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Catalogue of the collection to illustrate the animal resources and the fisheries of the United States, exhibited at Philadelphia in 1876 by the Smithsonian Institution and the United States Fish Commission, and forming a part of the United States National Museum

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SECTION D.

ANIMAL PRODUCTS AND THEIR APPLICATIONS.

I. FOODS.

1. FOODS IN A FRESH CONDITION.

This section includes specimens of the marketable animals in a fresh condition in refrigerators.

The following species of fish were exhibited in the Allegretti and Banta refrigerators in the Government building from May 10 to November 10, by Mr. E. G. Blackford, of New York City.

Fishes (eastern coast):

- Rabbit-fish (*Tetrodon laevigatus*).
- Bur-fish (*Chilomycterus geometricus*).
- File-fish (*Balistes capriscus*).
- Long-tailed file-fish (*Alutera cuspidata*).
- Orange file-fish (*Ceratacanthus aurantiacus*).
- American sole (*Achirus lineatus*).
- Flat-fish (*Pseudopleuronectes americanus*).
- Flounder (*Chænopsetta ocellaris*).
- Halibut (*Hippoglossus vulgaris*).
- Pollack (*Pollachius carbonarius*).
- Cod (*Gadus morrhua*).
- Tom-cod or frost-fish (*Microgadus tomcodus*).
- Haddock (*Melanogrammus aeglefinus*).
- Hake (*Phycis chuss*).
- Striped sea-robin (*Prionotus evolans*).
- Broad-fingered sea-robin (*Prionotus carolinus*).
- Sea-raven (*Hemitripterus americanus*).
- Wolf-fish (*Anarrhichas lupus*).
- Tautog, or black-fish (*Tautoga onitis*), weight 22½ pounds.
- Chogset or cunner (*Tautogolabrus adspersus*).
- Parrot-fish (*Pseudoscarus* sp.).
- Sergeant-major (*Glyphidodon saxatilis*).
- Lump-fish (*Cyclopterus lumpus*).
- Mackerel (*Scomber scombrus*).

Fishes (eastern coast):

- Bonito (*Sarda pelamys*).
 Spanish mackerel (*Cybium maculatum*).
 Cero (*Cybium caballa*).
 Striped cero (*Cybium regale*).
 Crevalle (*Carangus hippos* and *Paratractus pisquetos*).
 Pompano (*Trachynotus carolinus*).
 Big-eyed sead (*Trachurops crumenophthalmus*).
 South Carolina rudder-fish (*Seriola fasciata*).
 Silver-fish (*Argyriosus vomer*, &c.).
 Thread-fish (*Blepharis crinitus*).
 Dolphin (*Coryphæna Sueuri* and *C. punctulata*).
 Black rudder-fish (*Palinurichthys perciformis*).
 Butter-fish (*Poronotus triacanthus*).
 Short harvest-fish (*Peprilus Gardenii*).
 Squirrel (*Holocentrum sogo*).
 Squeteague (*Cynoscion regalis*).
 Spotted squeteague or weak-fish (*Cynoscion carolinensis*).
 Drum (*Pogonias chromis*).
 Spot (*Liostomus obliquus*).
 Red-fish, or spotted bass (*Sciaenops ocellatus*).
 King-fish (*Menticirrus nebulosus*).
 Croaker (*Micropogon undulatus*).
 Sheeps-head (*Archosargus probatocephalus*).
 Scuppaug, or porgy (*Stenotomus argyrops*).
 Grunts (*Hæmylum arcuatum*, &c.).
 Red snapper (*Lutjanus Blackfordii*).
 Grouper (*Epinephelus striatus*, *E. apua*, &c.).
 Sea bass (*Centropristis atrarius*).
 Striped bass or rock fish (*Roccus lineatus*).
 White perch (*Morone americana*).
 Moon-fish (*Parephippus quadratus*).
 Triple-tail (*Lobotes surinamensis*).
 Bluefish (*Pomatomus saltatrix*).
 Cobia (*Elacate canadus*).
 Sucker-fish (*Leptecheneis naucrateoides*).
 Striped mullet (*Mugil lineatus*).
 Silver gar-fish (*Belone longirostris*).
 Skipper (*Scomberesox scutellatus*).
 Salmon (*Salmo salar*).
 Tarpum (*Megalops thrissoides*).
 Menhaden (*Brevoortia tyrannus*).
 Shad (*Alosa sapidissima*).
 Alewife, or gaspereau (*Pomolobus pseudoharengus*).
 Tailor herring (*Pomolobus mediocris*).
 Herring (*Clupea harengus*).

Fishes (eastern coast):

- Mud shad (*Dorosoma Cepedianum*).
- Sea cat-fish (*Aelurichthys marinus*).
- Eel (*Anguilla bostoniensis*).
- Sturgeon (*Acipenser oxyrhynchus* and *A. brevirostris*).
- Spoonbill (*Polyodon folium*).
- Ray, or skate (*Raia* sp.).
- Spotted-fin shark (*Isogomphodon maculipinnis*).
- Dog-fish (*Mustelus lævis*).

Fishes (fresh waters):

- Burbot, or lawyer (*Lota maculosa*).
- Fresh-water drum (*Haploidonotus grunniens*).
- Small-mouthed black bass (*Micropterus salmoides*).
- Large-mouthed black bass (*Micropterus pallidus*).
- Rock bass (*Ambloplites rupestris*).
- Sun-fish (*Pomotis aureus*).
- Yellow perch (*Perca flavescens*).
- Yellow pike-perch (*Stizostedium americanum*).
- White bass, or striped bass (*Roccus chrysops*).
- Lake pike (*Esox lucius*).
- Masquallonge (*Esox nobilior*).
- Pickrel (*Esox reticulatus*).
- Brook trout (of eastern slope), (*Salvelmus fontinalis*).
- Lake trout (*Salmo confinis*).
- Salmon trout, or Mackinaw trout (*Cristivomer namaycush*).
- Atlantic salmon (*Salmo salar*).
- Sebago salmon (*Salmo salar* var. *sebago*).
- White-fish (*Coregonus albus*).
- Lake herring (*Argyrosomus harengus* and *A. clupeiformis*).
- Michigan grayling (*Thymallus tricolor*).
- Moon-eye (*Hyodon tergisus*).
- Suckers (*Catostomus teres* and *Ptychostomus aureolus*).
- Buffalo fish (*Bubalichthys bubalus*).
- Shiner (*Stilbe americana*).
- Catfishes (*Amiurus catus*, *A. nigricans*, &c.).

Fishes (western coast):

- Salmon (*Salmo quinnat*).
- Mussels.
- Clams.
- Crabs.
- Lobsters.
- Squid.

2. FOODS: DRIED AND SMOKED.

Mammal preparations.

Jerked bear-meat.

Jerked seal and walrus meat (Indian).

11435. Dried (jerked) flesh of harbor seal (*Phoca vitulina*). Prepared by the Passamaquoddy Indians. Eastport, Me. E. Palmer.

Jerked and smoked buffalo-meat.

14281. Dried (jerked) flesh of buffalo (*Bison americanus*), as prepared for hunters' use. Wyoming. F. V. Hayden, U. S. Geologist.

10917. Dried (jerked) flesh of buffalo (*Bison americanus*). Prepared by Sioux Indians. Army Medical Museum.

Dried and smoked beef.

Dried and smoked venison.

Hams of various kinds.

Jerked porpoise-meat (Indian).

11436. Dried (jerked) flesh of harbor porpoise (*Phocaena brachycion*). Prepared by the Passamaquoddy Indians of Eastern Maine. Eastport, Me. E. Palmer.

Jerked squirrels and other small mammals.

Pemmican.

12238. Pemmican of dried flesh of buffalo (*Bison americanus*), with buffalo-skin case. Prepared for hunters' use. Western Plains. Army Medical Museum.

Meat-biscuit, desiccated meat, meat extract (*extractum carnis*), desiccated and condensed milk, &c.

29524. Valentine's preparation of meat juice. M. L. Valentine, Richmond, Va.

29525. Valentine's meat juice and glycerine. (Meat juice 1 part, glycerine 3 parts.)

29358. Condensed milk. The Gail Borden Eagle brand (made in 1876). New York Condensed Milk Company, New York.

29360. Borden's pure cocoa (in combination with refined sugar and Borden's condensed milk). New York Condensed Milk Company, New York.

29359. Borden's meat-biscuit (made in 1851). Composed of pure juice or extract of beef combined with wheat-flour. New York Condensed Milk Company.

29361. Borden's extract of beef (made in 1876). Prepared by the Borden Meat Preserving Company, Colorado County, Texas. Concentrated *in vacuo*. New York Condensed Milk Company.

(Borden's extract of beef consists of the juices of lean meat concentrated *in vacuo* at a low degree of heat, by which process it is claimed the burnt taste and smell, objected to in other beef extracts, are avoided.)

4915. Condensed raw beef (pulverized). Prepared by the National Preserving Company, Baltimore.

Mammal preparations.

Sausages.

Cheese.

See in exhibition of Agricultural Department.

Bird preparations.

Jerked birds (Indian).

Reptile preparations.

Dried lizards (Indian).

Fish preparations.

Smoked halibut.

Dried cod, haddock, hake, &c.

26750. Alden's vapor-cured, snow-flaked, fresh codfish. E. G. Blackford.

Dried and smoked mullet and roes.

Dried and smoked garfish, flying-fish, &c.

Smoked herring, alewives, &c., and their roes.

12130. Smoked No. 1 herrings (*Clupea harengus*). Eastport, Me. D. T. Odell.12131. Smoked "Magdalena" herrings (*Clupea harengus*). Eastport, Me. D. T. Odell.12129. Smoked "scaled" herrings (*Clupea harengus*). Eastport, Me. D. T. Odell.26552-3-4. Smoked herring (*Clupea harengus*). Eastport, Me. Griffin Bros.

Smoked salmon, oulachan, white-fish, smelt, &c., and their roes.

12121. Smoked white-fish (*Coregonus albus*). Lake Erie. Schacht & Bros., Sandusky, Ohio.11608. Smoked flesh of the quinnat salmon (*Salmo quinnat*). Prepared by the McCloud River Indians. Shasta County, California. Livingston Stone.12122. Smoked sturgeon (*Acipenser rubicundus*). Lake Erie. Schacht & Bros., Sandusky, Ohio.19646. Dried flesh of trout (*Salmo*, sp.). Used as food by the Ahgy Pi-Uto Indians of Walker Lake, Nevada. Stephen Powers.19353. Dried eggs of quinnat salmon (*Salmo quinnat*). Prepared by the McCloud River Indians. Shasta, Cal. Livingston Stone.11049. Dried eggs of quinnat salmon (*Salmo quinnat*). Prepared for food by the Bannack Indians.21716. Flour made from flesh of quinnat salmon (*Salmo quinnat*) by the McCloud River Indians of California. Livingston Stone.21712. Basket of dried salmon (*Salmo quinnat*). Prepared for food by the McCloud River Indians. Shasta County, California. Livingston Stone.25284. Dried flesh of salmon (*Salmo*, sp.). Prepared by the Sitka Indians of Alaska. Alaska. J. G. Swan.12132. Dried flesh of the quinnat salmon (*Salmo quinnat*). Used as food by the McCloud River Indians. California. Livingston Stone.

Fish preparations.

13752. Dried eggs of quinnat salmon (*Salmo quinnat*). Used as food by the McCloud River Indians. California. Shasta County, California. Livingston Stone.

21187. Eggs of "herring" (sp. incog.). Used as food by Sitka Indians. Collected by them upon branches of hemlock (*Abies Mertensiana*), planted in shallow water, upon the spawning grounds of the fish. Sitka, Alaska. J. G. Swan.

Smoked sturgeon.

Veziqa, prepared from the notochord of sturgeon.

Insects.

Dried grasshoppers (Indian).

25314. Grasshoppers. Dried for food by the Indians of Southern California. E. Palmer.

Worms.

Dried worms (Indian).

Mollusk preparations.

Dried abalones (*Haliotis*) prepared by the California Chinese.

Dried siphons of *Schizothærus* prepared by the Indians of the Northwest coast.

Dried slugs (*Limax*, &c.), used by Indians.

Radiate preparations.

(Dried holothurians, "bêches de mer," used by Chinese.)

Protozoans.

("Mountain meal," a kind of infusorial earth, mixed with flour, and used as food in Lapland and China.)

3. FOODS: SALTED, CANNED, AND PICKLED.

Mammal preparations.

Salted buffalo-meat.

Salted beef.¹

Salted deer, reindeer, elk.

Salted tongues of beef, buffalo, deer, horse.¹

Salted pork.¹

Canned milk of the various brands.

¹ See above, p. 163.

Bird preparations.

Canned turkey.

Canned meats.

24918. Fresh turkey (*Meleagris gallopavo*). Wm. Underwood & Co., Boston,
[Mass.]

24932. Deviled turkey (*Meleagris gallopavo*). " "

26644. Cumberland roast turkey (star brand). Portland Packing Company,
Portland, Me.

Canned chicken.

Canned goose.

Reptile preparations.

Salted and canned turtles and turtle soup.

Canned frogs.

26751. Alden fresh green turtle. Prepared by Alden Sea Food Company.
Sold by Lynn Manufacturing Company, New York. Presented by
E. G. Blackford, New York.

Fish preparations.

Salted halibut, halibut fins, &c.

25271. Preserved fresh halibut (*Hippoglossus vulgaris*). Wm. Underwood
& Co., Boston, Mass.

Salted cod, cod's tongues, sounds, and roe.

24923. Fresh codfish (*Gadus morhua*). Wm. Underwood & Co., Boston, Mass.

25273. Fresh haddock (*Melanogrammus aeglefinus*). " "

Salted mackerel.

Salted Spanish mackerel.

26650. Fresh Seguin mackerel (star brand). Portland Packing Company,
Portland, Me.

25855-60. Canned mackerel (*Scomber scombrus*). Kemp, Day & Co., New
York.

24922. Fresh mackerel (*Scomber scombrus*), Wm. Underwood & Co., Boston,
Mass.

Salted bluefish.

Salted pompano.

Salted sword-fish.

Salted mullets.

Salted salmon.

24924. Fresh salmon (*Salmo salar*). Wm. Underwood & Co., Boston, Mass.

26557. Pickled salmon (*Salmo*).

26755. Fresh Columbia River salmon. Brookfield, Columbia River, W. T.
J. G. Megler & Co.

— Canned salmon. A. Booth & Co., Chicago, Ill.

Fish preparations.

Salted salmon.

26756. Fresh Columbia River salmon. Brookfield, W. T. J. G. Megler & Co.
 26757. Fresh Columbia River salmon. Brookfield, Columbia River, W. T. J. G. Megler & Co.
 26803. Spring salmon bellies (salted). Oregon Packing Company, Portland, Oreg.
 26747. Cook's Columbia River fresh salmon. Oregon Packing Company.

Canned menhaden, in oil, "American sardines."

16609. "American sardines." Prepared "à l'huile" from the menhaden (*Brevoortia tyrannus*). American Sardine Company, New York.
 16702. Cornish sardines (à l'huile), first quality. Prepared by Fox & Fryer, Falmouth and Nevagissy, Cornwall, from the pilchard (*Clupea pilchardus*).
 16680. "American boneless sardines." Prepared in olive oil from the menhaden (*Brevoortia tyrannus*). Process patented May 21, 1872. American Sardine Company, New York.
 15516. "Shadines." Prepared from the menhaden (*Brevoortia tyrannus*). Port Monmouth Fishery, New York. Hooper & Coit, New York.

