS INJURIOUS INSECTS AND PLANT DISEASES

California Bee Keepers' Ass'n, Salida, Cal. 6st St., bet. Avs. A & B. Bees; honey, etc.

California Fruit Cannery Ass'n, S. F., Cal. Honey. Av. B, bet. 1st & 2nd Sts.

Montana, State of. Collective exh. of honey. Agr. Pal., Avs. A & B, bet. 8th & 9th Sts.

Nevada, State of. Agr. Pal., Av. A, bet. 9th & 10th Sts. Honey.

Pacific Coast Syrup Co., S. F., Cal. Honey. Hort. Pal., 4th St., cor. Av. D. Strained honey, and in comb.

Wright, E. A., Oakland, Cal. Hort. Pal., Av. D, cor. 7th St. Honey.

STATE EXHIBITS

CALIFORNIA

Location: Avs. C & D, bet. 5th & 6th Sts.

The complete list of exhibits from California in the Department of Food Products will appear in revised edition of the Catalogue.

WASHINGTON

Location: 6th St., bet. Avs. B and C.

GROUP 123

Burpee & Letson, Bellingham. Salmon canning and weighing machinery.

Seattle-Astoria Iron Works, Seattle. Salmon canning and weighing machinery.

Smith Cannery Machine Co., Seattle. Salmon canning and weighing machinery.

GROUP 125

Shibata, U. Co., Seattle. Rice cakes.

GROUP 126

Washington, State of.—Processed fish.
Sea Beach Packing Co., Aberdeen. Can. clams

NEVADA

Palace of Agriculture

Location: Ave. A, bet. 9th and 10th Sts.

GROUP 122

Crescent Creamery.—Reno. Butter
Deeth Creamery.—Deeth. Butter.
Jensen Creamery.—Reno. Butter.
Lamoille Creamery.—Lamoille. Butter.
Minden Butter Co.—Minden. Butter.
Queen Creamery.—Smith. Butter.
Lovelock Creamery.—Lovelock. Butter.
Ramell, Caesar.—Reno. Cheese.
South Fork Creamery.—Reno. Butter.
Standard Creamery.—Reno. Butter.
University Dairy.—Reno. Butter, cheese.
Yerington Creamery.—Yerington. Butter.

GROUP 123

Nevada, State of.—Reno. Flour mills.
Nevada Sugar Co.—Fallon. Sugar factory.
Riverside Mill Co.—Reno. Paste foods.

GROUP 124

Douglas Milling Co.—Gardnerville. Flour.
Fallon Milling Co.—Fallon. Flour.
Mason Valley Milling Co.—Nurdyke. Flour.
Minden Flour Co.—Minden. Flour.
Paradise Valley Mill.—Paradise. Flour.
Reno Flour Milling Co.—Reno. Flour.
Riverside Mill Co.—Reno. Flour.

GROUP 126

Antelope Land & Ctle. Co.—Yerington. Turnips
Baroni, D.—Dayton. Celery.
Barrett, G. A.—Mason. Potatoes, Rhubarb.
Barrett, H.—Yerington. Carrots.
Cross, E.—Yerington. Potatoes.
Dapoli, J.—Dayton. Parsnips.
Day, Chas.—Wellington. Cantaloupe.
Fenili, F.—Nurdyke. Kale.
Fox, C.—Yerington. Horseradish.
Hardy, Mrs. L.—Wellington. Parsley.
Hillygus, J.—Mason. Tomatoes.
Kremmel, C. H.—Mason. Corn, Potatoes.
Podi, F.—Yerington. Alfalfa.

FOREIGN EXHIBITS

ARGENTINE

Location: 1st St., bet. Avs. A and B.

The complete list of exhibits from Argentina in the Department of Agriculture will appear in revised edition of the Catalogue.

CUBA

Location: Av. A, bet. 1st and 2nd Sts.

The complete list of exhibits from Cuba in the Department of Agriculture will appear in revised edition of the Catalogue.

ENGLAND

Location: 4th St., bet. Avs. A and B.

GROUP 127

Lipton, Thos. S., London. Tea, coffee, jelly tablets.

GROUP 128

Burke, Edw. & John, Ltd., New York. Aerated beverages.

GROUP 130

Burnett, Sir Robert & Co., New York. Gin.

Pursel Bros.—Yerington. Beets.
Quilici, V.—Dayton. Cauliflower.
Santina, J.—Wabuska. Onions.
Scotia, A.—Yerington. Parsley.
Schact, Wm.—Yerington. Sugar Beets.
Shirley, F.—Dayton. Tomatoes, Peanuts.
Snyder, J.—Yerington. Tomatoes.
Strosnider, I. A.—Yerington. Carrots.
Warren, H.—Wabuska, Casaba.

GROUP 127

Black, C.—Deeth. Vinegar.
Guthrie, R. M.—Reno. Vinegar.
Nevada Sugar Co.—Fallon. Sugar.

GROUP 133

Barlow, A. H.—Mason. Honey.
Bechtel, I.—Lovelock. Honey.
Bower, G. M.—Lamoille. Honey.
Earl, J. I.—Overton. Honey.
Graham, G. C.—Reno. Honey.
Griffith, W. W.—Las Vegas. Honey.
Guthrie, R. M.—Reno. Honey.
Jensen, R.—Reno. Honey.
Penrose, Wm.—Wabuska. Honey.
Schweis, G. C.—Reno. Honey.
Swingle, C. G.—Hazen. Honey.
Trickey, G. C.—Reno. Honey.

IDAHO

Palace of Agriculture

Location: Avs. B & C, bet. 6th & 7th Sts.

GROUP 124

St. Anthony Milling & Elevator Co.—St. Anthony. Flour.

MONTANA

Palace of Agriculture

Location: Aves. A & B, bet. 8th & 9th Sts. Streets

GROUP 133

Copenhaver, Dr.—Helena. Honey.
Kleinhesselinck, B. J.—Big Timber. Honey.

UNITED STATES GOVERNMENT EXHIBIT

PALACE OF FOOD PRODUCTS

Location: Ave. D & 2nd St.

UNITED STATES BUREAU OF FISHERIES

The complete list of exhibits of the Bureau of Fisheries will appear in the revised edition of the catalogue.

Dewar, John & Sons, Ltd., Perth, Scotland. Scotch whiskey.

Gillon, John & Co., Leith, Scotland. Scotch whiskey.

FRANCE

Location: Av. C, bet. 1st and 2nd Sts.

The complete list of exhibits from France in the Department of Agriculture will appear in revised edition of the Catalogue.

GREECE

Location: 3rd St., bet. Avs. A and B.

The complete list of exhibits from Greece in the Department of Agriculture will appear in revised edition of the Catalogue.

ITALY

Location: Av. A, bet. 1st and 2nd Sts.

The complete list of exhibits from Italy in the Department of Agriculture will appear in revised edition of the Catalogue.

JAPAN

Location: Aves. A & B, bet. 2nd & 3rd Sts.

GROUP 120

San Chu Shoten—Kanagawa. Beans.
 Kanagawaken Nogai—Kanagawa. Peanuts.
 Nozawa-Gumi—Kanagawa. Beans.
 Chibaken Rakkasei Dogyo Kumiai—Chiba.
 Peanuts.
 Hokkaido Nokai—Hokkaido. Beans.
 Taihokucho Nokai—Taihoku. Peanuts.
 Kagicho Nokai—Kagi. Peanuts.
 Shizuokakon Shoga, Hechima, Kosho Rakkasei Dogyo Kumiai—Shizuoka. Peanuts.

GROUP 121

Hideo Ishiwata—Shizuoka. Cortinellus Shiitake.
 Totaro Uchida—Oita. Cortinellus Shiitake.
 Kysuske Yamatsumi—Miyazaki. Cortinellus Shiitake.

GROUP 124

Kumamoto Menrui Dogyo Kumiai—Kumamoto.
 Vermicelli.
 Kihei Nihonki—Kumamoto. Vermicelli.
 Tooru Tsuru—Kumamoto. Vermicelli.
 Gajiro Akita—Tokushima. Vermicelli.
 Binjiro Takata—Tokushima. Vermicelli.
 Jusaburo Yamamoto—Tokushima. Vermicelli.
 Banshu-Iho Gun Somen Dogyo Kumiai—Hyogo. Vermicelli.
 Kanzakigun Somen Dogyo Kumiai—Hyogo. Vermicelli.
 Sesshu Nada Somen Seizo Dogyo Kumiai—Hyogo. Vermicelli.
 Awajinokuni Miharagun Somen Dogyo Kumiai—Hyogo. Vermicelli.
 Sakuichi Yamakawa—Saga. Vermicelli.
 Heikichi Ichibakese—Saga. Vermicelli.
 Harunichi Hideshima—Saga. Vermicelli.
 Sanchu Shokai—Kanagawa. Buckwheat Noodle.
 Nippon Seimai Seifun Kabushiki Kaisha—Hyogo. Rice.
 Nippon Beikoku Kabushiki Kaisha—Hyogo. Rice.
 Hyogoken Nokai—Hyogo. Rice.
 Niigataken Nokai—Niigata. Rice.
 Ibaragiken Nokai—Ebaragi. Rice.
 Tochigiken Nokai—Tochigi. Rice.
 Miyeken Nokai—Miye. Rice.
 Oomimai Dogyo Kumiai—Oomi. Rice.
 Yamagataken Nokai—Yamagata. Rice.
 Ishikawaken Nokai—Ishikawa. Rice.
 Toyamaken Nokai—Toyama. Rice.
 Okayamaken Nokai—Okayama. Rice.
 Bocho Kome Dogyo Kumiai—Yamaguchi. Rice.
 Kagawaken Nokai—Kagawa. Rice.
 Fukuokaken Nokai—Fukuoka. Rice.
 Higo Beiken Soko Kumiai—Kumamoto. Rice.
 Miyazakiken Nokai—Miyazaki. Rice.
 Kagoshimaken Nokai—Kagoshima. Rice.

GROUP 126

Murata Co.—San Francisco. Gold Fish and Tortoise. Pal. Hort., Av. M.
 Nippon Gyogyo Kabushiki Kaisha—Tokyo. Codfish.
 Kumajiro Wakana—Tokyo. Canned Sardines.
 Sukenori Hoshino—Tokyo. Canned Crabs.
 Yushutsu Shokuhin Kabushiki Kaisha—Tokyo. Canned Salmon.
 Shukichi Fujiura—Tokyo. Taro.
 Tomisaburo Hamaguchi—Kyoto. Canned Goods.
 Takasu Kanzume Goshikaisha—Hiroshima. Canned Lobster.
 Hiroshima Chikusan Kabushiki Kaisha—Hiroshima. Canned Meats, etc.
 Mantaro Asaya—Yehime. Kamaboko.
 Kosan Kabushiki Kaisha—Fukuoka. Cooked Crab.
 Yetsujiro Teramoto—Kumamoto. Canned Lobster.

Usui Gomeikaisha—Hokkaido. Beans.
 Shozo Izumi—Hokkaido. Canned Crab & Lobster.
 Tsutsumi Shokai—Hokkaido. Canned Crab & Lobster.
 Fujino Kanzumesho—Hokkaido. Canned Crab & Lobster.
 Hokubei Boyeki Kabushiki Kaisha—San Francisco. Canned Crab.
 Kichigoro Akiyama—Tokyo. Gold Fishes. Pal. Hort., Av. M.
 Yukichi Onuma—Ybaraki. Gold Fishes. Pal. Hort., Av. M.
 Yamanashi Kajitsu Bussan Dogyo Kumiai—Yamanashi. Dried Persimmon.

GROUP 127.

Goshikaisha Suzuki Shoten—Kanagawa. Ajinomoto.
 Keiji Hamaguchi—Chiba. Shoyu.
 Juihiro Iwasaki—Chiba. Shoyu.
 Hichizaemon Mogi—Chiba. Shoyu.
 Fusagoro Mugi—Chiba. Shoyu.
 Saheiji Mogi—Chiba. Shoyu.
 Hyozaeon Takanashi—Chiba. Shoyu.
 Hichirovemon Mogi—Chiba. Shoyu.
 Choshi Shoyu Goshikaisha—Chiba. Shoyu.
 Sanaokichi Aya—Kagawa. Shoyu.
 Marukin Shoyu Kabushiki Kaisha—Kagawa. Shoyu.
 Sojuro Yagi—Kagawa. Shoyu.
 Yasuda Shoyu Kabushiki Kaisha—Kagawa. Shoyu.
 Shimizu Shoyu Kabushiki Kaisha—Kagawa. Shoyu.
 Fudeshiro Takahashi—Kagawa. Shoyu.
 Shima Shoyu Seizo Kabushiki Kaisha—Kagawa. Shoyu.
 Chujiro Kinoshita—Kagawa. Shoyu.
 Akishiro Miyamoto—Kagawa. Shoyu.
 Shinpei Sano—Kagawa. Shoyu.
 Mojuro Otsuka—Hyogo. Shoyu.
 Taminosuke Uyeda—Hyogo. Shoyu.
 Shokichi Nishio—Hyogo. Shoyu.
 Kyutaro Tsubota—Hyogo. Shoyu.
 Mikigime Kaisha—Hyogo. Shoyu.
 Nippon Maru Ton Shoyu Kabushiki Kaisha—Hyogo. Shoyu.
 Tsubota Shoyu Gomeikaisha—Hyogo. Shoyu.
 Maruo Shoyu Gomeikaisha—Hyogo. Shoyu.
 Asai Shoyu Gomeikaisha—Hyogo. Shoyu.
 Marunishi Shoyu Gomeikaisha—Hyogo. Shoyu.
 Yakugoro Okabe—Osaka. Shoyu.
 Yaheiji Matsuya—Osaka. Shoyu.
 Shinzaburo Masuda—Osaka. Shoyu.
 Izumi Shoyu Kabushiki Kaisha—Osaka. Shoyu.
 Matasaburo Kawamori—Osaka. Shoyu.
 Gomeikaisha Amekaze Shoten—Osaka. Shoyu.
 Connosuke Togawa—Osaka. Shoyu.
 Nobuo Shitabani—Osaka. Shoyu.
 Kakujiro Ikushima—Osaka. Shoyu.
 Jihei Kida—Osaka. Shoyu.
 Kinbei Ehara—Osaka. Shoyu.
 Hikishiro Okubo—Kumamoto. Shoyu.
 Giichi Kato—Kumamoto. Shoyu.
 Itaro Katayama—Kumamoto. Shoyu.
 Ichibel Noda—Kumamoto. Shoyu.
 Tokichi Yoshimura—Kumamoto. Shoyu.
 Hidetaro Ichihara—Kumamoto. Shoyu.
 Jubei Watanabe—Kumamoto. Shoyu.
 Kenda So—Kumamoto. Shoyu.
 Sanzo Takagi—Kumamoto. Shoyu.
 Masakichi Furusho—Kumamoto. Shoyu.
 Masakichi Akaboshi—Kumamoto. Shoyu.
 Seitaro Nishio—Kumamoto. Shoyu.
 Taro Takata—Kumamoto. Shoyu.
 Hikojiro Uyeda—Kumamoto. Shoyu.
 Tsunehashi Tamashiro—Kumamoto. Shoyu.
 Shinnosuke Sato—Miye. Shoyu.
 Seitaro Kadowaki—Miye. Shoyu.
 Seisaku Uchida—Miye. Shoyu.
 Kozayemon Ito—Miye. Shoyu.
 Bunsuke Kuki—Miye. Shoyu.

- Yokkaichi-Shoyu Juzo Goshikaisha — Miye. Shoyu.
- Rihei Shimotsu—Miye. Shoyu.
- Matayemon Isaka—Miye. Shoyu.
- Sakuyemon Takai—Miye. Shoyu.
- Senyemon Morimoto—Miye. Shoyu.
- Yamahachi Gomeikaisha—Miye. Shoyu.
- Seisuke Hashimoto—Miye. Shoyu.
- Yamanaka-Shoyu Goshikaisha—Miye. Shoyu.
- Shinji Kitamura—Miye. Shoyu.
- Ryokichi Ito—Miye. Shoyu.
- Shoyemon Hattori—Miye. Shoyu.
- Tsunejiro Ito—Miye. Shoyu.
- Yasaburo Hamanaka—Miye. Shoyu.
- Shuyejiro Kadowaki—Miye. Shoyu.
- Shinsuke Yoshizawa—Miye. Shoyu.
- Seibei Kawamura—Miye. Shoyu.
- Keijiro Kondo—Okayama. Shoyu.
- Jotaro Takimoto—Okayama. Shoyu.
- Ihachiro Kuyama—Okayama. Shoyu.
- Tomomatsu Ono—Okayama. Shoyu.
- Kurajiro Kuyama—Okayama. Shoyu.
- Yontaro Oka—Okayama. Shoyu.
- Kaneichi - Shoyu Gomeikaisha — Okayama. Shoyu.
- Yaroku A-ki—Aichi. Shoyu.
- Marutoyo Goshikaisha—Aichi. Shoyu.
- Saburo Ogi—Aichi. Shoyu.
- Morita Goshikaisha—Aichi. Shoyu.
- Kikkotomi-Shoyu Kabishiki Kaisha—Aichi. Shoyu.
- Ito Goshikaisha—Aichi. Shoyu.
- Shizuoka Shoyu Dogyo Kumiai—Shizuoka. Shoyu.
- Mito-Shoyu Joze-Kumiai—Ebaragi. Shoyu.
- Soyemon Murata—Ebaragi. Shoyu.
- Ninbei Nishio—Ebaragi. Shoyu.
- Soyemon Murata—Ebaragi. Shoyu.
- Hikohei Yamanaka—Ebaragi. Shoyu.
- Tachichi Sugaya—Ebaragi. Shoyu.
- Yabei Murai—Ebaragi. Shoyu.
- Teikichi Tateno—Ebaragi. Shoyu.
- Hichizayemon Yoshida—Ebaragi. Shoyu.
- Masanosuke Sugizawa—Ebaragi. Shoyu.
- Teijiro Ohashi—Ebaragi. Shoyu.
- Gomeikaisha Shibanauma Shoten — Ebaragi. Shoyu.
- Nagai Shoyu Gomeikaisha—Ebaragi. Shoyu.
- Uhei Hanari—Ebaragi. Shoyu.
- Tabei Iyeda—Ebaragi. Shoyu.
- Jobishi Gomeikaisha—Ebaragi. Shoyu.
- Chagyō Kumiai Chuo Kaigisho—Tokyo. Tea.
- Taihi'ki Chasho Koaki—Taihoku. Tea.
- Chin Cho Shun—Taihoku. Tea.
- Kaku Kan Sen—Taihoku. Tea.
- Chin Cho Byo—Taihoku. Tea.
- Ko Sei Hyo—Taihoku. Tea.
- Chin Zui Ho—Taihoku. Tea.
- Ri Man Kyo—Taihoku. Tea.
- Ko Sei Chin—Taihoku. Tea.
- Ko Ho Shin—Taihoku. Tea.
- Chin Zui Sei—Taihoku. Tea.
- Chin Zui Rei—Taihoku. Tea.
- So Ryo To—Taihoku. Tea.
- Kaku Ho Gen—Taihoku. Tea.
- Ooba Yei Sei—Taihoku. Tea.
- Cho Gyoku Bin—Taihoku. Tea.
- Ryu Hin Shin—Taihoku. Tea.
- Rin Gyoku Sen—Taihoku. Tea.
- Rai Yei Zai—Taihoku. Tea.
- Sho Sei Yen—Taihoku. Tea.
- Nippon Taiwan-Cha Kabushiki Kaisha—Toyon. Tea.
- Nozawa-Gumi—Kanagawa. Pepper, Dried Ginger.
- Tachoki Seito Kabushiki Kaisha—Taihoku. Sugar.
- Rin Hon Gen Seito Kabushiki Kaisha—Tai-chu. Sugar.
- Yensuiwan Seito Takushoki Kabushiki Kaisha—Kagi. Sugar.
- Dainippon Seito Kabushiki Kaisha—Kagi. Sugar.
- Taiwan Seito Kabushikin Kaisha—Tainan. Sugar and Alcohol.
- Taiwan Seito Rengo Kai—Tokyo. Crude Sugar.
- Shizuokaken Shogu Hechima, Kosho Rakkasei Dogyo Kumeiai—Shizuoka. Pepper, Ginger.
- Zensuke Yagi—Chiba. Mirin.
- Zenbei Baba—Chiba. Mirin.
- Kohei Okada—Chiba. Mirin.
- Sanzayemon Akimoto—Chiba. Mirin.
- Monjiro Horikiri—Chiba. Mirin.
- Hachijoji Ishikawa—Aichi. Mirin.
- Tatsuji Iwatsuki—Aichi. Mirin.
- Kangoro Suzuki—Aichi. Mirin.
- Momotaro Oiwa—Aichi. Mirin.
- Senju Nagai—Aichi. Mirin.
- Kokichi Kazeoka—Aichi. Mirin.
- Heizayemon Yamada—Aichi. Mirin.
- Yomo Comeikaisha—Kyoto. Mirin.
- Sutejiro Kimura—Kyoto. Mirin.

GROUP 128

- Kabushikikaisha Nunobiki Kosen Sho—Hyogo. Mineral Water.
- The Clifford Wilkinson Tansan Mineral Water Co., Ltd.—Hyogo. Mineral Water.
- Takarazuka Kosen Goshikaisha—Hyogo. Mineral Water.
- Isaburo Nakamura—Hvogo. Mineral Water.
- The Hirano Mineral Water Co.—Hyogo. Mineral Water.
- Kojiro Uyeno—Hyogo. Mineral Water.
- Kokoku Kosen Kabushiki Kaisha—Osaka. Mineral Water.
- Misumi Kosen Shokai—Kumamoto. Mineral Water.

GROUP 130

- Zensuke Yagi—Chiba. Mirin.
- Zenbei Baba—Chiba. Mirin.
- Kohei Okada—Chiba. Mirin.
- Sanzayemon Akimoto—Chiba. Mirin.
- Monjiro Horikiri—Chiba. Mirin.
- Hachijoji Ishikawa—Aichi. Mirin.
- Tatsuji Iwatsuki—Aichi. Mirin.
- Kangoro Suzuki—Aichi. Mirin.
- Momotaro Oiwa—Aichi. Mirin.
- Senju Nagai—Aichi. Mirin.
- Kokichi Kazeoka—Aichi. Mirin.
- Heizayemon Yamada—Aichi. Mirin.
- Yomo Gomeikaisha—Kyoto. Mirin.
- Sutejiro Kimura—Kyoto. Mirin.
- Yei-gashima Shuzo Kabushiki Kaisha—Hyogo. Sake.
- Kvutar Washio—Hyogo. Sake.
- Runjuro Osabe—Hyogo. Sake.
- Yetsuzo Tatsuma—Hyogo. Sake.
- Tazayemon Yamamura—Hyogo. Sake.
- Ishizaki Goshi Kaisha—Hyogo. Sake.
- Sensuke Isumi—Hyogo. Sake.
- Kano Gomeikaisha—Hyogo. Sake.
- Gomeikaisha Honkano Shoten—Hyogo. Sake.
- Saburobei Otsuka—Osaka. Sake.
- Shibatani Gomeikaisha—Osaka. Sake.
- Sarji Torii—Osaka. Sake.
- Genjiro Kaizu—Osaka. Sake.
- Taku Gomeikaisha—Osaka. Sake.
- Wesaburo Otsuka—Osaka. Sake.
- Marunishi Goshikaisha—Aichi. Sake.
- Mogokichi Sato—Aichi. Sake.
- Hirose Gomeikaisha—Aichi. Sake.
- Shohei Sugimoto—Aichi. Sake.
- Yakichi Inaba—Aichi. Sake.
- Hichirobei Uchida—Aichi. Sake.
- Ota Goshikaisha—Aichi. Sake.
- Ita Goshikaisha—Aichi. Sake.
- Sh-taro Mase—Aichi. Sake.
- Tanaka Shuzo Goshikaisha—Aichi. Sake.
- Morita Goshikaisha—Aichi. Sake.
- Tsuneichi Okura—Kyoto. Sake.
- Kvutar Horino—Kyoto. Sake.
- Sakugoro Kobayashi—Fukuoka. Sake.
- Isaburo Tomiyasu—Fukuoka. Sake.
- Gomeikaisha Seiriki Shoten—Fukuoka. Sake.
- Sudo Gomeikaisha—Fukuoka. Sake.

