



<https://www.biodiversitylibrary.org/>

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

Washington, Govt. Print. Off, 1879

<https://www.biodiversitylibrary.org/bibliography/15755>

no.14 (1879): <https://www.biodiversitylibrary.org/item/53225>

Article/Chapter Title: The Chase and the Fisheries: Means of Pursuit and Capture

Author(s): G. Brown Goode

Page(s): Page 71, Page 72, Page 73, Page 74, Page 75, Page 76, Page 77, Page 78, Page 79, Page 80, Page 81, Page 82, Page 83, Page 84, Page 85, Page 86, Page 87, Page 88, Page 89, Page 90, Page 91, Page 92, Page 93, Page 94, Page 95, Page 96, Page 97, Page 98, Page 99, Page 100, Page 101, Page 102, Page 103, Page 104, Page 105, Page 106, Page 107, Page 108, Page 109, Page 110, Page 111, Page 112, Page 113, Page 114, Page 115, Page 116, Page 117, Page 118, Page 119, Page 120, Page 121, Page 122, Page 123, Page 124, Page 125, Page 126, Page 127, Page 128, Page 129, Page 130, Page 131, Page 132, Page 133, Page 134, Page 135, Page 136, Page 137, Page 138, Page 139, Page 140, Page 141, Page 142, Page 143, Page 144, Page 145, Page 146, Page 147, Page 148, Page 149, Page 150, Page 151, Page 152, Page 153, Page 154, Page 155, Page 156, Page 157, Page 158, Page 159, Page 160, Page 161, Page 162, Page 163, Page 164, Page 165, Page 166, Page 167

Holding Institution: Smithsonian Libraries and Archives

Sponsored by: Smithsonian

Generated 9 May 2024 12:04 PM
<https://www.biodiversitylibrary.org/pdf4/1697965i00053225.pdf>

This page intentionally left blank.

SECTION B.

(THE CHASE AND THE FISHERIES.)

MEANS OF PURSUIT AND CAPTURE.

I. HAND IMPLEMENTS OR TOOLS.

* *For striking.*

1. CLUBS.

Unarmed clubs.¹

Salmon-clubs used by the Indians of the Northwest coast.

Hunting-clubs.¹

Fishermen's clubs.

32717. "Halibut killer and gob-stick." Philip Merchant, Gloucester, Mass.
A heavy club with which the fisherman kills the halibut by a blow upon the head. One end is sharpened for use in detaching hooks from the gullets of fish which have swallowed them.

Armed clubs.¹

Stone-headed clubs.¹

Clubs, armed with teeth or bone points.¹

Clubs, armed with metal points.¹

2. SLUNG-WEIGHTS.

Slung-stones.¹

Slung-shot.¹

** *For cutting.*

3. KNIVES.

Straight knives.

Hunters' knives.

26152.	Hunter's knife.	5½-inch blade.	John Russell Cutlery Co., Turner's [Falls, Mass.]
26153.	Hunter's knife.	6-inch blade.	"
26154.	Hunter's knife.	7-inch blade.	"
26155.	Hunter's knife.	8-inch blade.	"
26172.	Hunter's knife.	5½-inch blade.	"
26173.	Hunter's knife.	6-inch blade.	"
26174.	Hunter's knife.	6½-inch blade.	"
26175.	Hunter's knife.	8-inch blade.	"
26191.	Hunter's knife.	5-inch blade.	"
26192.	Hunter's knife.	6-inch blade.	"
26193.	Hunter's knife.	7-inch blade.	"
26194.	Hunter's knife.	8-inch blade.	"

¹Displayed in the Ethnological division.

Straight knives.

Hunters' knives.

26220.	Hunter's knife.	5-inch blade.	John Russell Cutlery Co., Turner's [Falls, Mass.
26221.	Hunter's knife.	6-inch blade.	"
26222.	Hunter's knife.	7-inch blade.	"
26223.	Hunter's knife.	8-inch blade.	"
26224.	Hunter's knife.	10-inch blade.	"
26145.	Hunter's knife.	5½-inch blade.	"
26146.	Hunter's knife.	6-inch blade.	"
26147.	Hunter's knife.	7-inch blade.	"
26148.	Hunter's knife.	8-inch blade.	"
26160.	Hunter's knife.	5-inch blade.	"
26161.	Hunter's knife.	6-inch blade.	"
26162.	Hunter's knife.	7-inch blade.	"
26163.	Hunter's knife.	8-inch blade.	"
26164.	Hunter's knife.	9-inch blade.	"
26165.	Hunter's knife.	10-inch blade.	"
26166.	Hunter's knife.	11-inch blade.	"
26167.	Hunter's knife.	12-inch blade.	"
26156.	Hunter's knife.	5-inch blade.	"
26157.	Hunter's knife.	5½-inch blade.	"
26158.	Hunter's knife.	7-inch blade.	"
26202.	Hunter's knife.	5-inch blade.	"
26203.	Hunter's knife.	6-inch blade.	"
26204.	Hunter's knife.	7-inch blade.	"
26205.	Hunter's knife.	8-inch blade.	"
26206.	Hunter's knife.	9-inch blade.	"
26207.	Hunter's knife.	10-inch blade.	"
26208.	Hunter's knife.	12-inch blade.	"

Dudley hunters' knives.

26197.	Hunter's knife.	5-inch blade.	"
26198.	Hunter's knife.	6-inch blade.	"
26199.	Hunter's knife.	7-inch blade.	"
26200.	Hunter's knife.	9-inch blade.	"

Hunters' dirk-knives.

26225.	Hunter's knife (metal guard).	5-inch blade.	"
26226.	Hunter's knife (metal guard).	6-inch blade.	"
26227.	Hunter's knife (metal guard).	7-inch blade.	"
26228.	Hunter's knife (metal guard).	8-inch blade.	"
26143.	Hunter's knife (metal guard).	7-inch blade.	"
26168.	Hunter's knife (solid guard).	7-inch blade.	"

Splitting and ripping knives.

29401.	Double-edged throating and ripping knife.	A. McCurdy, Gloucester, Mass.
29403.	Double-edged throating-knife (old style).	G. B. Foster, Beverly, Mass.
29409.	Throating or ripping knife.	A. McCurdy, Gloucester, Mass.
29411.	Throating or ripping knife.	Capt. E. L. Rowe, Gloucester, Mass.