(Spiced lampreys) used in Europe.

Anchovy-sauce and "essence of anchovies."

Canned menhaden, in oil, "American club-fish."

Spiced menhaden, "ocean trout."

— Ocean trout. Hooper & Coit, Port Monmouth, N. J.

Salted herring.

26748. Quoddy River herring (salted). Griffin Bros., Eastport, Me. Presented by E. G. Blackford, New York.

Salted anchovies.

- 26565-68 } "Krauter anchovies, Christiania." New York. Eagle Preserved
 26571-72 } Fish Company.
 26559. Anchovies.

Canned herring, in oil, "Russian sardines."

26562. Russian sardines.
 26563-26570. "Russische Sardinen." Adler brand. Prima qualitat. "Reval." New York. Eagle Preserved Fish Company.

Caviare, prepared from roe of the various sturgeons.

12129. Caviare. Prepared from the eggs of the lake sturgeon (*Acipenser rubicundus*). Lake Erie. Schacht & Bros., Sandusky, Ohio.
 26558. Caviare.
 26635. American caviare. Max Ams, New York.
 26634. Prime Russian caviare. (Patented Nov. 9, 1875.) H. Dittman, Hamburg. Max Ams, New York.

Fish preparations.

Pickled fish preparations.

26555. Pickled eels (*Anguilla bostoniensis*).
 26633. American eels (pickled eels). Max Ams, New York.
 26636. "Hamburger aale" (cans) (pickled eels). Max Ams, New York.
 26630. "Hamburger aale" (pickled eels in jelly). Max Ams, New York.
 26631. "Hamburger aale" (whole eels rolled and pickled with olives, capers, and mushrooms). Max Ams, New York.
 26629. Hamburger aale (boxes). Max Ams, New York.
 26632. Hamburger aale. G. Dittman, Hamburg. Max Ams, New York.

Extract of fish.

26749. Extract of fish. Made from the juices of the flesh of fishes (menhaden). S. L. Goodale, Saco, Me.

Preparations of mollusks.

Canned clams.

Canned Little Neck clams.

Canned scallops.

Cockles (*Cardium edule*), used in Europe as pickles and catsup.

See supplementary catalogue of Invertebrates.

4. GELATINES.

Mammal gelatines (see, also, under 24)

Gelatines made from tanners refuse and from sinews.

Gelatines made from feet and hoofs.

Gelatines made from bone and ivory shavings.

Bird gelatines.

(Nests of esculent swallows (*Calocalia esculenta*, *C. fuciphaga*, *C. indifica*, &c.), exported from Indian Archipelago to China.)

Fish gelatines or isinglass (see, also, under 24).**Insect gelatine.**

Gelatine from cocoons of silk-worms.

5. BAITS AND FOODS FOR ANIMALS.

Prepared baits. (See under B, 45.)**Food for domesticated animals.**

Oil-factory scraps.

Fish-scraps.

Cuttle-fish bone (see under 18).

II. CLOTHING.

6. FURS (embracing the furs in their rough state (peltries), and in the various stages of preparation; also the manufactured articles, such as robes, rugs, cloaks, sacks, tippets, cuffs, muffs, hats, caps, gloves, trimmings, and linings).

Mammal furs.

Puma (*Felis concolor*), used for carriage-robes, rugs, &c.

H. 67. Missouri. C. A. Herpich & Co.

Ocelot (*Felis pardalis*) used for rugs.

12509. Texas. Smithsonian Institution.

Jaguar (*Felis onca*), used for rugs.

— Texas. Smithsonian Institution.

Cat (*Felis domestica*), used for robes and philosophical apparatus:

Black cat.

White cat.

Maltese cat.

Tortoise-shell cat.

H. 64. Natural. United States. C. A. Herpich & Co.

H. 65. Dyed brown. United States. C. A. Herpich & Co.

Canada lynx (*Lynx canadensis*), used for rugs and trimmings and dyed muffs, boas, &c.

24754. Labrador. G. R. Renfrew & Co., Quebec.

Bay lynx (*Lynx rufus*), used for rugs, and, when dyed, muffs and boas.

H. 61. Natural. Minnesota. C. A. Herpich & Co.

H. 62. Dyed brown. Kansas. “

H. 63. Dyed black. “ “

H. 59. Dyed black. “

H. 60. Dyed brown. “

Eskimo dog (*Canis sp.*), used for rugs, &c.

24756. Labrador. G. R. Renfrew & Co., Quebec.

Wolf (*Canis lupus*), used for lining rugs and robes.

12508. Black variety.

H. 75. Gray variety. Kansas. C. A. Herpich & Co.

24753. Labrador. G. R. Renfrew & Co., Quebec.

Mammal furs.

Coyote or prairie-wolf (*Canis latrans*), used for rugs and robes.

- H. 75. Colorado. C. A. Herpich & Co.
1014. Smithsonian Institution.

Red fox (*Vulpes fulvus*) used for robes.

24757. Labrador. G. R. Renfrew & Co., Quebec.
H. 34. Connecticut. C. A. Herpich & Co.
H. 35. Indiana. “
H. 3. Missouri. “

Silver fox (*Vulpes alopec, var. argentatus*), used for muffs and trimmings.

24759. Labrador. G. R. Renfrew & Co., Quebec.

Cross fox (*Vulpes alopec, var. decussatus*), used for robes and trimmings.

24758. Labrador. G. R. Renfrew & Co., Quebec.
H. 30. Montana. C. A. Herpich & Co.

Arctic fox (*Vulpes lagopus*).

24760. Labrador. G. R. Renfrew & Co., Quebec.
H. 29. White Arctic. C. A. Herpich & Co.
H. 28. Blue Labrador. “

Kit fox (*Vulpes velox*) used for robes, muffs, trimmings.

- H. 37. Nebraska. C. A. Herpich & Co.

Gray fox (*Urocyon virginianus*), used for robes, rugs, and linings.

- H. 32. Michigan. C. A. Herpich & Co.
H. 33. North Carolina. “

American or Hudson's Bay sable (*Mustela americana*), used for cloaks, muffs, cuffs, boas, linings, &c.

4393. Summer Arctic coast. B. R. Ross.
10176. Alaska. Lieut. F. M. Ring.
4389. Arctic coast, B. R. Ross.
460. Fort Boise, M. T. Dr. Geo. Suckley.
24764. Orange. Labrador. G. R. Renfrew & Co., Quebec.
24763. Silver. “ “ “
24762. Black. “ “ “
H. 25. Labrador. Smithsonian Institution.
H. 25. N. W. coast. “ “
H. 26. Lake Superior. “ “
H. 27. Maine. “ “

Fisher or pekan (*Mustela Pennanti*) used for linings; tails used for trimmings.

3230. Fort Crook, Oreg. Capt. Gardiner.
1008. Fort Dalles, Oreg. Dr. Geo. Suckley.
2000. Steilacoom, Wash. “
1009. Fort Dalles, Oregon. “
24761. Black. Labrador. G. R. Renfrew & Co., Quebec.

Mammal furs.

Ermine or weasal (*Putorius erminea*) of northern hemisphere, used for cloaks, linings, &c.

24765. Labrador. G. R. Renfrew & Co., Quebec.
H. 39. (5 specimens.) United States. C. A. Herpich & Co.

Mink (*Putorius vison*), used for cloaks and muffs.

4395. Arctic coast. B. R. Ross.
350. California. Lt. Trowbridge.
3568. Puget Sound. Dr. Kennerly.
2387. Cape Flattery, Wash. Dr. Geo. Suckley.
24766. Brown. Labrador. G. R. Renfrew & Co., Quebec.
H. 18. New York. C. A. Herpich & Co.
H. 19. Minnesota. "
H. 20. Ohio. "
H. 22. Maine. "
H. 22. Missouri. "
H. 23. Florida. "

Wolverine (*Gulo luscus*), used for muffs, robes, linings.

24767. Labrador. G. R. Renfrew & Co., Quebec.
11339. Filmore, Utah. Lieut. Geo. M. Wheeler.
4379. Fort Simpson, H. B. T. Robt. Kennicott.

American badger (*Taxidea americana*), used for muffs and rugs.

26609. Southern Utah. U. S. Engineer Corps.
H. 70. United States. C. A. Herpich & Co.

Skunk, Alaska sable (*Mephitis mephitica*), used for muffs, boas, &c.

81. Washington, D. C. S. F. Baird.
H. 7. Black. Ohio. C. A. Herpich & Co.
H. 8. Half-striped. Pennsylvania. C. A. Herpich & Co.
H. 9. Striped. Connecticut. "
H. 10. White. Missouri. "

Striped skunk (*Spilogale zorrilla*).

11136. Marsh Valley. Dr. F. V. Hayden.

Otter (*Lutra canadensis*), with specimens of the plucked and dyed fur, used for muffs, trimmings, &c.

2803. White River. Puget Sound. Dr. George Suckley.
24768. Labrador. G. R. Renfrew & Co., Quebec.
25752. Dressed by G. C. Treadwell & Co., Albany, N. Y.
25753. " "
25763. " "
H. 41. Natural. Maine. C. A. Herpich & Co.
H. 42. Natural. Plucked. Canada. C. A. Herpich & Co.
H. 43. Natural. Plucked and dyed. New York. C. A. Herpich & Co.

Mammal furs.

Sea otter (*Enhydra marina*), used for muffs, gloves, collars, cuffs, trimmings.

12262. St. Paul's Island, Alaska. H. W. Elliott.
 12265. " " "
 12263. " " "
 H. 44. California. C. A. Herpich & Co.
 H. 45. Silver tipped. California. C. A. Herpich & Co.

Black bear (*Ursus americanus*), used for caps, rugs, muffs, robes, &c.

24769. Labrador. G. R. Renfrew & Co., Quebec.
 24770. " " "
 H. 75. Minnesota.
 H. 76. Kansas.
 H. 77. West Virginia.
 12510. White bear (*Thalarctos maritimus*), used for rugs, robes; extensively by the Eskimos.
 19904-5. Grizzly bear (*Ursus horribilis*), used for rugs, robes, trimmings.
 12507. Raccoon (*Procyon lotor*), used for hats, linings:
 H. 1. Natural. Northern New York. C. A. Herpich & Co.
 H. 2. Natural. Ohio. "
 H. 3. Natural. Virginia. "
 H. 4. Natural, plucked. Wisconsin. "
 H. 5. Dyed black. Michigan. "
 H. 6. Dyed black and silver pointed. Michigan. C. A. Herpich & Co.

Fur seal (*Callirhinus ursinus*) used for cloaks, hats, gloves, muffs, linings, trimmings, &c.

- 12513-14-15-16-17-18. St. Paul's Island, Alaska. H. W. Elliott.
 9526. Unplucked. Hutchinson, Kohl & Co., San Francisco, Cal.
 9527. Unplucked. Alaska. Hutchinson, Kohl & Co.
 25757. Unplucked. Prybilov Islands, Alaska. Hutchinson, Kohl & Co.
 25758. London dye. Alaska. C. A. Herpich & Co.
 H. 93. " " "
 22233. Unplucked. Alaska. G. C. Treadwell & Co., Albany, N. Y.
 22234. Plucked. South Sea. " "
 26310. Unplucked pelt of fur seal. Alaska.
 26311. Plucked " " "
 26312. Plucked and dressed pelt of fur seal. Alaska.
 26613. Plucked and dyed pelt of fur seal. Alaska. Alaska Commercial Company.

Antarctic fur-seal (*Arctocephalus aucklandicus*), &c.

25762. Dressed by G. C. Treadwell & Co. Islos de Diego Ramires.
 25761. " " South Georgia Islands.
 25760. " " "
 25759. " " Staten Land, South Atlantic.
 25756. " " South Shetland Islands.
 25755. " " "
 25754. " " "
 26804-5-6-7. Deposited by Duryea & Hallet, Rahway, N. J.

Mammal furs.

Banded seal (*Histiophoca equestris*), used by Eskimos as fur.

7580. (Bag). Cape Romanzoff. W. H. Dall.

Square flipper seal (*Erignathus barbatus*).

12422. Labrador. Governor of Newfoundland.

Pacific hair seal (*Phoca Richardi?*).

H. 89. White coat. Pacific. C. A. Herpich & Co.

H. 90. White coat, silver pointed. Pacific. C. A. Herpich & Co.

Hood or bladder-nose seal (*Cystophora cristata*).

12424. Young. Labrador. Governor of Newfoundland.

12425. Bedlamer (1 year old). Labrador. Governor of Newfoundland.

12423. Labrador. Governor of Newfoundland.

Harp seal (*Pagophilus grælandicus*), with specimens of the white fur of the unborn cub and the blue fur of the young.

11828. Unborn. Newfoundland. Michael Carroll.

12427. Labrador. Governor of Newfoundland.

12421. Young. Labrador. Governor of Newfoundland.

12426. Bedlamer. " " "

13134. Sack made from white fur. Greenland. S. F. Baird.

Hair seal (*Phoca vitulina*), used for coats, caps, linings for shoes.

24771. Labrador. G. R. Renfrew & Co., Quebec.

H. 91. Dyed black. Halifax. C. A. Herpich & Co.

H. 92. Dyed brown. " "

Bison, or buffalo (*Bison americanus*) used for rugs and robes.

H. 82. Full furred winter.

H. 83. Fall robe. Montana. C. A. Herpich & Co.

H. 84. Summer robe. " "

H. 85. Indian painted. " "

H. 86. Yearling calf. " "

H. 87. Medium calf. " "

H. 88. Small calf. " "

Musk ox (*Ovibos moschatus*) used for robes, rugs, and trimmings.

12520. Hudson's Bay Territory.

12519. Calf. Hudson's Bay Territory.

Mountain sheep (*Ovis montana*).

H. 80. Montana. C. A. Herpich & Co.

Antelope (*Antilocapra americana*).

H. 81. Indian Territory. C. A. Herpich & Co.

Mammal furs

Elk (*Cervus canadensis*), used for rugs and robes.

H. 78. Montana. C. A. Herpich & Co.

Virginia deer (*Cariacus virginianus*).

12512. Virginia deer, used for trimmings and robes.

Black-tailed deer (*Cariacus columbianus*), used for robes and rugs.

11604-11605. Prepared by McCloud River Indians, California. Livingston Stone.

3565. Puget Sound. Dr. Kennerly.

Mule deer (*Cariacus macrotis*), used for trimmings, robes.

H. 99. Montana. C. A. Herpich & Co.

Woodland caribou (*Tarandus rangifer*, subspecies *caribou*), used for rugs, robes, &c.

24774. Labrador. G. R. Renfrew & Co., Quebec.

Barren ground caribou (*Tarandus rangifer*, subspecies *grælandicus*).

12363. (Albino.) F. Churchill, Hudson's Bay; W. W. Kirkby.

2050. (Young.) Robe from Mackenzie's River, H. B. T. R. Kennicott.

Moose (*Alces malchis*), used for rugs and robes.

24772. Labrador. G. R. Renfrew & Co., Quebec.

Mole (*Scalops* and *Condylura* sp.), used for robes and garments.

H. 72. United States. C. A. Herpich & Co.

Woodchuck or siffleur (*Arctomys monax*) robes, exported to Europe as "white and gray weenusk."