Gomeikaisha Seiriki Shoten—Fukuoka. Sake.
 Goshikaisha Ninomiya Meishujozoten—Fukuoka. Sake.
 Shigeyuki Tomiyasu—Fukuoka. Sake.
 Goshikaisha Kamachi-Meishu Jozo Sho—Fukuoka. Sake.
 Rynhei Takeda—Fukuoka. Sake.
 Taiwan Seito Kabushiki Kaisha — Tianan. Sugar and Alcohol.

GROUP 131

Dai Nippon Beer Kabushikikaisha—Tokyo. Beer, Citron.
 Teikoku Beer Kabushiki Kaisha—Fukuoka. Beer.
 Jozo Shikenjo—Photographs and samples of brewed drinks.

NETHERLANDS

Location: Av. B, bet. 1st and 2nd Sts.

GROUP 117

De Nederlandsche Sigarenfabriek "de Hulkar," Fa Hamers & Co., Oisterwyk. Cigars. AD Following groups under this head.

GROUP 125

de Biscuitfabriek "de Zwaluw" firma W. C. van der Kaay, Utrecht. Biscuits.

GROUP 127

Betke's Hollandsche Cacaofabriek, Amsterdam. Cocoa.
 de Firma B. van der Sluys, Rotterdam. Spices, oils and groceries.

GROUP 130

de Firma Gebr. Catz, Rotterdam. Bitters and liquors.

PORTUGAL

Location: 4th St., bet. Avs. A and B.

The complete list of exhibits from Portugal in the Department of Agriculture will appear in revised edition of the catalogue.

SPAIN

Location: Ave. B, bet. 1st and 2nd Sts.

The complete list of exhibits from Spain in the Department of Agriculture will appear in revised edition of the Catalogue.

CHINA

Location: Avs. B & C, bet. 4th & 5th Sts.

The complete list of exhibits from China in the Department of Agriculture will appear in revised edition of the Catalogue.



The first place to
visit in the

Palace of Food Products
is

Libby's Pure Food Exhibit

See how Libby's Food Products are put up the same day as gathered, right in the fields where they are produced, in the locality best suited for growing each particular product.

You will realize why Libby McNeill & Libby are known as the "World's Greatest Caterers" and why you should insist on Libby's — "The Brand You Can Trust"



"See
Libby's
First"



Souvenirs to All

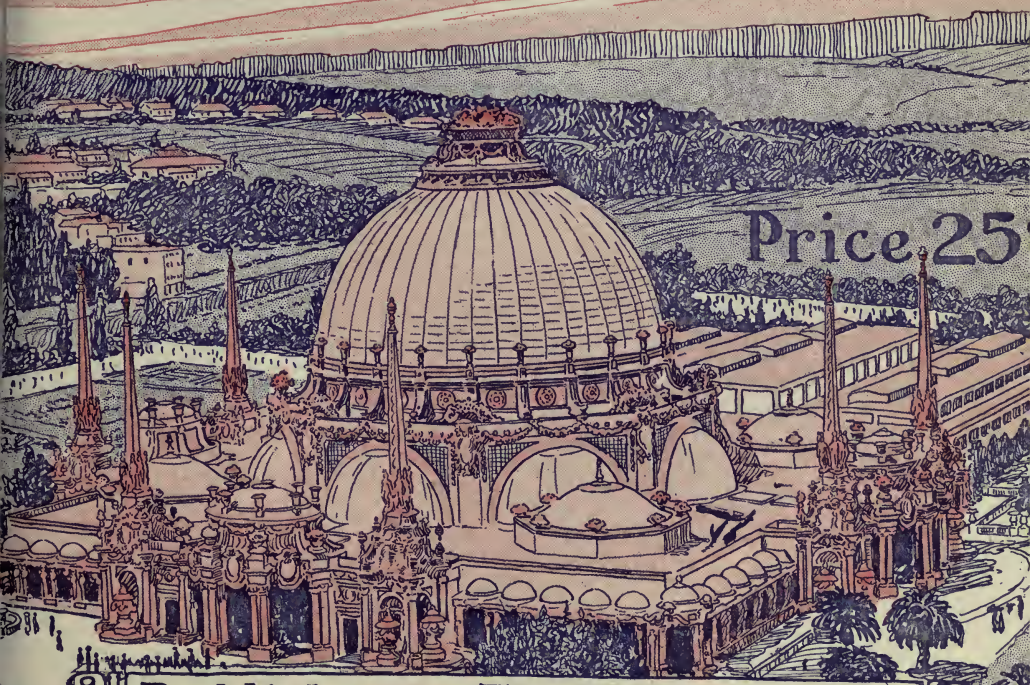


Libby, McNeill & Libby
Chicago

HORTICULTURE AND FLORICULTURE

Official Catalogue of Exhibitors

PANAMA - PACIFIC
INTERNATIONAL EXPOSITION
SAN FRANCISCO 1915



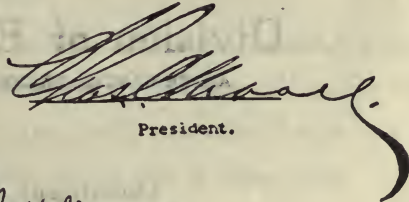
Published by The Wablgreen Co

PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT

July 10 1914.

To Whom It May Concern:

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.



President.




Secretary.

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PANAMA-PACIFIC INTERNATIONAL EXPOSITION
San Francisco, 1915

Official Catalogue of
Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHARLES C. MOORE
President

Director-in-Chief
FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department DK

HORTICULTURE

G. A. DENNISON, Chief

Preliminary Edition

Published for the Division of Exhibits by
The Wahlgreen Company, Official Publishers
San Francisco, 1915

PREFACE

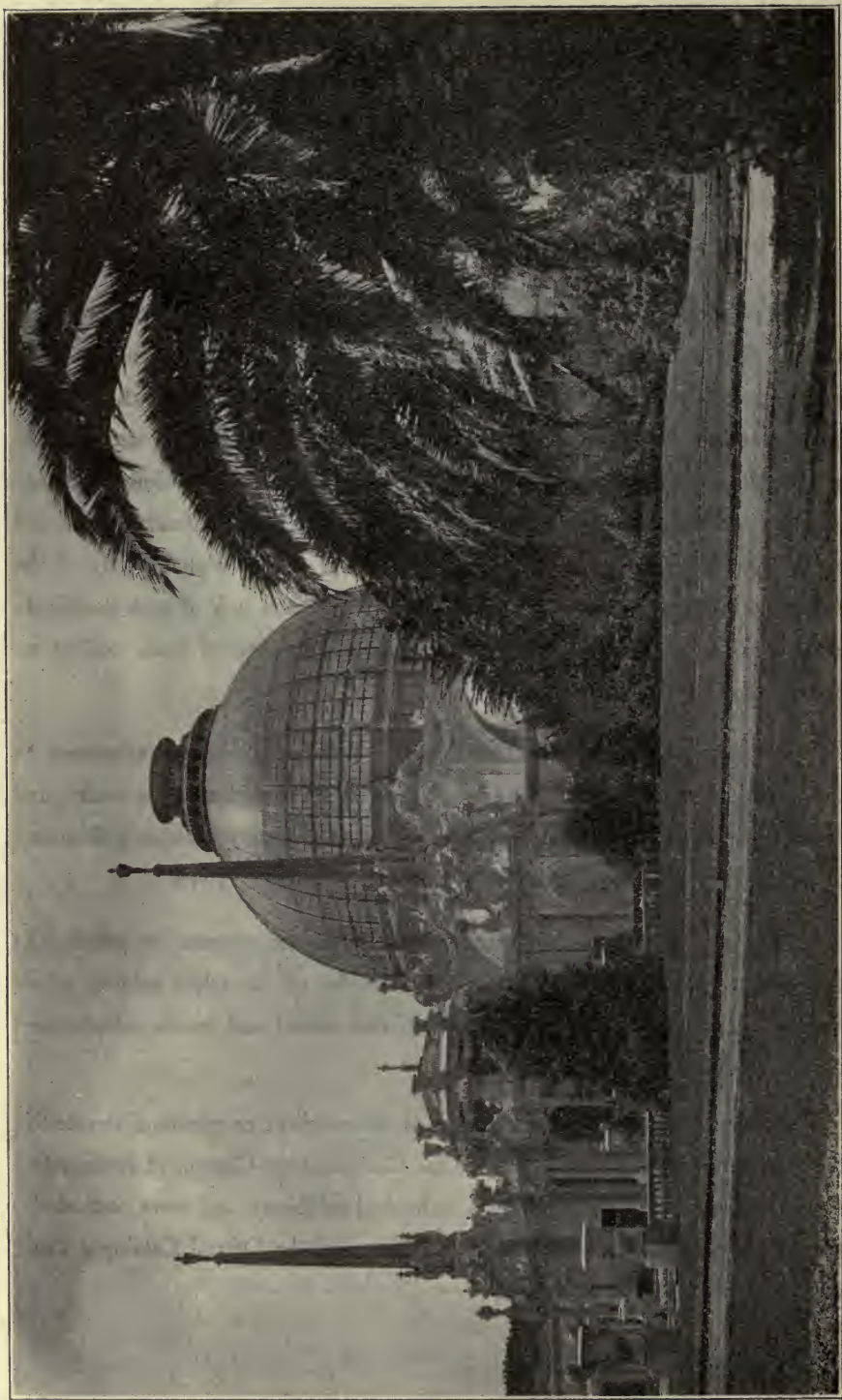
By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF HORTICULTURE

HORTICULTURE

Official Catalogue Department K

CLASSIFICATION OF EXHIBITS

Appliances and Methods of Pomology, Floriculture and Arboriculture.

Appliances and Methods of Viticulture.

Pomology.

Preserved, Dried and Pickled Fruits.

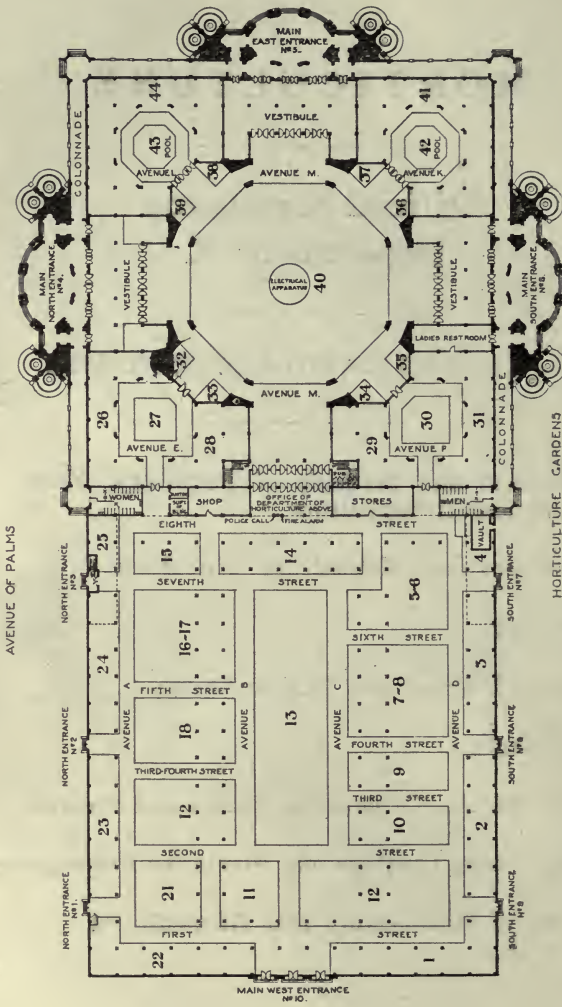
Fruit Culture.

Trees, Shrubs, Ornamental Plants and Flowers.

Seeds, Bulbs, Cuttings and Plants for Propagating.

Theory of Horticulture and Horticultural Statistics.

SOUTH GARDENS.



AVENUE OF PALMS

HORTICULTURE GARDENS

FLOOR PLAN

PALACE OF HORTICULTURE
PANAMA-PACIFIC INTERNATIONAL EXPOSITION
 OPEN-FEBRUARY 20 SAN FRANCISCO U.S.A. 1915 CLOSED-DECEMBER 4

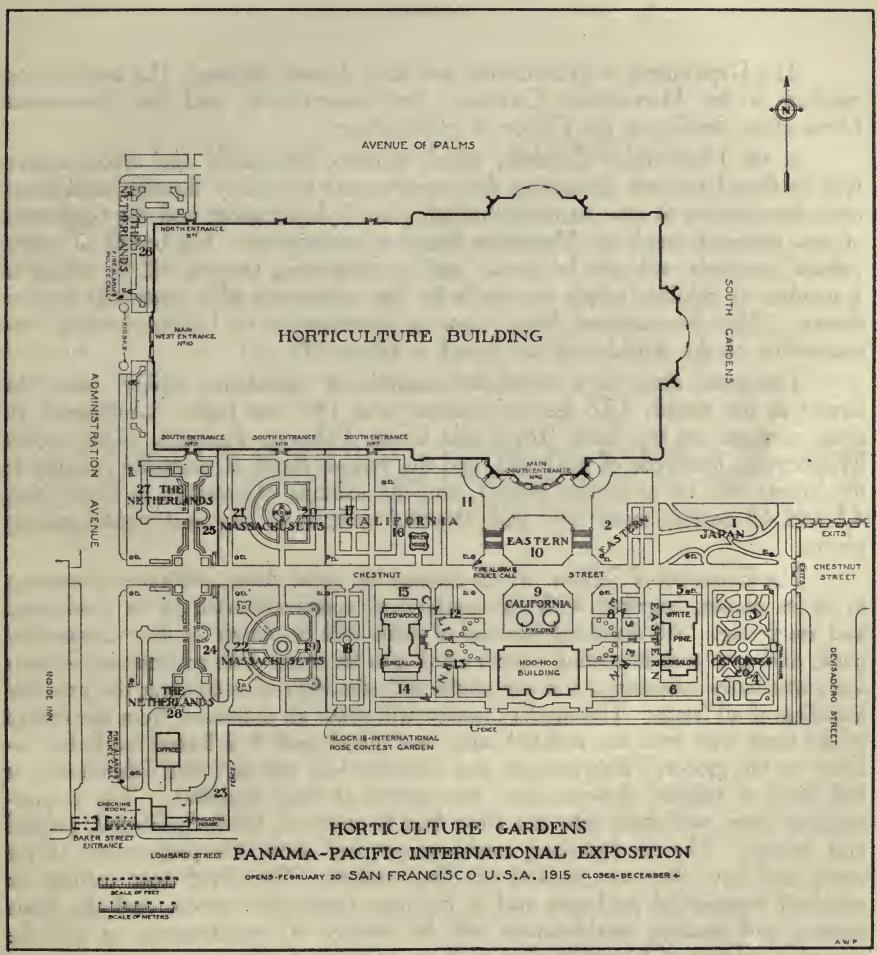
ADMINISTRATION AVENUE



SCALE OF FEET
 1" = 100'
 1/2" = 50'

INTRODUCTION

Department of Horticulture



HORTICULTURE BUILDING

FLOOR II - INTERNATIONAL ROSE CONTEST GARDEN

HORTICULTURE GARDENS

PANAMA-PACIFIC INTERNATIONAL EXPOSITION

OPENS-FEBRUARY 20 SAN FRANCISCO U.S.A. 1915 CLOSER-DECEMBER 6



INTRODUCTION

Department of Horticulture

By
G. A. DENNISON
Chief

The Department of Horticulture has three distinct sections: The out-of-doors exhibits in the Horticulture Gardens, the Conservatory, and the Economical Horticulture Section in the Palace of Horticulture.

In the Horticulture Gardens, which embrace floriculture and arboriculture, will be found exhibits illustrating the improvement of variety through seed selection, the creation of new varieties through plant hybridization, and the origination of new species through the Mendelian theory of segregation. The benefit of expert cultural methods will also be shown and an interesting feature will be found in a number of exhibits which are made by the originators of a particular fruit or flower. The International Rose Contest, participated in by the leading rose originators of the world, will be found in Block 18.

The great dome is a wonderful example of engineering ability, being the largest in the world, 152 feet in diameter and 186 feet high. Underneath its great expanse are the finest Royal and Cocos Palms in America. The curious *Mycrocycus*, hundreds of years old, and the various forms of plant life peculiar to the tropics will be of special interest, and the exhibits of aquatics in Pools Nos. 42 and 43 contain many new and beautiful varieties of day and night-blooming plants.

The Economical Section, which adjoins the great dome, embraces Pomology in all its phases, together with the mechanical appliances used in its production and marketing. All standard varieties of fruits will be shown in their commercial pack, and new and interesting varieties will also be seen. The educational features are particularly interesting, and are made with the idea of presenting the practical handling of all fruits. The model cannery will show all processes, from the receipt of the loose fruit from the orchard until, as canned fruit, it is boxed ready for delivery to the grocer. Microcopists and chemists will conduct their laboratories in full view of visitors, showing how they arrive at their decisions. The orange-packing house will show how the loose fruit is received, brushed, labeled, packed and boxed. The seed-packing establishment will show the preparation of the seeds and how they are packed for the market. The dried fruit exhibits in standard commercial packages and in the new family-size carton, and the raisin seeding and packing establishment will be worthy of consideration, as will the operating exhibits of horticultural machinery, spraying devices, etc.

The endeavor of the exhibit as a whole has been an arrangement which will prove of interest to the casual visitor who wishes to be entertained, to the student who desires to acquire objective demonstration of methods, to the business man seeking increased information as to standard packs and commodities, to the investing homeseeker desiring to be informed upon the horticultural resources of the various States and countries, to the housewife, that she may know how fruit is handled before it reaches her hands in any form of a commercial package.

HOW TO LOCATE AN EXHIBIT

The Palace of Horticulture is laid out in blocks, which are consecutively numbered from 1 to 44, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Eighth) running north to south, and as avenues (A to D), from east to west. To locate an exhibitor refer to the name, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisles location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

All Exhibits entered in this Catalogue are located in the Palace of Horticulture, **unless otherwise indicated** after the entry. The following are abbreviations used in this Catalogue to designate other Exhibit Palaces:

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace | Mch. Pal. |
| Transportation Palace | Trns. Pal. |
| Agriculture Palace | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

DEPARTMENT OF HORTICULTURE

Official Classification of Exhibits

GROUP 144

APPLIANCES AND METHODS OF POMOLOGY, FLORICULTURE AND ARBORICULTURE

- Class 700. Horticultural tools; methods and appliances for gathering, packing and transporting produce; pruning and grafting knives, ladders; tree diggers; watering apparatus; spraying apparatus and insecticides.
- Class 701. Frost-fighting principles, methods and devices; apparatus for preventing injury by frost; methods of de-frosting or thawing. Orchard heaters; heaters and vaporizers; heaters and covers.
- Class 702. Apparatus and objects for ornamenting gardens; vases, pots, chairs, seats, fountains, labels, etc.
- Class 703. Glass houses and their accessories; heating apparatus, mattings, etc.
- Class 704. Aquariums for plants. Ferneries, etc., for use in dwellings.
- Class 705. Garden architecture and landscape gardening; plans, drawings, models, books, pictures, etc.

GROUP 145

APPLIANCES AND METHODS OF VITICULTURE

- Class 706. Types of buildings used in connection with vine culture.
- Class 707. Methods of picking, packing and transporting fresh grapes.
- Class 708. Raisin growing; methods of curing, packing, grading, etc.

GROUP 146

POMOLOGY

- Class 709. Pomaceous and stone fruits: apples, pears, quinces, peaches, apricots, plums, nectarines, cherries, grapes, etc.
- Class 710. Citrus fruits: oranges, lemons, limes, shaddock, pomelos, etc.
- Class 711. Tropical and semi-tropical fruits: pineapples, avocados, bananas, guavas, mangoes, tamarinds, figs, olives, sapodillas, etc.
- Class 712. Small fruits: strawberries, raspberries, blackberries, dewberries, gooseberries, currants, etc.
- Class 713. Fruits matured in frost districts under frost protecting appliances.
- Class 714. Nuts: walnuts, almonds, chestnuts, filberts, pecans, hickorynuts, etc.
- Class 715. Casts and models of fruits in wax, plaster, etc. Photographs, publications and monographs. Labels for canned or preserved fruits.

GROUP 147

PRESERVED, DRIED AND PICKLED FRUITS

- Class 716. Fruits, dried or prepared: prunes, figs, raisins, peaches, apricots, dates, etc.
- Class 717. Fruits, canned, in tins or in glass. Fruits preserved without sugar.
- Class 718. Pickled fruits. Brandied fruits. Preserves, jellies and jams.
- Class 719. Processed fruits.
- Class 720. Olives: green, ripe, pickled and dried. Olive oil.
- Class 721. Equipment for and processes of canning fruit. Canning factories.

GROUP 148

FRUIT CULTURE

- Class 722. Collections of fruit trees and vines. Methods of propagating, packing, shipping, planting, growing, training, pruning, etc.
- Class 723. Plants of small fruits: strawberries, raspberries, blackberries, gooseberries, etc. Methods of propagating, growing, transplanting, training, packing, shipping, etc.
- Class 724. Methods of cross-fertilization of fruits and nuts.
- Class 725. Exhibits of insect pests and diseases of fruit trees, vines and plants, and modern appliances for their eradication. Advantages in the use of predaceous and parasitic insects.

GROUP 149

TREES, SHRUBS, ORNAMENTAL PLANTS AND FLOWERS

- Class 726. Ornamental trees, seedlings or grafted. Methods of propagating, packing, shipping, planting, growing, training, grafting, pruning, etc.
- Class 727. Ornamental shrubs, deciduous and evergreen. Methods of propagating, packing, shipping, planting, growing, training, grafting, pruning, etc.
- Class 728. Flowering plants for the park or garden. Bulbous plants. Herbaceous plants grown in open ground. Botanical specimens.

- Class 729. Plants for the conservatory, ornamental and flowering. Hot-house plants and those grown in houses of moderate temperature.
- Class 730. Specimens of culture used in different countries for use or for ornament.
- Class 731. Forced culture of fruits; specimens and processes.
- Class 732. Insect pests, fungus diseases and parasitic growths, affecting ornamental trees plants; natural and artificial methods of combating them.
- Class 733. Masses and baskets of flowers. Bouquets of natural flowers. Wax or other imitations of plants, leaves or flowers. Florists' supplies.

GROUP 150

SEEDS, BULBS, CUTTINGS AND PLANTS FOR PROPAGATING

- Class 734. Collections of seeds of flowers, plants and trees.
- Class 735. Collections of bulbs for planting.
- Class 736. Collections of cuttings or young plants for grafting. Nursery stock. Methods of packing and shipping.
- Class 737. Flowers and plants grown for perfumes, extracts, and medicinal uses.

GROUP 151

THEORY OF HORTICULTURE AND HORTICULTURAL STATISTICS

- Class 738. Charts or diagrams showing the comparative area occupied by fruit industries in states and countries. Charts or diagrams illustrating progress of organization among fruit growers for promotion of their industry by improved packing and marketing methods.
- Class 739. Charts showing moisture requirements of different fruits supplied by rainfall or irrigation, or by both. Charts or diagrams showing the period of ripening of different fruits in any state and country. Charts and names and time of market suitability of varieties of each fruit commercially grown in any state or country. Charts showing rainfall, sunshine and wind movements as affecting the character and yield of fruit.
- Class 740. Graphic representations of the history and work of state and national horticultural societies, including publications thereof.
- Class 741. Charts showing districts where frost protection will benefit growers.
- Class 742. Treatises on international, national and interstate fruit and fruit tree quarantine. Charts showing quarantine passports, tags, certificates, etc.