Straight knives.**Splitting and ripping knives.**

29416. Double-edged ripping-knife (peculiar to coast of Maine). Wilcox, Crittenden & Co., Middletown, Conn.
 29402. Mackerel-splitting knife. A. McCurdy, Gloucester, Mass.
 29408. Mackerel-splitting knife. Capt. Sam. Elwell, Gloucester, Mass.
 29404. Codfish-splitting knife. A. McCurdy, Gloucester, Mass.
 29413. Cod or haddock ripping knife (old style). G. P. Foster, Beverly, Mass.
 29414. Hake or haddock splitting knife. A. McCurdy, Gloucester, Mass.
 29415. Haddock-ripping knife. " " "

Flaying-knives, aboriginal and recent.¹

- | | | | |
|-----------------------|----------------|---------------------------|----------------|
| 26169. Flaying-knife. | 5-inch blade. | John Russell Cutlery Co., | Turner's |
| | | | [Falls, Mass.] |
| 26170. Flaying-knife. | 6-inch blade. | " | " |
| 26171. Flaying-knife. | 7-inch blade. | " | " |
| 26179. Flaying-knife. | 5-inch blade. | " | " |
| 26180. Flaying-knife. | 6-inch blade. | " | " |
| 26181. Flaying-knife. | 6½-inch blade. | " | " |
| 26185. Flaying-knife. | 5-inch blade. | " | " |
| 26186. Flaying-knife. | 6-inch blade. | " | " |
| 26187. Flaying-knife. | 7-inch blade. | " | " |
| 26188. Flaying-knife. | 5-inch blade. | " | " |
| 26189. Flaying-knife. | 6-inch blade. | " | " |
| 26190. Flaying-knife. | 7-inch blade. | " | " |
| 26211. Flaying-knife. | 5-inch blade. | " | " |
| 26212. Flaying-knife. | 6-inch blade. | " | " |
| 26213. Flaying-knife. | 6½-inch blade. | " | " |

Blubber-knives, Eskimos.²**Boarding-knives used by whalers.**

Used in cutting the blubber into sections from the "blanket piece" or long strip which is peeled from the sides of the whale; for illustration of the manner of use see the model of whaler "cutting in the blubber."

25676. Boarding-knife. W. H. Cook & Co., New Bedford, Mass.
 "This knife has seen many years of service."—A. R. C.
 26608. Boarding-knife, with sheath. A. R. Crittenden, Middletown, Conn.

Whalers' boat-knives.

Used to cut the harpoon-line when it gets tangled in paying out.

— Boat-knife (model). Capt. L. Howland, New Bedford.

This model in its sheath on the bulkhead of the whale-boat, ready for use, is shown in the model of a whale-boat (No. 24880).

Heading-knives.

32689. Halibut-heading knife. Adolph Voss, Gloucester, Mass.

¹ A full series of Eskimo and Indian flaying-knives is displayed in the Ethnological division.

² A series of these implements is exhibited in the Ethnological division.

Straight knives.

Finning-knives.

29400. Halibut-finning knife. Alex. McCurdy, Gloucester, Mass.
 29412. Halibut-finning knife. Capt. E. L. Rowe, Gloucester, Mass.

Chopping-knives.

29406. Bait-cleaver (used in halibut fishing). Alex. McCurdy, Gloucester, Mass.
 32665. Cod-bait knife. Gloucester, Mass. U. S. Fish Commission.
 32664. Bait-cleaver. " " "

Cheek-knives.

29438. Codfish cheek-knife. Alex. McCurdy, Gloucester, Mass.

Throating-knives.

22669. Cod-throater (single edge). Gloucester, Mass. U. S. Fish Commission.
 22670. Cod-throater (double edge). " "

Fish-knives (for general use).

26159. Fish-knife. Heavy. 12-inch blade. John Russell Cutlery Co., Turner's Falls, Mass.
 26196. Fish-knife. Hook handle. 12-inch blade. John Russell Cutlery Co., Turner's Falls, Mass.

Scaling-knives.

26210. Saw-blade fish-scaling knife. John Russell Cutlery Co., Turner's Falls, Mass.

Sailors' and fishermen's sheath-knives.

Sailors' sheath-knives. Wilcox, Crittenden & Co., Middletown, Conn.

29428. Sheath and belt, with "law-abiding" sheath-knife. First quality.
 29426. Sheath and belt. Second quality.
 29427. Sheath and belt, with "law-abiding" sheath-knife. Third quality.
 The "law-abiding" sheath-knife is round at the tip of the blade, which is also thick and dull.

Hunters' sheath-knives.

The hunting-knives enumerated above, manufactured by the John Russell Cutlery Co., and others like them, are usually provided with sheaths before they are used by hunters.

26665. Hunting-knife, sheath, and belt. Forest & Stream Publishing Co. (Property of John A. Nichols, Syracuse, N. Y.)

Slivering-knives, used by fishermen.

These knives are used to slice the flesh from the sides of the menhaden used for bait. The slices thus prepared are called "slivers," and are salted down in barrels to be used as baits for cod, halibut, and mackerel hooks, or are ground up in the bait-mills, forming "stosh" or "chum," a thick paste which is thrown over the sides of the mackerel-smacks to tole the fish to the surface.

Straight knives.**Slivering-knives, used by fishermen.**

29407. Slivering-knife. (Pattern first used by Cape Ann fishermen.) Geo. B. Foster, Beverly, Mass.
 29399. Slivering-knife. (Cape Ann pattern.) Alex. McCurdy.
 29405. Slivering-knife. (Nantucket pattern.) Samuel Elwell, jr., Gloucester, Mass.
 25764. Slivering-knife. Samuel Elwell, jr., Gloucester, Mass.
 32666. Slivering-blade. Gloucester, Mass. U. S. Fish Commission.

Flitching-knives.

Used in slicing halibut into steaks or "flitches" in preparation for salting and smoking.

32726. Shore flitching-knife. Gloucester, Mass. U. S. Fish Commission.
 32690. Bank flitching-knife. Adolph Voss, Gloucester, Mass.
 29410. Flitching-knife. Gloucester, Mass. A. R. Crittenden.

Clam and oyster knives.

26209. Clam-knife. John Russell Cutlery Co., Turner's Falls, Mass.
 —. Oyster-knife (model). See model of Chesapeake oyster-canoe (No. 25003).

Net-makers' knives.

These knives are without handles, and the heel of the short (2 inches long) round-pointed blade is curled so as to fit the finger like a ring.

29439. Net-mending knives (right-hand). Alex. McCurdy, Gloucester, Mass.
 29440. Net-mending knives (left-hand). Alex. McCurdy, Gloucester, Mass.

Mackerel-rimmers' fattening-knives or ploughs.

Used in creasing the sides of lean mackerel (Nos. 2 and 3) to cause them to resemble fat (No. 1) mackerel.

25768. Mackerel-plough. Edwin Blatchford.
 25769. Mackerel-plough. S. Elwell, jr., Gloucester, Mass.
 25770. Mackerel-plough. S. Elwell, jr., Gloucester, Mass.
 25771. Mackerel-plough. S. Elwell, jr., Gloucester, Mass.
 25773. Mackerel-plough. Edward Davis.
 25774. Mackerel-plough. Edward Davis.
 25775. Mackerel-plough. (Used in 1860.) Mrs. Hannah M. Burt.
 25720. Mackerel-plough. Central Wharf Co., Provincetown, Mass.

Splitting-knives.

Used in cleaning fish before salting.

32673. Mackerel-splitting knife. Gloucester, Mass. U. S. Fish Commission.
 22667. Cod-splitting knife (curved). " " "
 22668. Cod-splitting knife (straight). " " "

Stone and bone knives used by Indians and Eskimos.