24776. Labrador. G. R. Renfrew & Co., Quebec.

H. 71. United States. C. A. Herpich & Co.

Marmot (*Arctomys caligatus*), used for robes and trimmings.

835. Robe. Indians of Rocky Mountains, west of Fort Good Hope, H. B. T. R. Kennicott.

Chinchilla (*Chinchilla laniger*) of South America, used for muffs, mantles, boas, cloak-linings, and trimmings.

H. 103. Real. Bolivia. C. A. Herpich & Co.

H. 104. Bastard. Chili. "

Parry's marmot (*Spermophilus Parryi*).

20793. Robe. Sitka, Alaska. J. G. Swan.

835. Robe. Indians of Rocky Mountains, west of Fort Good Hope, H. B. T. R. Kennicott.

Mammal furs.

Musquash (*Fiber zibethicus*), used for muffs, capes, caps, and linings and imitations of beaver fur.

24779. Labrador. G. R. Renfrew & Co., Quebec.
 24780. Black variety. Labrador. G. R. Renfrew & Co., Quebec.
 H. 12. Natural brown. Maine. C. A. Herpich & Co.
 H. 13. Natural brown. Indiana. "
 H. 14. Natural black. New Jersey. "
 H. 15. Plucked and dyed. C. A. Herpich & Co.
 H. 16. Plucked and colored. "

Neutria, or coypu (*Myopotamus coypus*), used for linings and muffs, and imitations of beaver.

- H. 105. Plucked. Buenos Ayres. C. A. Herpich & Co.

Beaver (*Castor canadensis*), used for linings and muffs.

1230. Spotted albino. Bristol Bay, Alaska.
 24777. American. Labrador. G. R. Renfrew & Co., Quebec.
 24778. " " " " "
 12506. White.
 H. 46. Dyed and silver tipped. Hudson's Bay Territory. C. A. Herpich & Co.
 H. 47. Dyed and silver tipped. Canada. C. A. Herpich & Co.
 H. 48. Dyed and plucked. Lake Superior. "
 H. 49. Natural. Lake Superior. "
 H. 50. Natural, in hair. Kansas. "

Hare (*Lepus*, various species).

- H. 58. United States. C. A. Herpich & Co.
 19615. Fur blanket. Pi-Ute Indians. Walker Lake, Nevada. Stephen Powers.

Rabbit, or cony (*Lepus cuniculus*), used for children's furs, and imitations of seal, beaver, &c., exported largely to China.

- H. 51. Dyed brown, sheared. United States.
 H. 52. Natural blue. "
 H. 53. Natural white. "
 H. 54. Dyed black. "
 H. 55. Natural blue. "
 H. 56. Natural white. "
 H. 57. Gray. United States. C. A. Herpich & Co.

Possam (*Didelphys virginianus*).

- H. 17. Ohio. C. A. Herpich & Co.

Mountain cat (*Bassaris astuta*).

- H. 66. Montana. C. A. Herpich & Co.
 H. 11. Missouri. "

Bird furs.

Loon (*Colymbus torquatus*).

1302. Used by Makah Indians in manufacture of robes. Nevalh Bay, Washington Territory. J. G. Swan.

1296. Robe from down of. Neeah Bay, Washington Territory. J. G. Swan.

Swan's (*Cygnus americanus*) furs and swan's down trimmings.

H. 101. I. United States. C. A. Herpich & Co.

H. 102. II. " "

Brown pelican (*Pelecanus fuscus*).

9559. Tiburon Islands, Sonora. E. Palmer.

Goose (*Anser* sp.).

H. 99. United States. C. A. Herpich & Co.

H. 100. United States. "

7. LEATHER. (See under 20.)

8. TEXTILE FABRICS.

Prepared from hair of mammals.

Human hair used in manufacture of watch-chains.

Hair of bats used in felting and in plaiting ropes in Central America and tassels in New Caledonia.

Hair of raccoon used in felting (largely exported to Germany for the use of hatters).

Hair of weasels and sables used in felting.

Hair of fur seal woven with silk in the manufacture of shawls.

Moose hair and its fabrics.

Ox and calf hair used in the manufacture of imitation woolen goods.

Sheep's wool, with specimens of fleeces and stapled wools, from various breeds and localities, short-wool fabrics, broadcloths, merinoes, flannels, mouselins de laine, serges, tweeds, blankets, carpets, and tartans, worsted fabrics, stuffs, bombazines, camlets, shawls, plushes and velvets, hosiery, and yarns, felts, felt-cloths, and felt-hats.

Goats' wool with specimens of mohairs, cashmeres, plushes, velvet-eens, camlets, and shawls. (For manufactured wigs and perukes, see under 21.)

(Yak (*Poëphagus grunniens*) wool with specimens of yak-lace and other fabrics.)

(Camels' hair with specimens of fabrics, plushes, felts, shawls, &c.)

(Hair of llama, paco, guanaco, and vicugna, with specimens of alpaca, guanaco, and other fabrics, and umbrellas and other articles manufactured.)

Prepared from hair of mammals.

Hair of horses used in weaving furniture-covers, crinoline-skirts, and bags for pressing oil.

Hair of buffalo used in plaiting ropes, lariats, &c.

Fur of mole used in felting.

Beaver (castor) fur with specimens of the felt cloths, hats, &c. (Neutria-fur used in felting and in the manufacture of hats.)

Musquash fur used in felting.

Possum hair with fabrics of Indian and other manufacture.

Fur of rabbit and hare used in felting, with specimens of hats and cloths.

Whalebone fiber used in weaving cloth covers for telescopes, &c.

Prepared from feathers of birds.

Cloths woven from feather (China).

Prepared from silk of insects. (This collection should include specimens of the cocoons, the raw silk, the spun silk, and of the various fabrics, plain and figured silks, satins and satinettes, shawls, damasks, brocades, crapes, and ribbons.)

Silk of common silk-worm (*Bombyx mori*).

Silk of *Samia cecropia*, *Samia polyphemus*, and other native American moths.

(Silk of exotic moths other than *Bombyx mori*, such as the tussah (*Bombyx pernyi* and *Bombyx mylitta*), the moonga (*Saturnia assamensis*), the joree (*Bombyx religiosa*), the ena or arindy (*Bombyx cynthia*).

Fabrics woven by the insects themselves, as *Tinea padilla*.

Silk of spiders.

Prepared from byssus of mollusks.

(Fabrics woven from byssus of the wing-shell (*Pinna nobilis*) and other mollusks.)

III. MATERIALS EMPLOYED IN THE ARTS AND MANUFACTURES.

Hard materials.

9. IVORY AND BONE.

Ivory of mammals.

Tusks of walrus used for trinkets, handles, jewelry, buttons, paper-knives, counters, &c.

25656. Tusks of walrus (*Rosmarus obesus*). Alaska. C. H. Crandall.
 15592. Commercial walrus ivory. Poonook, Alaska. H. W. Elliott.
 16174. Teeth of young walrus (*Rosmarus obesus*). Used in making powder chargers. Nunivak Island, Alaska. W. H. Dall.
 24819. Ivory of walrus in rough state. Joseph Shardlow, New York.
 24887. Scrimshawed tooth of walrus (*Rosmarus*). (Figure of lady.) Geo. Y. Nickerson, New Bedford, Mass.
 24886. Scrimshawed tooth of walrus (*Rosmarus*). (Figure of lady and horse.) Geo. Y. Nickerson, New Bedford, Mass.
 26896. Scrimshawed tooth of walrus (*Rosmarus Cookii*). Repulse Bay. Capt. H. C. Chester, Noank, Conn.
 25654. Harpoon head made at sea from walrus tusk. J. H. Bartlett & Sons, New Bedford, Mass.
 2631. Handle of walrus ivory. Northwest coast, America. United States Exploring Expedition. Capt. Chas. Wilkes, U. S. N.
 24815-6. Cane handles of walrus ivory. Joseph Shardlow, New York.
 24812. Chain and cross of walrus ivory. " "
 24814. Knobs of walrus Ivory. " "
 24813. Scarf-slide of walrus ivory. " "
 24817-18. Sword handles of walrus ivory. " "
 24820-21-22. Knife handles of walrus ivory. " "
 24823. Crochet-needles of walrus ivory. " "
 24824. Pool-balls of walrus ivory. " "
 24825-6-7-8-9-30-31-32. Buttons and studs of walrus ivory. Joseph Shardlow, New York.

} Teeth of bears, dogs, wolves, foxes, peccaries, and other large mammals, used as implements, arrow-tips, and ornaments, by Indians. }

6226. Bear teeth (used as ornaments). Bloomfield, N. Y. Col. E. Jewett.

Elk ivory (used by Indians for ornamentation).

1874. Ivory of elk (*Cervus canadensis*). Yamp Utah Indians; Utah. Captain Gunnison, U. S. A.

Tusks of mammoth elephant (*Elephas primigenius*) from Northern America and Asia, with Eskimo carvings.¹

15385. Tusk of mammoth. Alaska. J. G. Swan.
 11041. Comb. Made from the ivory of fossil elephant. Saint Michael's, Alaska. W. H. Dall.

¹An interesting series of aboriginal carvings from mammoth ivory is displayed in the Ethnological division.

Ivory of mammals.

Teeth of peccary (*Dicotyles* sp.).¹

Ivory of narwhal (*Monodon monoceros*), used for canes.

— . Tusks of narwhal. Greenland. U. S. Fish Commission.

13521. Cane made from tusk of narwhal. Eskimos of North Greenland.
F. T. Commagere.

Teeth of sperm-whale (*Physeter macrocephalus*) and their application to the manufacture of balls, buttons, and trinkets.

25653. Teeth of sperm-whale. J. H. Bartlett & Sons, New Bedford, Mass.

25710. Teeth of cow whale. Capt. Joseph Fisher, Provincetown, Mass.

25719. Teeth of sperm-whale. Andrew Kennedy, Provincetown, Mass.

24906-8. Teeth of sperm-whale, polished. J. H. Clark, Newport, R. I.

25709. Teeth of the cow whale (scrimshawed). Capt. Joseph Fisher, Provincetown, Mass.

7428. Tooth of sperm-whale. Scrimshawed with British coat of arms and female figure. J. Varden.

24905. Tooth of sperm-whale. Scrimshawed and mounted as watch case, figure of American eagle. J. H. Clark, Newport, R. I.

24904. Tooth of sperm-whale. Scrimshawed with figure of crucifix and flowers. J. H. Clark, Newport, R. I.

24901. Tooth of sperm-whale. Scrimshawed with figure of whaling-ship. J. H. Clark, Newport, R. I.

24902. Tooth of sperm-whale. Scrimshawed with figure of America in colors. J. H. Clark, Newport, R. I.

24903. Tooth of sperm-whale. Scrimshawed with figure of girl dancing. J. H. Clark, Newport, R. I.

7659. Tooth of sperm-whale. Scrimshawed with this legend: "Taken * by * the * ship * Montreal * of * London * in * the * Pacific * Ocean * from * a * one * hundred * barrel * whale *. — * — 1835 *." Mrs. Dove, Washington, D. C., 1842.

24888. Tooth of sperm-whale. Scrimshawed with figure of General Washington and American eagle. Geo. Y. Nickerson, New Bedford, Mass.

24889. Tooth of sperm-whale. Scrimshawed with figure of General Scott and American eagle. Geo. Y. Nickerson, New Bedford, Mass.

7660. Tooth of sperm-whale. Scrimshawed with figure of pagoda. ??? Pacific Ocean. United States Exploring Expedition. Capt. Charles Wilkes, U. S. N.

25792. Tooth of sperm-whale (scrimshawed) Malcolm McFadyyn, Gloucester, Mass.

24836. Balls turned from teeth of sperm-whale. Joseph Shardlow, New York.

Incisors of beaver (*Castor canadensis*) used by Indians for chisels, knives, and ornaments.

2684. Dice. Made from teeth of beaver. Oregon Indians. United States Exploring Expedition. Capt. Charles Wilkes.

¹Interesting applications of this material may be found in the Ethnological series.

Ivory of reptiles.

Teeth of alligator used for jewelry, whistles, cane-handles, buttons, &c.

26895. Jewelry manufactured from teeth of alligator (*Alligator mississippiensis*). E. F. Gilbert, Jacksonville, Fla.

An extensive trade in alligator teeth has sprung up within the last ten years. Ten establishments in Eastern Florida are engaged in their manufacture into fancy articles.

Ivory of fishes.

Sharks' teeth used in arming weapons.¹

Teeth of sharks and other fish used as trinkets.¹

Jaws of the sleeper-shark (*Somniosus brevipinna*) used for head-dresses by Indians.

—, Coronet of shark's teeth. Gulf of Saint Lawrence. G. R. Renfrew & Sons, Quebec.

Bone of mammals.

Parts of splanchno-skeleton of feræ, used as charms.

—, Os penis of raccoon, used as charm.

9476. "Os mirabilis" of walrus. Alaska. Gen. Geo. H. Thomas, U. S. A.

Bones of bear and other large mammals, used by Indians for implements and as tablets for paintings.¹

Bones of buffalo and of the domestic ruminants, used as substitute for ivory in the manufacture of buttons, handles, combs, &c.

24855. Bone parasol-handle. Joseph Shardlow, New York.

24854. Bone parasol-handle. " "

24853. Bone parasol-handle. " "

24852. Bone counters. Joseph Shardlow, New York.

24851. Bone shields. " "

24850. Bone cribbage-pins. " "

24849. Bone dice. " "

24843-4-5-6-7-8. Bone brush-handles. Joseph Shardlow, New York.

24842. Bone martingale-rings. " "

24837. Bone napkin-rings. " "

24833-4-5-6. Bone parasol-handle. " "

19513. Bow. Made of bone. Greenland Eskimos. Geo. Y. Nickerson.

10280. Bow. Made of bone. Eskimo. King William's Land.

25673. Bone marlin-spike. Made at sea by Thomas Freeman. Used for splicing trawl-lines. Sanford Freeman, Norwichport, Mass.

Sperm-whale jaw-bone, used for harness-rings, martingales, &c.

29233-4-5-6-7-8-9-40. Parasol-handles made from sperm-whale's jaw. Harvey & Ford, Philadelphia.

¹ Displayed in Ethnological division.

Bone of mammals.

Sperm-whale jaw-bone, used for harness-rings, martingales, &c.

29241. Paper-cutters, made from sperm-whale's jaw. Harvey & Ford, Philadelphia.
24909. Chopping-knife. Made from jaw of sperm-whale. Prof. S. F. Baird.
25791. Sail-thimble. Made from bone of whale. J. W. Foster, Beverly, Mass.
25793. Seam-rubber. Used by sail-makers to rub along seams. Made from jaw-bone of sperm-whale. Frank Westerberger, Beverly, Mass.
25650. Sail-maker's hand-fid. Made at sea from jaw-bone of sperm-whale. A. R. Crittenden, Middletown, Conn.
25655. Saw-frame. Made at sea from bone of sperm-whale. J. H. Bartlett & Sons, New Bedford, Mass.
25801. Pulley. Made from jaw-bone of sperm-whale. E. H. Cook, Provincetown, Mass.
25649. Pulley-block. Made at sea from jaw-bone of sperm-whale. A. R. Crittenden, Middletown, Conn.
25713. Seine-needle. Made from jaw-bone of sperm-whale. N. H. Payne, Wellfleet, Mass.