GROUP 144

APPLIANCES AND METHODS OF POM-
OLOGY, FLORICULTURE AND
ARBORICULTURE

Atkins, E. C. & Company, Indianapolis, Ind.
Pruning Saws. Mfr. Pal., 5th St., bet. Avs.
C & D.

Austin-Western Road Machinery Co., Chicago.
Lib. Arts Palace bet. Avs. B and C. Motor
Lawn mower, Mch. Palace, 4th & 5th Sts.

Bean Spray Pump Co., San Jose, Cal. Spray-
ing equipment and fittings. Ave. E.

California Spray Chemical Co., Watsonville,
Cal. 1st St. cor. Ave. A.

Cleveland Foundry Co., The, Cleveland, Ohio.
Mfr. Pal., Av. D, bet. 5th & 6th Sts. Mfrs.
of New Perfection Orchard Heater. The
skill and experience of the world's largest
manufacturer of oil-burning devices is back
of the Perfection line—the best materials,
careful workmanship, standardized methods,
constant inspection. The result—Perfection
products give uniform satisfaction and last
indefinitely.

Cleveland Lawn Weeder Co., The, Cleveland, O.
Weeders. Working exhibit, Horticulture
Gardens. The "Cleveland" Lawn Weeder.

Coldwell Lawn Mower Co., Newburgh, N. Y.
Lawn Mowers. 1st St. cor. Ave. D.

Disston, Henry & Sons, Inc., Philadelphia, Pa.
Pruning Saws; Post Hole and Tree Dig-
gers. Mfr. Pal., Av. C, cor. 6th St.

Field Force Pump Co., Elmira, N. Y. Spray-
ing Apparatus. 7th St., cor. Av. A.

Hercules Powder Co. San Francisco, Cal.
Horticultural Tools. Min. Pal. Ave. B &
7th St. Earth Augers, Subsoiling Bars;
Tree Planting; See Exhibit in Section 30, in
Palace of Mines and Metallurgy.

International Harvester Company of America,
Chicago, U. S. A. Horticultural Tools, etc.
Agr. Pal., 4th St. bet. Aves. B & C. Hor-
ticultural tools, methods and appliances,
Spraying Apparatus.

Rognier, G. & Co., San Mateo, Cal. Garden
ornaments. Ave. F. Fountain seats.

Stewart Fruit Co., Los Angeles and San
Francisco. Orange Packing. 1st St. Aves.
C & D. Complete orange packing plant
in operation, showing every phase of the
industry, including grading, sizing, packing,
box making, etc.

Union Oil Company of California, San Fran-
cisco, Cal. Min. Pal., 6th St. & Ave. B.
Distillate for Tree Spraying. Oil for Or-
chard heating; insecticides.

Winters Dried Fruit Co., Winters, Cal. Fruit
Grader. Av. A, cor. 7th St.

POMOLOGY

GROUP 146

Winters Dried Fruit Co., Winters, Cal. Al-
monds. Av. A, cor. 7th St.

GROUP 147

PRESERVED, DRIED AND PICKLED
FRUITS

Anderson-Barngrover Mfg. Co., San Jose, Cal.
Av. E. Canning and Dried Fruit Machin-
ery.

Ayars Machine Co., Salem, N. J. Electrical
timing device for process kettles. Bet. 1st
& 2nd Sts. & Avs. B & D.

California Associated Raisin Co., Fresno, Cal.
Raisins. bet. 7th and 8th Sts. & Avs. A&B.

Cal. Fruit Cannery Ass'n., San Francisco,
Cal. Canned Fruits. Av. B, 1st & 2nd Sts.

Castle Brothers, San Francisco, Cal. 1st St.,
cor. Av. A. Packers and Shippers; Cali-
fornia Dried Fruits; Main Office—106
Pine Street, Packing houses—San Fran-
cisco, San Jose, Fresno, Selma, Pomona.

Citizens Wholesale Supply Co., Columbus, O.
Fd. Pr. Pal., 4th St. bet. Avs. D & E.

Hawaiian Pineapple Packers' Assn., Hono-
lulu, T. H. Pineapple Products. Av. F.
Hawaiian Pineapple, Hawaiian Pineapple
Juice; Haiku Fruit & Packing Co., Ltd.,
Haiku, Maui, Hawaii, pineapple; Hawaii
Preserving Co., Honolulu, Hawaii, pine-
apple; Hawaiian Islands Packing Co., Wa-
hiawa, Oahu, Hawaii, pineapple; Hawaiian
Pineapple Co., Ltd., Honolulu, Hawaii,
pineapple; Kauai Fruit & Land Co., Kauai,
Hawaii, pineapple; Libby, McNeill & Lib-
by, Inc., of Honolulu, Hawaii, pineapple;
Maui Pineapple Co., Maui, Hawaii, pine-
apple; Pearl City Fruit Co., Ltd., Hono-
lulu, Hawaii, pineapple; Thomas Pineapple
Co., Honolulu, Hawaii, pineapple.

Heinz, H. J. Co., Pittsburg, Pa. Preserved
Fruits. Fd. Pr. Pal. 3rd St. cor. Av. C.

Hunt Brothers Co., San Francisco, Cal. Pres-
erved Fruits. 1st St., cor. Av. A.

Hydraulic Press Mfg. Co., Mt. Gilead, O.
Fruit Grinders. Bet. 1st & 2nd Sts. & Avs.
B & D.

Knapp Company, The, Fred H., Baltimore,
Md. Machinery. Bet. 1st & 2nd Sts. &
Avs. B & D. Can Labeling and Boxing
Machines.

Lady Betty, Inc., Brookline, Mass. Preserved
Fruits. Fd. Pr. Pal., Av. B2, cor. 3rd.

Libby, McNeill & Libby, Chicago, Ill. Pres-
erves, etc. Fr. Pr. Pal. Av. E, cor. 2nd
St. California Canned Fruits: Yellow
Free Peaches, Yellow Cling Peaches, White
Cling Peaches, Bartlett Pears, Grapes,
Seedless Grapes, Apricots, Royal Anne
Cherries, Black Cherries, Green Gage
Plums, Egg Plums, Hawaiian Pineapple,
Raspberries and Blackberries, Preserved
Fruits, Jellies, Jams, Marmalades, Apple
Butter, Olives, Olive Oil, Apples.

Los Angeles Olive Growers Ass'n., Los An-
geles, Cal. Olive Oil, 2nd St., cor. Av. A.

Morgan Machine Co., Rochester, N. Y. Ma-
chinery. Bet. 1st and 2nd Sts., and Avs.
B & D. Box Nailing Machine.

National Cannery Association, Washington,
D. C. Bet. 1st & 2nd Sts. & Avs. B & D.

American Can Co., New York and San
Francisco. Can Clinching Machine.

Anchor Cap & Closure Co., New York.
Vacuum Closing Machine.

Anderson-Barngrover Mfg. Co., San Jose,
Cal. Fruit Grader.

Beach Russ Co., Brooklyn, N. Y. Vacuum
Pump.

Berger & Carter Co., San Francisco. Fill-
ing Table.

Burpee & Letson, Bellingham, Wash. Weigh-
ing Machine.

Burt Labeling Machine Co., Baltimore, Md.
Can Labeling Machine.

Demming, F. L., Chicago, Ill. Combined
Vacuum Machine.

Dundon, P. J., San Francisco. Retort for
Canned Fruits.

Haller, Jos. F., Pittsburg, Pa. Berry
Washing Machine.

Hamilton Brass & Copper Works, Hamil-
ton, O. Steam Kettle.

- Hohmann & Maurer, Rochester, N. Y. Lye Peelers.
- Huntley Mfg. Co., Silver Creek, N. Y. Blanching Machine.
- Johnson Machine Co., San Francisco. Can Opening Device.
- Knapp, Fred H., Westminster, Maryland. Boxing Machine.
- Krenz, Oscar, San Francisco. Steam Tilt-ing Kettle.
- Morgan Machine Co., Rochester, N. Y. Box Nailing Machine.
- Tagliabeni, C. J. Co., Brooklyn, N. Y. Con-troller for Retort.
- Union Iron Works, San Francisco. Syrup Filling Machine.
- Pacific Coast Syrup Co., San Francisco, Port-land, Seattle. Preserved Fruits. 4th St., cor. Av. D.
- Pompeian Company, The, Genoa-Italy, Balti-more, U. S. A. Olive Oil. "The Pompeian Company is the largest importer of high-quality, edible olive oil in America. Olive oil is imported in bulk and packaged in an up-to-date, hygienic plant at Baltimore, under the most sanitary conditions. Enter your name on Pompeian register, and receive Pompeian receipt booklet with the story of Pompeian Olive Oil."
- Sprague Canning Machinery Co., Chicago, Ill. Can Washing Machines.
- Stewart Fruit Co., Los Angeles and San Francisco, Cal. Orange Packing. 1st St., bet. Avs. C & D. A complete orange pack-ing plant in operation, showing every phase of the industry, including grading, sizing, packing, box making and tagging.
- Stonham, E., Los Angeles, Cal. Pumps. Bet. 1st & 2nd Sts. & Avs. B & D.
- Thompson & Hills, Ltd., Auckland. Canned Fruits. Agr. Pal. Avs. C & D, bet. 6th & 8th Sts.
- Wellman, H. P., San Francisco. Can Marking Device. Bet. 1st & 2nd Sts. & Avs. B & D.
- Winters Dried Fruit Co., Winters, Cal. Dried Fruits. Av. A, cor. 7th St.
- Wright, E. A., Oakland, Cal. Preserved Fruits, 7th St., cor. Av. D.
- Dingee & Conrad Co., West Grove, Pa. Roses. Block 2, Bed IV.
- Dreer, Henry A., Inc., Philadelphia, Pa. Aquatic Plants. Av. L. Largest growers in America. Seeds, Plants and Bulbs of all kinds. Write for catalog. Seeds fresh and reliable.
- Eicholz, Henry, Waynesboro, Pa. Roses. Block 18, Bed XXXIV.
- Farr, Bertrand H., Wyomissing, Pa. Flowering Plants. Blocks 5 & 6, Bed XXIV, A & B.
- Hill, E. G. Co., Richmond, Ind. Roses. Block 18, Beds XXVI and XLVII.
- Horticultural Federation of the Nether-lands. Blocks 23, 24, 25, 26, 27, 28, Hort. Gardens. Large collective exhibit of trees, shrubs and plants.
- Howard & Smith, Los Angeles, Cal. Roses. Block 18.
- Kasting, Wm. F. Co., Buffalo, N. Y. Cannas. Block 10, Bed IX.
- McGredy, Samuel & Son, Portadown, Ireland. Roses. Block 18.
- Michell, Henry F., Company, Philadelphia, Pa. Buddleia, Block 5, Bed XXII; and Cannas, Block 2, Bed VI.
- Friend Mfg. Co. Gasport, N. Y. Spraying Equipment. 1st St. cor. Ave. A.
- Hammond, Benjamin, Beacon, N. Y. Insecti-cides, etc. Horticultural Garden.
- Morse, C. C. & Co., San Francisco, Cal. Seed Growers and Dealers, 4th St., cor. Av. D, Blocks 3 and 4, Horticultural Gar-dens. Collection of Annuals, Sweet Peas and various flowers, Roses, Dahlias, new-est and best varieties; Hyacinths, Daf-fodils, Tulips and various Holland Bulbs. Onion Lettuce, Radish, Pumpkin, Tomato, Corn, etc. Alfalfa, Clovers and Grasses. Largest wholesale seedman and seed grow-ers on Pacific Coast. Seeds by mail—cata-log free. Morse's seeds on sale by all leading dealers west of Kansas. Morse's seeds are all tested. Morse's seeds noted for quality. Retail Store, 125 Market St., San Francisco.

GROUP 148

FRUIT CULTURE

- Schoener, Rev. Geo., Brooks, Ore. Black-berry Plants. Block 14, Bed XXXIV.

GROUP 149

TREES, SHRUBS, ORNAMENTAL PLANTS AND FLOWERS

- Artificial Decorative Plant Co., San Fran-cisco. Artificial Plants. 2nd St., cor. Av. B.
- Brant-Heintz Flower Co., Madison, N. J. Roses. Block 18, Bed XLIII.
- Childs, John Lewis, Flowerfield, L. I., N. Y. Gladioli and Lilies. Block 5, Bed XXII.
- Cockerell, T. D. A. and W. P., Boulder, Colo. Sunflowers. Block 6, Bed XXIV.
- Conard & Jones Company, The, West Grove, Pa. Cannas, Block 10. Originators and merchants of fine roses and canna lillies. Send for catalog—free.
- Cook, John, Baltimore, Md. Roses. Block 18, Bed XLII.
- Cowee, Arthur, Berlin, N. Y. Gladioli. Blocks 7 and 8, Beds XI6 to XX inclusive. Representative and Grower of Groff's Hy-brids and Originations; originator and Grower of many fine varieties. Illustrated catalog sent free upon request.
- Philippine Board. Large collection of or-chids. Conservatory, Philippine Pavilion.
- Pleas, C. E. Plant Co., Chipley, Florida. Kudzu, Forage and Ornamental Vine, Con-servatory and on lattice between Blocks 18 and 19, 17 and 20. Plants for sale.
- Rea, Frederick J., Norwood, Mass. Phlox. Mass. Coll. Exhibit, Horticultural Gardens. Hardy varieties.
- Reuter, S. J. & Son, Westerly, R. I. Roses. Block 18, Bed XL.
- Schoener, Rev. Geo., Brooks, Ore. Roses. Block 18.
- Tevis, Dr. Harry L., Alma, Cal. Loan ex-hibit, Conservatory.
- Totty, Charles H., Madison, N. J. Roses. Block 18; Heliotrope, Block 5, Bed XXII.
- Tricker, William, Arlington, N. J. Aquatic Plants, Av. K.
- U. S. Dept. of Agriculture Experiment Sta-tions. Dasheen, Vines, Palms. Conservatory.
- Vaughan's Seed Store, Chicago, Ill. Gladioli, Block 2, Bed I. Roses, Cannas; growers of Gladiolus Bulbs in quantity and variety. An international collection.
- Wagner, J. B., Pasadena, Cal. Wagner's Giant Winter Rhubarb yield. \$1000 acre yearly. Block 6, Bed XXXV.

Whitacre, H. W., Seattle, Wash. Banwine Rhubarb. Block 6, Bed XXIV. A new variety, very early and of delicious flavor. Quick growth. Ask for catalog.

Wilmore, W. W., Denver, Colo. Dahlias, Block 6, Bed XXIA, and Block 7, Bed XXIB.

Wilmore, W. W., Jr., Wheatridge, Colo. Dahlias, Gladioli, Canna. Block 7, Bed XV. Novelties a specialty.

Wood, Allen L., Rochester. Boxwood Plants.

Watase, Torajiro, Toyko. Seeds of ornamental plants. Av. A, cor. 4th St.

Zvolanek, Ant. C., Lompoc, Cal. Sweet Peas, Winter flowering Sweet Peas. Blocks 16 and 17, Beds XL and XLIII. These sweet peas usually bloom in 60 to 90 days after sowing, any time in the year; out of doors or in greenhouses, originated and

STATE EXHIBITS

ARKANSAS

Location: Bet. 2nd & 4th Sts., and Avs. A & B
GROUP 144

Benton County Hardware Co.—Rogers. Spraying Apparatus.

Elocher, J. W.—Hiwasse. Cartons.

Graham Mfg. Co.—Fruit Shipping Packages.

Owasso Mfg. Co.—Benton. Folding Crates.

Parker Bros.—Fayetteville. Landscape Gardening, etc.

State of Arkansas.—Types of Heaters.

Thomsen Chemical Co.—Rogers. Insecticides.

University of Arkansas.—Fayetteville. Landscape Gardening.

Woods, H.—Bentonville. Cartons.

GROUP 146

Alexander, J. R.—Scotts Nuts.

Ammons, W. E.—Bentonville. Pomaceous Fruits.

Barnes, Mrs. J. N.—Jacksonville. Nuts.

Batjer, W. F. D.—Rogers. Pomaceous Fruits.

Bert Johnson Orchard Co.—Labels.

Boyle, A. G.—Bentonville. Pomaceous Fruits.

Britt, J. J.—Bentonville. Pomaceous Fruits.

Cornelius, J. T.—Rogers. Pomaceous Fruits.

Curry, C. H.—Centerton. Pomaceous Fruits.

Derryberry, J. M.—Rogers. Pomaceous Fruits.

Downer, E. C.—Rogers. Pomaceous Fruits.

Eicher, D. E.—Springdale. Pomaceous Fruits.

Eicher, J. A.—Springdale. Pomaceous Fruits.

Farris, J. C.—Centerton. Pomaceous Fruits.

Forester, U. S.—Harrison. Nuts.

Garver, S.—Centerton. Pomaceous Fruits.

Giger, Julius.—Bentonville. Pomaceous Fruits.

Gipple, H. W.—Bentonville. Pomaceous Fruits.

Highland Orchard Co.

Hough, P. H.—Springdale. Pomaceous Fruits.

Jacks, J. C.—Marianna. Nuts.

Jordan, J. M.—Centerton. Pomaceous Fruits.

Keiffer, Francis.—Harrison. Nuts.

Keith & Sons.—Hiwasse. Pomaceous Fruits.

Lane, D. O.—Gentry. Pomaceous Fruits.

Lee, J. P.—Fayetteville. Pomaceous Fruits.

Lincoln, Geo.—Bentonville. Pomaceous Fruits.

McDavid, G. U.—Springdale. Pomaceous Fruits.

McLean, L. D.—Rogers. Pomaceous Fruits.

Millsop, A. D.—Farmington. Pomaceous Fruits.

Peay, Rayburn.—Johnson. Pomaceous Fruits.

Rand, L. L.—Gentry. Pomaceous Fruits.

Reeder, Geo.—Rogers. Pomaceous Fruits.

Robrck, I. E.—Johnson. Pomaceous Fruits.

Rubart, Lizzie.—Batavia. Clay Models.

Sauge, Louis.—Alexander. Nuts.

Sharp, E. G. S.—Rogers. Pomaceous Fruits.

Stover, C. E.—Rogers. Pomaceous Fruits.

Swenson, E. T.—Bentonville. Pomaceous Fruits.

University of Arkansas.—Fayetteville. Models.

Whitesides, S.—Decatur. Pomaceous Fruits.

Whitfield, D. H.—Bentonville. Pomaceous Fruits.

Woods, J. N.—Rogers. Pomaceous Fruits.

GROUP 147

Appleby & Co.—Fruit in Tins.

Ardmagna, Felix.—Tonnetitown. Processed Fruits.

Barnes, Mrs. Gertrude.—Little Rock. Fruits in Glass.

Bennett, Mrs. H. M.—Little Rock. Jellies.

Bert Johnson Orchard Co.—Fruit in Tins.

Caudle, E.—Greenwood. Fruits in Glass.

Crossnoe, Mrs. T. C.—Hope. Jellies.

Dixie Canner Co.—Little Rock. Equipment for Canning Fruits.

Doyle, Mrs. C. E.—Little Rock. Fruits in Glass.

Green, Mrs. Elliott.—Morrilton. Fruits in Glass.

Hamilton & Son.—Fayetteville. Dried Fruits.

Holland American Co.—Fruit in Tins.

Jonesboro Argicultural School.—Jonesboro. Processed Fruits.

K. C. Southern Ry.—Processed Fruits.

Kimmons, Walker & Co.—Fayetteville. Dried Apples.

M. & N. A. Ry.—Processed Fruits.

Morgan Sanitary Evaporator Co.—Rogers. Fruits in Tins.

Smith, L. A.—Springdale. Fruits in Tins.

State of Arkansas, by Cotton Belt Ry.—Processed Fruits.

State of Arkansas, by Commissioner of Agriculture.—Processed Fruits.

Teasdale, J. E.—Rogers. Dried Apples.

Tuggle, W. M.—Processed Fruits.

GROUP 148

Bauer, J. C.—Judsonia. Plants of Small Fruits.

Britt, J. J.—Bentonville. Fruit Trees and Vines.

Cope, W. A.—Jonesboro. Fruit Tree Diseases and Insect Pests.

Green, T. H.—Russellville. Fruit Tree Diseases and Insect Pests.

Goree, Earl.—Springdale. Fruit Trees and Vines.

Hewitt, J. S., University of Arkansas.—Fruit Tree Diseases and Insect Pests.

Parker Bros.—Fayetteville. Fruit Trees and Vines.

Stark Bros. N. & O. Co.—Fayetteville. Fruit Trees and Vines.

University of Arkansas.—Fayetteville. Fruit Tree Diseases and Insect Pests.

University of Arkansas.—By W. H. Wicks. Fruit Cross Fertilization.

Vestal, J. W. & Son.—Little Rock. Plants of Small Fruits.

Waller, J.—Judsonia. Plants of Small Fruits.

Wilson, L. C.—Wicks. Methods of Growing.

GROUP 149

Parker Bros.—Fayetteville. Ornamental Trees.

University of Arkansas.—Fayetteville. Insecticides.

Vestal, J. W. & Son.—Little Rock. Ornamental Trees.

GROUP 150

Britt, J. J.—Bentonville. Nursery Stock, Methods of Packing.
Goree, Earle.—Springdale. Nursery Stock.
McKnight, Mrs. W. A.—Little Rock. Collection of Flower Seeds.
Stark Bros., N. & O. Co.—Fayetteville. Nursery Stock, Methods of Packing.
University of Arkansas.—Fayetteville. Collection of Flower Seeds.

GROUP 151.

Ozark Fruit Growers Ass'n.—Rogers. Charts for Shipping Purposes.
State of Arkansas.—Charts.
State of Arkansas.—State Horticultural Reports.

CALIFORNIA

Location: Bet. Aves. B & C & 2nd & 7th Sts.

GROUP 146

Alameda County. Pomaceous, stone and citrus fruits; nuts.
California Almond Growers' Exchange, Sacramento. Almonds.
Humboldt County. Pomaceous and stone fruits; nuts.
Kern County. Pomaceous, stone and citrus fruits; nuts.
Mendocino County. Pomaceous and stone fruits; nuts.
Monterey County. Pomaceous and stone fruits; nuts.
Napa County. Pomaceous, stone and citrus fruits; nuts.
San Joaquin Valley Counties Commission, Fresno. Fresno, Merced, Madera, Kings, Stanislaus, San Joaquin, Calaveras and Mariposa. Pomaceous, stone and citrus fruits; nuts.
Santa Barbara County. Pomaceous, stone and citrus fruits; nuts.
Santa Clara County. Pomaceous and stone fruits; nuts.
Santa Cruz County. Pomaceous and stone fruits; nuts.
Shasta County. Pomaceous, stone and citrus fruits; nuts.
Siskiyou County. Pomaceous, stone and citrus fruits; nuts.
Solano County. Pomaceous, stone and citrus fruits; nuts.
Sonoma County. Pomaceous, stone and citrus fruits; nuts.
Southern California Counties Exposition Commission, Los Angeles. Los Angeles, San Diego, San Bernardino, Riverside, Orange, Ventura and Imperial counties. Citrus fruits; nuts. San Bernardino and San Diego counties. Pomaceous and stone fruits.
Sutter County. Pomaceous, stone and citrus fruits; nuts.
Tulare County. Pomaceous, stone and citrus fruits; nuts.
Yolo County. Pomaceous, stone and citrus fruits; nuts.

GROUP 147

Alameda County. Dried, canned and processed fruits; olives and olive oil.
Kern County. Dried, canned and processed fruits; olives and olive oil.
Monterey County. Dried, canned and processed fruits.
Napa County. Dried, canned and processed fruits.
San Joaquin Valley Counties Commission, Fresno. Fresno, Merced, Madera, Kings, Stanislaus, San Joaquin and Calaveras counties. Dried, canned and processed fruits. Fresno, Merced, Madera, Kings, Stanislaus and San Joaquin counties. Olives and olive oil.