7224. Bone knife. Anderson River Eskimos, Fort Anderson, H. B. T. R. McFarlane.

Straight knives.

Stone and bone knives used by Indians and Eskimos.

16115. Bone knife. Magemut Eskimos, Nunivak Islands, Alaska. W. H. Dall.
 2178. Bone knife. Eskimos.
 1328. Bone knife. Eskimos.

Harpoon-knives.

16348. Harpoon-knife, with sheath. Magemut Eskimos, Nunivak Islands,
 [Alaska. W. H. Dall.
 16110. Harpoon-knife, with sheath. " "
 16105. Harpoon-knife, with sheath. " "
 16106. Harpoon-knife, with sheath. " "
 19382. Harpoon-knife, with slate blade. " "

Honey-knives.

The thin blade bent at an angle to the handle.

26145. Honey-knife. John Russell Cutlery Co., Turner's Falls, Mass.

Skin scrapers and parers, used in preparing leather.

26144. Tanner's knife. 12-inch blade. John Russell Cutlery Co., Turner's
 [Falls, Mass.
 26195. Tanner's knife. 14-inch blade. " "

4. AXES.**Axes, proper.****Head-axes for whalemén.**

Used in cutting off head of whale.

25913. Head-axe. E. B. & F. Macy, New Bedford, Mass.

Whalemén's boat-hatchets.

Used for cutting harpoon-line at the bow, when it becomes tangled in "paying out."

24880. Boat-hatchet. (Model.) Capt. L. Howland, New Bedford, Mass.
 This implement in its place in the boat is shown in model of whale-boat.
 26839. A boat-hatchet may be seen in its proper place in the bow of the large whale-boat.

Cutting-spades.**Whale-spades.****Cutting-spades.**

Used in peeling the blubber from the carcass of the dead whale; for illustration see model of "whale-ship cutting in the blubber."

25679. Cutting-spade. E. B. & F. Macy, New Bedford, Mass.
 25008. Cutting-spade. J. H. Thomson, New Bedford, Mass.

Cutting-spades.

Throat-spades, flat and round shank.

Used in cutting off the head of the whale.

25925. Throat-spade. E. B. & F. Macy, New Bedford, Mass.

Wide spades.

Used in "blubber-room" for cutting blubber before mincing.

25629. Wide spade. E. B. & F. Macy, New Bedford, Mass.

Half-round spades.

For cutting "blanket" piece, to allow blubber-hook to enter.

25927. Half-round spade. E. B. & F. Macy, New Bedford, Mass.

Head-spades.

Used in cutting off the head of the whale.

25932. Head-spade. E. B. & F. Macy, New Bedford, Mass.

Blubber-mincing spades.

For mincing blubber before trying out.

25912. Hand mince-knife. E. B. & F. Macy, New Bedford, Mass.

Chopping-knives.

Used to chop clams for bait.

29489. Clam-chopper. William H. Hesbolt, Provincetown, Mass.

32676. Clam-chopper. Adolph Voss, Gloucester, Mass.

Bait-mill knives.

Used on the rollers of bait-mincing machines; for mills see section C. 5.

29417. Bait-mill knife. Provincetown pattern. William H. Hesbolt,
Provincetown, Mass.

25715. Bait-mill knife. M. W. Grant, Wellfleet, Mass.

Ice-choppers.

Used in chopping ice for packing fish or bait.

32685. Ice-chopper. Adolph Voss, Gloucester, Mass.

Ice-chisels.

Used in cutting holes in the ice for fishing.

25888. Ice-chisel (nickel-plated). Bradford & Anthony, Boston, Mass.

5. THRUSTING SPEARS AND PRODS.

Fishing-lances.

Whale-lances.

Used by whalers to give the death-blow to the whale.

25678. Whale-lance with handle, ready for use. E. B. & F. Macy, New Bedford, Mass.
 25007. Whale-lance with handle, ready for use. J. H. Thomson, New Bedford, Mass.

Whale-lance, iron.

25611. Whale-lance. (Primitive model) used by New Bedford whalers. W. H. Cook & Co., New Bedford, Mass.

Seal-lances.

10140. Head of lance (bone and iron). Eskimos of Northeast coast, southwest of King William's Land. Capt. C. F. Hall.
 1117. Seal-lance. Eskimos of Arctic coast, Anderson River, H. B. T. R. McFarlane.

Fish-lances.

29453. Sword-fish lance. Saml. Elwell, jr., Gloucester, Mass.
 32703. Sword-fish lance. Vinald McCaleb. Gloucester, Mass.
 25232. Sword-fish lance (with screw to fix folding handles). U. S. Fish Commission.
 26519. Lance. Indians of the Northwest coast. J. G. Swan.
 The tip of this lance is made from the horn of the mountain-goat (*Mazama montana*).

Whaleman's boat-spades (thick and thin).

Carried in boat to disable the whale by cutting its flukes.

25928. Boat-spade, with handle and warp complete, ready for use. E. B. & F. Macy, New Bedford, Mass.

Prodding instruments.

Snow-probes.

Used by the Eskimos in probing the air-holes in ice and under the snow to detect the presence of seals.

10274. Bone probe. King William's Land. Capt. C. F. Hall.
 10275. Bone probe. " "
 10276. Bone probe. " "
 2000. Bone probe. Northeastern Coast. S. F. Baird.
 2179. Bone probe. " "
 2180. Bone probe. " "
 2181. Bone probe. " "

¹ These probes are sometimes supplied with a detachable head.

Prodding-instruments.

Probing-awls.

Used in piercing the base of the brain in killing fish for the table.

29418. Large steel prod, suitable for large fish. A. R. Crittenden, Middletown, Conn.

II. IMPLEMENTS FOR SEIZURE OF OBJECT.

**Scooping-instruments.*

6. SCOOPS.

†*For hand-use.*

Shovels.

Clam-shovels.

— . ¹Long-handled shovel. U. S. Fish Commission.
26716. ¹Short-handled shovel. U. S. Fish Commission.

Oyster-shovels.

26717. (Model, with Chesapeake oyster-canoe, No. 25003). T. B. Ferguson, Maryland Commissioner of Fisheries.

Trowels used in taking burrowing shore animals.

— . Collector's trowel (flat). To be supplied.
— . Collector's trowel (round). “

Hand-scoops used in collecting mollusks.

— . ¹Spoon-scoop. U. S. Fish Commission.

Bait-ladles.

32652. “Bait-heaver” (straight). Gloucester, Mass. G. Brown Goode.
32653. “Bait-heaver” (one-sided). “ “

Hand-dredges (used in collecting mollusks).

26718. Tin hand-dredge. U. S. Fish Commission.

Pile-scrapers.

26719. Frame of pile-scrapcr. U. S. Fish Commission.

¹It is thought unnecessary to exhibit these familiar implements.

†† *For use with sounding-lines.*¹

Armed leads.