Horn-cores of ruminants, used in manufacture of assayers' cupels.

Bone of birds.

Bones of birds, used by Indians and Eskimos in making awls, needles, flutes, bird-calls, and dress-trimmings.

10333. Gambling-sticks. Made from bones of white crane. Mojave Indians. Dr. E. Palmer.

Bone of fishes.

Fish-bones, used by Indians and Eskimos in making implements.¹

Bone of sword-fish.

25675. Shoemaker's tool. Made from sword of sword-fish (*Xiphias gladius*). Sanford Freeman, Norwichport, Mass.

Sharks' vertebræ, used for canes.

Waste bone and ivory.

Use in manufacture of bone-black, ivory-black, and bank-note ink (see under 29).

Use in manufacture of sizes and glues (see under 24).

Use in manufacture of gelatine for food (see under 4).

Use in manufacture of phosphorus, carbonate of ammonia (harts-horn), and sal ammoniac (see under 30).

Use in manufacture of bone-charcoal for filters (see under 30).

Use in manufacture of paper.

Use of shavings in case-hardening gun-barrels and other fine steel.

¹Displayed in Ethnological series.

Waste bone and ivory.

10. HORN.

(Embracing the varieties of horn known to commerce, the split and pressed horns, and the various manufactured articles, such as jewelry, combs, and handles.)

Horn (employed as a material).

Horns of ox, sheep, and goat, used for handles, buttons, combs, powder-flasks, cups, boxes, stirrups, spoons, and imitations of tortoise-shell, also "sensitive Chinese leaves," and formerly for transparent plates in lanterns and horn-hooks, for trumpets, and for finger-nails in lay figures.

25277. Cow's horns. Philip R. Woodford, Boston, Mass.
 25274. Steer's horns. " "
 25276. Bull's horns. " "

Horn of buffalo, used like that of ox.

25278. Horns of buffalo bull. Philip R. Woodford, Boston, Mass.
 25280. Horns of buffalo calf. " "
 25279. Horns of buffalo cow. " "
 8489. Spoon of buffalo horn. Assinaboin Indians. Fort Buford, Dakota.
 Dr. J. P. Kimball, U. S. A.
 11030. Spoon of buffalo horn. Yellowstone Valley, Dakota. Lieutenant
 Cusick.

Horn of musk ox (*Ovibos moschatus*).

11648. Arctic regions. Capt. C. F. Hall.
 10389. Spoon made from horns of musk ox. Igloolik. Capt. C. F. Hall.
 25275. Ox horns. Philip R. Woodford, Boston, Mass.

Series of articles manufactured from horn. Geo. F. Lincoln, Leominster, Mass. :

29507. Horn as it comes from the press, cut out preparatory to making combs.
 29508. Combs. Cut.
 29509. Unfinished combs.
 29510. Horn cut into small pieces for use in manufacture of jewelry.
 29571. Finished comb.
 29502. Polished jewelry (uncolored).

Horn of mountain sheep and mountain goat, used by Aleutians in making spoons, bowls, and numerous other implements.

16809. Horns of mountain goat (*Mazama montana*). Used by Eskimo for making horn spoons. Alaska. W. H. Dall.
 20623-4. Spoon made from horn of mountain goat. Bella Bella Indians. J. G. Swan.
 9278. Spoon made from horn of mountain goat. Alaska. A. H. Hoff, U. S. A.

Horn (employed as a material).

Horns of Rocky Mountain sheep (*Ovis montana*).

704. Spoon made from horn of Rocky Mountain sheep. Northwest coast.
George Gibbs.
20842. Spoon made from horn of Rocky Mountain sheep. Haidah Indians.
Prince of Wales Island, Alaska. J. G. Swan.
14455. Spoon made from horn of Rocky Mountain sheep. Pi-Ute Indians.
Maj. J. W. Powell.

Antlers.

Antlers of deer, elk, and moose (stag horn), used in the manufacture of handles for instruments, trinkets, and buttons.

- 26229-26-30. Carving from horn of deer (*Cariacus virginianus*). Harvey & Ford, Philadelphia.
21312. Spoon carved from antler of elk (*Cervus canadensis*). Hoopah Indians, California. S. Powers.

Antlers of deer, elk, moose, and nearly all species of ruminants, employed for ornamental purposes. (A series of these antlers is used in the decoration of the columns in the Government building.)

Chemical and other applications.

Burnt horn (*cornu ustum*) used in dentifrices.

Carbonate of ammonia (hartshorn), manufactured from deer horns.
(See under 30.)

11. HOOFS AND CLAWS, &C.

(Embracing the commercial hoof, and the various stages of manufacture represented by specimens.)

Hoofs.

Hoofs of ox and bison, used in making buttons, combs, and handles.

26901. Commercial hoof. Philip R. Woodford, Boston, Mass.
Series of articles made from hoof. Geo. F. Lincoln, Leominster, Mass.:
29516. Dust made from the hoof.
29517. Belt buckle.
29518. Martingale rings.
29519. Breastpin.
29520. Cross for neck wear.
29521. Breastpin.

Hoofs of horse, used like those of ox and bison.

Hoofs of musk ox, deer, and antelope, used by Indians in ornamentation.

7443. Hoofs of musk ox. Used for trimming of garments by Eskimos.
Mackenzie's River. R. MacFarlane.

Feet of deer, used for knife-handles, stool-feet, &c.

Claws.

Claws of bear, puma, wolf, &c., used by Indians in ornamentation. }
 (See Ethnological series.)

Human nails, used by Indians for ornamental trimming.

Chemical application of hoofs and claws.

Use in manufacture of prussiate of potash (see under 30).

Use in manufacture of glue (see under 24).

12. BALEEN.

Whalebone in an unmanufactured state.

14042. Baleen of humpback whale (*Megaptera versabilis*). Coast of California, 1873. C. M. Scammon.
12311. Bone of humpback whale (*Megaptera versabilis*). Coast of California. C. M. Scammon.
13893. Baleen of humpback whale (*Megaptera versabilis*). Monterey, Cal. 1873. C. M. Scammon.
13019. Baleen of humpback whale (*Megaptera versabilis*). Monterey, Cal. 1872. C. M. Scammon.
12263. Baleen of humpback whale (*Megaptera versabilis*). San Luis, Cal. C. M. Scammon.
13020. Baleen of humpback whale (*Megaptera versabilis*). San Luis, Cal. C. M. Scammon.
13985. Baleen of sulphur-bottom whale (*Sibbaldius sulfureus*). Monterey, Cal. C. M. Scammon.
13984. Baleen of sulphur-bottom whale (*Sibbaldius sulfureus*). Monterey, Cal. C. M. Scammon.
12052. Bone of the California gray whale (*Rhachianectes glaucus*). Monterey, Cal. 1873. C. M. Scammon.
15402. Baleen. North Pacific. Capt. Henderson.
7494. Whalebone. Anderson River Eskimos. Mackenzie's River district. R. MacFarlane.
1108. Whalebone. Prepared by Anderson River Eskimos. Mackenzie's River district. R. MacFarlane.
1116. Whalebone. Anderson River Eskimos. Mackenzie's River district. R. MacFarlane.
2079. Whalebone. Arctic coast. R. MacFarlane.
24976. Whalebone fiber. Curled for bed-stuffing. J. A. Sevey, Boston, Mass.
24930. Whalebone. Prepared for whip-makers' use. J. A. Sevey, Boston, Mass.
24862. Whip with whalebone stock, knotted, inlaid with whale-tooth's ivory, handle wound with thin whalebone. American Whip Co., Westfield, Mass.
24950. Dress-bone. Whalebone prepared for dress-makers' use. J. A. Sevey, Boston, Mass.
24946. Whalebone. Prepared for suspender-makers' use. J. A. Sevey, Boston, Mass.
24945. Whalebone. Prepared for bonnet-makers' use. J. A. Sevey, Boston, Mass.
24941. Whalebone. Prepared for umbrella-makers' use. J. A. Sevey, Boston, Mass.

Whalebone in an unmanufactured state.

24940. Whalebone. Prepared for parasol-makers' use. J. A. Sevey, Boston, Mass.
24951. Gross dress-bone. Whalebone prepared for dress-makers' use. J. A. Sevey, Boston, Mass.
24948. White dress-bone. Whalebone (white) prepared for dress-makers' use. J. A. Sevey, Boston, Mass.
24978. Whalebone. Prepared for brush-makers' use. J. A. Sevey, Boston, [Mass.]
24942. Whalebone. Prepared for ribbon-weavers' use. " "
24943. Whalebone. Prepared for hat-makers' use. " "
24944. Whalebone. Prepared for cap-makers' use. " "
24947. Whalebone. Prepared for neck-stock-makers' use. " "
24952. Whalebone. Prepared for corset-makers' use. " "
24949. Round dress-bone. Whalebone prepared for dress-makers' use. J. A. Sevey, Boston, Mass.
24977. Whalebone fiber. J. A. Sevey, Boston, Mass.
24938. Whalebone cane. Black and white, twisted. J. A. Sevey. Boston, [Mass.]
24973. Whalebone boot-shanks. " "
24937. Whalebone tongue-scrapers. " "
24966. Whalebone probang. " "
24935. Whalebone riding-whip, made of black and white whalebone, twisted. J. A. Sevey, Boston, Mass.
24934. Whalebone riding-whip. J. A. Sevey, Boston, Mass.
24937. Whalebone cane. Plain. " "
24936. Whalebone cane. Twisted. " "
24972. Whalebone graining-comb. Used by painters. J. A. Sevey, Boston, [Mass.]
24965. Whalebone probang. " "
24980. Whalebone caterpillar-brush. " "
24981. Whalebone shavings. " "
24963. Whalebone back-supporter. " "
24979. Whalebone flue-brush. " "
24975. Whalebone fiber shoe-brush. " "
24983. Whalebone. Sample. " "
24959. Whalebone divining-rod. " "
24958. Whalebone angling-rod tip. " "
24956. Whalebone rosettes for harness. " "
24962. Whalebone landing-net rod. " "
24954. Whalebone hip busk bone. " "
24984. Whalebone. Price-list samples. " "
24970. Whalebone penholder. Black and white, twisted. " "
24961. Whalebone busk. " "
24964. Whalebone fore-arm bones. Artificial. " "
24968. Whalebone plait-raiser. " "
24969. Whalebone penholder. " "
24955. Manufactured corset, showing use of whalebone. " "
24953. Whalebone corset-clasps. " "
24960. Whalebone drill-bow. " "
24957. Whalebone billiard-cushion springs. " "
24971. Whalebone paper-cutter. " "
24985. Whalebone rule. " "

Whalebone in an unmanufactured state.

24860. Whalebone and rattan whip-stalk. Finished, ready for covering. American Whip Company, Westfield, Mass.
24858. Whalebone. As prepared for use in the whip. American Whip Company, Westfield, Mass.
24859. Whalebone and rattan. Fitted ready for sticking together for whip-stalk. American Whip Company, Westfield, Mass.
24857. Whalebone. In rough state, as sold to whip manufacturers. American Whip Company, Westfield, Mass.
24982. Whalebone. Prepared for whip-makers' use (patent). J. A. Sevey, Boston, Mass.

13. TORTOISE-SHELL.**Tortoise-shell** (*Eretmochelys squamata* Linn.).

- 12387-8-9-90. Tortoise-shell (*Eretmochelys squamata* Linn.). Pacific hawk's-bill turtle. Pacific coast.
24890. Commercial tortoise-shell. George Y. Nickerson, New Bedford, Mass.
26891. Tortoise-shell jewelry, &c. Charles W. Kennard & Co., Boston, Mass.:
- Comb cut and polished.
 - Comb cut before polishing.
 - Brooch and ear-rings.
 - Sleeve-buttons.
 - Necklace and locket.

14. SCALES.**Scales of fishes** used in ornamental work, with specimens of flowers and other articles manufactured.**Fish-scale jewelry.** F. C. Keergaard & Co., Philadelphia, Pa.:

25480. Scales of sheephead (*Archosargus probatocephalus*).
25481. Scales of sheephead (*Archosargus probatocephalus*). Prepared for use.
25482. Brooch and ear-rings. " "
25483. Spray of flowers. " "
25484. Spray of flowers. " "
25485. Spray of flowers. " "
25486. Spray of flowers. " "
25487. Spray of flowers (dyed). " "
25488. Necklace and cross. " "
25489. Brooch and ear-rings. " "
25490. Brooch and ear-rings (dyed) (*Archosargus probatocephalus*).
26892. Jewelry made from scales of mullet, drum, &c. Mrs. C. E. Mott, Jacksonville, Fla.

(Pearl white, or *essence d'Orient*, prepared from scales of *Alburnus lucidus* and other *Cyprinidæ* and *Clupeidæ*, used in making artificial pearls.) (See under 27.)

26893. Essence d'Orient. (Introduced for comparison.) Gustave Bossange, Paris.

15. PEARL.

Pearls and nacre (embracing the pearl-yielding shells, with the pearls and the mother-o'-pearl in the rough state, with the manufactured buttons, handles, and jewelry, pearl-powder, inlaid work, and papier-maché, ornamented with mother-o'-pearl.

Top-shells (*Turbinidæ*), and their application to manufacture of shell-flowers.¹

Tower-shells (*Trochidæ*).¹

Ear-shells (*Haliotidæ*), used in manufacture of buttons, handles, inlaid work, and pearl powder.¹

Other gasetropods supplying nacre.¹

Pearl-oysters (*Aviculidæ*), with pearls and nacre.¹

River-mussels (*Unionidæ*), with pearls and nacre.¹

Mussels, oysters, and other conchifers supplying pearls and nacre.¹

Shells of nautilus and argonaut, prepared to exhibit their nacre.¹

Ornamental pearl-work, imitating sprays of flowers, &c.¹

Imitation pearls.¹

16. SHELL.

Cameo shell.¹

Shell of conch (*Strombus gigas*), and carvings.¹

Shell of helmet (*Cassis rufa*, *C. tuberosa*, and *C. madagascariensis*), with carvings.¹

Shells used for implements, &c.¹

Shells of *Strombus*, *Triton*, *Dolium*, *Fusus*, *Murex*, and *Buccinum*, used for fog-horns, lamps, vases, and ornamental borders in flower-gardens.¹

Shells of *Busycon*, *Sycotypus*, *Mactra*, &c., used by Indians in manufacture of implements, with specimens of implements.¹

Shells of *Mactra*, used for ladles, scoops, and spoons by fishermen.¹

Shells of *Tridacua*, used for vases, fountains, and in the manufacture of handles and carvings.¹

Shells of *Pecten*, *Haliotis*, *Dentalium*, *Mercenaria*, &c., used by Indians for trimmings and ornaments.¹

Shells of *Pecten*, used in making pin-cushions and purses.¹

Shells of *Mercenaria violacea*, *Purpura lapillus*, and *Buccinum undatum*, used by Indians of eastern coast in manufacture of money, with specimens of wampum (with the modern wampum or shell-beads, manufactured for the Indian trade), and of the hyqua or *Dentalium* shells, employed in a similar manner by the Indians of the Pacific coast.¹

Specimens of the cowry (*Cypraea moneta*), "live cowry" and dead cowry, used in African trade and for trimmings.¹

¹ See in Part II of the present catalogue.

Shells used for implements, &c.