Santa Barbara County. Dried, canned and processed fruits; olives and olive oil.

Santa Clara County. Dried, canned and processed fruits; olives and olive oil.

Santa Cruz County. Dried, canned and processed fruits; olives and olive oil.

Shasta County. Dried, canned and processed fruits; olives and olive oil.

Siskiyou County. Dried, canned and processed fruits.

Solano County. Dried, canned and processed fruits.

Sonoma County. Dried, canned and processed fruits.

Southern California Counties Exposition Commission, Los Angeles. Los Angeles, San Diego, San Bernardino, Riverside, Orange, Ventura and Imperial counties. Dried, canned and processed fruits. Ventura, Los Angeles, Orange and San Diego counties. Olives and olive oil.

Sutter County. Dried, canned and processed fruits; olives and olive oil.

Tulare County. Dried, canned and processed fruits; olives and olive oil.

Yolo County. Dried, canned and processed fruits; olives and olive oil.

GROUP 148

Etter, Albert F.—Briceland, Humboldt Co. Strawberry Plants. Blks. 13&14, Bed XXXVI
State Commission of Horticulture, Sacramento. Practical illustration of the State Insectory Service.

GROUP 149.

Alameda County. Trees, shrubs, ornamental plants and flowers.
Branin, Mrs. Jemima.—San Lorenzo. Roses. Block 18, Bed XLII.
Bustrim, Wm.—Watsonville. Lilies. Harrisii Lilies. Block 16, Bed LX.
California Rose Co.—Pomona. Roses. Blk 17, Beds LXVIII and LXIX.
Coates, Leonard Co.—Morganhill. Acacias, Eucalyptus, Trees and Shrubs. Block 15, Bed XXVI (trees and shrubs); Block 16, Bed LXI (acacias and eucalyptus).
Diener, E. & Co.—Mountain View. Flowering Plants. Block 2, Bed VIII and Block 11, Bed L (geraniums).
Etter, Albert F.—Briceland, Humboldt Co. Hybrid Columbines. Block 15, Bed XXXI.
Gill E. Nursery Co.—West Berkeley. Roses. Block 16, Bed LVII.
Lilley, J. Eaden.—Santa Cruz. Freesias. Block 16, Bed LXIII.
Lincoln, O. J.—Santa Cruz. Gladioli. Block 13, Bed XXVI.
Lohrmann, R.—San Rafael. Flowering Plants. Block 16, Bed LV.
Pacific Coast Bulb Co.—Santa Cruz. Tulips. Block 17, Bed LXIII.
Purdy, Carl.—Ukiah. Bulbous Plants. Blk. 17, Bed LXX & LXXI, Blk. 15, Bed XXXI.
Roeding, Geo. Co.—Fresno. Evergreens, Palms, etc. Blk. 2, Bed VII (palms); Blk. 8 Bed XII (evergreen shrubs); Blk. 8, Beds XII, XIII and XIV (conifers).
San Joaquin Valley Counties Commission, Fresno, Fresno County. Trees, shrubs, ornamental plants and flowers.
San Mateo County. Trees, shrubs, ornamental plants and flowers.
Turner, Henry W.—Montebello. Roses. Blk. 17, Bed LXVI.
Vallance Nursery Co.—Oakland. Roses. Evergreens and conifers. Block 16, Bed LV.
Vanderbilt, Newell F.—San Rafael. Delphiniums and Dahlias. Blk. 17, Bed LXX.
Wallace, Grant.—San Mateo. Eucalyptus. Blk. 17, Bed LXII.

GROUP 150

Alameda County. Seeds, bulbs, cuttings and plants for propagating.
 San Joaquin Valley Counties Commission, Fresno, Fresno County. Seeds, bulbs, cuttings and plants for propagating.
 San Mateo County. Seeds, bulbs, cuttings and plants for propagating.

GROUP 151

State Commission of Horticulture, Sacramento. Theory of Horticulture; maps, charts and publications; State Quarantine Service.

IDAHO

Location: Bet. 7th & 8th Sts. & Avs. B & C.

GROUP 146

Ahlstrand Fred.—Fruitland. Apples.
 Alderson, Jno.—Weiser. Apples.
 Alspace, S. B.—Payette. Apples.
 Barnes, Dr. N. B.—Emmett. Apples.
 Beckwith, T. J.—Payette. Apples.
 Berg, Louis.—Emmett. Apples.
 Blakesley, B. C.—Fruitland. Apples.
 Blakesley & Graham.—Fruitland. Apples.
 Bolton, S. H.—Twin Falls. Apples.
 Brockman, Fred.—Weiser. Apples.
 Cable, H.—Weiser. Apples.
 Chisholm, H. C.—Twin Falls. Apples.
 Conway, J. R.—Twin Falls. Apples.
 Danielson, C. A.—Emmett. Apples.
 Dorothy, L. P.—Fruitland. Apples.
 Duell, Chas.—Fruitland. Apples.
 Fisher, Grant.—Fruitland. Apples.
 Focht, Wm.—Twin Falls. Apples.
 Fosselman, T. A.—Weiser. Apples.
 Fouts, W. R.—Payette. Apples.
 Frank, Geo.—Fruitland. Apples.
 Fritchman, Clarence.—Wood Spur. Apples.
 Garman, N. J.—Payette. Apples.
 Golden, H. E.—Payette. Apples.
 Goldsmith, Ira.—Weiser. Apples.
 Graham, Guy.—Fruitland. Apples.
 Green, Jay.—Twin Falls. Apples.
 Haines, J. D.—Weiser. Apples.
 Harland, H.—Wood Spur. Apples.
 Hengler, Chas.—Fruitland. Apples.
 Hengler, Chas. B.—Fruitland. Apples.
 Hollenberg, H. B.—Weiser. Apples.
 Hunter, E. E.—Fruitland. Apples.
 Huntington, C. K.—Fruitland. Apples.
 Jerome, Louis.—Payette. Apples.
 Johnson, A. E.—Parma. Apples.
 Johnson, Axel.—Payette. Apples.
 Johnson, W. H.—Twin Falls. Apples.
 Jones, David.—Wood Spur. Apples.
 Kaufman, H. A.—Fruitland. Apples.
 Kennison, H. B.—Fruitland. Apples.
 Larson, C. E.—Payette. Apples.
 Latig, C. P.—Wood Spur. Apples.
 Latig, G. W.—Wood Spur. Apples.
 Lewis, Harry.—Fruitland. Apples.
 Lincoln, Geo.—Twin Falls. Apples.
 Madsen & Edgcomb.—Fruitland. Apples.
 Martin, C. H.—Emmett. Apples.
 Minish, B. S.—Twin Falls. Apples.
 Moulton, Jno.—Weiser. Apples.
 Munn, T. E.—Weiser. Apples.
 Nesbit, S. K.—Twin Falls. Apples.
 Oster, Wm.—Wood Spur. Apples.
 Pardun, S. and D.—Fruitland. Apples.
 Pennington, A. J.—Weiser. Apples.
 Perrine, I. B.—Twin Falls. Apples.
 Powell, M. E.—Fruitland. Apples.
 Rand, Lester.—Fruitland. Apples.
 Reed, W. A.—Fruitland. Apples.
 Rezac, Geo.—Wood Spur. Apples.
 Rinehart, Loren.—Council. Apples.
 Rogers, A. A.—Fruitland. Apples.
 Sante, G. V.—Council. Apples.
 Schermer, Wm.—Weiser. Apples.
 Schriftfeld, J. O.—Fruitland. Apples.

Shanks, L. M.—Payette. Apples.
 Smith Bros.—Fruitland. Apples.
 Smith H. E.—Payette. Apples.
 Snyder, L. A.—Twin Falls. Apples.
 Spencer, Wm.—Twin Falls. Apples.
 Starr, W. S.—Twin Falls. Apples.
 Steele, John.—Parma. Apples.
 Stetler, A. A.—Fruitland. Apples.
 Stimson, B. H.—Emmett. Apples.
 Stoughton, B. W.—Wood Spur. Apples.
 Supplee, F.—Wood Spur. Apples.
 Taylor, L. Z.—Fruitland. Apples.
 Taylor, M. R.—Parma. Apples.
 Waters & Cook.—Twin Falls. Apples.
 Wells, A. L.—Payette. Apples.
 White, Dan.—Fruitland. Apples.
 Whiteside, Mrs. Lydia.—Emmett. Apples.
 Whitsell, J. H.—Fruitland. Apples.
 Williams, D. W.—Weiser. Apples.
 Wood, A. E.—Wood Spur. Apples.
 Woods, R. H.—Wood Spur. Apples.
 Wynn, P.—Twin Falls. Apples.
 Young, Lee.—Payette. Apples.

GROUP 147

Ahlstrand Br's.—Payette. Processed Fruits.
 Ames, G. E.—Lewiston. Processed Fruits.
 Apple, W. N.—Emmett. Processed Fruits.
 Bankson, W. H.—Lewiston. Processed Fruits.
 Barnes, Dr. N. B.—Emmett. Processed Fruits.
 Barranger, T. C.—Emmett. Processed Fruits.
 Beckwith, T. J.—Payette. Processed Fruits.
 Berridge, Mrs. Diana.—Boise. Processed Fruits.
 Blank, E. A.—Boise. Processed Fruits.
 Blatner, John.—Weiser. Processed Fruits.
 Bohrer, Chas. H.—Weiser. Processed Fruits.
 Bowers, B. C.—Emmett. Processed Fruits.
 Brunning, Jos.—Fruitland. Processed Fruits.
 Buck, S.—Lewiston. Processed Fruits.
 BUCKMAN, C. D.—Emmett. Processed Fruits.
 Buena Vista Farm, B. S. Wright, Prop.—Emmett. Processed Fruits.
 Callender, Will.—Emmett. Processed Fruits.
 Cantwell & Glass.—Swan Falls. Processed Fruits.
 Clark, D. W.—Lewiston. Processed Fruits.
 Cockran, H. H.—Emmett. Processed Fruits.
 Coffman, J. W.—Weiser. Processed Fruits.
 Conway, J. R.—Twin Falls. Processed Fruits.
 Cook, Chas.—Emmett. Processed Fruits.
 Dagnall, Geo.—Lewiston. Processed Fruits.
 Danielson, C. A.—Emmett. Processed Fruits.
 Dean, E. E.—Wood Spur. Processed Fruits.
 De Clark, H. J.—Emmett. Processed Fruits.
 Dewey, J. C.—Emmett. Processed Fruits.
 Dodge, Mrs. R.—Boise. Processed Fruits.
 Driscoll, Mrs. T.—Payette. Processed Fruits.
 Duffie, Allen H.—Lewiston. Processed Fruits.
 Durham Bros.—Emmett. Processed Fruits.
 Elwood, A. E.—Payette. Processed Fruits.
 Eureka Ranch, H. W. Holler, Prop.—Emmett. Processed Fruits.
 Fest, H. L.—Emmett. Processed Fruits.
 Flagler, Ira L.—Emmett. Processed Fruits.
 Fletmore, Lot L.—Weiser. Processed Fruits.
 Forner, Geo.—Payette. Processed Fruits.
 Foster, F.—Boise. Processed Fruits.
 Fouts, W. A.—Payette. Processed Fruits.
 Gamage, C. L.—Emmett. Processed Fruits.
 Gamin & Theuser—Weiser. Processed Fruits.
 Gem Fruit Farm, J. L. Jensen, Prop.—Emmett. Processed Fruits.
 Glenn, Sam.—Boise. Processed Fruits.
 Gray, H. C.—Lewiston. Processed Fruits.
 Hallock, Jason—Weiser. Processed Fruits.
 Hartley, Chas.—Emmett. Processed Fruits.
 Hartley, Ray.—Emmett.
 Hayes, E. K.—Emmett. Processed Fruits.
 Haynes, L. L.—Lewiston. Processed Fruits.
 Heath, I.—Emmett. Processed Fruits.
 Hitt, J. I.—Emmett. Processed Fruits.
 Homa, Wm.—Payette. Processed Fruits.

Indian Cache Ranch—Lewiston. Processed Fruits.
 Kefauver, Paul—Emmett. Processed Fruits.
 Knox, H. L.—Emmett. Processed Fruits.
 Lathrop, A. C.—Emmett. Processed Fruits.
 Lee, N. R.—Lewiston. Processed Fruits.
 Lipes, D. H.—Lewiston. Processed Fruits.
 Maneman, A. C.—Fruitland. Processed Fruits.
 Marker, J. P.—Emmett. Processed Fruits.
 Martin, Chas.—Emmett. Processed Fruits.
 McCool, R. A.—Emmett. Processed Fruits.
 Mesa Orchard Co.—Mesa. Processed Fruits.
 Moulton, John—Weiser. Processed Fruits.
 Mutch, F. E.—Caldwell. Processed Fruits.
 Niagara Spring Orchard—Twin Falls. Processed Fruits.
 Obermeyer, Lou—Emmett. Processed Fruits.
 Paine, Ben—Roswell. Processed Fruits.
 Patvin, E.—Lewiston. Processed Fruits.
 Payette Commercial Club—Payette. Processed Fruits.
 Perrine, I. B.—Twin Falls. Processed Fruits.
 Phillip & Bodenbaugh—Caldwell. Processed Fruits.
 Pickering, R.—Lewiston. Processed Fruits.
 Prockish, Geo. J.—Weiser. Processed Fruits.
 Purcell, Neph—Payette. Processed Fruits.
 Raymond, E. H.—Boise. Processed Fruits.
 Richards, A. S.—Emmett. Processed Fruits.
 Romrell, Geo. H.—McCannon. Procd. Fruits.
 Sanders, John—Emmett. Processed Fruits.
 Santa Rosa Orchard Co., D. L. Ingard, Prop.—Fruitland. Processed Fruits.
 Schleicher, R.—Lewiston. Processed Fruits.
 Shaw, R. B.—Emmett. Processed Fruits.
 Shaw, R. W.—Emmett. Processed Fruits.
 Singel, C. J.—Boise. Processed Fruits.
 Slager, Ira—Emmett. Processed Fruits.
 Smitchger, L.—Boise. Processed Fruits.
 Sommercamp, H. J.—Fruitland. Processed Fruits.
 Stern, E. D.—Boise. Processed Fruits.
 Stephens, E. F.—Nampa. Processed Fruits.
 Sullivan & Sullivan—Emmett. Processed Fruits.
 Taylor, E. P.—Payette. Processed Fruits.
 Taylor, Geo.—Boise. Processed Fruits.
 Taylor, S. F.—New Plymouth. Procd. Fruits.
 University of Idaho—Moscow. Procd. Fruits.
 Vahlberg, E. C. & Sons—Emmett. Processed Fruits.
 Valberg, Ed.—Emmett. Processed Fruits.
 Warden, Abner—Emmett. Processed Fruits.
 Weiser Fruit & Produce Growers' Association—Weiser. Processed Fruits.
 Wherry, G. G.—Lewiston. Processed Fruits.
 Whitmore, J. A.—Boise. Processed Fruits.
 Wills, A. C.—Emmett. Processed Fruits.
 Wills, J. A.—Emmett. Processed Fruits.
 Wilson, Silas—Nampa. Processed Fruits.
 Wood, A. E.—Payette. Processed Fruits.
 Wynn, P.—Twin Falls. Processed Fruits.
 Yeck, John—Emmett. Processed Fruits.
 Yost, W. W.—Boise. Processed Fruits.

KANSAS

Location: Bet. 2nd & 3rd Sts. & Avs. C & D.

GROUP 146

Alters, John—Belle Plain. Apples.
 Blair, George A.—Mulvane. Apples.
 Butts, J. S.—Mulvane. Apples.
 Dickson Orchard Co.—Arkansas City. Apples.
 Glover Bros.—Sedgewick City. Apples.
 Hoover, E. G., Hoover Orchard—Wichita. Apples.
 Mason, Thomas—Oxford. Apples.
 Ross Bros.—Wichita. Apples.
 Smith, George B.—Wichita. Apples.
 Thomas Orchard Co.—Wichita. Apples.
 Wickham, Chas.—Wichita. Berries, peaches.
 Yaggy Orchard Co.—Hutchinson. Apples.

GROUP 147

Glover Bros.—Sedgewick City. Processed Fruits.
 Hanson, H. J.—Wichita. Processed Fruits.
 Hoover, E. G., Hoover Orchard—Wichita. Processed Fruits.
 Ross Bros.—Wichita. Processed Fruits.

MASSACHUSETTS

Location: Blocks 19, 20, 21 and 22,
 Horticulture Gardens

GROUP 149

Alexander, J. K.—East Bridgewater. Dahlias.
 Bay State Nurseries—North Abington. Trees, Shrubs (Blocks 19, 20, 21, 22, Horticulture Gardens). Growers of hardy ornamental trees, shrubs, vines, perennials, etc., at wholesale and retail. Catalog and price list mailed upon request. W. H. Wyman, Proprietor.
 Boston & Maine Railroad Co.—Shrubs.
 Breck-Robinson Co.—Lexington. Trees, plants.
 Cherry Hill Nurseries, T. C. Thurlow Sons, Inc., Proprietors—West Newbury. Plants.
 Dwyer, Edward F. & Sons—Lynn. Dahlias.
 Eager, George B.—Wakefield. Shrubs.
 Eastern Nurseries—Jamaica Plain. Phlox.
 Farquhar, R. J. & Co.—Boston. Shrubs.
 Fisher, Peter—Ellis. Carnations.
 Forbes & Keith—New Bedford. Dahlias.
 Gillet, Edward—Southwick. Ferns, plants.
 Manning, J. Woodward—North Wilmington. Shrubs.
 New England Nurseries—Bedford. Trees.
 Old Colony Nurseries, Inc.—Plymouth. Shrubs.
 Patten & Co.—Tewksbury. Carnations.
 Rea, Frederic J.—Norwood. Phlox.
 Roland, Thomas—Nahant. Acacia.
 Walker, George H.—North Dighton. Dahlias.

MONTANA

Location: Av. A, cor. 7th St.

GROUP 146.

Aichel, Mrs. Andrew—Hamilton. Apples.
 Allomont Orchards—Lo Lo. Apples.
 Andrus, I. E.—Missoula. Apples.
 Bagley, W. F.—Woodside. Apples.
 Bentley, F. J.—Hamilton. Apples.
 Berry, E. L.—Thompson. Apples.
 Bohannon, W. I.—Glenn. Apples.
 Burrell, A. E.—Hamilton. Apples.
 Calbrick, Wm.—Kalispell. Apples.
 Clark, W. A. Orchard—Missoula. Apples.
 Cottrell, Mrs. Ida M.—Florence. Apples.
 Curlew Orchards—Victor. Apples.
 Curtis, L. A.—Hamilton. Apples.
 Day, Dr. L. W.—Darby. Apples.
 De Young Bros.—Hamilton. Apples.
 Eaker, Dr. C. W.—Hamilton. Apples.
 Elliott, Mrs. J. A.—Hamilton. Apples.
 Elliott, Hazel—Hamilton. Apples.
 Elmer, Uriah—Whitehall. Apples.
 Engler, Frank—Victor. Apples.
 Estey, O. C.—Bigfork. Apples.
 Fitch, J. H. C.—Kalispell. Apples.
 Fox, Edwin—Missoula. Pears.
 Gibford, R. W.—Darby. Apples.
 Gray, Clark—Hamilton. Apples.
 Gregg, Richard—Kalispell. Apples.
 Grubb, G. H.—Kalispell. Apples.
 Hansen, Andrew—Hamilton. Apples.
 Hall, R. L.—Eureka. Apples.
 Hauf, John—Woodside. Apples.
 Hess, H. L.—Hamilton. Apples.
 Hightower, A. M.—Stevensville. Apples.
 Howell, Byron—Plains. Apples.
 Johnson, E. A.—Hamilton. Apples.
 Kress, Ben—Hamilton. Apples.

Krohne, C. O.—Livingston. Apples.
 McElroy, Mrs.—Bigfork. Apples.
 Millbank, J. T.—Glenn. Apples.
 Montana Fruit Distrib.—Hamilton. Apples.
 Nicholson, R. B.—Como. Apples.
 Nicol, R. W.—Hamilton. Apples.
 Olsen, B. J.—Hamilton. Apples.
 Pennoyer, L. A.—Hamilton. Apples.
 Platt, H. & Son—Como. Apples.
 Proctor, C. E.—Proctor. Apples.
 Schultz, Wm.—Rollins. Apples.
 Scott, Willis—Eureka. Apples.
 Sears, I. H.—Hamilton. Apples.
 Shellhammer, G.—Hamilton. Apples.
 Stanford, Geo. S.—Somers. Apples.
 Taylor, Ray—Hamilton. Apples.
 Taylor & Welgemuth—Hamilton. Apples.
 University Orchard—Stevensville. Apples.
 Wemple, J. L.—Florence. Apples.
 White, Milo—Florence. Apples.
 Whiteside, Fred—Kalispell. Apples.
 Wood, J. C.—Bigfork. Apples, peaches, plums.
 Yenny, Jesse—Bigfork. Apples, peaches.
 Young, Claud—Hamilton. Apples.

NEVADA

Location: Agr. Pal., Av. A, bet. 9th & 10th.

GROUP 147

Boyce, A. M.—Yerington. Processed Fruits.
 Caliente League—Caliente. Processed Fruits.
 Cowdery, Walter—Dayton. Processed Fruits.
 Fulstone, G. H.—Wellington. Processed Fruits.
 Howard, Gene—Dayton. Processed Fruits.
 Johnson, M. L.—Dayton. Processed Fruits.
 McGowan, John—Yerington. Processed Fruits.
 Sinclair, W. J.—Wellington. Processed Fruits.
 Snyder, John—Yerington. Processed Fruits.
 Wilson, J. I.—Nurdyke. Processed Fruits.

NEW YORK

Location: 2nd St., cor. Av. D

GROUP 146

Allis, Clarke—Medina. Apples.
 Allis, Seth & Son—Holley. Apples.
 Austin, James & Son—Kent. Apples.
 Beckwith, John S.—Albion. Apples.
 Boller, Chas. A. & Son—Sodus. Apples.
 Broadwell, F. G.—Waterport. Apples.
 Brown, H. L.—Carlton. Apples.
 Burrows, L. M.—Albion. Apples.
 Bush, S. J. T.—Morton. Apples.
 Case, B. J. & Co.—Sodus. Apples.
 Catchpole, E. W. & Son—North Rose. Apples.
 Chase, Mrs. Bert. L.—Dresden. Apples.
 Christensen, S. T.—Penn Yan. Apples.
 Cowell, S. E. & Son—Kent. Apples.
 Fullager, H. S.—Penn Yan. Apples.
 Harding, C. M.—Knowlesville. Apples.
 Hill, Harvey J.—Medina. Apples.
 Howard, W. E. & Son—Holley. Apples.
 LaMont, Geo.—Gaines. Apples.
 Lattin, Dr. F. H.—Gaines. Apples.
 Mack, Thos.—Holley. Apples.
 Miles, H. W.—Waterport. Apples.
 Mower, C. N.—Waterport. Apples.
 Nostrand, Peter E.—Shelter Island. Apples.
 Rupert, Frank E.—Seneca. Apples.
 Schaubert, Geo. E.—Ballston Lake. Apples.
 Simpson, Geo. D.—Carlton. Apples.
 Snyder, A. G.—Murray. Apples.
 Snyder Brothers—Gaines. Apples.
 Tanner, Leslie—Medina. Apples.
 Van Vranken, A. Sons—Rexford. Apples.
 Wellman, H. E.—Kendall. Apples.
 Wilson, B. G.—Waterport. Apples.
 Wilson, P. B. & Son—Waterport. Apples.

GROUP 147

Gaylord, W. T.—Sodus. Evaporated apples.
 Martin, E. C.—Auburn. Canned, pickled and
 brandied fruits.

GROUP 149

Wood, Allen L.—Rochester. Boxwood plants.

OREGON

Location: Bet. Avs. C & D, & 6th & 8th Sts.