Common "deep-sea lead."
Deep-sea-sounding apparatus.

Cup-leads.

Scoop sounding-machine.

** *Grasping-hooks.*

7. HOOKED INSTRUMENTS. (Those used with a single motion, that of hooking.)

Single-pointed hooks.

Gaff-hooks.

25495. Salmon-gaff hook and staff. Bradford & Anthony, Boston, Mass.
2668. Gaff-hook. U. S. Fish Commission.
29388. Halibut-gaff. M. W. Grant, Wellfleet, Mass.
32678. Halibut hand-gaff. Gloucester, Mass. G. Brown Goode.
32683. Halibut deck-gaff. " " "
25935. Haddock hand-gaff. A. McCurdy, Gloucester, Mass.
29390. Haddock-gaff. M. W. Grant, Wellfleet, Mass.
25938. Codfish-gaff. Used in George's Bank fisheries. A. McCurdy, Gloucester, Mass.
25939. Dory cod-gaff. Used in shore fisheries. A. McCurdy, Gloucester, Mass.
25934. Hand-gaff. Used in halibut fisheries. A. McCurdy, Gloucester, Mass.
29389. Cod-gaff. M. W. Grant, Wellfleet, Mass.
26187. Gaff-hook. Indians of Northwest coast. J. G. Swan.
26680. Gaff-hook. Property of J. H. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Co.
32716. "Pew." Used in handling fish on wharves and decks. Capt. S. J. Martin, Gloucester, Mass.
32685. "Pew-gaff." Used in pitching fish from dories to vessels. Gloucester, Mass. G. Brown Goode.
32730. Fish-fork (three tines, short handle). Gloucester, Mass. G. Brown Goode. Used in pitching fish in a dory, or from hold of vessel.
32691. Halibut-cutter's hook. Used by the "header" in decapitating halibut. Gloucester, Mass. G. Brown Goode.
32684. Fish-fork (two tines). Gloucester, Mass. G. Brown Goode.
32725. "Nape-boner" hook. Used in the preparation of boneless fish. Gloucester, Mass. G. Brown Goode.

Boat-hooks.

Arranged with "Accessories of fishing-boats," B. 48.

Rabbit and squirrel hooks, used by Indians.

— Squirrel-hooks. Pi-Ute Indians. Southern Utah. J. W. Powell.

²Clam-hooks, hoes, and picks used in gathering shell-fish.

¹See exhibit of Navy Department.

²It is thought unnecessary to exhibit these familiar implements.

Single-pointed hooks.

¹Forks used in handling salted and dried fish.

Whalemen's hooks.

Blubber-hooks.

25930. Blubber-hook. For hauling small pieces of blubber. E. B. & F. Macy. New Bedford, Mass.

26133. Blubber-hook. Aliut Eskimo. Nunivak Island, Alaska. W. H. Dall.

Blubber forks and pikes.

25615. Blubber-pike. Used for tossing blubber into try-kettle. Humphrey S. Kirby, New Bedford, Mass.

25617. Blubber-pike. From the storeroom of a returned whaler. Humphrey S. Kirby, New Bedford, Mass.

Junk-hooks, etc.

For hauling heavy pieces of blubber.

25616. Gaff-hook. Used to haul blubber across the deck from chopper to try-kettle. Humphrey S. Kirby, New Bedford, Mass.

25916. Junk-hook. E. B. & F. Macy, New Bedford, Mass.

²Lance-hooks.

Many-pointed hooks.

²Can-hooks.

³Grappling-irons.

Lip-hooks or grapnels, used by whalers.

25918. Whaler's grapnel. Used for towing whale to ship. E. B. & F. Macy, New Bedford, Mass.

Line-hooks, used by whalers.

25924. Whaler's line-hook for catching line, &c. E. B. & F. Macy, New Bedford, Mass.

Clam-rakes.

29466. Clam-hoe. Provincetown style. Wm. H. Hesbolt, Provincetown, Mass.

29437. Hand-claw. Used for gathering "hen-clams" and "scallops." Wellfleet, Cape Cod, and coast of Maine. M. W. Grant, Wellfleet, Mass.

— . Clam-rake (model). Used in collecting the sea-clam (*Mactra solidissima*) on Nantucket Shoals. These clams are salted down and used as bait for cod, halibut, &c. See with model of Nantucket dory (26257).

¹ It is thought unnecessary to exhibit these familiar implements.

² Arranged with boat fittings.

³ Arranged with the anchors.

Many-pointed hooks.

Many-pointed fish-jigs.

29436. Mackerel-gaff. Used when the mackerel swim close in large shoals.
M. W. Grant, Wellfleet, Mass.
29441. Mackerel-bob. Used when the mackerel are close to the vessel and
in large schools. Wm. H. Hesbolt, Provincetown, Mass.

Oulachan rakes or spears.

Used by Indians of the Northwest coast in the capture of the oulachan or
candle-fish (*Osmerus pacificus*).

- . Oulachan rake or comb. Flathead Indians. J. G. Swan.

Squid-jigs.

25848. Squid-jig. George P. Steel, Provincetown, Mass.
25714. Squid-jig. " " "
25776. Squid-jig. Gloucester style. A. R. Crittenden, Middletown, Conn.
29443. Squid-jig. Over fifty years old. Lemuel Cook, 2d, Provincetown,
Mass.
32721. Squid-jig. Capt. R. H. Hurlbert, Gloucester, Mass.
32722. Squid-jig. " " "
25683. Squid-line and jig. Used in catching squid for bait. Bradford &
Anthony, Boston, Mass.
29447. Molds used in forming squid-jigs. John B. Parsons, Rockport, Mass.

Twisting-rods (used in drawing small mammals from their burrows).

- . Twisting-rod. Virginia.

8. BARBED IMPLEMENTS. (Those used with two motions, the first that
of thrusting.)**Spears with fixed heads.**

Barbed spears (with single point).

25594. Crab-spear, used about Newport, R. I. J. M. K. Southwick, New-
port, R. I.
25595. Flounder-spear. J. M. K. Southwick, Newport, R. I.
- . "Conch" harpoon. Used by Bahamians and fishermen of Key West
in the capture of large fish. Dr. J. W. Velie, Chicago, Ill.

Eel-spears.

- . Eel-spear with six prongs for winter fishing. Lent by Bradford & An-
[thony, Boston, Mass.
25558. Eel-spear with ten prongs for winter fishing. "
25557. Eel-spear for summer fishing. "
25556. Nine fish-spears. "
25224. Eel-spear, used in southern New England. U. S. Fish Commission.
25647. New Bedford eel-spear. H. S. Kirby, New Bedford, Mass.
25606. Eel-spear, Boston pattern. Used on Cape Cod. J. M. K. South-
wick, Newport, R. I.

Spears with fixed heads.

Aboriginal fish-spears.