Shells of *Cypraea*, *Rotella*, *Oliva*, *Turritella*, *Phasianella* (Venetian shells), &c., mounted as buttons and jewelry.¹

Composition shell-work for box-covers and frames, made by gluing shells in mosaic.¹

Calcined shells, used by dentifrice and porcelain makers.¹ (See, also, under 32.)

Cuttle-fish bone from *Sepia officinalis*, used as a pounce, as a dentifrice, as polishing powders, for taking fine impressions in counterfeiting, and as food for birds.¹ (See, also, under D 5.)

Concretions from the stomach of *Astacus*, known as "crab's-eyes" and "crab-stones," and used as antacids.¹

Shell of king-crab (*Limulus polyphemus*), used as a boat-bailer.¹

Opercula of mollusks, used as "eye-stones."¹

17. CORAL.

Coral as a material.

Red coral (*Corallium nobilis*), with specimens of the five commercial grades (1, froth of blood; 2, flower of blood; 3, 4, 5, blood of first, second, and third qualities) of the white variety, and of the round beads, *negligée* beads, bracelets, pins, coronets, armlets, ear-rings, &c.¹

White coral, *Oculina*, sp., used by jewelers.¹

Madrepores and other showy corals, used for ornamental purposes.¹

Horny axis of black flexible coral (*Plexaura crassa*), used for canes and whips in the Bermudas.¹

Axis of fan coral (*Rhipidogorgia*), used for skimmers and strainers in the Bermudas.¹

Coral, used for building purposes.¹

Coral rock of recent formation (Coquina), used in Florida in manufacture of ornamental vases and carvings.¹

Calcined coral, used for dentifrices, as an antacid, &c.¹

Imitations of red coral in celluloid, rubber, and other substances.¹

18. INFUSORIAL EARTHS.

Polishing powders (used for polishing metals, cabinet-ware, and stone).

Specimens of polishing slate, tripoli, and other foreign polishing powder.¹

Specimens of American infusorial deposits.¹

¹ See under Part II of this catalogue.

Infusorial earths employed in manufactures.

- Infusorial earth, used in making window and plate glass.¹
 Infusorial earth, used in making soluble glass.¹
 Infusorial earth, used in making mortar.¹
 Infusorial earth, used in making molds for metal casting.¹
 Infusorial earth, used in making filters.¹
 Infusorial earth, used in making dynamite.¹
 Infusorial earth, used in making fire-proof packing.¹
 Infusorial earth, as an absorbent for oils and liquids.¹

19. OTHER MATERIALS FROM INVERTEBRATES.

From insects.

- Brazilian diamond-beetles, used in jewelry.
 Wings of beetles, used in embroidery.

From echinoderms.

- Spines of echinoids, used for slate-crayons.

Flexible materials.

20. LEATHERS. (Embracing the hides in a rough state, in the various stages of dressing, and manufactured into shoe-leather, parchment, vellum, binders' leather, thongs, &c.)

Leather prepared from mammal skins.

Leather prepared from human skin.

26070. Boots made from skin of man. H. & A. Mahrenholz, New York.

Sea-lion leather, used by Eskimos to cover bidarkas, and for garments and beds.

11371. Leather of sea-lion (*Eumetopias stelleri*). Used by Aleutian Islanders for manufacture of canoe. Alaska. Vincent Colyer.

Walrus leather, used by Eskimos for harness, tables, thongs, seal-nets, and for covering polishing-wheels.

15617. Harpoon-line of walrus leather. Alaska. H. W. Elliott.

Seal leather, used for fine shoes and in the manufacture of "patent leather," and by Eskimos for numerous purposes.

10186. Seal-skin bleached by hot water. Inuit Eskimos. Arctic Ocean. Capt. C. F. Hall.

1103. Seal-skin leather tanned by Eskimos. Mackenzie's River district. R. MacFarlane.

24785. Indian moccasins made from skin of seal (*Phoca vitulina?*) G. R. Renfrew & Co., Quebec.

¹ See under Part II of this catalogue.

Leather prepared from mammal skins.

Bison leather (and buffalo leather, buff-leather).

25951. Imitation buckskin. Manufactured from skin of American bison (*Bison americanus*). Wilcox Tannery, Elk County, Pennsylvania.
 25952. Collar leather. Manufactured from skin of American bison (*Bison americanus*). Wilcox Tannery, Elk County, Pennsylvania.
 25954. Sole leather. Manufactured from skin of American bison (*Bison americanus*). Wilcox Tannery, Elk County, Pennsylvania.
 25953. Whang leather. Manufactured from skin of American bison (*Bison americanus*). Wilcox Tannery, Elk County, Pennsylvania.

Ox leather, with specimens of sole leather, split leather, grain leather, rawhide thongs, whips, leather belts and saddles, and of calf-skins, prepared for binders' and bootmakers' use, as Russia leather and vellum, and tawed, as parchment.¹

Sheep leather, with specimens of binders' leather, imitation chamois leather, wash leather, buff leather, roan, imitation morocco and parchment, with vellum made from skins of dead-born lambs, and manufactured gloves, &c.¹

Goat leather, with specimens of shagreen leather, morocco leather, as used for linings, upholstery, bindings, and pocket-books, parchment, drum-heads, &c., with kid leather, used in manufacture of shoes and gloves, under-clothing, and vellum made from skin of young kids, also skin bottles used in Asia.¹

Horse and ass leather, used in manufacture of shagreen, sole leather, harness-leather, saddles, trunks, water-hose, pump-valves, military accouterments, ladies' shoe-uppers.¹

8871. Tanned ox-skin, used for sole leather. Cheyenne Indians, Kansas.
 Dr. G. M. Sternberg, U. S. A.

Rawhide.

29549. Rawhide prepared for belting. Darrow Manufacturing Company.
 29546. Coil of rope. Made from rawhide. " "
 29548. Basket. " "
 29547. Doll's head. " "
 29545. Powder-flasks. " "

Deer leather, dressed as buff leather, chamois-imitation leather, Indian dressed (buckskin), and for the finer moroccos, also manufactured into gloves, gaiters, under-garments, polishers, &c.

25282. Buck-tanned skin of mule deer (*Cariacus macrotis*). Indians.
 6977. Leather from skin of deer (*Cariacus macrotis?*). Tanned by Caddo Indians. E. Palmer.
 5554. Buck-tanned deer-skin (*Cariacus macrotis*). Apache Indians. E. Palmer.
 14383. Buck-tanned skin of deer (*Cariacus macrotis*). J. W. Powell.

¹In view of the extensive exhibition of leathers in the Shoe and Leather Building, no special effort has been made to complete this part of the collection.

Leather prepared from mammal skins.

Deer leather, &c.

6978. Buck-tanned skin of deer (*Cariacus macrotis*). Comanche Indians. E. Palmer.
11606. Buckskin (*Cariacus columbianus*). Dressed by McCloud Indians. Shasta County, California. Livingston Stone.
11605. Buckskin (*Cariacus columbianus*). Tanned by McCloud Indians. Shasta County, California. Livingston Stone.
11604. Buckskin (*Cariacus columbianus*). Tanned by McCloud Indians. Shasta County, California. Livingston Stone.
8540. Buckskin for moccasins. Nebraska. Dr. S. M. Horton, U. S. A.
26885. Skin of Virginia deer (*Cariacus virginianus*). Seminole Indians of Florida. G. Brown Goode.
24800. Tanned skin of young Virginia deer (*Cariacus virginianus*). J. H. Henderson, Big Coon, Ala.

Moose leather in ordinary and buckskin finish.

24781. Moccasins made from skin of moose (*Alces malchis*). Huron Indians. G. R. Renfrew & Co., Quebec.
24787. Rubber-sole moccasins made from skin of moose (dyed). G. R. Renfrew & Co., Quebec.
24782. Indian moccasins made from skin of moose. Iroquois tribe. G. R. Renfrew & Co., Quebec.
24773. Indian buck-tanned skin of moose (*Alces malchis*). Labrador. G. R. Renfrew & Co., Quebec.
24786. Indian moccasins made from skin of moose. "Lady's size." G. R. Renfrew & Co., Quebec.
838. Smoke-tanned skin of moose (*Alces malchis*). Slave (Lake?) Indians. R. Kennicott, Fort Liard.

Caribou leather in ordinary and buckskin finish.

24775. Indian buck-tanned skin of caribou (*Tarandus rangifer*). Labrador. G. R. Renfrew & Co., Quebec.
24783. Indian moccasins made from skin of caribou. "Man's size." G. R. Renfrew & Co., Quebec.
24784. Indian moccasins made from skin of caribou. "Woman's size." G. R. Renfrew & Co., Quebec.

Reindeer leather.¹

836. Smoke-tanned skin of barren-ground caribou (*Tarandus rangifer*, subspecies *grænlandicus*). Mackenzie's River district. R. Kennicott.

Elk leather in ordinary and buckskin finish.

8536. Elk-skin tanned with smoke. Nebraska. Dr. S. M. Horton, U. S. A.

Mountain-sheep leather.

8548. Buck-tanned skin of mountain sheep (*Ovis montana*). Nebraska. Dr. S. M. Horton, U. S. A.

¹See garments in Ethnological division.

Leather prepared from mammal skins.

Series of different leathers illustrating the manufacture of gloves:

25286. Raw skin of "Maranham jack" deer (*Cariacus* sp.) from South America. S. G. Hutchinson & Co., Johnstown, N. Y.
25287. Skin of "Maranham jack" deer, dressed by glove manufacturer, ready for cutting. S. G. Hutchinson & Co., Johnstown, N. Y.
25288. Gloves manufactured from skin of "Maranham jack" deer. S. G. Hutchinson & Co., Johnstown, N. Y.
25289. Raw skin of deer (*Cariacus* sp.). From Central America. S. G. Hutchinson & Co., Johnstown, N. Y.
25290. Skin of deer dressed by glove manufacturers. Central America. S. G. Hutchinson & Co., Johnstown, N. Y.
25291. Raw skin of mule deer (*Cariacus macrotis*). S. G. Hutchinson & Co., Johnstown, N. Y.
25292. Skin of mule deer (*Cariacus macrotis*). Fat or liquor dressed. S. G. Hutchinson & Co., Johnstown, N. Y.
25293. Skin of mule deer (*Cariacus macrotis*). Oil dressed. S. G. Hutchinson & Co., Johnstown, N. Y.
25294. Gloves made from skin of mule deer (*Cariacus macrotis*). S. G. Hutchinson & Co., Johnstown, N. Y.
25295. Raw skin of African "bles bok." S. G. Hutchinson & Co., Johnstown, N. Y.
25296. Skin of African "bles bok" (dressed). S. G. Hutchinson & Co., Johnstown, N. Y.
25297. Gauntlet gloves made from skin of African "bles bok." S. G. Hutchinson & Co., Johnstown, N. Y.
25298. Raw skin of prong-horn or antelope (*Antilocapra americana*). S. G. Hutchinson & Co., Johnstown, N. Y.
25299. Skin of prong-horn or antelope (*Antilocapra americana*). Dressed and colored. S. G. Hutchinson & Co., Johnstown, N. Y.
25300. Gloves made from skin of prong-horn or antelope (*Antilocapra americana*). S. G. Hutchinson & Co., Johnstown, N. Y.
25301. Raw skin of south American peccary (*Dicotyles labiatus*). S. G. Hutchinson & Co., Johnstown, N. Y.
25303. Gloves made from skin of South American peccary (*Dicotyles labiatus*). S. G. Hutchinson & Co., Johnstown, N. Y.
25302. Skin of South American peccary (*Dicotyles labiatus*). Dressed for glove manufacturer. S. G. Hutchinson & Co., Johnstown, N. Y.
25304. Buck-tanned skin of sheep. " " "
25305. Dressed skin of sheep, tanned like kid leather, but smoked instead of colored. S. G. Hutchinson & Co., Johnstown, N. Y.
25306. Sheep-skin made into "kid leather." S. G. Hutchinson & Co., Johnstown, N. Y.
25307. Gloves made from "kid-dressed" sheep-skin. S. G. Hutchinson & Co., Johnstown, N. Y.
25308. "Kid"-dressed lamb-skin, ready for coloring. S. G. Hutchinson & Co., Johnstown, N. Y.
25309. Lamb-skin "kid-dressed," colored. S. G. Hutchinson & Co., Johnstown, N. Y.
25310. Gloves made from "kid-dressed" lamb-skin. S. G. Hutchinson & Co., Johnstown, N. Y.
25311. Lamb-skin dressed in Germany. S. G. Hutchinson & Co., Johnstown, N. Y.

Leather prepared from mammal skins.

Series of different leathers illustrating the manufacture of gloves.

The following account of the glove trade in North America is from the pen of Mr. S. G. Hutchinson:

“The manufacture of gloves and mittens from leather was started in Fulton County, New York (according to best information), in the year 1809, by people from Connecticut, who first engaged in the manufacture of tinware and in exchanging their tinware for the products of the country. They thus obtained deer-pelts, which they learned to tan according to the Indian process, and, using paper patterns, cut and made them into rough mittens and gloves. Subsequently they learned a better process of tanning, and also have made great improvements in manufacturing gloves; and from apparently insignificant and accidental beginnings has originated an industry which is estimated to produce over \$4,000,000 worth of manufactured goods, and which business has never as yet been successfully transplanted elsewhere.

“The skins used in the manufacture of gloves and mittens are the different varieties of deer-skins and sheep and lamb skins. The deer-skins are gleaned from the entire United States, Mexico, Central and South America, and Africa, and there is as much difference in the quality of the skins from the different countries as in the climate of the countries or localities from which they come. The heaviest and most valuable skins come from under the equator.

“Sheep-skins are extensively used in the manufacture of gloves as well as deer-skins. It is estimated that over 100,000 dozen are used annually. The quality of these varies as much as deer-skins, and depends as much upon the section of country from which they come, the coarse-wool skins making the best leather. A part of the sheep-skins are dressed in a similar manner to the deer-skins, and are finished to resemble buckskin. Many sheep and lamb skins are by a very different process made into what is called kid leather, the lamb-skins, especially, making a very nice glove; in fact, some of the lined fur-trimmed gloves made from this kid leather excel any of foreign manufacture.

“To give a more definite idea of where the deer-skins come from, I will give a little item of statistics of arrivals of deer-skins at the port of New York in the years 1868 to 1872, inclusive:

Whence.	1868.	1869.	1870.	1871.	1872.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Central America.....	254, 200	249, 000	252, 900	230, 700	249, 000
Para.....	288, 500	214, 900	185, 700	150, 900	141, 800
Angostura.....	100, 000	89, 600	173, 000	157, 500	65, 000
Puerto, Cal.....	60, 000	210, 300	115, 000	31, 500	154, 400
Sisal.....	105, 000	62, 000	84, 000	67, 700	125, 500
Honduras.....	60, 800	52, 300	61, 500	57, 900	62, 500
Vera Cruz.....	30, 000	26, 700	19, 000	19, 500	21, 000
Campeachy.....	24, 000	12, 500	19, 400	21, 000	12, 500
Total.....	923, 000	917, 300	909, 600	736, 700	832, 200

“And to give you something of an idea of how these deer-skins are converted into leather ready for cutting into gloves, I will copy a poem written by Horace Sprague in 1859. However, the operation has been somewhat changed and much improved since:

“And be it mine in brief to comprehend,
From the inception to the final end,
Through every process, how the routine moves
From unwrought hides to manufactured gloves.