GROUP 146

Douglas County:

Roseburg Commercial Club and Growers of
 the Umpqua Valley. Apples, pears,
 peaches grapes, cherries.

Hood River County:

Hood River Commercial Club—Hood River.
 Colossal model of Spitzenberg apple, semi-
 relief picture, etc.

Apple Land & Orchard Co.—Hood River.
 Apples.

Brink Haven Orchard—Hood River. Apples.

King, W. E.—Hood River. Apples.

Miller, Gus—Hood River. Apples.

Putnam, John R.—Hood River. Apples.

Rodwell, Mrs. W. W.—Hood River. Apples.

Sears & Porter—Hood River. Apples.

Jackson County:

Ashland and Medford Fruit Growers. Pears
 apples, peaches, grapes.

Josephine County:

Carson, A. H. & Son—Redlands Vineyard.
 Grapes.

Grants Pass Commercial Club. Apples.

Robinson, J. H. Peaches.

Turner & Augustine—Eilerslee Fruit Farm.
 Grapes and pears.

Lowe, D. M.—Ashland. Apples, apricots,
 grapes, peaches, pears, strawberries.

Union County:

Bingaman, Chas. Apples.

Chandler, J. A. Apples.

Cleaver, Charles. Apples.

Dornberger, J. Apples.

Larson, J. P. Apples.

Riddle, C. M. Apples.

Stoddard, J. B. Apples.

Wasco County:

Cooper, Robert. Cherries.

Hostetter, J. C. Apples.

Sandoz, Julius. Apples.

The Dalles Business Men's Assn. Grapes.

Woedeki, Carl. Pears.

Willamette Valley Association:

Benton, Clackamas, Lane, Linn, Marion,
 Polk, Washington and Yamhill counties.
 Fruits, walnuts.

GROUP 147

Cloud Canning Co.—Hood River. Canned
 fruits.

Food Products Co.—Portland. Evaporated
 fruits.

Hood River Apple Vinegar Co.—Hood River.
 Evaporated apples.

Willamette Valley Assn.—Benton, Clackamas,
 Lane, Linn, Marion, Polk, Washington and
 Yamhill counties. Dried and processed
 fruits.

GROUP 149

J. B. Pilkington—Portland. Buddleia Mag-
 nifica and Abelia Rupestris.

GROUP 147

National Canner's Association

Location: bet. 1st & 2nd Sts. & Avs. B & D.
 California Iron Works, Riverside, Cal.—Grip
 box truck for canning and picking houses.

Reeves Purley Company, Columbus, Ind.—Vari-
 able speed transmission for blanching ma-
 chines, exhaust boxes and cookers.

UTAH

Location: Bet. 3rd & 4th Sts. & Avs. C & D.

GROUP 146

Anderson, Lorenzo—Elwood. Apples.
 Anderson, Seifus—Elwood. Apples.
 Ball, L. A.—Logan. Apples.
 Beatty, T. B.—Tremonton. Apples.
 Bingham, Andrew—Riverdale. Apples.
 Bingham, Enoch—Riverdale. Apples.
 Bingham, S. J.—Riverdale. Apples.
 Blood, H. C.—Kaysville. Apples.
 Broby, N. R.—Wellsville. Apples.
 Burton, John F.—Garland. Apples.
 Campbell, D. M.—Providence. Apples.
 Childs, H. B.—Riverdale. Apples.
 Christensen, Erastus—Bear River. Apples.
 Christensen, Theodore E.—Gunnison. Apples,
 pears, crab apples, plums.
 Cordner, Jas.—Provo. Apples.
 Cragun, Edmond—Pleasant Grove. Apples.
 Creighbaum, Chas.—Ogden. Apples.
 Culmer, Horace—Pleasant Grove. Apples.
 Davidson, Wm.—Logan. Apples.
 Duffin, J. G.—Clearfield. Apples.
 Eliason, B. F.—Moroní. Peaches.
 Ercanbrack, Chas.—Provo. Apples.
 Fisher, Jas.—Provo. Apples.
 Flanders, Hyrum—Santaquin. Apples.
 Forsgren, J. H.—Elwood. Apples.
 Guthrie, J. I.—Layton. Apples.
 Hansen, Fred—Tremonton. Apples.
 Hansen, Rasmus—Bear River. Apples.
 Hansen, Taylor—Manti. Apples.
 Hickenlooper, O. H.—Ogden. Apples.
 Holman, Art—Pleasant Grove. Apples.
 Holmgren, David—Tremonton. Apples.
 Holmgren, J. P.—Bear River. Apples.
 Humphrey, T. G.—Salina. Apples, pears.
 Jensen, Jas. P., Jr.—Tremonton. Apples.
 Jensen, Jas. P., Sr.—Tremonton. Apples.
 Jensen, W. E.—Freedom. Plums.
 Johnson, Lewis—Elwood. Apples.
 Johnson, Olaf—Elwood. Apples.
 Kelly, Geo. J.—Ogden. Apples.
 Kent, Bishop—Logan. Apples.
 Knight, Geo. T.—American Fork. Apples.
 Knox, F. C.—Tremonton. Apples.
 Mabey, J. L.—Clearfield. Apples.
 Marion Orchard Co.—Corinne. Apples.
 Miller, A. D.—Clearfield. Apples.
 Monroe, Robert—Logan. Apples.
 Monson, Jens.—Pleasant Grove. Apples.
 Mortensen, Moroni.—Bear River. Apples.
 National Sav. & Trust Co.—Garland. Apples.
 Neilsen, N. J.—Hyrum. Apples.
 Neilsen, D. O.—Hyrum. Apples.
 Nordgren, Mr.—Hyrum. Apples.
 Northrop, R. S.—Tremonton. Apples.
 Nuttal, W. A.—Provo. Apples.
 Olsen, A.—Ephraim. Prunes.
 Parker, Gilbert—Clearfield. Apples.
 Patten, T. J.—Provo. Apples.
 Payne, Jos. O.—Clearfield. Apples.
 Peterson, Frank.—Ogden. Apples.
 Phillips, Hyrum.—Morgan. Apples.
 Poulson, O. J.—Provo. Apples.
 Poulton, Ralph.—Provo. Apples.
 Pulley, Andrew.—American Fork. Apples.
 Quayle, Mrs. Betty—Logan. Apples.
 Quayle, John.—Logan. Apples.
 Rasmussen, Pete.—Manti. Apples.
 Romney, Geo., Jr.—Smithfield. Apples.
 Rossiter, Mr.—Providence. Apples.
 Roche, John E.—Millville. Apples.
 Schofield, Thomas.—Layton. Apples.
 Spencer, Frank.—Provo. Apples.
 Staples, J. L.—Elsinore. Pears, plums.
 Thimes, C. F.—Ogden. Apples.
 Thompson, H. H.—Roy. Apples.
 Thornton, T. W.—American Fork.
 Wadley, J. D.—Pleasant Grove. Apples.
 Warnick, C. B.—Pleasant Grove. Apples.

Weidman, J. L.—Bear River. Apples.
 Weidman, Peter.—Bear River. Apples.
 West, Lester.—Pleasant Grove. Apples.
 Wherry Bros.—Riverdale. Apples.
 Younker, D. A.—Logan. Apples.
 Zollinger, Wm.—Providence. Apples.

GROUP 147

Alfred, Mrs.—Salina. Processed fruits.
 Andelin, O. W.—Provo. Processed fruits.
 Anderson, J. C.—Oak City. Processed fruits.
 Anderson, L.—Brigham. Processed fruits.
 Anderson, P.—Price. Processed fruits.
 Anderson, Parley.—Richfield. Processed
 fruits.
 Anderson, S. C.—Oak City. Processed fruits.
 Bagley, E. S.—Cottonwood. Processed fruits.
 Bannon, J. F.—Draper. Processed fruits.
 Barber, Jas.—Syracuse. Processed fruits.
 Barlow, Israel.—Ogden. Processed fruits.
 Barnes Orchard Co.—Clearfield. Processed
 fruits.
 Baum, F.—Heber. Processed fruits.
 Beatty Farm Co.—Tremonton. Processed
 fruits.
 Brown, C. F.—Tooele. Processed fruits.
 Bryson, J. D. & Sons.—Bountiful. Processed
 fruits.
 Butler, Mr.—Collrutch. Processed fruits.
 Carrera, Chas.—Helper. Processed fruits.
 Carter, R. G.—Provo. Processed fruits.
 Chay, Lee.—Salt Lake County. Processed
 fruits.
 Christensen, T. E.—Gunnison. Processed
 fruits.
 Cleland, A. J.—Ogden. Processed fruits.
 Craig, Wm.—Ogden. Canned fruits.
 Crane, A.—Mt. Pleasant. Processed fruits.
 Creighbaum, Chas.—Ogden. Processed fruits.
 Davis, E.—Provo. Processed fruits.
 Davis, W. D.—Minersville. Processed fruits.
 Downard, Geo.—Price. Processed fruits.
 Downes, Jas.—Provo. Processed fruits.
 Drake, J. W.—Green River. Processed fruits.
 Duffin, Mrs.—Woods Cross. Processed fruits.
 Duffin, S.—Clearfield. Processed fruits.
 Dutton, E.—Oak City. Processed fruits.
 Egbert, Mr.—West Jordan. Processed fruits.
 Elliason, B. F.—Moroní. Processed fruits.
 Erickson, F.—Salt Lake County. Processed
 fruits.
 Evans, Geo.—Granger. Processed fruits.
 Faddes, Bert.—Processed fruits.
 Fitzgerald, M.—Draper. Processed fruits.
 Flanders, H.—Santaquin. Processed fruits.
 Forsgren, J. H.—Tremonton. Processed fruits.
 Frye, W. H.—Price. Processed fruits.
 Fullmer, Sam C.—Mapleton. Processed fruits.
 Garff, P.—Draper. Processed fruits.
 Gibson, Fred.—Clearfield. Processed fruits.
 Hamblin, F. M.—Clearfield. Processed fruits.
 Hanks, A.—Clearfield. Processed fruits.
 Hansen, F. P.—Bear River. Processed fruits.
 Hansen, R.—Tremonton. Processed fruits.
 Hobson, F. H.—Coalville. Processed fruits.
 Hollingshead, S.—Minersville. Processed
 fruits.
 Holmgren, D.—Bear River. Processed fruits.
 Horsley, E. J.—Price. Processed fruits.
 Huff, J. A.—Moab. Processed fruits.
 Humphrey, T. G.—Salina. Processed fruits.
 Isaacson, Carl.—Brigham. Processed fruits.
 Jensen, A. E.—Freedom. Processed fruits.
 Jensen, C. J.—West Jordan. Processed fruits.
 Jensen, J.—Holiday. Processed fruits.
 Jensen, Leo—Elwood. Processed fruits.
 Jensen, N. A.—Pleasant Grove. Processed
 fruits.
 Jones, D.—Bountiful. Processed fruits.
 Jones, Jas.—Price. Processed fruits.
 Todd, J. S.—Green River. Processed fruits.
 Kelly, Geo. J.—Ogden. Processed fruits.
 Kelsey, W. M.—Minersville. Processed fruits.
 Knudson, W. O.—Brigham. Processed fruits.

- Lance, Myron.—Moab. Processed fruits.
 Larson, L.—Holiday. Processed fruits.
 Liddell, P.—Wellington. Processed fruits.
 Lindgren, O.—Bountiful. Processed fruits.
 Mabey, J. L.—Clearfield. Processed fruits.
 Madson, G. B.—Mapleton. Processed fruits.
 McCleary, C. J.—American Fork. Processed fruits.
 McMichael, R.—Coalville. Processed fruits.
 Miller, Mrs.—Spring Glen. Processed fruits.
 Miller, J. P.—Moab. Processed fruits.
 Mortensen, M.—Honeyville. Processed fruits.
 Moss, John H.—Woods Cross. Processed fruits.
 Naylor, Fred.—Murray. Processed fruits.
 Nelson, M. C.—Geneva. Processed fruits.
 Newell, E.—Provo. Processed fruits.
 Nokes, C. M.—Riverton. Processed fruits.
 Nuttal, Mr.—Provo. Processed fruits.
 Olsen, A.—Ephraim. Processed fruits.
 Pack, David.—Bountiful. Processed fruits.
 Packard, Mr.—Corinne. Processed fruits.
 Palmer, Geo. W.—Farmington. Processed fruits.
 Park, D. S.—Provo. Processed fruits.
 Payne, Jos. P.—Clearfield. Processed fruits.
 Pelton, Mrs. N.—Woods Cross. Processed fruits.
 Perkins, Jasper.—Centerville. Processed fruits.
 Peterson, John.—Moab. Processed fruits.
 Phillips, H.—Porterville. Processed fruits.
 Porter, C. A.—Payson. Processed fruits.
 Porter, Mr.—Morgan. Processed fruits.
 Poulson, O. J.—Provo. Processed fruits.
 Poulson, R.—Pleasant Grove. Processed fruits.
 Poy, John.—Salt Lake County. Processed fruits.
 Pritchett, T. M.—Fairview. Processed fruits.
 Pulley, A.—American Fork. Processed fruits.
 Rasmussen, R. N.—Ogden. Processed fruits.
 Richens, W. F.—Provo. Processed fruits.
 Robert Bros.—Green River. Processed fruits.
 Roberts, Gus.—Bountiful. Processed fruits.
 Rose, Mrs. A. T.—Farmington. Processed fruits.
 Ryland, Geo.—Price. Processed fruits.
 Sacramento Bros.—Spring Glen. Processed fruits.
 Sappmyer, B.—Provo. Processed fruits.
 Scorup, J. H.—Salina. Processed fruits.
 Seddon, S. M. T.—Union. Processed fruits.
 Seegmiller, W. H.—Richfield. Processed fruits.
 Sheffer, Mrs.—Bountiful. Processed fruits.
 Smith, E. E.—Bountiful. Processed fruits.
 Smith, J. M.—Heber. Processed fruits.
 Smith, J. M. & Sons.—Draper. Processed fruits.
 Smith, J. O.—Centerville. Processed fruits.
 Smith, J. O.—East Mill Creek. Processed fruits.
 Smith, L. H.—Draper. Processed fruits.
 Smith, Ray.—St. George. Processed fruits.
 Smith, W. B.—American Fork. Processed fruits.
 Southern Experiment Farm.—St. George. Processed fruits.
 Spaulding, T. D.—Green River. Processed fruits.
 St. George Experiment Station.—St. George. Processed fruits.
 Star Canning Co.—Roy. Canned fruits.
 Stay, J. C.—Salt Lake County. Processed fruits.
 Stayles, J. L.—Elsinore. Processed fruits.
 Steed, E. V.—Clearfield. Processed fruits.
 Stoddard, A. P.—Minersville. Processed fruits.
 Stringham, Dr.—Bountiful. Processed fruits.
 Tallman, D.—Bountiful. Processed fruits.
 Waddoups, Thomas.—Bountiful. Processed fruits.
 Wadley, R. D.—Pleasant Grove. Processed fruits.
 Walker, Simon.—Oak City. Processed fruits.
 Walton, J. T.—Centerville. Processed fruits.
 Warwick, C. P.—Pleasant Grove. Processed fruits.
 Wasatch Orchard Co.—Ogden. Canned fruits.
 Webb, Mr.—Salt Lake County. Processed fruits.
 Weldemon, P.—Tremont. Processed fruits.
 Wherry Orchard.—Ogden. Processed fruits.
 Wicks, J. M.—Leeds. Processed fruits.
 Williams, H. E.—Syracuse. Processed fruits.
 Wilson, S. M.—Green River. Processed fruits.
 Winters, Mr.—Pleasant Grove. Processed fruits.
 Wood, Wm. B.—Minersville. Processed fruits.
 Woodbury, W. H.—Granger. Processed fruits.
 Woodhouse, E. P.—Provo. Processed fruits.
 Workman, A.—Hurricane. Processed fruits.
 World, H. J.—Price. Processed fruits.
 Worsley, W. W.—Farmington. Processed fruits.
 Wright Whittier Canning Co.—Ogden. Canned fruits.
 Youngberg, J. A.—West Point. Processed fruits.

WASHINGTON.

Location: Bet. 4th & 6th Sts., & Ays. C & D.

GROUP 144

Yakima Valley:

Price Fruit Sizer Co.—North Yakima. Apple sizing machine in operation.

GROUP 146

Austin Wood Yard—Sunnyside. Apples.

Baird, Jerome—Sunnyside. Apples.

Ferrell, O. R.—Sunnyside. Apples.

Kyler Brothers—Sunnyside. Apples.

Seoon, J. C.—Sunnyside. Apples.

Walla Walla County and Valley:

Anspach, C. H.—State Line. Apples.

Baker-Longdon—Walla Walla. Apples.

Blalock Fruit Co.—Walla Walla. Apples.

Brash, John—Walla Walla. Apples.

Duncan, Gavin—Walla Walla. Apples.

Hammit, L. F.—State Line. Apples.

Hansen, G.—Walla Walla. Apples.

Harris, W. S.—Waitsburg. Apples.

Hobson, G.—State Line. Apples.

O'Brien, C. S.—Walla Walla. Apples.

Pacific Fruit & Produce Co.—Walla Walla. Apples.

Taggard, J. D.—Waitsburg. Apples.

Walla Walla Commercial Club—Walla Walla. Photographs.

Walla Walla County & Valley—Apple Feature.

Warwick, W. G.—Dayton. Apples.

Zanow, J.—Walla Walla. Apples.

Wilkinson, R. H.—Sunnyside. Apples.

Yakima Valley:

Lynch & Taylor—North Yakima. Apples.

North Yakima Commercial Club—N. Yakima. Photographs.

Richey & Gilbert—North Yakima. Apples.

Thompson Fruit Co.—North Yakima. Apples.

Wright Fruit Co.—North Yakima. Apples.

Yakima County Horticultural Union—North Yakima. Apples.

Yakima Fruit Growers' Exchange.—North Yakima. Apples.

Yakima Valley Fruit Growers' Assn.—North Yakima. Apples.

GROUP 147

Spokane Chamber of Commerce—Spokane. Apple products.

Walla Walla County and Valley:

Blalock Fruit Co.—Walla Walla. By-products exhibit—Dried fruits.

Walla Walla Commercial Club — Walla Walla. Processed fruits.

Yakima Valley:

Downs, Warren—North Yakima. Canned peaches.

Goldendale, Wash.—Processed fruits.

North Yakima Commercial Club.—North Yakima. Processed fruits.

Yakima Fruit Products Co.—North Yakima. Evaporated fruit.

GROUP 148

Downs, Warren—North Yakima. Peach tree.

Foreign Section

CUBA

Location: 1st St., cor. Av. C & Conservatory

GROUP 146

Cuban Government—Citrus fruits, tropical and semi-tropical fruits, cocanuts, etc.

GROUP 147

Cuban Government—Processed fruits.

GROUP 149

Cuban Government—Exhibit in Conservatory: Palms, ferns, shrubs and plants.

FRANCE

GROUP 149

Pernet-Ducher—Lyons. Roses. Block 18.

GERMANY

GROUP 149

Lambert, Peter—Trier (Treves). Roses. Block 18, Block 8, Bed XII.

GREAT BRITAIN AND IRELAND

GROUP 149

Bide, S. S., & Sons, Ltd.—Farnham, England. Roses. Block 18.

Dickson, Hugh, Ltd., Royal Nurseries— Belfast, Ireland. Roses. Block 18.

Dobbie & Co.—Edinburgh, Scotland. Roses. Block 18.

Kelway & Son—Langport, Somerset, England. Flowering annuals. Block 18, Bed XXXVIII

McGredy, Samuel & Son—Portadown, Ireland. Roses. Block 18.

Sutton & Sons—Reading, England. Flowering annuals. Block 18, Bed XXXVII A & B.

NETHERLANDS

GROUP 149

Horticultural Federation of the Netherlands. Large collective exhibit of trees, shrubs and plants. Blocks 23, 24, 25, 26, 27 and 28. Horticultural Gardens.

JAPAN

GROUP 144

Block 1, Horticulture Gardens

Yokohama Uyei Kabushiki Kaisha—Kanagawa. Ornamental articles for gardens and miniature garden.

GROUP 146

Location: Av. A, cor. 4th St.

Bureau of Agriculture, Department of Agriculture and Commerce — Tokyo. Photographs and pictures showing the cultivation of citron and the system of inspection.

Kishnu Citron Assn.—Wakayama. Citron.

Shizuoka Citron Assn.—Shizuoka. Citron.

Soshu Citron Assn.—Kanagawa. Citron.

GROUP 148

Block 1, Horticulture Gardens

Chiyoda Nursery Co.—Aichi. Citron and wild orange trees.

Kubo, Buhel—Hyogo. Wild orange trees.

Ishiguro, Kaichi—Aichi. Citron and wild orange trees.

Watase, Torajiro—Tokyo. Peach, pear, persimmon and flowering crabapple trees.

Wada, Tokuso—Tokyo. Peach, pear, persimmon and flowering crabapple trees.

GROUP 149

Block 1, Horticulture Gardens

Yokohama Nursery Co.—Kanagawa. Flowers and plants. Av. A, cor. 4th St. (Syriza flower basket); Av. M (conservatory plants).

Domoto Bros., Oakland, Cal. Trees and plants.

Kijiro Akashi—Fukuoka. Agelia.

Kotaro Tanaka—Tokyo. Lilies and dwarf trees.

Nagaomura Kawabe Yengeigyo—Hyogo. Flowers and bulbs.

Nippon Yengei Kabushiki Kaisha—Hyogo. Flowers and Bulbs.

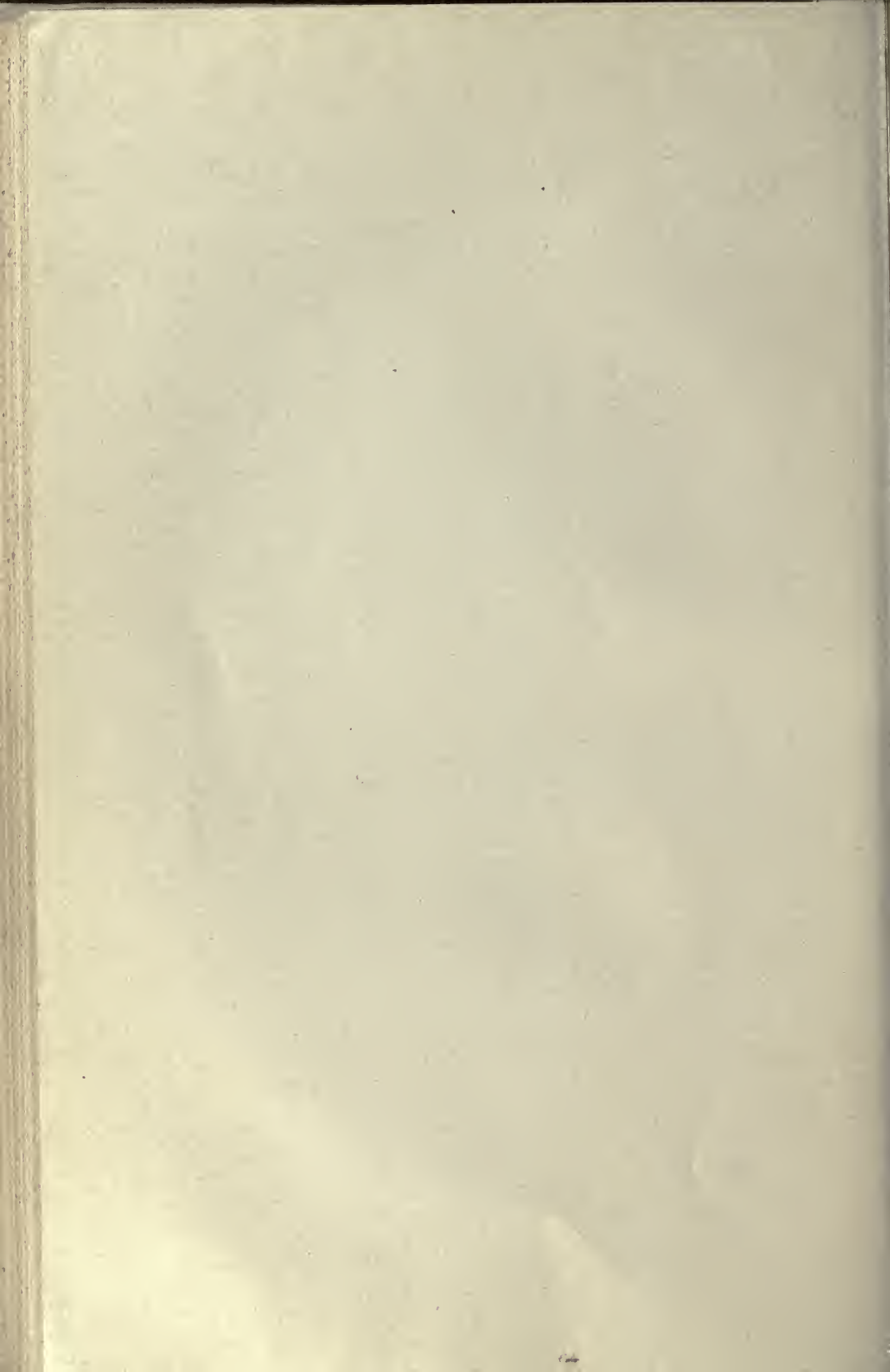
Seitaro Arai—Kanagawa. Lilies.