7420. Head of fish-spear. Eskimos. Fort Anderson, Arctic coast. R. McFarlane.
2675. Heads of fish-darts. Eskimos. Mackenzie's River district. R. McFarlane.
7514. Head of fish-spear, made of elk-horn. Eskimos. Northwest coast. Geo. Gibbs.
2322. Head of salmon-spear. Indians. Fort Crook, Oreg. Lieut. John Feimer, U. S. A.
2628. Fish-dart heads. Indians. Columbia River. U. S. Exploring Expedition. Capt. C. Wilkes, U. S. N.
1439. Lance-head of bone. Indians. New Mexico. Lieut. A. W. Whipple, U. S. A.
18933. Fish-spears. Sitka Indians. Sitka. J. G. Swan.
11429. Salmon-spears. Passamaquoddy Indians. Eastport, Me. E. Palmer.
10283. Salmon-spear. Eskimos. Igloolik. Capt. C. F. Hall.
2543. Fish-spear. Tschutschi Indians. South Pacific Exploring Expedition. Capt. John Rodgers, U. S. N.
23518. Three-pronged spear. Northwest coast. J. G. Swan.

Aboriginal bird and fish spears.

19517. Bird-spear. Eskimos. Greenland. Geo. Y. Nickerson.
10267. Bird-spear with throwing-stick. Arctic America. Smithsonian Institution.
15950. Fish-spear. Magemut Eskimos. Nunivak, Alaska. W. H. Dall.
11358. Fish or bird spear. Eskimos. Bristol Bay, Alaska. Vincent Colyer.
- 15689-90-91-93-94-95-96. Bird-spears. Eskimos. Nunivak Islands, Alaska, W. H. Dall.
- 7973-7997. Fish and bird spears. Mushegay Indians. Alaska. Smithsonian Institution.

Spears with detachable heads.

Lily-irons.

25230. Sword-fish lily-iron. Capt. John B. Smith. U. S. Fish Commission.
25645. Sword-fish dart and socket, peculiar to New Bedford. A. R. Crittenden, Middletown, Conn.
32714. Sword-fish lily-iron. Adolph Voss, Gloucester, Mass.
32715. Sword-fish lily-iron. " "
25208. Swordfish-dart head. Wilcox, Crittenden & Co., Middletown, Conn.
- , "Turtle-peg" harpoon. Key West, Fla. Dr. J. W. Velie, Chicago, Ill.

Eskimo harpoons of stone, bone, and iron.

14255. Iron harpoon-head, with line of walrus hide. Eskimos. Smith Sound. Capt. C. F. Hall.
10120. Harpoon-head, brass and iron. Eskimos. Victoria Harbor. Capt. C. F. Hall.
9838. Harpoon-heads of bone and iron. Eskimos. Northeast coast. S. F. Baird.

Spears with detachable heads.

Eskimo harpoons of stone, bone, and iron.

19522. Harpoon-head of stone and bone. Eskimos. Greenland. Geo. Y. Nickerson.
10136. Head of walrus-harpoon. Eskimos. Igloolik. Capt. C. F. Hall.
10400. Head of seal-harpoon. Eskimos. Igloolik. Capt. C. F. Hall.
10407. Bone harpoon-head. Eskimos. King William's Sound. Capt. C. F. Hall.
10404. Part of ancient Innuvit harpoon-head. Repulse Bay. Capt. C. F. Hall.
10273. Handle of whaling-harpoon made of bone and wood. Eskimos. Greenland. Smithsonian Institution.
19519. Handle of whaling-harpoon made of wood and bone. Eskimos. Greenland. Geo. Y. Nickerson.
10265. Whaling-harpoon. Eskimos. Northwest coast. Smithsonian Institution.
19518. Whaling-harpoon of recent manufacture, with head of bone and iron, handle of wood and iron, and seal-skin line. Eskimos. Greenland. Geo. Y. Nickerson.
565. Harpoon-head of bone and iron with walrus-hide line. Eskimos. Port Foulke. Dr. I. I. Hayes.
2186. Seal-harpoon head of bone and iron. Eskimos. Anderson River. R. McFarlane.
13140. Walrus-harpoon head of bone and iron, hide line. Innuvit Eskimos. Greenland. S. F. Baird.
19376. Bone harpoon-head with hide line. Eskimos. Alaska. Rev. James Curley.
11618. Seal-harpoon head of bone. Eskimos. Nunivak Islands, Alaska. W. H. Dall.
15631. Miniature model of seal-harpoon. Eskimos. Alaska. H. W. Elliott.
1678. Miniature model of seal-harpoon. Eskimos. Alaska. W. H. Dall.
- 16120-21-23-25, 5606-7621. Seal-harpoon heads of bone and iron. Eskimos. Nunivak Islands, Alaska. W. H. Dall.
15619. Harpoon-head of bone. Eskimos. Alaska. H. W. Elliott.
2674. Seal-harpoon heads of bone. Anderson River Eskimos. Fort Anderson. R. McFarlane.
- 2092, 2250, 2817, 3975, 5815, 7422, 7440. Seal-harpoon heads of bone and iron. Anderson River Eskimos. Mackenzie's River district. R. McFarlane.
- Indian harpoons of shell and iron. Whaling-harpoon, used by Makah Indians of Vancouver's Island and vicinity.
4131. Four models of whaling-harpoons, lines and throats. Makah Indians. Neah Bay, Wash. J. G. Swan.
1869. Head of whaling-harpoon, with line. Makah Indians. Cape Flattery, Wash. Geo. Suckley.
- This harpoon-head is made from the shell of a large species of *Mytilus*, and illustrates the methods of manufacture employed by Indians of the Northwest coast previous to the introduction of metal by the white man.
- 20896-7. Head of whaling-harpoon and line. Makah Indians. Sitka, Alaska. J. G. Swan.
- This harpoon-head is constructed of sheet-iron and shows the method now employed in the manufacture of the weapons. The rope and covers are made from the bark of *Thuja gigantea*.
828. Head of whaling-harpoon with line. Makah Indians. Neah Bay, Wash. Ter. J. G. Swan.

Spears with detachable heads.

Eskimo harpoons of stone, bone, and iron.

1868. Head of whaling-harpoon with line. Makah Indians. Neah Bay, Wash. Ter. J. G. Swan.
 26875-26825. Handles of whaling-harpoons. Makah Indians. J. G. Swan.
 2530. Harpoon-darts. Eskimos. Alaska. North Pacific Exploring Expedition. Capt. John Rodgers.
 16675. Harpoon-dart. Kotzebue Sound. W. H. Dall.
 5775-6-7-9-80. Harpoon-darts. Sitka, Alaska. W. H. Howard, U. S. R. M.

Harpoon-spears.