Leather prepared from mammal skins.

Series of different leathers illustrating the manufacture of gloves :

First into vats, low sunken in the ground,
 The rattling skins are thrown with husky sound,
 And there for days are suffered to remain,
 Until the water permeates the grain,
 And their whole yielding form and texture make
 Pliant and supple, fitting them to break.
 Prone o'er the slanting beam the breaker plies,
 With long two-handled knife, his energies
 All the adhering flesh to clean away.
 His is the hardest work and poorest pay.
 Flesh-liming, or the hairing process called,
 Is next in order and is next installed.
 Upon the flesh-side of the broken skin
 Quick-lime is spread and safely folded in ;
 Then in the soak or water vat with care
 'T is placed ten days for loosening the hair,
 And when the beam and knife again are proved
 The hairy coat is easily removed.
 In lime-vats next the skins are put to lime ;
 From one to six weeks is the allotted time.
 This process, perfected by low degrees,
 Thickens the skins and smooths the surfaces.
 Frizing requires the beam and knife again,
 To shave clean off the cuticle or grain.
 Parching is used for heavy skins alone.
 The meaning of the term is drying down ;
 Not in the fervors of the scorching sun,
 But in the shade alone, 't is safely done.
 A soaking then ensues until
 They 're softer made and fitted for the mill.
 Milling in order next succeeds, of course.
 Placed in the stock, by steam or water force
 The skins are briskly run six hours or more
 To supple them and open every pore,
 Then taken out to air. With oil imbued,
 Replaced again, and milling is renewed.
 Each half hour afterward alternately
 They 're in the stocks or out to air and dry,
 Until throughout the substance of the skin
 The oil commingles with the gelatine
 Or glue, and leaves the other parts together
 The true and genuine product we call leather.
 The beam and scudding-knife again are plied
 For scudding on the grain or facial side.
 The mucous substance or reticular
 Tissue of the skin is shaved off bare.
 The process then, to perfect and to crown,
 Requires a day at most for drying down.
 Next in lye-liquor vats they 're placed awhile,
 In vulgar parlance, 'for to cut the ile' ;
 But by the chymie law affinity
 The oil gelatinous and alkali
 Combine, without a figure or a trope,
 And form the useful product we call soap.
 A half hour in the stocks the skins being run,
 The soap washed out, and thus the scouring 's done.
 To soften, to give shape, and natural size,
 Duly the stacking process next applies.
 Fast in the perch the pendent skin being placed,
 Grasped by the hand and firmly shoulder-braced,
 The arm-stake then is vigorously applied
 To supple and extend the leathery hide,
 While the knee-stake is more suitably found
 Fitted to stretch and smooth the edges round.
 Ocher with water mixed, when dried enough
 And into square blocks fashioned, is called buff,

Leather prepared from mammal skins.

Series of different leathers illustrating the manufacture of gloves.

Which by the hand is rubbed upon the skin.
Perch hung until the ocher's well wrought in
And deeply set, producing a soft, mellow,
Golden, enduring, inerasive yellow.
This buffing named. The process next to bring
The manufacture through is finishing.
A horizontal shaft, firm overlaid
With emery, and by machinery made
To turn, elaborates the skin placed on
To perfect smoothness, and the work is done.'

"The manufacture of the different kinds and styles of gloves is becoming divided up so that many of our leading manufacturers are making a specialty of some particular kind of gloves. Some make exclusively heavy buckskin gloves and mittens; others make exclusively sheep-skin gloves and gauntlets; others, lined kid gloves of various kinds and styles; others, unlined kid and antelope or castor gloves and ladies' gauntlets, thus enabling them to pay strict attention to their particular branch, and reaching the highest degree of perfection attainable at this age and stage of the business.

"Marked progress is yearly made in this industry, and it is predicted that in no distant future the finest gloves made in the world will be made here in the two villages of Johnstown and Gloversville, N. Y."

Porpoise leather.

Beluga leather dressed as kid, sole, harness, velvet, plush, boot, mail-bag, belt, and patent (varnished) leather.

26018. Tanned skin of beluga (*Delphinapterus catodon*). G. R. Renfrew & Co., Quebec.

26019. Lace leather, "Rivière du Loup en bas." Manufactured from the skin of beluga (*Delphinapterus catodon*), by the Gulf Porpoise Fishing Company.

Beaver leather, used in manufacture of saddles, shoes, gloves, and trunks.

Rat leather, used for thumbs of kid gloves.

Leather trimmings, used as stuffing for balls, &c.

Prepared from intestines of mammals.

Parchment from viscera of seals, used by Eskimos for clothing, bags, and blankets.

6559. Intestine of seal. Used for waterproof clothing. Cook's Inlet. Dr. T. T. Minor.

5570. Intestine of seal. Used for waterproof clothing. Yukon River. W. H. Dall.

6559. Intestine of seal. Prepared and used for clothing. Dr. T. T. Minor.

20802. Prepared seal-gut for waterproof dresses. Sitka, Alaska. J. G. Swan.
See also numerous garments of this material displayed in the Ethnological division.

Prepared from intestines of mammals.

Leather from pharynx of seal and walrus, used by Eskimo for boot-soles.

Parchment from viscera of bears, used in Kamtchatka for masks and window-panes.

Viscera of ox, used in manufacture of gold-beaters' skin.

Bladders of animals, used for pouches, parchment, bottle and jar covers, and by Eskimo for oil-bottles.

Viscera of sheep, used in manufacture of "cat-gut," with specimens of whip-cord, hatters' cord, for bowstrings, clockmakers' cord, filandre, guitar, violin, and harp strings, angling-lines, &c.

Viscera of hog, used as envelopes for minced meat, sausages, &c.

Throat of sea-lion (*Eumetopias Stelleri*), dressed as parchment envelopes to preserve valuable papers.

20803. Sitka Indians, Alaska. J. G. Swan.

Sinews of sheep, deer, goat, buffalo, seal, walrus, and other animals, used in manufacture of threads, lines, nets, and snow-shoes, in strengthening bows, &c.; the babiche of the Eskimos of the Northwest coast.

5185. Babiche. Siccane Indians. British Columbia. J. T. Rothrock.

2034. Mackenzie's River. R. Kennicott.

849. Mackenzie's River. "

842. Moose sinew. Fort Good Hope. Mackenzie's River. R. Kennicott.

2036. Sinews of moose and caribou. Fort Liard Indians. "

5546. Deer sinew. Apache Indians. Dr. E. Palmer.

2200. Babiche. Undressed skin of mountain sheep.

843. Babiche from mountain sheep. Mackenzie's River. R. Kennicott.

1882. Bow covered with sinew of mountain sheep (*Ovis montana*). Digger Indians. California. Captain Gunnison, U. S. A.

24788. Snow-shoes made from sinew of caribou (man's size). G. R. Renfrew & Co., Quebec.

24789. Snow-shoes made from sinew of caribou (woman's size). G. R. Renfrew & Co., Quebec.

Prepared from bird-skins (Eskimos).

Eider leather.¹

Auk leather.¹

7453. Oil-bag. Made from skin of loon's foot. Fort Anderson. R. MacFarlane.

Prepared from reptile skins.

Alligator leather.

16810. Salted skin of alligator (*Alligator mississippiensis*). Upper Saint John's River, Florida. G. Brown Goode.

16810. Tanned skin of alligator. Upper Saint John's River, Florida. G. Brown Goode.

¹ See garments in Ethnological series.

Prepared from reptile skins.

Alligator leather.

25283. Tanned skin of alligator (*Alligator mississippiensis*). Upper Saint John's River, Florida. G. Brown Goode.
24791. Tanned skin of alligator (*Alligator mississippiensis*). "Russet finish." Schayer Bros., Boston, Mass.
24796. Cigar-case, made from skin of alligator (*Alligator mississippiensis*). "Russet finish." Schayer Bros., Boston, Mass.
24792. Lady's satchel, made from skin of alligator (*Alligator mississippiensis*). "Russet finish." Schayer Bros., Boston, Mass.
24795. Match-case, made from skin of alligator (*Alligator mississippiensis*). "Russet finish." Schayer Bros., Boston, Mass.
24793. Slippers, made from the skin of alligator (*Alligator mississippiensis*). "Russet finish." Schayer Bros., Boston, Mass.
24794. Slippers, made from skin of alligator (*Alligator mississippiensis*). "Black finish." Schayer Bros., Boston, Mass.
26058. Riding-boots, made from skin of alligator (*Alligator mississippiensis*). H. & A. Mahrenholz, New York City.

Rattlesnake leather.

24797. Dressed skin of rattlesnake (*Crotalus durissus*). Big Coon, Ala. J. H. Henderson.
24799. Dressed skin of rattlesnake (*Crotalus durissus*). Big Coon, Ala. J. H. Henderson.
24798. Shoes made from skin of rattlesnake (*Crotalus durissus*). Big Coon, Ala. J. H. Henderson.
9043. Bow covered with skin of rattlesnake. Used by Flathead Indians. Fort Colville, W. T. Dr. J. T. Ghisslin, U. S. A.

Other snake leather.

26069. Boots made from skin of boa (*Boa constrictor*). H. & A. Mahrenholz, New York.

Prepared from fish-skins.

Leather prepared from scaled fish by Indians.

16091. Salmon-skins dressed as leather and used in making waterproof shirts and boots by Magemut Eskimo. Nunivak Island, Alaska. W. H. Dall.
10347. Parky, or upper garment, made from the skin of codfish (?). Nunivak Island, Alaska. W. H. Dall.

Eel leather, made for pigtails, queues, flail-thongs.

Skins of eels (*Anguilla vulgaris*).

25285. Eel-skins. Market, Washington, D. C. G. Brown Goode.
These eel-skins are highly esteemed by the Virginia negroes as a cure for rheumatism.

Sturgeon leather.

26013. Tanned skin of sturgeon (*Acipenser rubicundus*). Wernich & Wandel, Waukegan, Ill.

Prepared from fish-skins.

Shark leather (shagreen used for coverings, and by the Alaska Indians for boot-soles).¹

Leather waste.

Paper manufactured from waste.

Glue manufactured from waste. (See under 24.)

Prussian blue made from leather waste. (See under 30.)

21. HAIR AND WOOL.

Hair used in weaving and felting. (See under 8.)

Hair used for wigs and ornaments.

Human hair as an article of commerce, with specimens of switches and wigs, and also of the trade imitations of hair in jute, horse-hair, &c.

Goat's wool as employed in manufacture of wigs and perukes.

Human scalp locks as Indian trophies.²

Scalps of animals as trophies.²

Hair and bristles used for brushes (embracing the commercial hair and bristles, assorted and unassorted, and specimens of the manufactured articles).

Hair of skunk, used for fine brushes.

29340.	Gilders' and varnishers' brushes (black hair; flat).	Miles Bros. & Co.
29341.	“ “ “ “ “ “ “	“
29342.	“ “ “ “ “ “ “	“
29343.	“ “ “ “ “ (round).	“
29344.	Dusting-brush (white hair; flat).	“

Hair of bear used for varnishing-brushes.

29338. Varnish or dusting brush. Miles Brothers & Co.

29339. “Mottler” brush. “

Hair of American badger used for fine shaving, graining, gilding, and dust brushes.³

Hair of American badger (*Taxidea americana*) adapted to the manufacture of brushes.

Hair of squirrel, especially the tail, used in making fine artists' pencils.

29320. “Camel's-hair” varnish-brush. French style. Miles Brothers & Co.

29321. “Camel's-hair” coach-painters' color-brush. “

¹ See garments in Ethnological series.

² See specimens in the Ethnological division.

³ The badger-hair brushes sold in America are almost exclusively manufactured from the hair of the European badger. The hair of the American badger is quite as well adapted to the purpose.

Hair and bristles used for brushes.

Hair of squirrel, especially the tail, used in making fine artists' pencils.

29322. "Camel's-hair" varnish or copying brush. English style. Miles Brothers & Co., New York.
 29322. "Camel's-hair" gilders' brush. Miles Brothers & Co., New York.
 29324-5. "Camel's-hair" lacquering brush. " "
 29326. "Camel's-hair" pencil, quill handles. " "
 29353. Series of scrolling and ornamenting brushes. " "

These brushes are made chiefly from the tail of the gray squirrel (*Sciurus carolinensis*), and are known to the trade as "camel's-hair" brushes.

Bristles of hog and peccary used in making coarse brushes for varnishing, scrubbing, &c.

26020. Series of bristles (black). B Nos. 1-12. William Wilkens & Co., Baltimore.
 26021. " " " (white). B Nos. 1-13. " "
 26026. " " " (yellow). B Nos. 1-12. " "
 26027. " " " (red). B Nos. 1-11. " "
 26028. " " " (black). D B Nos. 1-12. " "
 26022. " " " (black). ("Casings") Nos. 1-12. " "
 26023. " " " (natural black). ("Casings") Nos. 1-11. William Wilkens & Co.
 26024. Series of bristles (white). ("Casings") Nos. 1-12. William Wilkens [& Co.
 26025. " " " (white). Medium stiff, Nos. 1-12. "
 26029. " " " (union). William Wilkens & Co.
 26030. " " " (blue). "
 26031. " " " (unbleached). "

Brushes made from bristles:

29327. Flat copying-brush, No. 1. Miles Brothers & Co.
 29328. " " " No. 3½. "
 29329. " " " No. 2. "
 29330. " " " No. 2½. "
 29331. " " " No. 3. "
 29332. Round paint-brush, No. A 1/10. "
 29333. " " " No. A 2/10. "
 29334. " " " No. A 1. "
 29335. " " " No. A 2. "
 29336. " " " No. A 3. "
 29337. Shaving-brush. "

Sheep's wool (on skin) used for blackboard-rubbers.¹

Hair of deer and antelope (on skin) used by Indians for hair-brushes.²

Deer-hair brushes.

Brushes made from white hair in tail of deer (*Cariacus macrotis* and *C. virginianus*):

29354. Flat brush. 1 inch Miles Brothers & Co.
 29355. " 1½ " "
 29356. " 2 " "
 29357. Round brush. "

¹See exhibit in Educational Bureau.

²See Ethnological series.

Hair and bristles used for brushes.

Hair of horses, used for fly-brushes.

26032. Series of samples of horse-hair (dyed blue). William Wilkens & Co.
 26033. " " " " " (dyed red). "
 26034. " " " " " (dyed white). "

Ox-hair from the inside of cows' ears used for striping and lettering brushes.

- 29345-6-7-8-9-50. Fresco-painters' brushes, 1-6. Miles Brothers & Co.
 29351. Series of ox-hair striping-pencils, sold as camel's-hair pencils. Miles Brothers & Co.

Hair used in other manufactures.

Bristles used in shoemakers' wax ends.

Bristles used in anatomical instruments.

Hair and bristles used in artificial flies. (See under B, 45.)

Hair of cattle used in strengthening mortar and plaster.

Hair used for stuffing.

Horse-hair, straight and curled, used for mattresses and cushions.

Refuse hair of beaver and musquash, cut from felting-hair, used for cushions.

(Down of rabbits used for cushions.)

Wool used as a medium for pigments.

Wool-flocking used in the manufacture of wall-paper, colored felts, and rubber cloth.

Chemical products.

Refuse human and other hair used in manufacture of prussiate of potash, with specimens of manufactured product.