Yokoro Kondo—Aichi. Bulbs.

Yokohama Uyei Kabushiki Kaisha—Kanagawa. Trees, plants and dwarf trees.

Yoshino-yen—Tokyo. Iris.

Yugen Sekinin Fukoku Yurine Shinyo Kobi.—Kobai Hanbai Kumiai—Saitama. Lilies.



MINES *and* METALLURGY

Official Catalogue of Exhibitors

PANAMA-
PACIFIC
INTERNATIONAL
EXPOSITION
SAN FRANCISCO
1915

Price 25¢



Pure and Permanent Iron

Why is Armco-American Ingot Iron More Resistant to Rust than Steel or Any Other Iron?



ONE of the triumphs of modern science is the understanding which has been achieved of the nature of corrosion or rust. It has been definitely learned that rusting is an electro-chemical action which has as its basis the chemical or physical differences between the various portions of a metal which is exposed to air and moisture.

The **chemical** differences between various points on the surface of a sheet or plate of iron are most effectively and surely abolished by making the metal just as nearly as possible of **one substance**, i. e., of the highest attainable purity. In Armco-American Ingot Iron, the total of foreign substances is reduced to less than one-sixth of one per cent.

The **physical** differences in iron or steel result from the presence of occluded gases (the mark of unskilful handling in the furnace or the ladle)—from the coarse or uneven crystallization which follows improper heat treatment and rolling (and which is only partially remedied by the ordinary practice in annealing)—and from the permanent stresses or strains which result from rapid or careless working at any stage. In the making of Armco Iron, each of these processes is the object of constant watchfulness on the part of men who have at their command the results of years of research, whose instructions are always to work for quality rather than tonnage, and whose ambition is to maintain and to heighten the reputation of their product.

The American Rolling Mill Company



The trade mark ARMCO carries the assurance that iron bearing that mark is manufactured by The American Rolling Mill Company with the skill, intelligence and fidelity associated with its products, and hence can be depended upon to possess in the highest degree the merit claimed for it.

Licensed Manufacturers under Patents granted to The International Metal Products Company.

Armco-American Ingot Iron Black and Galvanized Sheets, Roofing, Pipe, Gutter, Metal Lath and Terne Plate.

Middletown, Ohio

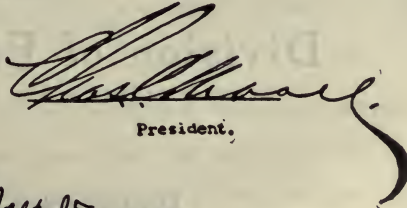
District Sales Offices at Chicago, Pittsburgh, Detroit, Cleveland, New York, St. Louis and Cincinnati.

PANAMA-PACIFIC INTERNATIONAL EXPOSITION
SAN FRANCISCO
OFFICE OF THE PRESIDENT

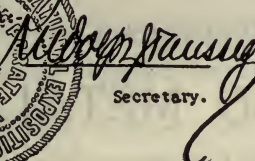
(July 10 1914)

To Whom It May Concern:-

This is to certify that the Wahlgreen Company, of which Mr. G. A. Wahlgreen is the President and Manager, has been given a contract by the Panama-Pacific International Exposition Company authorizing and requiring the Wahlgreen Company to publish the official daily programme, official catalogue, official hand-book, official guide and official maps of the Exposition.


President.




Secretary.

Official Catalogue of Exhibitors

Panama-Pacific International Exposition
San Francisco, California, 1915

CHAS. C. MOORE
President

Director-in-Chief
FREDERICK J. V. SKIFF

Division of Exhibits

ASHER CARTER BAKER, Director

Department L

MINES AND METALLURGY

CHAS. E. BUNWELD, Chief

Preliminary Edition

Published for the Division of Exhibits by
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PREFACE

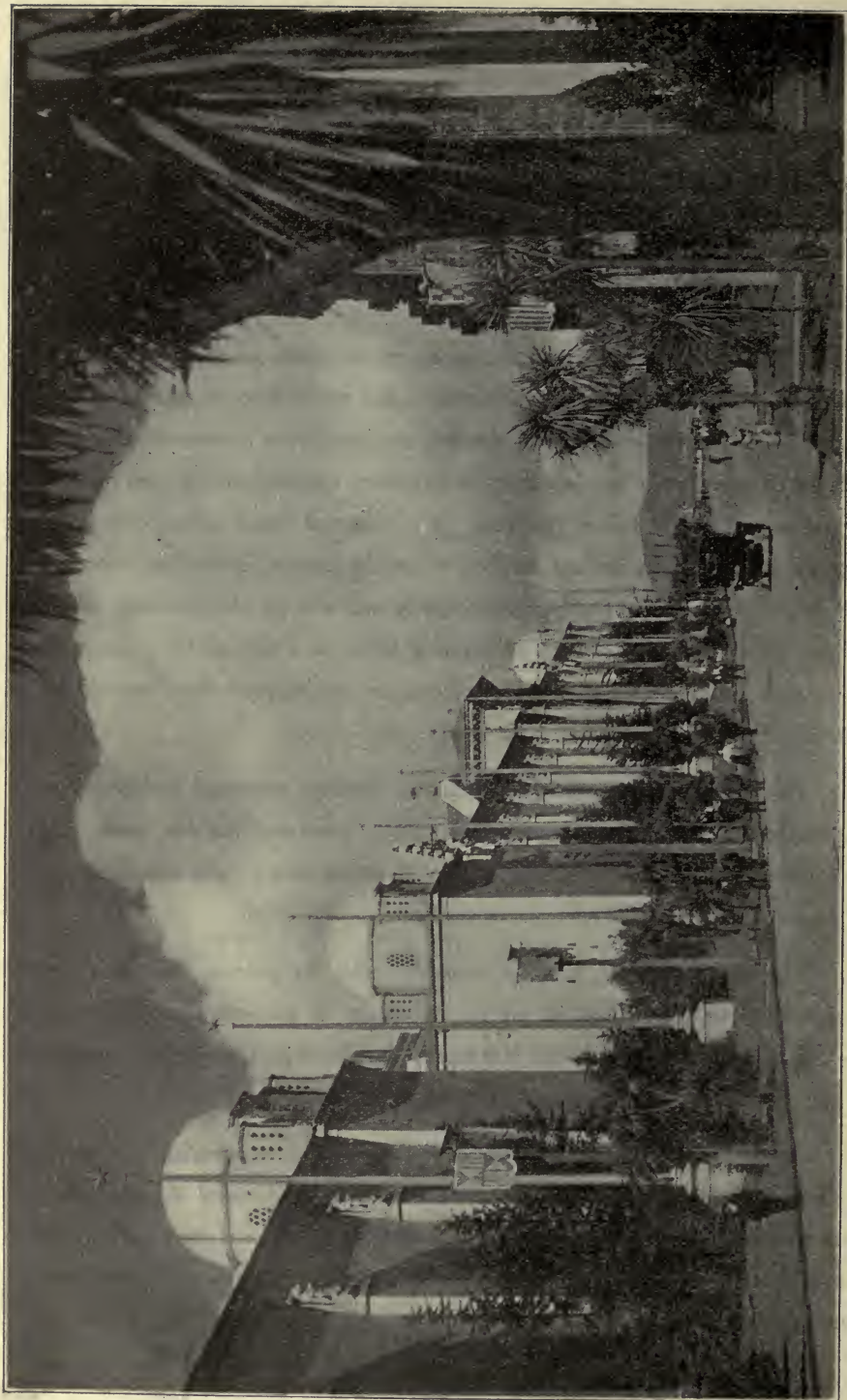
By Asher Carter Baker, Director of Exhibits

A modern, universal exposition is an encyclopedia of man's words and works. It is a collection of the achievements and productivity of man for examination by the International Jury of Awards, and constitutes a compact, classified, indexed compendium of man's activity in all phases, extending to the most material as well as to the most refined products. It is estimated that a million objects are exposed in the various displays installed within the palaces, in foreign, state and special pavilions. To properly classify, group and arrange alphabetically all the exhibits of an exposition of such international scope, is a task of such magnitude as to make it impossible to provide a complete catalogue of these exhibits on opening day of the Exposition.

This edition of the official catalogue is therefore presented preliminary to the revised and complete catalogue which will be issued within a few weeks, and to the preparation of which, in realization of its extraordinary value as a document of general and commercial reference, special care is being given.

The present volume, however, capably serves the purpose for which it is designed, as an early index of the infinite variety of interesting exhibits which are the concrete evidences of the industrial, educational and artistic advancement of the world.

Acknowledgment is hereby offered of the excellent co-operation received in the compilation of this catalogue from the Commissioners-General of participating nations, officers of State Commissions, individual exhibitors, and more particularly, the various officers of the Division of Exhibits, and the Official Catalogue Company, publishers of the catalogue.



PALACE OF MINES

MINES AND METALLURGY

Official Catalogue Department L

CLASSIFICATION OF EXHIBITS

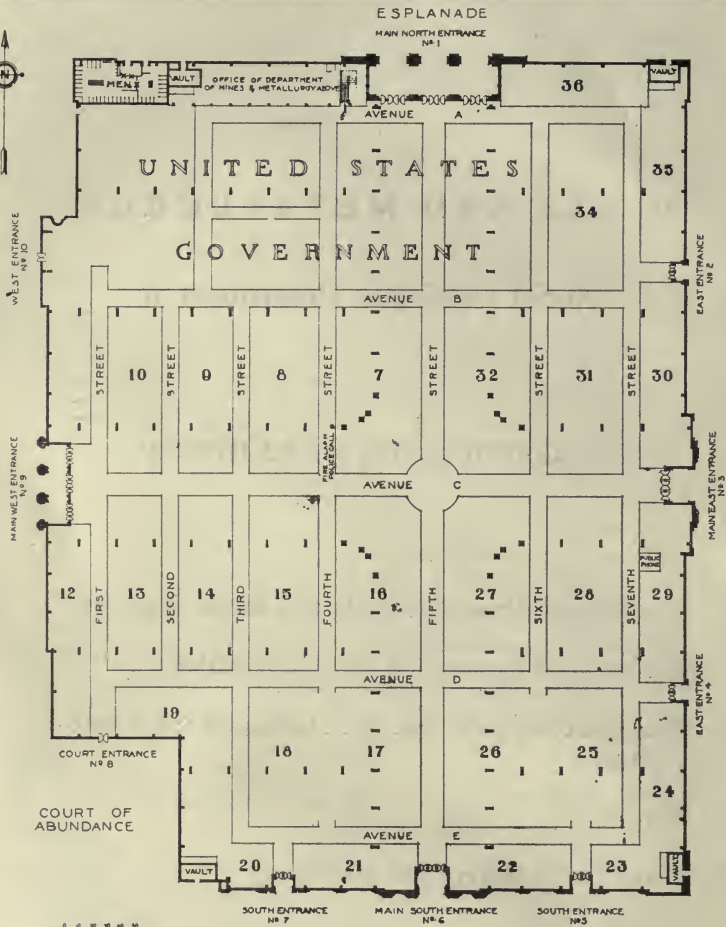
Working of Mines, Ore Beds and Stone Quarries

Minerals and Stones, and Their Utilization

Mine, Metallurgical and Oil Models, Maps, Photographs

Metallurgy

Literature of Mining and Metallurgy



FLOOR PLAN

PALACE OF MINES & METALLURGY
PANAMA-PACIFIC INTERNATIONAL EXPOSITION

OPENS FEBRUARY 20 SAN FRANCISCO U.S.A.:1915 CLOSES DECEMBER 4

INTRODUCTION

Department of Mines and Metallurgy

BY

CHARLES E. van BARNEVALD

Chief of Department.

The Palace of Mines and Metallurgy is situated at the northeast corner of the main group of Exhibit Palaces, fronting the Marina and flanked by the Avenue of Progress. Its southwest corner adjoins the beautiful Court of Abundance, an architectural gem symbolizing the successive geologic stages of the world's development, the dynamic agencies of earth, air, water and fire. The thought of evolution is strikingly brought out in the embellishment of this building by the spontaneity with which all architectural lines flow into sculptural ornamentation. The Court is wonderfully enriched by the magnificent Brangwyn mural paintings. One of these panels on the southwestern corner of the Palace depicts a group of mediaeval artisans working metals with fire. The Palace is rectangular in form and covers an area of roughly six acres, surmounted by a dome 165 feet in height.

The Department of Mines and Metallurgy deals with the natural mineral resources (metallic, non-metallic and fuels) of the world; their exploration and exploitation; their conversion into metal; their manufacture into structural forms and into raw materials for the various industries.

The object of the Mines and Metallurgical exhibit is two fold. First, to draw attention to the natural mineral resources of each country, state and community so that the public may learn of the mode of occurrence of the minerals and metals of commerce and of their distribution; of the stage of development of the various countries and districts; of present and possible future sources of supply and consumption; of general market and trade conditions in the many industries which are based on the utilization of mineral resources. Second, to educate the public in a general way regarding the details of the numerous subdivisions of this great basic industry, both at home and abroad, in the hope that the hundreds of thousands who will visit the Palace will tarry long enough to grasp the tremendous importance of this industry in the development and settlement not only of the United States but of the World.

The aim of this Department has been to illustrate every mineral of economic importance, not merely by mineralogical and geological specimens, but by complete industrial exhibits which begin with the undeveloped mineral resource, end with the article sold to the retail trade of the country and show, insofar as possible, the intermediate processes of mining, reduction and manufacture.

Especial attention has been given to petroleum and coal, to copper, to lead and zinc, to the precious metals, to the gems and semi-precious stones. The iron and steel industry is shown by the most comprehensive and complete exhibit ever assembled. The rarer minerals and processes for their reduction have received due attention, particularly the radio-active ores.

A co-operative metallurgical exhibit has been arranged where standard metallurgical methods will be illustrated on a working scale. An open Metallurgical Forum will be conducted by the United States Bureau of Mines. It is expected that this will prove to be a rendezvous for technical men from all parts of the world and that many important problems will be investigated during the life of the Exposition.

Mining methods are illustrated by a novel and most instructive exhibit beneath the floor of the Palace in THE DEMONSTRATION MINE. The leading metal mining companies and coal producers of the United States, and the various manufacturers of machinery and equipment, have joined in a comprehensive exhibit illustrating mine practice. Iron mining on the Iron Ranges of Lake Superior, copper mining in Arizona and Montana, lead-silver mining in Idaho, gold mining in South Dakota; coal mining on the Pacific Coast, in Wyoming, in Pennsylvania and in West Virginia are shown by full size stopes and rooms, together with all the incidental surface and underground equipment—a truly educational exhibit. Other types of mining are fully illustrated in the underground motion picture theatre. Daily demonstrations of mine rescue work will be given.

In short, the exhibits in the Palace of Mines and Metallurgy are truly representative of the important industry which this Department is designed to serve.

HOW TO LOCATE AN EXHIBIT

The Palace of Mines and Metallurgy is laid out in blocks, which are consecutively numbered from 1 to 36, inclusive, as shown on the floor plan. The aisles are designated as streets (First to Seventh), running north to south, and as avenues (A to E), from east to west. To locate an exhibitor refer to the names, alphabetically arranged under the exhibit group to which each belongs in the official classification, and note the aisle location following each name. Street and Avenue signs are erected at their intersection on the corners of all blocks.

The United States Government exhibits, including Bureau of Mines, Geological Survey, United States Mint and United States Postoffice, will be found in the northwest corner of the building.

The Demonstration Mine and the Co-operative Metallurgical Exhibit are situated near the main north entrance on Avenue B and Fifth Street.

| | |
|----------------------------------|--------------|
| Fine Arts Palace..... | Fn. A. Pal. |
| Education Palace..... | Ed. Pal. |
| Liberal Arts Palace..... | Lb. A. Pal. |
| Manufactures Palace..... | Mfr. Pal. |
| Varied Industries Palace..... | V. I. Pal. |
| Machinery Palace..... | Mch. Pal. |
| Transportation Palace..... | Trns. Pal. |
| Agriculture Palace..... | Agr. Pal. |
| Food Products Palace..... | Fd. Pr. Pal. |
| Live Stock Palace..... | Lv. St. Pal. |
| Horticulture Palace..... | Hor. Pal. |
| Mines and Metallurgy Palace..... | Min. Pal. |

MINES AND METALLURGY

Official Classification of Exhibits

GROUP 152

WORKING OF MINES, ORE BEDS AND STONE QUARRIES

(Equipment and Processes.)

- Class 743. Equipment and methods of geological surveys, mining bureaus, societies and other institutions for the promotion of mining. Instruments and equipment for surface and underground surveys and examinations in connection with mining.
- Class 744. Equipment and methods of prospecting for mineral veins and deposits, for building stones, coal, petroleum, natural gas, artesian waters, etc.
- Class 745. Equipment and methods for sampling, assaying, analyzing or testing ores, metals and other minerals and mineral products.
- Class 746. Equipment and methods for drilling, cutting or otherwise breaking down rock, ore, or other mineral in quarries, open cuts or mines; sinking shafts, opening galleries, drifts or tunnels.
- Class 747. Explosives and methods for storing, handling, thawing, placing and firing the same, in mines, quarries and deep wells; different classes of explosives, and methods and equipment for testing the same.
- Class 748. Equipment for, and methods of mining coal and other minerals, and of timbering or otherwise securing mine shafts, drifts, rooms, stopes, etc., or tunnels, and of preventing surface subsidence over mines.
- Class 749. Electric, compressed air, or other motors, for use in opening and operating mines and quarries, and for operating equipment for handling ores and other minerals. (See Classes 459 and 464.)
- Class 750. Equipment and methods for the underground handling and transportation of ore, coal, etc., including mine cars, haulage engines and rope, and locomotives using compressed air, electricity, gasoline, alcohol, etc. (See Class 460.)
- Class 751. Machinery and appliances for draining mines and quarries. (See Class 462.)
- Class 752. Equipment for and methods of ventilating mines.
- Class 753. Equipment for and methods of lighting mines: oils, acetylene, electricity; safety lamps, testing and cleaning lamps; lamps and other appliances for testing mine gases.
- Class 754. Equipment and methods for mine safety; safety appliances and methods, including signals, mine telephones, etc.; safety devices; methods of preventing dust explosions and other accidents; equipment and devices for fighting mine fires; mine laws, rules and regulations in behalf of safety in mines and quarries.
- Class 755. Equipment and methods for mine rescue work, apparatus for artificial respiration, and other appliances; equipment and methods of resuscitating persons overcome by electric shock or by mine gases; equipment and methods in first aid to the injured in mines; equipment and methods in mine sanitation.
- Class 756. Equipment and methods for handling and weighing mine products at the mine, and for their above-surface transportation; tipples, screens, picking tables, etc.; railways, tramways, inclined planes, belt conveyors, loose cables, aerial cables, wire rope for mining purposes, trolleys, etc.; appliances for loading and unloading wagons, boats, cars, etc.
- Class 757. Machinery, appliances and methods for working gases or minerals in liquid form or in solution, such as petroleum, natural gas, salt, sulphur, etc.; appliances and methods for capping and plugging gas and oil wells; pipe lines, storage facilities, etc.
- Class 758. Equipment and methods used in quarrying stone and other materials requiring similar operations.
- Class 759. Equipment and methods used in excavation, in open-pit and placer mining; steam shovels, dredges, and hydraulic mining equipment; special methods of storing and conveying water, etc. (See Classes 199 and 466.)

GROUP 153

MINERALS AND STONES, AND THEIR UTILIZATION

- Class 760. Systematic collections in geology, general mineralogy, crystallography and paleontology. Collections illustrating the structure, modes of occurrence and origin of ore deposits, and other mineral deposits, with maps showing their distribution.
- Class 761. Building materials: ornamental and building stones, rough hewn, sawed or polished; stones for highway construction and other purposes.
- Class 762. Mechanical appliances and processes used in cutting, sawing, shaping and polishing marble, granite, slate, and other building stone.
- Class 763. Equipment and processes for crushing, separating, washing or drying rocks, clays and other minerals.

- Class 764. Building materials: rocks which produce lime or cement. Processes and appliances used in the preparation and utilization of lime, cement and plaster; their products and uses; artificial stone; reinforced concrete.
- Group 765. Building materials: clays, fuller's earth, kaolin, feldspar, silica, sand and rock, quartz and other substances used in the manufacture of earthenware and of building materials such as brick, paving brick, paving and roof tiles, pipe, terra cotta, glass, etc.; processes of utilization with specimens of their products; brick and tile making machinery. Prepared roofings using mineral base other than asphalt and bitumen.
- Class 766. Grindstones, whetstones, pumice stones; other natural and artificial mineral abrasives, including carborundum, alundum, etc.: processes of their manufacture and their use.
- Class 767. Refractory rocks, fire clays and sands. Moulding sands.
- Class 768. Mica, asbestos, meerschaum, fluorspar, graphite (plumbago), gypsum and other non-metallic minerals; processes of utilization with their products.
- Class 769. Gems and precious stones; lapidary work; artificial gem materials and their preparation.
- Class 770. Common salt, nitrates, sulphates, borates, and other natural salts; methods of purification with their products.
- Class 771. Mineral waters; artesian water conditions; utilization of water.
- Class 772. Sulphur and pyrite; process of utilization, with their products.
- Class 773. Mineral and vegetable paints; dye stuffs, pigments, varnishes and fillers; processes of preparation and their products; painting and glazing.
- Class 774. Mineral fertilizers; natural and artificial sources of nitrogen; potash and phosphates; processes of preparation, with their products.
- Class 775. Asphalt and asphaltic rocks; mineral bitumen and wax; amber, jet, etc.; processes for obtaining, treating, refining, and utilizing, and their products as used in building materials, roofing and paving.
- Class 776. Mineral fuels and luminants; peat, lignite, bituminous coal, anthracite; coal dust and compressed coal; petroleum and its products; mineral gases. Equipment for crushing, separating, and washing coal. Equipment and processes for briquetting or otherwise compressing fuels; for preparing coke and by-products; for storing, refining, and handling petroleum and natural gas products.
- Class 777. Metallic ores of every kind, and products. Native metals. Radium.
- Class 778. Artificial mineral products, their preparation and use.

GROUP 154

MINE, METALLURGICAL AND OIL MODELS, MAPS, PHOTOGRAPHS

- Class 779. Maps, charts, photographs, transparencies, and models illustrating geologic and topographical features, their relation to mineral deposits; the structure and mode of occurrence of mineral deposits. Mine models, working plans of mines and of mine transportation systems. Models of metallurgical plants. Maps, photographs, lantern slides, moving pictures, etc., of mining and metallurgical operations, plants, camps, etc.