6564. Head of barbed fish-dart, made of native copper. Eskimos. Sitka, Alaska. Dr. T. T. Minor.
 9083. Head of barbed fish-dart, made of native copper. Alaska. Lieut. F. W. Ring, U. S. N.
 20653. Head of barbed fish-dart of native copper with line of twisted sinew. Alaska. Smithsonian Institution.
 21413. Fish-spear with detachable barb. Hoochuon Indians. South Eel River, California. Stephen Powers.
 Double-pronged spears with detachable heads. McCloud River Indians, Shasta Co., Cal. Livingston Stone. These spears are used in the capture of the *Salmo quinnat*. The handles are thirty feet in length. The barbs are made from the splint bones of deer. See No. 13743, below.
 19046. Fish-spear with detachable barbs. Cooyunu Pi-Ute Indians. Pyramid Lake, Nevada. Stephen Powers.
 23522. Two-pronged spear with detachable barbs. Indians of Northwest coast. J. G. Swan.
 26826. Handle of spear similar to 23522, but longer. J. G. Swan.
 23520. Spear with many-barbed detachable head and kelp line. Indians of Northwest coast. J. G. Swan.
 13743. Points for salmon-spear made of the splint bones of the deer. McCloud River Indians. Shasta Co., Cal. Livingston Stone.
 650. Harpoon-arrows with iron tips. Indians. Cape Flattery, Wash. Ter. Geo. Gibbs.
 21308. Wooden barbs for fish-harpoon. Indians. Hoopah Valley, Cal. Stephen Powers.
 2249. Head of fish-harpoon. Eskimos. Anderson River. R. McFarlane.
 11356. Harpoon-dart with bladder-float. Nashegay Indians. Alaska. Dr. T. T. Minor.

9. TONGS, &C.

† *For hand-use.*

Tongs (with two handles).**Oyster-tongs and oyster-rakes.**

26110. Oyster-tongs. S. Salisbury, Providence, R. I.
 26109. Oyster-tongs. " "
 25205. Oyster-tongs. Wilcox, Crittenden & Co., Middletown, Conn.
 29111. Oyster-nippers. S. Salisbury, Providence, R. I.

“Nippers” (with cord and handle).

Snake-tongs.
Sponge-tongs.
Coral-tongs.

†† *For use with sounding-lines.*

“Clamms” for deep-sea soundings (forceps closed by a weight).¹

(Ross' “deep-sea clamms.”)
(Bull-dog sounding-machine.)

*** *Grasping-lines.*

10. NOOSES.

† *Stationary nooses.*

Jerk-snares.

Bird-snares.
Fish-snares of wire, gut, hair, &c.

†† *Thrown nooses.*

Lariats and lassos.

11344. Lariat of hide. Apache Indians. General M. C. Meigs, U. S. A.
8534. Lariat of hide. Sioux Indians. Nebraska. Dr. S. M. Horton, U. S. A.
1912. Lariat of hide. Sioux Indians. Upper Missouri River. Lieut. G. K. Warren.
6920. Lariat of hide. Comanche Indians. Fort Cobb, Ind. T. E. Palmer.
6921. Lariat of hide. Comanche Indians. Llano Estacado, Texas. E. Palmer.
5559. Lariat of hide. Apache Indians. E. Palmer.
7492. Lariat of moose-skin. Mackenzie River Indians. Fort Anderson. R. McFarlane.
11206. Lariat of rope. Pi-Ute Indians. Southern Utah. Maj. J. W. Powell.
5558. Lariat of buffalo-hair. Apache Indians. E. Palmer.
7317. Lariat of buffalo-hair. Apache Indians. Maj. W. H. Mills, U. S. A.
9034. Lariat of buffalo-hair. Nez Percé Indians. Idaho. Dr. E. Storror.
6922. Lariat of buffalo-hair. Comanche Indians. Fort Cobb, Ind. Ter. E. Palmer.

11. LOADED LINES. (Bolas.)

Bird-slings (used by Eskimos).

19507. Bird-sling. Greenland. J. H. Clark. Smithsonian Institution.
9831. Bird-sling. Greenland. S. F. Baird. “ “
7444. Bird-sling. McKenzie's River. Fort Anderson, H. B. T. R. McFarlane.
9831. Bird-sling. Greenland. S. F. Baird.
7537. Bird-sling. Arctic coast. Fort Anderson, H. B. T. B. R. Ross.

¹See exhibit of Navy Department.

*****Entangling-lines.*

12. TANGLES.

The tangles are employed by naturalists for the purpose of gathering small spiny animals, such as sea-urchins and star-fishes, from the bottom at considerable depths. They adhere to the fibers of the spun-yarn in great numbers. It has been thought that this instrument might advantageously be employed in freeing oyster-beds from their worst enemies, the star-fish.

Swab-tangles.

Swab-tangles.

26844. Swab-tangle. U. S. Fish Commission.

(Dredge-tangles, used by English collectors.)

Harrow-tangles.

Harrow-tangles.

26845. Models of harrow-tangles. U. S. Fish Commission. Formerly used by the Fish Commission, now replaced by the wheel-tangles.

Wheel-tangles.

Wheel-tangles.

26846. Model of wheel-tangle. U. S. Fish Commission.

26848. Wheel-tangles. U. S. Fish Commission.

III. MISSILES.

**Simple missiles (those propelled by the unaided arm).*

13. HURLED WEIGHTS.

Stones and disks (thrown by the hand).

Weights (dropped from an elevation, dead-falls, not automatic).

14. HURLED STICKS.

Straight sticks.

Clubs used as missiles.

Curved sticks.

Throw-sticks, used by the Moqui Indians of New Mexico in hunting rabbits.

9543-4. Throw-sticks. Used in rabbit-hunting by Moqui Indians. New Mexico. Dr. Edward Palmer.

15. HURLED SPEARS.

Darts and lances.

See under "Lances and spears," above enumerated, many of which may be used as missiles.

** *Centrifugal missiles. (Propelling power augmented by an artificial increase of the length of the arm.)*

16. SLINGS AND SPEARS THROWN BY STRAPS.

Slings.

9532. Sling. Navajo Indians. Smithsonian Institution.
17234. Sling. Indians. " "

Spears (with straps).

17. MISSILES PROPELLED BY "THROWING-STICKS."

Spears (with throwing-sticks, used by Eskimos).

See above under "Bird and fish spears," particularly No. 10267, a spear with throwing-stick attached.

7899. Throwing-stick. Eskimos. Aleutian Islands. Dr. T. T. Minor.
7933. Throwing-stick. Eskimos. Kodiak. "
16076. Throwing-stick. Eskimos. Unalashka. W. H. Dall.
2533. Throwing-stick. Eskimos. Alaska. North Pacific Exploring Expedition. Capt. John Rodgers.
11346-47. Throwing-sticks. Yukon River, Alaska. Vincent Colyer.
15643. 1642-16243. Throwing-sticks. Eskimos. Nunivak Islands. W. H. Dall.
2267. Throwing-stick. Eskimos. Smithsonian Institution.
5774. Throwing-stick. Eskimos. Sitka. W. A. Howard, U. S. R. M.
20771. Throwing-stick. Eskimos. Sitka. J. G. Swan.

*** *Missiles propelled by a spring.—(Spring consisting of bent rod.)*

18. BOWS AND ARROWS.

Bows.

Simple bows.

(Cross-bows.)

(Ballistas.)