22. QUILLS.

Quills of mammals.

Quills of American hedge-hog used by Indians in embroidering.

Quills of birds.

Quills of swan and turkey for engrossing-pens.

Quills of goose and eagle for writing-pens.

Quills of crow and duck for fine pens.

Quills used in making tooth-picks, fishing-floats, color-bottles, pencil-handles, needle-holders, &c.

23. FEATHERS.

Feathers used for clothing. (See under Furs, D 10.)

Feathers used for implements (including manufactured articles).

29528. Fan.
 26596. Fan made from feathers of roseate spoonbill (*Platalea ajaja*). Mrs. C. E. Mott, Jacksonville, Fla.
 26597. Fan made from feathers of white tern (*Sterna* sp.). Mrs. C. E. Mott, Jacksonville, Fla.
 26598. Fan made from feathers of white crane (*Garzetta candidissima*). Mrs. C. E. Mott, Jacksonville, Fla.
 26599. Fan made from feathers of blue heron (*Florida cœrulea*). Mrs. C. E. Mott, Jacksonville, Fla.
 26601-26605. Fan made from feathers of water-turkey (*Plotus anhinga*). Mrs. C. E. Mott, Jacksonville, Fla.
 26602. Fan made from feathers of fish-crow (*Corvus ossifragus*) and blue heron (*Florida cœrulea*). Mrs. C. E. Mott, Jacksonville, Fla.
 26603. Fan made from feathers of wood ibis (*Tantalus loculator*) and parakeet (*Psittæus carolinensis*). Mrs. C. E. Mott, Jacksonville, Fla.
 26603. Fan from miscellaneous feathers. Mrs. C. E. Mott, Jacksonville, Fla.
 26812. Domestic turkey-feather dusters. 5 sizes. Chicago Feather-Duster Company. Chicago, Ill.

Feathers used for plumes and ornaments (including plumes, head-dresses, cockades, hat and dress trimmings, &c.)

26604. Bouquet made from feathers of Florida birds. Mrs. C. E. Mott, Jacksonville, Fla.
 29529. Flowers made from feathers of Florida birds.

Feathers used in other manufactures.

Feathered arrow-shafts. (See under B, 18.)

Feathers used in making artificial flies.

Feathers used in manufacture of textile fabrics. (See under D, II, C.)

Down of birds.

Down of eider-duck used in bed-stuffing, with specimens of balls in which it is packed for transportation.

Down of other ducks.

Down of geese and swans used as stuffing for beds, and as electrical non-conductor in manufacture of philosophical instruments.

24. GELATINE AND ISINGLASS.

Gelatine.

Gelatine made from leather-shavings, bones, hoofs, and horns of bison, cattle, sheep, and other domestic animals, used in manufacture of glue, size, court-plaster, *papier glacé* for tracing, imitation glass, artificial flowers, and ornamental work, wrappings for confections, table-jelly (see under D 1), &c.

Glue.

25315. No. 1. Manufactured from horns and hoofs. Wm. H. Brown, Peabody, Mass.
 25316. No. 2. Manufactured from horns and hoofs. Wm. H. Brown, Peabody, Mass.

Gelatine.

Size, or frozen glue.

25317-18. "A. A. E." Manufactured from horns and hoofs. Wm. H. Brown, Peabody, Mass.

Gelatines made from bone and ivory shavings.

Bird gelatine.

(Nests of esculent swallows (*Calocalia esculenta*, *C. fuciphaga*, *C. indifica*, &c.) exported from Indian Archipelago to China.)

Isinglass.

Isinglass (ichthyocolla), made from air-bladders and skins of fishes and used in the manufacture of fine glues and sizes, adhesive and court plasters, diamond cement, imitation glass, and table-jelly and confectionery (see under D 1, D), in refining wines and liquors, in adulterating milk, in fixing the luster of artificial pearls, and in lustering silk ribbons (embracing the dried bladders and the manufactured products) in their grades of "lyre," "heart-shaped," "leaf," and "book" isinglass.

Isinglass from sounds of cod and hake.

12123. Isinglass. (First quality.) Manufactured from sounds of cod, hake, &c. Cape Ann. Cape Ann Isinglass and Glue Company, Rockport, Mass.
12124. (Second quality.) Manufactured from sounds of hake, cod, &c. Cape Ann Isinglass and Glue Company, Rockport, Mass.
12126. Dried sound of cod (*Gadus morrhua*). Used in the manufacture of isinglass. George's Banks. Cape Ann Isinglass and Glue Company, Rockport, Mass.
12125. Dried sound of hake (*Phycis chuss*). Used in manufacture of isinglass. Bay of Fundy. Cape Ann Isinglass and Glue Company, Rockport, Mass.
16683. Sound of hake (*Phycis chuss*), used in the manufacture of isinglass. Portland, Me. H. Trefethern.
16684. Sound of hake (*Phycis chuss*), used in the manufacture of isinglass. Portland, Me. H. Trefethern.
25264. Isinglass. Manufactured from sounds of cod, hake, &c. Cape Ann Isinglass and Glue Company, Rockport, Mass.
25263. Air-bladder of cod (*Gadus morrhua*), used in manufacture of isinglass. Cape Ann Isinglass and Glue Company, Rockport, Mass.
25796. Isinglass made from skins of cod (*Gadus morrhua*). By a new method, by the Gloucester Isinglass and Glue Company. Wm. N. Le Paiz, agent, Boston, Mass.
25268. Air-bladder of "foreign crab" (species unknown), used in manufacture of isinglass. Cape Ann Isinglass and Glue Company, Rockport, Mass.
- Air-bladder of foreign "sea trout" (an unknown fish), used in the manufacture of isinglass. East Indies. Cape Ann Isinglass and Glue Company, Rockport, Mass.

Isinglass.

Isinglass from sounds of cod and hake.

25794. Prepared glue made from skins of cod (*Gadus morrhua*). By Gloucester Isinglass and Glue Company. Wm. N. Le Paiz, agent, Boston, Mass.
25797. "Court-plaster" glue made from skins of cod (*Gadus morrhua*). By the Gloucester Isinglass and Glue Company. Wm. N. Le Paiz, agent, Boston, Mass.
25795. Glue made from skins of cod (*Gadus morrhua*). By Gloucester Isinglass and Glue Company. Wm. N. Le Paiz, agent, Boston, Mass.
20744. Dried tongues of fish (probably cod), used by Sitka Indians in making glue. Sitka, Alaska. J. G. Swan.

Isinglass from the squeteague family (*Sciænidæ*), principally used by confectioners.

25265. Air-bladder of "beluga" (an unknown sciænid fish), used in the manufacture of isinglass. Cape Ann Isinglass and Glue Company, Rockport, Mass.
25269. Air-bladder of hake (*Phycis chuss*), used in manufacture of isinglass. Cape Ann Isinglass and Glue Company, Rockport, Mass.
25312. Air-bladder of sciænid fish, known to the trade as "tongue." East Indies. Cape Ann Isinglass and Glue Company, Rockport, Mass.
25267. Air-bladder of squeteague (*Cynoscion regalis*), used in manufacturing isinglass. Cape Ann Isinglass and Glue Company, Rockport, Mass.
12127. Dried sound of squeteague (*Cynoscion regalis*), used in the manufacture of isinglass. Long Island Sound. Cape Ann Isinglass and Glue Company, Rockport, Mass.

Isinglass.

12120. Isinglass made from sound of lake sturgeon (*Acipenser rubicundus*). Lake Erie. Schacht & Bros., Sandusky, Ohio.

25. FLEXIBLE MATERIALS DERIVED FROM INVERTEBRATES.¹**Insect productions.**

Silk-worm "gut" used in making leaders for fish-lines.

(Nest of Cayenne-ant (*Formica bispinosa*), used as a mechanical styptic.)

Spiders' web used as a mechanical styptic and for the cross-lines in optical instruments. (See, also, under D, 8).

Papier maché of hornets' nests used for gun-wadding.

Mollusk productions.

Byssus of mollusks (see under D, 8).

¹ See under Part II of the present catalogue.

26. SPONGES.¹**Specimens of American commercial sponges** (with the different grades, and bleached sponges).

(Specimens of Mediterranean sponges.)

Surgical apparatus, probangs, aurilaves, "sponge-tents," and other instruments manufactured.

Spongeo-piline used as a substitute for poultices.

Sponges used in stuffing mattresses and cushions.

27. OILS AND FATS.

Mammal oils.

Bear-oil and bear-fat used as a cosmetic and in the manufacture of pomatums.

Dog-oil used in the manufacture of kid gloves.

Seal-oil, in its various grades, used for lubricating.

25059-60. Oil of seals (*Cystophora*, *Pagophylus*, *Pusa*, and *Phoca*, sp.). Newfoundland. Walter Grieve & Co., St. John's, N. F.

25061-3. Oil of seals (*Cystophora*, *Pagophilus*, *Pusa*, and *Phoca*, sp.). J. Munn & Co., Harbor Grace, N. F.

25979. Oil of harbor seal (*Phoca vitulina*). Capt. N. E. Atwood, Provincetown, Mass.

Sea-elephant oil.

25057. Oil of sea-elephant (*Macrorhinus*, sp.). Haven, Williams & Co., New London, Conn.

25058. Oil of sea-elephant (*Macrorhinus leonina*). South Georgia Island. Haven, Williams & Co., New London, Conn.

Sea-lion oil.**Manatee-oil.****Dugong-oil.**

Oil and fat from domestic animals, (tallow, suet, lard, oil used in lamps, for lubricating, and neat's-foot oil used in dressing leather; also, manufactured into various substances (see D, 30), and tallow candles and night-lights.)

Oil from body of whales, grampuses, and porpoises used in the arts, for lubricating, painting, &c.

25054. Oil of humpback whale (*Megaptera*, sp.). Atlantic Ocean. Haven, Williams & Co., New London, Conn.

25055. Oil of right-whale. Haven, Williams & Co., New London, Conn.

25056. Oil of sulphur-bottom whale (*Sibbaldius*, sp.). Haven, Williams & Co., New London, Conn.

26038. Oil of beluga (*Delphinapterus catodon*). Renfrew & Co., Quebec.

24894. Crude Arctic whale oil. George Delano & Co.

24895. Bleached "winter" sperm-oil, from the sperm-whale (*Physeter macrocephalus*). George Delano & Co., New Bedford, Mass.

¹ See under Part II of the present catalogue.

Mammal oils.

Oil from whales and porpoises.

25743. Oil of grampus (*Grampus griseus*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.
25067. Oil of grampus (*Grampus griseus*). Extracted by exposure to the sun. Capt. Caleb Cook, New Bedford, Mass.
25067. Double refined oil of grampus (*Grampus griseus*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.
25737. "Pressed" oil of grampus (*Grampus griseus*). E. E. Small, Provincetown, Mass.
25967. Oil of cowfish. Capt. N. E. Atwood, Provincetown, Mass.
25958. Oil of porpoise. Marvin Brothers & Bartlett, Portsmouth, N. H.
25738. Oil of porpoise (*Lagenorhynchus leucopleurus*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.
25974. Oil of porpoise (*Delphinus erebennus?*). Capt. N. E. Atwood, Provincetown, Mass.
12116. Oil of harbor porpoise (*Phocæna americana*). Prepared by the Passamaquoddy Indians. Eastport, Me. Dr. E. Palmer.
12115. Oil of harbor porpoise (*Phocæna americana*). Eastport, Me. Dr. E. Palmer.
26037. Oil of harbor porpoise (*Phocæna americana*). Passamaquoddy Bay, Maine. George H. Peabody, Eastport, Me.
25739. Oil of snuffer (*Phocæna americana*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.
24893. Crude "body"-oil from sperm-whale (*Physeter macrocephalus*). George Delano & Co., New Bedford, Mass.
26076. Oil of black-fish (*Globicephalus intermedius*). North American Oil Company, Wellfleet, Mass.
25741. Oil of black-fish (*Globicephalus melas*). E. E. Small, Provincetown, Mass.
25064. Refined oil of black-fish (*Globicephalus intermedius*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.
25065. Double refined oil of black-fish (*Globicephalus intermedius*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.
25977. Oil from body of black-fish (*Globicephalus melas*). Capt. N. E. Atwood, Provincetown, Mass.

Black-fish and porpoise-jaw oil used in lubricating fine machinery, watches, clocks, and guns, with specimens of blubber.

25742. Oil from head of black-fish (*Globicephalus melas*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.
25968. Oil from head of black-fish (*Globicephalus melas*). Sold as "porpoise-jaw oil." Capt. Caleb Cook, Provincetown, Mass.
25984. Oil from head of black-fish (*Globicephalus melas*). Sold as "porpoise-jaw oil." Capt. N. E. Atwood, Provincetown, Mass.
25969. Oil from jaw of porpoise. Capt. N. E. Atwood, Provincetown, Mass.
- 26035-6. Oil from head of harbor-porpoise (*Phocæna americana*). Passamaquoddy Bay. Geo. A. Peabody, Eastport, Me.
26075. Head-oil of black-fish (*Globicephalus intermedius*). North American Oil Company, Wellfleet, Mass.
26035. Jaw-oil of porpoise (*Phocæna americana*). Passamaquoddy Bay. G. A. Peabody, Eastport, Me.
25066. Jaw-oil of black-fish (*Globicephalus intermedius*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.

Mammal oils.

Black-fish and porpoise jaw oil, &c.

23042. "Jaw-marrow" of black-fish (*Globicephalus melas*). E. E. Small, Provincetown, Mass.
25040. Blubber of black-fish and grampus (*Globicephalus melas* and *Grampus griseus*). E. E. Small, Provincetown, Mass.
26041. "Melon" blubber of black-fish (*Globicephalus melas*). E. E. Small, Provincetown, Mass.
25069. "Melon blubber" of black-fish (*Globicephalus intermedius*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.

Grampus-oil used for lubricating fine machinery.

25068. "Melon" blubber of grampus (*Grampus griseus*). Cape Cod. Capt. Caleb Cook, Provincetown, Mass.
25733. Oil from head of grampus (*Grampus griseus*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.

Sperm-oil used in lamps, for lubricating, as an emollient in medicine, for lip-salves, and in the manufacture of spermaceti.

24892. Crude "head" sperm-oil from sperm-whale (*Physeter macrocephalus*). George Delano & Co., New Bedford, Mass.
25745. Crude sperm-oil from sperm-whale (*Physeter macrocephalus*). E. E. Small, Provincetown, Mass.

Spermaceti, with specimens of candles.

24896. Plain refined spermaceti from sperm-whale (*Physeter macrocephalus*). George Delano & Co., New Bedford, Mass.
24897. Spermaceti candles. George Delano & Co., New Bedford, Mass.

Manufactured glycerines, used as a preservative and antiseptic, as a cosmetic, as an emollient, as a substitute for cod-liver oil, in the manufacture of nitro-glycerine, dynamite, dualine, lithofracteur, coloniamite, and other explosives, soap, &c.

26798. Pure inodorous glycerine. Manufactured by H. Bower, Philadelphia. John Wyeth & Bro., Philadelphia.

Manufactured stearines, with candles and other manufactured articles.

Soaps manufactured from mammal-oil, soda-soaps (hard, toilet, and resin soaps), potash-soaps (washing, shaving, and soft soaps), diachylon plaster, &c.

Butter made from milk of cows, goats, and horses.