GROUP 155

METALLURGY

- Class 780. Equipment, methods and processes used, and products obtained; (a) in the handling of ores, such as hand sorting, conveying, elevating, weighing, sampling, etc.; (b) in the preparation of ores, such as breaking, crushing, pulverizing, grinding, washing, drying, etc.; (c) in the concentration, separation and classification of ores, such as screens and trommels, jigs, sand and slime separators, slime settling and thickening devices, dry vanners, etc.; water clarifiers, flotation processes with the aid of oil, gas, etc.; magnetic and electrostatic concentration, decapitation, briquetting, sintering, etc. (See also Class 460.)
- Class 781. Equipment, materials, processes, products and by-products concerned in the treatment of the ores of iron for pig iron; equipment for smelting iron ores; blast furnaces and accessories; furnace construction; appliances used in operating furnaces and in handling and utilizing furnace products. Equipment for measuring furnace temperatures. Equipment and methods in the generation and use of gases, the preparation and use of liquid and solid fuels, generation, drying and heating of blast; handling and use of slags; recovery, use of and injuries from dust, fumes, etc. Varieties of pig iron.
- Class 782. Equipment, methods and products of the manufacture and use of refractory materials for metallurgical purposes (bricks, blocks, crucibles, retorts, etc.)
- Class 783. Equipment, materials, processes and products concerned in the manufacture of Bessemer, open hearth, crucible and electrically-refined steel; ingots, billets, blooms, slabs, steel castings and other semi-finished material; re-heating furnaces, hammers, presses and rolls used in shaping these. Various processes of manufacturing iron or steel directly from the ores, such as electric smelting and refining, etc.
- Class 784. Equipment, materials, processes and products concerned in the manufacture of special and alloy steels, including the preparation of manganese, chromium, nickel, vanadium, tungsten and other metals used therein; copper steels.
- Class 785. Equipment, materials, processes and products concerned in producing and refining wrought iron.

- Class 786. Equipment, methods, processes and products in the manufacture of iron and steel in finished commercial forms, such as merchant bar, hoop iron, band iron, bars for wire drawing, iron and steel wire; wire rope, wire mesh fabric and reinforcing bars; iron and steel of standard or special sections, armor plates, sheet iron and sheet steel for commercial building, metallurgical and other purposes; fabricated steel for construction purposes, such as columns, beams and girders for bridges, transmission towers, buildings, etc.; rails, axles, tires, wheels, large forgings, gun barrels, projectiles, ordnance equipment, other than naval, and its production. Testing. Illustrative material.
- Class 787. Equipment, processes and products in the manufacture of welded and seamless metal pipes and tubes, other than cast iron pipes.
- Class 788. Metal plates and screens, flanged, stamped, cut, decorated and perforated, and their production. Production and use in metallurgical operations of wire cloth and screens.
- Class 789. General foundry equipment. Foundry processes and products.
- Class 790. Equipment, materials, and processes used in the metallurgy of copper, and products obtained. Treatment of ores, production of copper and copper alloys, bronze and brass, in ingots, bars, sheets, wire and other forms. Electrolytic and other processes used in refining copper, and in separating the accompanying gold, silver, and other substances.
- Class 791. Equipment, materials and processes used in the metallurgy of gold and silver, including amalgamation, hydrometallurgy, cyanidation, etc., and products obtained. Treatment of the ores: retorting amalgam, refining precipitates and electrolytic slimes; parting of gold and silver; melting, refining, stamping and shipping bullion; mint processes and products. Gold and silver in bars and other forms.
- Class 792. Equipment, materials, and processes used in the metallurgy of lead, and products obtained; treatment of ores, including blast roasting, sintering, briquetting, smelting, etc.; refining of lead bullion and the separation of the associated gold and silver. Production of lead in commercial forms, pigs, bars, sheets, pipes, shot and test lead; lead alloys; white lead and other lead pigments.
- Class 793. Equipment, materials, and processes used in the metallurgy of zinc, cadmium and mercury, and their alloys, zinc spelter, metallic zinc in bars and sheets, and zinc white; treatment of galvanizer's dross and zinc skimmings.
- Class 794. Equipment, materials, and processes used in the metallurgy of aluminum, sodium, calcium, magnesium, and their alloys, and other metals or alloys produced or refined by electro-metallurgical processes and not otherwise provided for.
- Class 795. Equipment, materials, and processes used in the metallurgy of arsenic, antimony, tin, nickel, platinum and other metals not otherwise provided for, and their alloys, such as German silver and monel metal.
- Class 796. Equipment for and processes of recovering and treating gold and silver and other metal waste in the working of these metals, and dust from refiners of precious metals. Appliances, processes, and products for exact rolling, beating and grinding of gold, silver, aluminum, zinc, lead, tin, and other metals and alloys. Apparatus and processes for working platinum and other rare metals.
- Class 797. Equipment, processes and products of electricity applied to the production and refining of metals and other mineral products not otherwise classified; electroplating; electric and other methods of welding; electrotyping; and other applications of electricity in metallurgy not otherwise provided for.
- Class 798. Apparatus and processes (other than electro-metallurgical) for coating metals with more precious, more malleable or more durable metals; case hardening; malleableizing; galvanizing or sherardizing of metals, leading or nickel plating; tin plates (bright, dull, mottled, ornamental, printed) and tin plating. Products.
- Class 799. Appliances and processes for enameling metallic objects, and products, and other metal coating or protection not otherwise provided for. Products.

GROUP 156

LITERATURE OF MINING AND METALLURGY

- Class 800. Statistics and publications relative to geology, mineralogy, paleontology, topography, quarrying, mining, mine accidents, metallurgy, the manipulation of mineral products and the development of water resources.

GROUP 152

WORKING OF MINES, ORE BEDS, STONE QUARRIES

- Ackroyd & Best, Ltd., Pittsburgh, Pa. Safety Lamps. The Mine.
- American Blower Co., Detroit, Mich. Sirroca mine fan. The Mine.
- American Mine Door Co., Canton, Ohio. Mine door. The Mine.
- American Well Works, Aurora, Ill. Deep well pumps. Mch. Pal., 1st St., Avs. G & G2.
- Baldwin Locomotive Works, Philadelphia, Pa. Baldwin-Westinghouse electric mine locomotive—bar steel frame with trolley and gathering reel. Baldwin-Westinghouse storage battery locomotive with bar steel frame. The Mine.
- Byron Jackson Iron Works, San Francisco, Cal. Pump. The Mine.
- Coast Mfg. and Supply Co., Livermore, Cal. The Mine.
- Co-operative Metallurgical Exhibit, U. S. Bureau of Mines and Following Companies. 5th St. & Av. A:
Ainsworth & Sons, Wm. G., Denver, Colo. Assay and analytical balances.
- Braun Corporation, Los Angeles, Cal. Assay and chemical goods.
- Braun-Knecht-Heiman Co., San Francisco, Cal. Chemical goods.
- Keeler Mfg. Co., Salt Lake City, Utah. Assay balance.
- Tyler Co., W. S., Cleveland, O. Assay screens.
- Concordia Safety Lamp Co., Pittsburg, Pa. Mfr. Pal. and in The Mine. Electric safety lamps for mines.
- Consolidated Coal Co., The, Baltimore, Md. The Mine.
- Denver Engineering Works, Denver, Colo. The Mine.
- Denver Rock Drill Mfg. Co., Denver, Colo. The Mine. M. A. Peterson, Dist Mgr., 225 Rialto Bldg., San Francisco, Cal. Mining drills and accessories.
- Draeger Oxygen Apparatus Co., Pittsburg, Pa. Rescue apparatus. The Mine.
- Economy Engineering Co., Chicago, Ill. Mfrs. Mch. Pal., Av. H, bet. 3rd & 4th Sts. Warehouse equipment.
- Fairmont Mining Machinery Co., West Va. The Mine. "Fairmont" steel ties for mine tracks; portable electric mine pumps; rotary box car loader model; railroad car retarder model; coal mine equipment and supplies.
- Harron, Rickard & McCone, San Francisco, Cal. Coll. Exh. drilling pumps. Mch. Pal., 4th & 5th Sts., Avs. G & H.
- Hayward, S. F. & Co., New York, N. Y. The Mine.
- Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo. The Mine. Leadville Drill Column Hoist.
- Hercules Powder Co., San Francisco, Cal. Explosives. Av. B & 7th St. Dynamite; all grades and strengths; blasting powders and blasting supplies; smokeless sporting powder; black sporting powder; earth augers; subsoling bars; explosives for stump blasting; tree planting.
- Hockensmith Wheel & Mine Car Co., Penn. Station, Pa. The Mine.
- Homestake Mining Co., Lead, S. D. The Mine.
- Hendy Iron Works, Joshua, San Francisco, Cal. The Mine.
- Hughes Bros., Scranton, Pa. The Mine.
- Ingersoll Rand Co., New York, N. Y. The Mine.
- Keystone Driller Co., Beaver Falls, Pa. Drilling machinery. Mch. Pal., 4th St., bet. Avs. F & G.
- Koehler Mfg. Co., Marlboro, Mass. Safety mine lamps. The Mine.
- Lehigh Coal & Nav. Co., Lansford, Pa. The Mine.
- Lucey Co., J. F., Pittsburg, Pa. Drilling machinery. Mch. Pal., 5th St. & Av. F.
- Luitweiler Pumping Engine Co., Rochester, N. Y. Deep well pumps. Mch. Pal., 1st & 2nd Sts. & Av. E.
- Mine Safety Appliance Co., Pittsburg, Pa. The Mine.
- Missouri, State of. Prosp. drill. Drill hole Sects. in tubes and cases.
- National Lamp Works, Cleveland, O. The Mine.
- Pac. Portable Cons. Co., Inc., Los Angeles, Cal. Portable house in Oil Camp.
- Pacific Tank & Pipe Co., San Francisco, Cal. Clarifiers. 6th St., bet. Avs. A & B. Sand and slime settling tanks; sump, water, oil and gas tanks; tankage for separating gold and silver; cleaning and refining of ores; zinc shavings and sheets.
- Pyrene Mfg. Co., New York, N. Y. Fire extinguishers. The Mine.
- Rosseler & Haaslacher Chemical Co., The, New York, N. Y. Cyanide. 7th St., bet. Avs. A & B.
- Siebe, Gorman & Co., Ltd., Chicago, Ill. The Mine.
- Simonds Machinery Co., San Francisco, Cal. Deep well pumps. Mch. Pal., 1st & 2nd Sts. & Av. E.
- Simmonds Co., John, New York, N. Y. The Mine.
- Standard Gas Engine Co., San Francisco, Cal. Mine hoists. Mch. Pal., 1st & 2nd Sts., Avs. E & F.
- Star Drilling Machine Co., Akron, O. Drilling machinery. Mch. Pal., 2nd St., Avs. F & G.
- Sullivan Machinery Co., Spokane, Wash. The Mine. Post puncher for mining pitching coal.
- Superior Oxygen Co., Pittsburg, Pa. Oxygen. The Mine.
- U. S. Geo. Survey, Washington, D. C. Equipment and survey methods. Av. B.
- U. S. Steel Corporation & Subsidiary Cos., New York, N. Y. Collective iron, steel and coal exhibit. Av. D.
- American Bridge Co., Pittsburg, Pa. Model of coal barge.
- American Steel & Wire Co., Chicago, Ill. Track and tramway cables.
- Carnegie Steel Co., Pittsburg, Pa. Mining and drilling equipment.
- National Tube Co., Pittsburg, Pa. Oil well pipe and casing.
- H. C. Frick Co., Pittsburg, Pa. Safety and rescue Ex.
- Oliver Iron Mining Co., Duluth, Minn. Safety and rescue Ex.
- Tenn. Coal, Iron & R. R. Co., Birmingham. Safety and rescue Ex.
- U. S. Coal & Coke Co., Pittsburg, Pa. Safety and rescue Ex.
- Bunsen Coal Co., Pittsburg, Pa. Safety and rescue Ex.
- Weber Subterranean Pump Co., New York, N. Y. Mine and artesian well pumps. Mch. Pal., 1st St. & Av. C2.
- Westinghouse Electric & Mfg. Co., Pittsburgh, Pa. Trans. Pal. Baldwin-Westinghouse electric mine locomotive—bar steel frame with trolley and gathering reel. Baldwin-Westinghouse storage battery locomotive with bar steel frame; mine motors; industrial gears and pinions; industrial motor control. See motor appliances in booths of other exhibitors, in service.

White Co., Cleveland, O. Rescue truck
Wetherbee Igniter Co., Springfield, Mass. The
Mine.
Wolf Safety Lamp Co. of America, Inc., New
York, N. Y. The Mine. Miners' safety
and carbide lamps.

GROUP 153

MINERALS AND STONES AND THEIR
UTILIZATION

Anaconda Copper Mining Co., Anaconda, Mont.
Minerals, ores. Av. B, bet. 5th & 6th Sts.
Andrew & Co., Ltd., Sheffield, Eng. Rock
drills. Mch. Pal., 4th St., bet. Avs. G &
G2.
Argentina. Mineral and stones. 5th St., bet.
Avs. C & D.
Asbestos Protected Metal Co., Beaver Falls,
Pa. Roofing. Bureau of Mines.
Barber Asphalt Paving Co., Philadelphia, Pa.
Roofing materials. Mch. Pal., 5th St. & Av.
I. Parrott & Co., San Francisco, Cal., Rep-
resentatives. See ad. on front cover of
Machinery catalog.
Barrett Mfg. Co., Philadelphia, Pa. Asphalt
products. 7th St., bet. Avs. C & D.
Ceresit Waterproofing Co., Chicago, Ill. Water-
proofing products. Mch. Pal., 5th St. &
Av. I. Cement waterproofing and damp-
proof products for factories, residences, reser-
voirs, etc. Ceresit Floor Hardener for
hard and dustless concrete floors. Weather
wear, storm-proof roof coat.
China. Minerals and stones. 4th St., bet.
Avs. C & D.
Consolidation Coal Co., Fairmont, W. Va.
Coal. The Mine.
Disston, Henry & Sons, Inc., Philadelphia,
Pa. Saw Mfr. Av. C, cor. 6th St.
Footc Mfg. Co., Nunda, N. Y. Mch. Pal.,
4th & 5th Sts., bet. C & C2. Concrete
mixers and equipment.
Fuller & Co., W. P., San Francisco, Cal.
Paints, varnishes. Av. C & 3rd St.
Homestake Mining Co., Lead, S. D. Mineral
collection. The Mine.
International Acheson Graphite Co., Niagara
Falls, N. Y. Graphite. Mch. Pal., 3rd &
4th Sts., Av. C2.
Jaeger Machine Co., Columbus, O. Mch.
Pal., 4th & 5th Sts., bet. Avs. C & C2.
Artificial stone and cement.
Koppers Co., H. Model coke ovens. Collec-
tive Exhibit. Av. D.
MacLeod Co., The, Cincinnati, O. Paint
spreading machines. 1st St. & Av. I, Mch.
Pal.
Missouri, State of. Zinc, lead ores. 6th St.
National Cannerns Ass'ciation. Hort. Pal.
1st & 2nd Sts., & Avs. B & D.
Paraffine Paint Co., The, San Francisco, Cal.
Ready roofing. Min. Pal., 7th St., cor.
Av. C. Plastic caulking cement. Wall
board, asbestos roofing, building and roof-
ing papers, refined asphaltum, preservative
paints, roofing paints, cement and damp-
proof paints, cement waterproofing com-
pound. Enamels for iron and steel. Gen.
Offices: 34 First St., San Francisco, Cal.
Parrott & Co., San Francisco, Cal. Cement
waterproofing. Mch. Pal. 4th & 5th Sts.,
Av. I.
Redwood Manufacturers Co., San Francisco,
Cal. Farm Equipment. Block 36, Mch.
Pal. 15,000-gallon "Remco" redwood tank
in operation. "Remco" machine-banded
redwood stave pipe in operation. Miniature
"Remco" redwood tank and tower, sections
of "Remco" pipe, machine-banded and con-
tinuous stave.

Round Mountain Mining Co., Round Mountain,
Nev. Gold ores, country rocks, ores and
nuggets. Av. B, bet. 2nd & 3rd Sts. Maps,
geological sections, photographs relative to
geology, mineralogy, quarrying, mining
metallurgy, and the manipulation of mineral
products.

Smith Co., T. L., Milwaukee, Wis. Concrete
mixers. Mch. Pal. Parrott & Co., San
Francisco, Cal., representatives. See ad.
on front cover of Machinery Catalogue.

GROUP 153

Standard Oil Co. of California. Asphaltum
products. Av. C, bet. 6th & 7th Sts. As-
phaltum, road oil, cement, fuel oils, illumina-
ting oils, gas oils, lubricating greases,
gasoline, lubricating oils, floor oil, liquid
gloss.
Standard Oil Co. of Indiana. Wax. Av. C,
bet. 6th & 7th Sts. Paraffine wax, petro-
leum by-products. Comb. Ex.
Standard Varnish Works, Chicago, New York,
London. Min. Pal. Av. C, bet. 2nd & 3rd
Sts. Largest makers of high-grade varnishes
in the world. 113 Front St., San Francisco,
Cal.
Sturtevant Mill Co., Boston, Mass. Manufac-
turers: Crushing rolls, pulverizers, screens,
automatic scales, laboratory ore sampling
machinery. Harron, Rickard & McCone, San
Francisco, representatives.
Union Oil Company of California, San Fran-
cisco, Cal. Producers and refiners. Min.
Pal. 6th St. & Av. B. Exhibit of fuel and
lubricants in Mch. Pal. Cycloramic scenic
display of California oil industry; collec-
tion in geology; asphalt for paving, asphalt
for highway construction, asphalt for roof-
ing, asphalt for coating pipes, asphalt for
coating building paper, asphalt for insulat-
ing, asphalt for waterproofing, asphalt for
joint fitting, asphalt for saturating, asphalt
for printer's ink, asphalt for lacquers, as-
phalt for rubber substitute, asphalt for coat-
ing patent leather; complete line refined
petroleum products.
Universal Crusher Co., Cedar Rapids, Ia. Mch.
Pal. 4th & 5th Sts., bet. Avs. C & C2. Rock
and stone crushers.
U. S. Steel Corp. & Subsidiary Cos., New
York. Collective iron, coal and coke exhibit.
Av. D.
Carnegie Steel Co., Pittsburgh. Fur. coal
and coke by-products.
Illinois Steel Co., Chicago. Fur. coal and
coke by-products.
H. C. Frick Coke Co., Pittsburgh. Coal and
coke.
Universal Portland Cement Co., Chicago.
Cement products.
H. Koppers Co. Model coke ovens.
Uruguay. Minerals and stones. 4th St., bet.
Avs. B & C.
Valentine & Co., New York. Valspar varnish.
(Com. Exhibit). Min. Pal.
Vermont Marble Co., Proctor, Vt. Marble
for building purposes. V. I., Av. E & 2nd
St.
Wolverine Lubricants Co. Oils. (Com. Ex-
hibit). Min. Pal.

GROUP 154

MINE MODELS, MAPS, PHOTOGRAPHS

Anaconda Copper Mfg. Co., Anaconda, Mont.
Maps, photos. Av. B, bet. 5th & 6th St.
Argentina. Mine models, maps, photos. 5th
St., bet. Avs. C & D.
Bunker Hill & Sullivan Mfg. Co., Kellog, Idaho.
The Mine.

- China. Mine model, maps, photos. 4th St., bet. Avs. C & D.
- Coast Mfg. & Supply Co., Livermore, Cal. Fuse and caps.
- Consolidated Coal Co., Fairmont, W. Va. The Mine.
- Homestake Mining Co., Lead, S. D. The Mine.
- Lehigh Coal & Nav. Co., Lansford, Pa. The Mine.
- Missouri, State of. Collective exhibit. Mining Palace.
- North American Construction Co., Bay City, Mich. Oil camp.
- Pacific Coast Coal Co., Seattle, Wash. The Mine.
- Pacific Tank & Pipe Co., San Francisco, Cal. Wood stove pipe. 6th St., bet. Avs. A & B.
- Schuyler, F. B., Berkeley, Cal. Gem Mine reproduction. Av. A & 7th St.
- Transvaal Chamber of Mines, South Africa. Specimens, photographs. Av. C & 5th St.
- Uruguay. Mine models, maps, photos. 4th St., bet. Avs. B & C.
- U. S. Geological Survey, Washington, D. C. Charts, photos, maps. Av. B.
- U. S. Steel Corp. & Subsidiary Cos., New York. Collective iron, steel and coal exhibit. Av. D.
- Carnegie Steel Co., Pittsburgh. Models and photos of steel manufacture.
- H. C. Frick Coke Co., Pittsburgh. Models and photos, coal mining.
- Illinois Steel Co., Chicago. Photos, steel manufacture.
- Oliver Iron Mining Co., Duluth. Models and iron-mining exhibit.
- Pittsburgh & Conneaut Dock Co., Conneaut. Models and photos, ore handling.

GROUP 155

METALLURGY

- Anaconda Copper Mfg. Co., Anaconda, Mont. Copper metals. Av. B, bet. 5th & 6th Sts.
- Argentine. Metallurgy of ores. 5th St., bet. Avs. C & D.
- Am. Rolling Mills Co., Middletown, O. Armeo iron. 7th St., bet. Avs. C & D.
- Armeo Iron Culvert Mfrs. Assn., Middletown, O. Culverts. Min. Pal., Av. C & 7th St.
- Corrugated Armeo iron culverts, automatic flood gates, pressure head gates, irrigation gates, Lennon metal flumes
- Bristol Co., The, Waterbury, Conn. Recording pyrometers. Mch. Pal., 2nd St. & Av. D.
- Co-operative Metallurgical Exhibit, U. S. Bureau of Mines and the following companies. 5th St. & Av. A.
- Ainsworth & Sons, Wm. G., Denver, Colo. Assay and analytical balances.
- Braun Corporation, Los Angeles, Cal. Agitators, crushers, mixers, etc.
- Braun-Knecht-Heiman Co., San Francisco, Cal. Agitators, crushers, mixers, etc.
- Dorr Cyanide Machinery Co., Denver, Colo. Cyanide tanks.
- Englehard, Chas. & Co., Rochester, N. Y. Pyrometers.
- Merrill Metallurgical Co., San Francisco, Cal. Mining equipment.
- Oliver Continuous Filter Co., San Francisco, Cal. Working model of Oliver filter.
- Taylor Instrument Co., Rochester, N. Y. Thermometers and pyrometers.
- Tyler Co., W. S., Cleveland, Ohio.
- China. Metallurgy of ores. 4th St., bet. Avs. C & D.
- Denver Engineering Works, Denver, Colo. The Mine.
- Dodge Manufacturing Co., Mishawaka, Ind. Screens, power-driven.
- Fairmont Mining Machinery Co., W. Va. The Mine.
- Fuller, W. P. & Co., San Francisco, Cal. Av. C & Third St. Operating lead mill.

- Henderson Willis Co., St. Louis, Mo. Welding equipment. Mch. Pal. 2nd St. & Av. F.
- Homestake Mining Co., Lead, S. D. The Mine.
- Industrial Instrument Co., Foxboro, Mass. Recording pyrometers. Mch. Pal. 3rd St. & Av. C2.
- Int'l Acheson Graphite Co., Niagara Falls, N. Y. Mch. Pal. 3rd & 4th Sts., Av. C2.
- Jahnke Welding & Mfg. Co., San Francisco, Cal. Welding Equipment. Mch. Pal. South Entrance.
- Krogh Mfg. Co., San Francisco, Cal. Mch. Pal. 3rd St., Avs. H & I. Slime Pumps.
- Lambie Steel Form Co., New York, N. Y. Interchangeable Steel Moulds. Mch. Pal. 1st St. and Av. D.
- Macleod Co., The, Cincinnati, O. Welding equipment. Mch. Pal., 1st St. & Av. I. Oil furnaces.
- Marland, W. J., Oakland, Cal. Coll. Exh. Interchangeable steel moulds. Mch. Pal., 1st St. & Av. D.
- Missouri, State of. Collective exhibit metals.
- U. S. Steel Corp. & Subsidiary Cos., New York. Collective iron, steel and coal exhibit. Av. D.
- Am. Bridge Co., Pittsburgh. Steel bridges and buildings.
- Am. Steel & Wire Co., Chicago. Wire reinforcing material.
- Am. Sheet & Tin Plate Co., Pittsburgh. Sheets and tin plates.
- Carnegie Steel Co., Pittsburg. Raw steel and rolled products.
- Illinois Steel Co., Chicago. Steel and finished rolled products.
- National Tube Co., Pittsburgh. Pipes and tubes.
- Tenn. Coal, Iron & R. R. Co., Birmingham. Steel rails.
- Lorain Steel Co., Johnstown, Pa. Electric track welding.
- Tinius-Olsen Testing Machine Co. Testing machinery.