These articles are arranged with the Ethnological series, as are also the arrows, with the exception of a few forms peculiarly adapted to hunting.

Arrows.

Hunting-arrows.

11350-54. Bird-arrows. Eskimos. Bristol Bay, Alaska. Vincent Colyer.
16410-11-12. Bird-arrows. Eskimos. Nunivak Islands, Alaska. W. H. Dall.

Arrows.

Hunting-arrows.

- 8827-28-29-30. Bird-arrows. Eskimos. Alaska? Smithsonian Institution.
 5602. Bird-arrows. Yukon River, Alaska. W. H. Dall.
 15654. Hunting-arrows. Kodiak Indians. Alaska. W. H. Dall.
 16413-14-15. Hunting-arrows with heads of bone and iron. Eskimos. Nunivak Islands, Alaska. W. H. Dall.
 —. Hunting-arrows with bone heads. Eskimos. Nunivak Islands, Alaska. Vincent Colyer.

Harpoon-arrows, used in fishing.

- 11348-52. Harpoon-arrows. Eskimos. Bristol Bay, Alaska. Vincent Colyer.
 15677-15681-82. Harpoon-arrows. Eskimos. Nunivak Islands, Alaska. W. H. Dall.
 19379. Harpoon-arrow. Eskimos. Alaska. Rev. J. Curley.
 8005-6-9. Harpoon-arrows. Eskimos. Nushegay Indians. Dr. T. T. Minor.

Accessories of bows and arrows.

- Holders.*
 Quivers.*
 Arrow-head pouches.*

Implements of manufacture.

- Flint-chipping apparatus.*
 Arrow-head sharpeners.*
 Shaft-gauges.*
 Cord-twisting apparatus.*
 Shaft-polishers.*
 Glue-sticks, used in fastening head of arrow.*

Arranged with the Ethnological series.

‡‡ *Spring consisting of elastic cord.*

19. INDIA-RUBBER SLINGS.

Pea-shooters (used in killing birds).

‡‡‡ *Spring consisting of metallic helix.*

20. SPRING-GUNS.

Spring-guns.

**** *Missiles propelled by the compression of air or water.*

21. AIR-GUNS.

Blow-guns (missile propelled by the breath).

- Blow-guns carrying arrows.
 Blow-guns carrying balls.

Piston air-guns.**Reservoir air-guns.**

Air-guns.

29535. Bedford Eureka air-pistol, with darts, slugs, and gun-rest. (Patented Dec. 21, 1875.) Eureka Manufacturing Company, Boston, Mass.

Air-gun canes.

22. WATER-GUNS.

Syringe-guns.

Humming-bird guns.

**** *Fire-arms.*

23. GUNS AND PISTOLS.

Muzzle-loading arms.

26714. Flint-lock gun (single barrel) old fashion. Smithsonian Institution.

809. Single-barrel shot (?) gun.

Given by Lord Melville to Sir John Franklin, who used it on his unfortunate expeditions in 1820, 1821, and 1822, then given by Sir John to his interpreter, St. Germain, who sold it to Chief Factor Smith, of the Hudson Bay Co., who gave it to his son-in-law, Chief Factor McPherson, from whom it was obtained by B. R. Ross, of the Hudson Bay Co.

Breech-loading arms.

25894. Six-shooting shot-gun. Colt's Fire-Arms Manufacturing Company, Hartford, Conn.
25895. Double-barreled breech-loading fowling-piece. E. Remington & Sons, Ilion, N. Y.
25247. Double-barreled breech-loading fowling-piece. Damascus steel, 12 gauge. Parker Bros., Meriden, Conn.
25250. Single-barreled breech-loading shot-gun. (Patented May 26, 1874. Phoenix calibre 12.) Whitney Arms Company, Whitneyville, Conn.
26574. Breech-loading gun. Clark & Sneider, Baltimore, Md.
26573. Breech-loading gun. " "
29533. The Sneider patent double-barrel breech-loading shot-gun. Clark & Sneider, Baltimore, Md.
29534. The Sneider double-barrel breech-loading shot-gun; solid tip grip. (Patented Dec. 22, 1868; April 7, 1874.) Clark & Sneider, Baltimore, Md.
25896. Creedmoor rifle. E. Remington & Sons, Ilion, N. Y.
- . Mid-range rifle. Peabody & Martin pattern (44 cal., 100 grs.), made by Providence Tool Co. Schuyler, Waltham & Graham, New York.
25890. Sporting-rifle. King's improvement. (Patented March 29, 1866; October 16, 1860. Model, 1873. Calibre .44.) Winchester Repeating Arms, New Haven, Conn.
22202. Sharpe's rifle. (Patented April 1, 1866.) Manufacturers.
- 29289-311. Maynard's rifle with appurtenances. (Pistol grip, vernier rear-sight. Front wind-gauge sight and spirit-level; 32 inches, .4 calibre.) Massachusetts Arms Company, Chicopee Falls, Mass.

Breech-loading arms.

29299. Shot-barrel for Maynard's rifle; 32 inches, .64 calibre. Massachusetts Arms Company, Chicopee Falls, Mass.
25873. Six-shooting rifle; 44-inch calibre. Colt's Fire-Arms Manufacturing Company, Hartford, Conn.
25889. Carbine. King's improvement. (Patented March 29, 1866; October 16, 1860. Model 1873. Calibre .44.) Winchester Repeating Arms, New Haven, Conn.
25248. Breech-loading sporting-rifle. (Patented October 17, 1866. Reissued June 25, 1872; Dec. 26, 1865. Reissued Oct. 1, 1867; May 15, 1866; July 16, 1872.) Whitney Arms Company, Whitneyville, Conn.
25249. Breech-loading sporting-rifle. Phœnix calibre, 44. Whitney Arms Company, Whitneyville, Conn.
25892. Six-shooting revolver. 45 calibre. (Patented Sept. 19, 1871; July 2, 1872.) Colt's Fire-Arms Manufacturing Company, Hartford, Conn.

Whaling-guns.

24986. C. C. Brand's improved whaling-gun. Patented June 22, 1852. For use with C. C. Brand's improved bomb-lance. 24987. Powder-flask with charger. 24988. Wad-cutter. 24989. Wad-cutter (inside). 24992. Prepared wads. 24990, 24991. Screw-drivers. C. C. Brand, Norwich, Conn.
- 24993-97. C. C. Brand's improved bomb-lance. Patented June 22, 1859. For use with C. C. Brand's improved whaling-gun. 24997. Exploded lance. 24998. Lance-hook (for drawing charge). C. C. Brand, Norwich, Conn.
25251. E. Pierce's harpoon-gun. Patented 1865. U. S. Fish Commission.
26897. Cunningham & Hogan's breech-loading bomb-gun, with explosive lances. William Lewis, New Bedford, Mass.

24. (ACCESSORY.) AMMUNITION AND ITS PREPARATION.

Explosives.

Gunpowder.

Gun-cotton.

Percussion powder:

Caps.

Needle percussion.

Primers.

Wood powder.

Dynamite or giant-powder.