Oleomargarines, with specimens of imitation butter.

Brains of buffalo used in tanning by Indians.

Bird-oils.

(Oil of petrels and other sea-birds used by Eskimos and in the Azores for lamp-oil.)

Bird-oils.

Goose-oil used by watch-makers, and as an emollient.

Oil of pigeon (*Ectopistes migratorius*), used as food by Indians and frontiersmen.

Reptile-oils.

Alligator-oil manufactured in Florida.

24898. Oil of alligator (*Alligator mississippiensis*). Prepared by Col. L. A. Harden, Jacksonville, Fla. Dr. W. H. Babcock.

Turtle-oil made from turtle-eggs, used in dressing leather and in manufacture of soap.

Rattlesnake and other snake oils.

Fish-oils.

Sun-fish oil used by fishermen for cure of rheumatism.

25724. Oil from liver of sun-fish (*Mola rotunda*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.

25959. Oil from liver of sun-fish (*Mola rotunda*). Marvin Brothers & Bartlett, Portsmouth, N. H.

25966. Oil from liver of sun-fish (*Mola rotunda*). Capt. N. E. Atwood, Provincetown, Mass.

Oil from liver of the cod family.

25982. Oil from liver of cod-fish (*Gadus morrhua*), crude. Capt. N. E. Atwood, Provincetown, Mass.

25960. Liver-oil of cod-fish (*Gadus morrhua*). Marvin Brothers & Bartlett, Portsmouth, N. H.

26550. Oil from liver of cod-fish (*Gadus morrhua*). Herbert M. Rodgers & Co., 11 Fulton Market, New York.

26551. Oil from liver of cod-fish (*Gadus morrhua*). Herbert M. Rodgers & Co., New York.

26707. Pure cod-liver oil. Prepared for medicinal use only, by Marvin Brothers, Portsmouth, N. H. John Wyeth, Philadelphia.

25985. Medicinal oil from livers of cod-fish (*Gadus morrhua*). Capt. N. E. Atwood, Provincetown, Mass.

25961. Stearine from liver-oil of cod-fish (*Gadus morrhua*). Marvin Brothers & Bartlett, Portsmouth, N. H.

25970. Oil from liver of cusk (*Brosmius vulgaris*). Capt. N. E. Atwood, Provincetown, Mass.

25736. Oil from liver of hake (*Phycis chuss*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.

25732. Oil from liver of haddock (*Melanogrammus aeglefinus*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.

25978. Oil from liver of haddock (*Melanogrammus aeglefinus*). Capt. N. E. Atwood, Provincetown, Mass.

25971. Oil from liver of pollock (*Pollachius carbonarius*). Capt. N. E. Atwood, Provincetown, Mass.

25740. Oil from liver of pollock (*Pollachius carbonarius*). Extracted by exposure to the sun. E. E. Small, Provincetown, Mass.

Fish-oils.

Herring-oil.

White-fish oil.

Sturgeon-oil.

Menhaden-oil used in currying leather, in rope making, for lubricating, for adulterating linseed-oil, as a paint-oil, and exported to Europe for use in the manufacture of soap and for smearing sheep.

26050. Oil of menhaden (*Brevoortia tyrannus*). Geo. W. Miles, Milford, Conn.

25744. Oil of pogie or menhaden (*Brevoortia tyrannus*), kettle-rendered. E. E. Small, Provincetown, Mass.

26077. Oil of pogie or menhaden (*Brevoortia tyrannus*). North American Oil Company, Wellfleet, Mass.

Oil of other fishes.

25973. Oil of horse-mackerel (*Oreynus secundidorsalis*). Capt. N. E. Atwood, Provincetown, Mass.

12117. Oil of herring (*Clupea harengus*). Capt. U. S. Treat, Eastport, Me.

12118. Oil from lake sturgeon (*Acipenser rubicundus*). Lake Erie. Schacht & Bros., Sandusky, Ohio.

25980. Oil from liver of mackerel-shark (*Isuropsis Dekayi*). Capt. N. E. Atwood, Provincetown, Mass.

25975. Oil from liver of thresher-shark (*Alopias vulpes*). Capt. N. E. Atwood, Provincetown, Mass.

25956. Oil from liver of dog-fish (*Squalus americanus*). Marion Bros. & Bartlett, Portsmouth, N. H.

25981. Oil from liver of dog-fish (*Squalus americanus*). Capt. N. E. Atwood, Provincetown, Mass.

25957. Oil from liver of skates (*Raia laevis*, &c.). Marion Bros. & Bartlett, Portsmouth, N. H.

25975. Oil from liver of cramp-fish (*Torpedo occidentalis*). Capt. N. E. Atwood, Provincetown, Mass.

25735. Oil from liver of cramp-fish (*Torpedo occidentalis*). E. E. Small, Provincetown, Mass.

26978. Sword-fish oil. Capt. N. E. Atwood, Provincetown, Mass.

26979. Mackerel-oil. " "

26980. Skate-oil. " "

26981. Halibut-oil. " "

Oulachan oil used by Indians of Northwest coast for food and illumination.

Soaps made from fish-oil.

28. PERFUMES.**Mammal perfumes.**

Musk of musk-ox.

Musk of the musquash.

Castoreum of the beaver, including the various commercial grades, the Canadian, Hudson's Bay, and Russian castoreum, and specimens of castorine.

26057. Scent-glands of beaver (*Castor canadensis*). Nebraska. E. R. Squibb, M. D., Brooklyn, N. Y.

Mammal perfumes.

Hyraceum of the daman (*Hyrax capensis*).

Ambergris of sperm-whale, with specimens of ambreine.

26894. Ambergris (commercial). Weeks Potter, Boston.

Reptile perfumes.

Musk of alligator.

Oil of hawksbill and loggerhead turtles, used in perfumery.

29. COLORING MATERIALS.

Derived from mammals.

Bone-black.

Ivory-black (*noire d'ivoire*), used in fine painting, and in the manufacture of bank-note ink.

Prussiates, prussian blue, ferrocyanide of potassium, made from hoofs and refuse human and other hair.

26093. Red prussiate of potassa (*Potassium ferrocyanide*). E. R. Squibb, M. D., Brooklyn, N. Y.

26094. Yellow prussiate of potassa (*Potassium ferrocyanide*). E. R. Squibb, M. D., Brooklyn, N. Y.

26794. Yellow prussiate of potash. Manufactured by H. Bower, Philadelphia. John Wyeth, Philadelphia.

Gall of animals used in dyeing.

Dung of animals used in calico-printing.

Hæmatin made from blood, and used in turkey-red dyeworks, and for the red liquor of printers.

Wool-flocking (see under D, 21).

Derived from birds.

Shell of eggs used for white pigment.

Series of murexides or purpurate of ammonia dyes, made from guano.

26065. Murexid. Prepared by E. Merck, Darmstadt. E. R. Squibb, M. D., Brooklyn, N. Y.

Derived from fishes.

Essence d'Orient, or fish-scale pearl, used as a pigment.

26893. Essence d'Orient. Introduced for comparison. Gustave Bossange, Paris.

(Gall of carp, used in Turkey as a green paint and in staining paper.)

Derived from insects.

(Cochineal dye, from *Coccus cacti* of Mexico, used in manufacture of rouge, of carmine, and lake pigments, and in coloring tinctures.)

26064. Honduras silver cochineal. E. R. Squibb, Brooklyn, N. Y.

Derived from insects.

Canadian cochineal.

(Kermes and other cochineals of commerce, *Coccus ilicis*.)

Lac dye and lac lake, from *Coccus lacca*, *C. polonicus*, *C. uva-ursi*, and *Ophis fabæ*.

Dye prepared from bed-bug (*Cimex lectularius*).

(Dye prepared from *Trombidium*, in Guinea and Surinam.)

Nut-galls produced by insects, and used in tanning for black dyes, for woolen cloth, silk, and calico, and in manufacture of ink and gallic and pyrogallic acid, employed in photography.

Derived from mollusks.¹

(*Sepia* from *Sepia officinalis*.)

Purple dyes from gasteropods, *Murex*, *Purpura*, &c.

Purple dyes from nudibranch mollusks.

30. CHEMICAL PRODUCTS AND AGENTS EMPLOYED IN ARTS AND MEDICINES.

Derived from mammals.

Secretion of skunk.

Album græcum of dogs used as a depilatory in tanning hides.

Albumen of blood, employed in sugar-refineries, in certain cements and pigments, and as an antidote and emollient.

Dung, used in calico-printing.

Gall of animals, used in mixing colors, in fixing the lines of crayon and pencil drawings, in preparing the surface of ivory for painting, in removing grease, and in medicine.

Pepsine and pancreatin, prepared from stomach of hogs and calves.

26796. Saccharated pepsin. John Wyeth & Bro., Philadelphia.

26795. Pancreatin, saccharated. " "

25964. Saccharine pepsin. E. Schaffer, Louisville, Ky.

25963. Dry pepsin (concentrated). E. Schaffer, Louisville, Ky.

25962. Pure pepsin. E. Schaffer, Louisville, Ky.

29262. Acid phospho-lactate or milk-phosphate. Prepared directly from milk, by Gail Borden & Co. New York Condensed Milk Company, New York.

Derived from insects.

Coccinella, used as remedy for toothache.

(Trehala, made from nests of beetles (*Larinas nidificans*), of East Indies, and used for a substitute for tapioca.)

Formic acid.

Carbazotic acid and its derivatives, made from sewing-silk scraps, and used as a substitute for quinine.

¹ See in Part II of the present catalogue.

Derived from insects.

Beeswax, used in manufacture of candles, cerates, plasters, and artificial flowers, in modeling and casting, and in medicine.

Honey, used as a preservative, a food, and in medicine as an aperient and demulcent.

19076. Sugar made of cane-lice. Prepared by the Cooyuwee Indians, Pyramid Lake, Nevada. Stephen Powers.

(Wax, used in Chinese pharmacy, secreted by the *Coccus pehlah*.)

(a'. Manna from the *Tamarix mannifera*, used as food, and in medicine as a purgative.

b'. Cedar manna from Mount Lebanon, from *Pinus cedrus*.

c'. Arabian manna, of *Hedysarum alliagi*.)

(Eye-powder, made by Chinese from the Telini fly (*Mylabris eichorii*) of India.)

Derived from mammals.

(Koumiss, a fermented liquor, prepared from mare's and cow's milk, and employed in medicines.)

Phosphorus, prepared from bones, with specimens of matches, vermin poisons, and other products.

Vaccine lymph, derived from cows.

Ammonia, prepared from bones and horn.

Sal ammoniac, prepared from bones and dung.

Prussiates, prepared from hoof, horn, and leather waste, dried blood, hair, and wool, with specimens of blue cyanide of potassium. (See under Coloring Materials.)

Lime from bones and bone phosphates. (See, also, under 32.)

Punk and tinder, made from droppings of camel and bison.

Animal charcoal, used as a decolorizer.

Derived from birds.

Albumen of eggs, used in photography, in clarifying liquors, by physicians as emollients and antidotes, and by apothecaries in suspending oils and other liquids in water.

Egg-shells, employed as an antacid.

Derived from reptiles.

Crotalin of rattlesnake and copperhead.

(*Scincus officinalis* of Egypt, used by European practitioners as sudorific and stimulant.)

Derived from fishes.

Propylamine, made from fish-brine.

25066. Propylamine (manufactured by E. Merck, Darmstadt). E. R. Squibb, M. D., Brooklyn, N. Y.

Derived from fishes.

(Intestines of grayling, used by Laplanders as a substitute for rennet.)

Skins of eels, used by negroes for rheumatism.

Derived from insects.

Vesicatory preparations from American beetles, *Cantharis cinerea* and *C. vittata*.

Vesicatory preparations derived from foreign beetles, cantharides or Spanish flies (*Cantharis vesicatoria*), and other species, and substitutes, *Mylabris cichorii*, *Cercoma Schæfferi*, *Meloe*, sp., var., &c.

Vesicatory preparations from American spiders, such as *Tegenaria medicinalis*.

Gall-nuts, used in medicine (see under 29).

Derived from crustacea.

Salve-bug of fishermen of Banks (*Caligus curtus*), parasite on cod-fish.

Crabs' eyes, or concretions from stomach of astacus, used as an antacid.

Derived from worms.

American leech (*Macrobdeella decora*), used in surgery.

(European leech (*Hirudo medicinalis*), introduced into America.)

(African leech (*Hirudo trochina*), introduced.)

Leeches used as barometers.

Derived from mollusks.

(Cuttle-fish bone of *Sepia officinalis*.) (See under D, III, H.)

Calcined shells, used for building-lime and in manufacture of dentifrices and enamel. (See under D, III, H.)

Derived from radiates.

a. Limes, derived from calcining coral and coral rock.

Derived from protozoans.

Burnt sponge, formerly used in medicine.

Infusorial earth and its applications. (See above under K.)

31. FERTILIZERS.

Natural guanos.

Bat guano from caves.

Bird guano from oceanic islands.

Artificial guanos.

Menhaden guano.

Series of preparations illustrating the manufacture of soluble Pacific guano. Soluble Pacific Guano Company, Wood's Holl, Mass.¹

- 26104. Crude South Carolina phosphate.
- 25213, 26103. Crushed South Carolina phosphates.
- 26102. Ground South Carolina phosphate.
- 26100. Crude Navassa phosphate. Navassa Island, W. I.
- 26101. Sicily sulphur, used in manufacture of sulphuric acid, used in factory.
- 26099. Stassfurth kainite, used in preservation of scrap.
- 26095. Crude menhaden scrap.
- 26097. Menhaden scrap, dried by the Hogle patent drying-machine.
- 26095. Soluble Pacific guano (unscreened).
- 26098. Soluble Pacific guano (screened).

Other preparations.¹

- 26062. Island guano. Geo. W. Miles, Milford, Conn.
- 26061-3. Ammoniated bone superphosphate. Geo. W. Miles, Milford, Conn.
- 22246. Leopoldshall kainite. Winfield S. Dunan, Baltimore, Md.

Dried meat and blood.

Dried blood.

- 22239. Black dried blood. Contains 16 per cent. ammonia. Winfield S. Dunan, Baltimore, Md.
- 22240. Black blood-dust. Contains 12 per cent. ammonia. Winfield S. Dunan, Baltimore, Md.
- 22241. Red blood-dust. Contains 14 per cent. of ammonia. Winfield S. Dunan, Baltimore, Md.
- 22242. Mixed dried blood. Contains about 13 per cent. of ammonia. Winfield S. Dunan, Baltimore, Md.
- 22243. Blood, bone, and meat tankage. Contains about 9.50 per cent. of ammonia and 24 per cent. bone-phosphate of lime. Winfield S. Dunan, Baltimore, Md.
- 22244. Azotin. Contains about 14 per cent. of ammonia, and is made from what are known as "butcher's cracklings"—the grease having been pressed out, the scrap is dried and ground. Winfield S. Dunan, Baltimore, Md.
- 22245. Sulphate of ammonia. Contains about 25 per cent. of ammonia. Winfield S. Dunan, Baltimore, Md.

Poudrettes.

Other animal fertilizers.

32. LIMES. (See under 30.)

33. OTHER MATERIALS NOT MENTIONED.

¹An elaborate model of the works of the Soluble Pacific Guano Company of Wood's Holl, Mass., and Charleston, S. C., is on exhibition in the grounds of the Exposition.