LITERATURE OF MINING AND METALLURGY

GROUP 156

- Coast Mfg. & Supply Co., Livermore, Cal. The Mine.

CALIFORNIA STATE EXHIBIT

- Location: Avenue C, between 5th and 6th Streets.

GROUP 153

- Alameda County. Mineral paints, display of.
- Henry Cowell Lime & Cement Co. Cement.
- Kern County. Display: Minerals, stones, fuels, luminants.
- Kern Trading & Oil Co., S. F. Peg model of oil fields, Kern county.
- Santa Barbara County. Display of minerals, fuels, luminants.
- Santa Clara County. Minerals, collective display of.
- San Joaquin Valley Counties Commission, Fresno, Cal. Minerals and stones, from Calaveras, Madero, Fresno, Mariposa counties.
- Shasta County. Minerals, collective display of.
- Siskiyou County. Minerals, collective display of.
- Southern California Counties Exposition Commission, Los Angeles. Mineral fuels and luminants. Los Angeles, San Bernardino and San Diego counties. Minerals and building materials.

GROUP 154

- Shasta County. Mine models.
- Siskiyou County. Mine models.
- Yuba Construction Company. Model dredger.

GROUP 155

- Straube Manufacturing Company. Stamp mill.

NEW YORK

Avenue C Bet. 4th and 5th Streets

GROUP 153

New York State Museum.—Albany. Mineral resources, origin and deposits.
 Carborundum Co.—Niagara Falls. Corbarundum, granite, silicium.
 New York Lime Co.—Natural Bridge, N. Y. Limestone.
 Finch, Pruyn Co.—Glen Falls, New York. Marble.
 Glens Falls, Portland Cement Co.—Glens Falls. Crude products.
 Paragon Plaster Co.—Artificial granite; feldspar.
 Kinkel's Sons, P. H.—Bedford. Feldspar, pink and white; rose quartz.
 Crown Point Spar Co.—Crown Point. Feldspar, pegmatite, mill products.
 Johnson, E. J.—New York City. Slate roofs.
 Mathews Slate Roof Co.—Poultney, Vermont. Slate roof.
 Barton & Son, H. H. Co.—Philadelphia, Pa. Garnet matrix and paper.
 North River Garnet Co.—North River. Garnet matrix; mill products.
 Bruyn Hasbrouck.—New Paltz. Grit, rough and shaped.
 Jos. Dixon Graphite Co.—Jersey City, N. J. Mfg. and products.
 International Acheson Graphite Co.—Niagara Falls, N. Y. Artificial graphite.
 U. S. Gypsum Co.—Oakfield. Gypsum, tile, plaster board.
 Niagara Gypsum Co.—Oakfield. Gypsum, rock, calcined, plaster.
 Ontario Talc Co.—Gouverneur, N. Y. Talc, fibrous and ground.
 Uniform Fibrous Talc Co.—Taleville. Talc, fibrous and ground.
 Worcester Salt Co.—Silver Springs. Salt; mfg. and products.
 Sterling Salt Co.—Cuylerville. Rock and refined salt.
 Retsof Salt Co.—Retsof, N. Y. Salt—rock, lump and ground.
 Onondaga Coarse Salt Association.—Syracuse Salt by solar evaporation.
 Solvay Process Co.—Syracuse. Soda compounds from limestone and coke.
 St. Lawrence Pyrites Co.—Herman. Crude pyrite and products.
 Connors Paint Co., Wm.—Troy. Mineral pigment.
 Clinton Metallic Paint Co.—Clinton. Mineral pigment.
 Wells Co., James M.—Ogdensburg. Mineral pigment.
 Vacuum Oil Co.—Olean and Rochester. Petroleum—crude and products.
 Wellsville Refining Co.—Wellsville. Crude oil and products.
 Shaner, A. L.—Bolivar. Crude oil, Wough and Porter pools.
 Love, Thomas.—Olean. Crude oil, Clarksville, pool.
 Wirt Gasoline Co.—Bolivar. Gasoline, compressed from natural gas.
 Witherbee, Sherman & Co.—Mineville. Magnetite.
 Port Henry Iron Ore Co.—Mineville. Iron Ore.
 Cheever Iron Ore Co.—Port Henry. Magnetite Ore.
 Chateaugay Ore and Iron Co.—Lyon Mountain. Iron Ore and county rocks.
 Benson Mines Co.—Benson Mines. Iron Ore.
 MacIntyre Iron Co.—Tahawus. Titaniferous Magnetite.
 Borst, C. A.—Clinton. Hematite Iron Ore.
 Northern Ore Co.—Edwards. Zinc Ore.

GROUP 154

New York State Museum.—Albany. Mine, metallurgical models, maps, photos.
 Worcester Salt Co.—Silver Springs. Model; making of salt.
 Sterling Salt Co.—Cuylerville. Rock salt occurrence, mining, etc.
 Witherbee-Sherman Co.—Mineville. Iron Ore —"Old Bed;" panoramas.
 Wellsville Refining Co.—Wellsville. Model oil derrick.
 International Acheson Graphite Co.—Niagara Falls. Model electric furnace.
 Solvay Process Co.—Syracuse. Relief charts and photos.
 St. Lawrence Pyrites Co.—Herman. Picture: mines, mills.
 Myers-Whaley Co.—Knoxville, Tenn. Picture: shoveling machine.
 Retsof Salt Co.—Retsof. Photo: surface plant, workings.
 American Gypsum Co.—Akron. Photo: underground gasoline motor.
 Glens Falls Portland Cement Co.—Glens Falls. Quarry photo.
 United States Gypsum Co.—Oakfield. Photo of plant.
 Benson Mines Co.—Benson Mines. Photos of quarry and mill.
 Borst, C. A.—Clinton. Photo of Hematite mine plant.
 New York Lime Co.—Natural Bridge. Photos of quarries and plant.
 Northern Ore Co.—Edwards. Photos of plant.

GROUP 155

Association of American Portland Cement Manufacturers.—Model cement road.
 Barton & Son Co., H. H.—North River. Sorting by hand abrasive garnet.
 Witherbee-Sherman & Co.—Mineville. Concentration magnetic ore.
 Chateaugay Ore and Iron Co.—Lyon Mountain. Iron Ore products.
 North River Garnet Co.—North River. Abrasive garnet.
 Dixon Crucible Co., Jos.—Ticonderoga. Graphite products.
 Northern Iron Co.—Standish. Process: pig iron Lyon Mountain.
 Northern Iron Co.—Port Henry. Process: Mineville pig iron.
 MacIntyre Iron Co.—Tahawus. Products, etc., Port Henry furnace.
 International Acheson Graphite Co.—Niagara Falls. Refractory graphite crucibles.
 Dixon Crucible Co., Jos.—Jersey City, N. Y. Graphite crucibles.
 Carborundum Co.—Niagara Falls. Electro-sillicon ware.

GROUP 156

New York State Museum.—Albany. Statistics: mineral resources.

STATE OF NEVADA

GROUP 153

Location: Av. B, bet. 2nd & 3rd Sts.
 State of Nevada Geological Exhibit. Including minerals, ores, etc.
 Amalgamated Pioche Mines & Smelters Corp., Pioche. Gold, silver, lead, copper, zinc ores.
 Adler, A., Mina. Gold ore.
 Alameda Mining Company, Mina. Copper ores.
 Amador Mining Company, Austin. Silver ores.
 American Smelter & Refining Co., Salt Lake City, Utah. Iron ore.
 Anchor Mine, Las Vegas. Zinc ore.
 Aurora Consolidated Mining Co., Aurora. Gold ore.
 Austin Manhattan Mining Company, Austin. Lead-silver ores, silver.

- Buckhorn Mines Co., Buckhorn. Ores and country rock.
- Bamberger Delmar Mining Company, Delmar. Gold ore.
- Blue Light Mining Co., Mina. Copper ore.
- Bray, Joe, Austin. Antimony ore Lead-silver ore.
- Bray & Knowles, Battle Mountain. Copper ore.
- Bristol Mining Company, Bristol. Copper ores.
- Brown, H. M., Mina. Copper ores.
- Brunswick Iron Mine, Carson City. Iron ore.
- Byran Mine, Battle Mountain. Gold ore.
- Codd, A. A., Reno. Country rock and ores, from Rochester District.
- Consolidated Nevada Utah Corp., Pioche. Gold, silver, lead ores.
- Carrara Marble Co., Carrara. Marble.
- Chedic, W. H., Carson City. Graphite.
- Carr, Clyde, Mina. Precious stones.
- Coaldale Coal Company, Coaldale. Coal, sub-bituminous.
- C. & C. Mining Co., Virginia City. Silver ore.
- Cattenhorn Brothers, Battle Mountain. Silver ore.
- Chisholm Mine, Ely. Lead-silver ore.
- Connis, H. A., Ely. Manganese ore.
- Cook, W. L., Reno. Copper ore.
- Cook & Lloyd, Luning. Lead, silver ore.
- Crow Canyon Mining Company, Elko. Gold ore.
- Crown Mines, Golconda. Gold ore.
- Curfew, Harry, Silver City. Gold ore.
- Delmar & Sproule, Goodsprings, Las Vegas. Gypsum.
- Day Mine, Ely. Lead-silver ore.
- Del Monte Mines, Goodsprings, Las Vegas. Copper ore.
- Dexter Union Mining Co., Manhattan. Gold ore.
- Dixon & Stebbins, Round Mountain. Gold ore.
- Donald, D. A., Silver Peak. Arsenic.
- Douglas-Wardell, Tonopah. Mercury ore.
- Dyer, E. A., Yerington. Copper ores.
- E. J. Mining Company, Bristol. Lead-silver ore.
- Eckman, William, Battle Mountain. Lead-silver ore.
- Ehlers, Paul, Luning. Gold ore.
- Elko Prince Mining Company, Midas. Gold ore.
- Ella Mine, Pioche. Lead-silver ore.
- Everett, F. Minna. Copper ore.
- Esmeralda County, Commissioners of, Goldfield. Mica, sulphur ores, molybdenum and tungsten ores.
- Falkner, E. & F. D., Mina. Lead and vanadium ores.
- Flinn & Roeder, Pioche. Lead-silver ore.
- Finney, E. H., Las Vegas. Gypsum.
- Florence-Goldfield Mining Co., Goldfield. Rough and polished ores.
- Goldbanks Quicksilver Co., Winnemucca. Country rocks and ores.
- Goldfield Cons. Mines Co., Goldfield. Country rocks and gold ores.
- Gould, Dr. H. G., Lovelock. Gypsum.
- George, E. T., Battle Mountain. Lead-silver and silver ores.
- Giroux Consolidated Mining Co., Ely. Copper ore.
- Glasgow Western Exploration Co., Battle Mountain. Copper ore.
- Gold Mountain Mining Company, Tonopah. Gold ore.
- Good Enough Mine, Pioche. Copper ore.
- Goldbanks Quicksilver Mining Co., Winnemucca. Mercury ore.
- Gold Eagle Mine, Ely. Silver ore.
- Goldfield Alamo Mining Company, Hawthorne. Lead-silver ore.
- Goldfield Consolidated Mining Co., Goldfield. Gold ore.
- Goldfield Florence Mining Co., Goldfield. Gold ore.
- Goldfield Plymouth Mining Co., Goldfield. Gold ore.
- Goodspeed, William, Ely. Silver-lead ore.
- Goodwin & Johnson, Pioche. Lead-silver ore.
- Grube, F. G., Luning. Silver ore.
- Hill & Worsick, Lovelock. Wonderstone.
- Heeney, John T., Reno. Opals in the rough.
- Hard Scramble Mine, Rube Brown, Midas. Gold ore.
- Hannan, John, Reno. Lead-silver ore.
- Haughton, James, Mina. Lead-silver ore.
- Hilt & Adams, Mina. Lead-silver ore.
- Hillside Mining Company, Bristol. Lead-silver ore.
- Holmes Mining Co., Candelinn. Silver ore.
- Horton Brothers, Battle Mountain. Lead-silver ore.
- Hulse, E. W., Ely. Antimony ore.
- Jumbo Extension Mining Co., Goldfield. Gold-copper ores.
- Kennedy, C. E., Winnemucca. Gold ore.
- Kiernan, J. H., Pioche. Copper ore.
- Kimberly Consolidated Mining Co., Hill Top. Gold ore.
- Kramer Hill Mining Co., Golconda. Gold ore.
- Lawrence, I. N., Las Vegas. Tungsten ore.
- Lemaire Brothers, Battle Mountain. Silver ore.
- Little Eoluppus Mine (A. H. Scott), Luning. Silver ore.
- Luchens, Fred, Austin. Silver ore.
- Lucky Star Mine, Luning. Lead-silver ore.
- Luning Aviator Mining Co., Luning. Copper ore.
- Lyon & Heggland, Luning. Copper ore.
- Mason Valley Mines Co., Thompson. Country rocks and ores, copper.
- Mercury Mines Co., Ione. Country rocks and ores.
- Montana-Tonopah Mines Co., Tonopah. Ores.
- Manhattan Consolidated Mining Co., Manhattan. Gold ore.
- Manhattan Mining Company, Ely. Copper ore.
- Manhattan White Cap Mining Co., Manhattan. Arsenic, antimony ores.
- Marcel, D. P., Ruth. Copper ore.
- Mariopa Mining Co., Austin. Silver ore.
- Masey, F. M., Midas. Gold ore.
- McCluskey, H. G., Goldfield. Lead-silver ore.
- McDonald, D. C., Ely. Copper ore, lead.
- McDonald, J. R., Las Vegas. Zinc ore.
- McLaughlin, J. A., Tonopah. Zinc ore.
- Meagher, W., Battle Mountain. Lead-silver ore.
- Mercury Mining Company, Ione. Mercury ore.
- Montana Tonopah Mining Company, Tonopah. Silver ore.
- Monte Cristo Mine, Goodsprings, Las Vegas. Zinc ore.
- Mount Diablo Mine, Candelina. Silver ore.
- Nevada Bunker Hill Mining Co., Elko. Country rocks and ores. Copper, silver, lead.
- Nevada Cinnabar Co., Ione. Country rocks and ores.
- Nevada Consolidated Copper Co., McGill. Copper ores.
- Nevada Douglas Copper Co., Ludwig. Country rocks and copper ores.
- Nevada Hills Mining Co., Fairview. Country rocks and ores.
- Nevada New Mines Co., Rawhide. Gold and silver ores. Country rock.
- Nevada Wonder Mining Co., Wonder. Country rocks and ores.
- Ninnis, F. C., Tonopah. Silver ore.
- Nevada Douglas, Yerington. Gypsum, copper ores and native copper.
- Nevada Sulphur Company, Sulphur. Sulphur.
- National Mines Co., National. Silver ore.
- Nevada Central Mining Co., Ely. Lead-silver.

- Nevada Cinnabar Mining Co., Ione. Mercury ore.
- Nevada Consolidated Mining Co., Ely. Copper ore.
- Nevada Minnesota Mining Co., Yerington. Copper ore.
- Nevada New Mines Co., Rawhide. Gold ore.
- New Era Mining Co., Pioche. Gold ore.
- Newlyons & Hegglund, Pioche. Silver ore.
- Noble, R. T., Midas. Gold ore.
- Plymire, Dr. F. A., Mina. Polished marble.
- Portland Cement Company. Mound House. Gypsum.
- Potosi Mine, Goodsprings, Las Vegas. Zinc ore.
- Prairie Flower Mine, Goodsprings, Las Vegas. Zinc ore.
- Paisley, J. A., Midas. Gold ore.
- Panie & Licing, Ely. Lead-silver ore.
- Patuch Mine, Mina. Silver ore.
- Pepper & Keough, Mina. Mercury ore.
- Playter, Jos. H., Golconda. Gold ore.
- Pohl, Fred, Austin. Bar of silver, silver ore.
- Poujade, J., Carson City. Lead-silver ore.
- Ophir Mining Co., Virginia City. Silver ore.
- Orr, William, Lovelock. Native silver and silver ore.
- Queen Sheba Mine, Mills City. Lead-silver ore, silver ore.
- Quigley, F. D., Luning. Copper ore.
- Round Mountain Mining Co., Round Mountain. Gold ores, country rocks, ores and nuggets. Av. B, bet. 2nd & 3rd Sts. Maps, geological sections, photographs relative to geology, mineralogy, quarrying, mining metallurgy, and the manipulation of mineral products.
- Red Top Mining Co., Hill Top. Lead-silver ore.
- Rex Reduction Co., Midas. Gold ore.
- Reich, C., Luning. Copper ore.
- Romanche, P. V., Orizabo. Silver-lead ore.
- Round Mountain Tungsten Mining Co., Round Mountain. Tungsten ore.
- "Rover Group," Goodsprings, Las Vegas. Lead and zinc ores.
- Royal Mining Co., Luning. Gold ore.
- Ruby Silver Mining Co., Battle Mountain. Silver ore.
- Ruth Mine, Ruth. Lead-silver ore.
- Seven Troughs Coalition Mining Co., Seven Troughs. Ores.
- Stevenson, C. T., Reno. Polished varisite.
- Seven Troughs Coalition Mining Co., Lovelock. Gold ore.
- Shafford & McCarthy, Austin. Lead-silver ore.
- Scherfield Mining Co., Golconda. Silver ore.
- Silverfield Mining Co., Golconda. Lead-silver ore.
- Simmons, P. H., Mina. Copper ore.
- Smith, E. E., San Francisco. Gold ore.
- Stewart Bros., McMillan, Luning. Copper ore.
- Stewart, W. J., Tonopah. Copper ore.
- Stewart, Robert, Sodaville. Gold ore.
- Tonopah Belmont Development Co., Tonopah. Oxidized and sulphide ores.
- Tonopah Extension Mining Co., Tonopah. Ores.
- Tonopah Mining Co., of Nevada, Tonopah. Oxidized and sulphide ores.
- Taylor, James T., Pioche. Lead-silver ore.
- Tilford, John, Ely. Tungsten.
- Tolare Mining Co., Austin. Lead-silver ore.
- Tonopah Extension Mining Co., Tonopah. Silver ore.
- Tonopah Merger Mining Co., Tonopah. Silver ore.
- Tonopah Midway Mining Co., Tonopah. Silver ore.
- Tonopah North Star Mining Co., Tonopah. Silver ore.
- University of Nevada, Reno. Country rock and ores, gold and silver.
- University of Nevada, Reno. Diatomaceous earth, tripoli, mica, salt, ores, tungsten, antimony, lead, silver, copper and gold.
- U. S. Smelting & Refining Co., Salt Lake, Utah. Copper ore.
- Virgin River Salt Co., Las Vegas. Salt.
- Vanderhoff, E. E., Ely. Lead ore.
- Virginia Iron Mine, Virginia City. Iron ore.
- Virtue Mine Co., Ely. Lead-silver ore.
- Watson & Bachman, Luning. Copper ore.
- Williams & Clifford, Austin. Lead-silver ore.
- Waltl, E. D., Eureka. Zinc and copper ore.
- Wedekind & Selever, Mina. Copper ore.
- Welch & Selever, Mina. Copper ore.
- White Cap Mining Co., National. Silver ore.
- Workman, Jesse, National. Lead-silver ore.
- West End Consolidated Mining Co., Tonopah. Country rocks and ores.
- White Pine County Commissioners, Ely. Copper ores.
- Wingfield, George, Reno. Polished specimens of gold ore, copper ore.
- Yellow Pine Mine, Goodsprings. Zinc ore.
- Yount & Fayle, Goodsprings. Platinum ore.

GROUP 154

- Amalgamated Pioche Mines & Smelters Corp., Pioche. Photograph.
- Balliet, Letson, Tonopah. Drawing and photograph.
- Buckeye Belmont Mines Co., Tonopah. Photographs and panorama.
- Buckhorn Mines Co., Buckhorn. Photographs and model.
- Codd, A. A., Reno. Panorama and photograph.
- Denver Rock Drill & Machinery Co., S. F., Cal. Waugh stoper model, 12 A.
- Desert Power & Mill Co., Millers. Panorama of mill.
- Florence-Goldfield Mining Co., Goldfield. Map of workings.
- Goldbanks Quicksilver Co., Winnemucca. Map and photographs.
- Julian, E. A., Reno. Mill cow.
- Mason Valley Mines Co., Thompson. Panorama of mine and smelter.
- Mercury Mines Co., Ione. Photograph of property.
- Montana-Tonopah Mines Co., Tonopah. Photographs, map and model.
- Moran, William J., Tonopah. Claim map.
- National Mines Co., Winnemucca. Photograph of mine.
- Nevada Bunker Hill Mining Co., Elko. Photographs and maps.
- Nevada Cinnabar Co., Ione. Photographs of property.
- Nevada Consolidated Copper Co., McGill. Panorama and photographs.
- Nevada Douglas Copper Mining Co., Ludwig. Panorama of property.
- Nevada Hills Mining Co., Fairview. Photographs and model.
- Nevada Wonder Mining Co., Wonder. Photographs of property.
- O'Leary, Frank, National. Claim map.
- Reid, W. F., Goldfield. Model of blacksmith shop, tools.
- Round Mountain Mining Co., Round Mountain. Photographs.
- Seven Troughs Coalition Mining Co., Seven Troughs. Panorama.
- Tonopah Belmont Development Co., Tonopah. Photographs and model.
- Tonopah Extension Mining Co., Tonopah. Photographs.
- University of Nevada, Reno. Models, panoramas and maps.
- Goldfield Consolidated Mines Co., Goldfield. Photographs.

GROUP 155

State of Nevada. Metallurgical products.
 Belmont Milling, Tonopah. Products of mill.
 Buckhorn Mines Co., Buckhorn. Products of mill.
 Churchill Milling Co., Wonder. Screen analysis of mill products.
 Desert Power & Mill Co., Millers. Product of mill.
 Coldbanks Quicksilver Co., Winnemucca. Products of furnace.
 Mason Valley Mines Co., Thompson. Products of copper smelter.
 Mercury Mines Co., Ione. Products of furnace.
 Nevada Cinnabar Co., McGill. Products of furnace.
 Nevada Cons. Copper Co., McGill. Metallurgical products, copper.
 Nevada Hills Mining Co., Fairview. Products of mill.
 Nevada Milling Co., Tonopah. Products of mill.
 Seven Troughs Coalition Co., Seven Troughs. Products of mill.

GROUP 156

State of Nevada. Literature and statistics of mining and metallurgy.
 Belmont Milling Co., Tonopah. Flow and elevation sheets.
 Churchill Milling Co., Wonder. Flow sheet.
 Desert Power & Mill Co., Millers. Flow sheet.
 Goldfield Consolidated Mines Co., Goldfield. Flow sheet.
 Montana Tonopah Mines Co., Tonopah. Flow sheet.
 Nevada Hills Mining Co., Fairview. Elevation and flow sheet.
 Nevada Milling Co., Tonopah. Flow sheet, section Carpenter agitator.
 Round Mountain Mining Co., Round Mountain. Flow sheet.
 Seven Troughs Coalition Mining Co., Seven Troughs. Flow sheet.
 Tonopah Extension Mining Co., Tonopah. Flow sheet.
 University of Nevada, Reno. Production charts and maps.

SWEDEN

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