Nitroglycerine.

Dualine.

Lithofracteur.

Colonia powder.

Other explosives.

For obvious reasons this series could not be exhibited.

Missiles.

Bullets.

(Accessory.) Bullet-molds.

29300. Pair of molds for conical and cylindrical bullets. Massachusetts Arms Company, Chicopee Falls, Mass.

Shot.

— Series of samples of shot, sizes from No. 000 to No. 12. Thomas Sparks, Philadelphia, Pa.

Explosive bullets, shells, &c.:

Bomb-lance.

Wadding.

Bulk wadding.

Prepared wads.

(Accessory.) Wad-cutters.

The articles of this class may be seen in connection with the ammunition series.

Ammunition-measures.

Measures.

Shot-measures.

Powder-measures. } Attached to pouches and separate.

16190. Powder-charger. Nunivak Islands, Alaska. W. H. Dall.

2689. Gun-charger. Indians of Northwest coast. Captain Wilkes, U. S. N. U. S. Exploring Expedition.

Weighing scales.

Prepared ammunition.

Ball, shot, and wire cartridges.

25891. Card of rim-fire cartridges. Winchester Repeating Arms, New Haven, Conn.

29304. Ten metallic cartridge-shells, .4, for rifle. Massachusetts Arms Company, Chicopee Falls, Mass.

29305. Ten metallic cartridge-shells, .64, for shot-guns. Massachusetts Arms Company, Chicopee Falls, Mass.

Methods of preparing cartridges.

Loaders, crimpers, and cappers.

29303. Metallic loader for rifle-cartridge. Massachusetts Arms Company, Chicopee Falls, Mass.

Methods of preparing cartridges.

Loaders, crimpers, and cappers.

29302. Rosewood loader for shot-cartridge. Massachusetts Arms Company, Chicopee Falls, Mass.
 29308. Two rosewood loading-blocks. Massachusetts Arms Company, Chicopee Falls, Mass.
 25897. Cartridge-loading machine. E. Remington & Sons, Ilion, N. Y.
 29306. Cartridge-capper. Massachusetts Arms Company, Chicopee Falls, Mass.

25. ACCESSORIES OF LOADING, CLEANING, AND REPAIRING, SIGHTING, AND TESTING FIRE-ARMS.

Instruments for cleaning, loading, &c.

Rammers.

Swabs.

Charge-drawers—"worms"—and other loading tools.

These may be seen attached to the various wrappers.

29307. Wrench and cap-picker. Massachusetts Arms Company, Chicopee Falls, Mass.
 29311. Rod and tip for cloth, plain. Massachusetts Arms Company, Chicopee Falls, Mass.
 29310. Jointed rod and brush. Massachusetts Arms Company, Chicopee Falls, Mass.
 29309. Screw-driver. Massachusetts Arms Company, Chicopee Falls, Mass.
 7525. Gun-screw-driver. Apache Indians. Arizona. E. Palmer.
 26695. Loading-tools. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26696. Closer. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 29251. Oil-bottle, nickel (No. 1). Edwin W. Judge, New Haven, Conn.
 29252. Oil-bottle, nickel (No. 2). " "
 26698. Oil-can. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Sights, &c.

Muzzle-sights.

Slit-sights.

Globe-sights.

Peep-sights.

Breech-sights.

Plain-sights.

Graduating-sights.

Telescope-sights.

Levels, attached to guns.

Wind-gauges.

These may be seen attached to the guns.

Recoil-checks.

25700. William D. Miller's patent recoil-check for shot-guns and rifles. (Patented Nov. 2, 1875, No. 52.) A. J. Norman, New York. Advantages claimed for this arrangement are that it repels and neutralizes the recoil, permits steadier aim, and insures increased range and greater penetration.

26. FOR CARRYING ARMS AND AMMUNITION.

Ammunition-holders.

Powder-horns:

Horns.

Flasks.

Canisters.

1910. Powder-horn. Sioux Indians. Upper Missouri River. Lieut. G. K. Warren, U. S. A.
1472. Powder-horn. Comanche Indians. General D. N. Couch, U. S. A.
16309. Powder-horn. Sitka, Alaska. W. H. Dall.
1909. Powder-horn and pouch. (Containing bullets, gun-flints, and arrow-points.) Sioux Indians. Upper Missouri River. Lieut. G. K. Warren, U. S. A.
5520. Powder-horn. Papago and Apache Indians. E. Palmer.
21672. Powder-horn and pouch. Yankton Sioux. Dakota. Army Medical Museum. Dr. J. T. Boughter.
26706. Cartridge-box. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26703. Cartridge-flask. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
7313. Powder-flask. Apache Indians. Major Mills, U. S. A.
13035. Powder-flask. Alient Eskimos. Ounalashka. W. H. Dall.
16099. Powder-flask. Magemut Eskimos. Nunivak Islands, Alaska. W. H. Dall.
9290. Powder-flask. Alaska. Dr. A. H. Hoff, U. S. A.
5184. Powder-flask. Porterre Indians. Dr. J. T. Rothrock, U. S. A.
16292. Powder-flask. Kodiak Eskimos. Chirikoff. W. H. Dall.

Shot and bullet holders.

Pouches.

- Shot-pouch. Found in old house, Saint Regis, N. Y. R. B. Hough.
20673. Shot-pouch. Indians of the Northwest coast. Fort Simpson, B. C. J. G. Swan.
9641. Bullet-pouch. Navajo Indians. E. Palmer.
11077. Bullet-pouch. Navajo Indians. Northwestern New Mexico. Vincent Colyer.
2112. Bullet-pouch. Indians of Upper Missouri. War Department, U. S. A.
6199. Bullet-pouch and belt. Delaware Indians. Arizona. E. Palmer.
2470. Bullet-pouch and belt. Indians of Missouri Valley. War Department, U. S. A.
5432. Bullet-pouch and belt. J. Varden.
26699. Ball-box. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
1935. Bullet-pouch and belt. Indian.

Shot and bullet holders.

Cap-holders.

5525. Cap-case. Apache Indians. Arizona. E. Palmer.
 26697. Cap-box. Property of J. A. Nichols, Syracuse, N. Y. Contributed
 by Forest & Stream Publishing Company.

Pouches.

Boxes.

Cap-straps, used by Indians.

Cartridge-holders:

Pouches.

Boxes.

Belts.

Vests.

Weapon-holders.

Slings for arms:

Shoulder-slings.

Saddle-slings.

Holsters.

Belts:

Pistol-belts.

Racks and cases:

Gun-racks.

Gun-cases.

8546. Gun-case. Indians. Ogalalla, Nebr. Dr. S. M. Horton, U. S. A.
 14849. Gun-case. Indian. Colorado. Maj. J. W. Powell.
 26705. Gun-case. Property of J. A. Nichols, Syracuse, N. Y. Contributed
 by Forest and Stream Publishing Company.
 26704. Gun-case. Property of J. A. Nichols, Syracuse, N. Y. Contributed
 by Forest and Stream Publishing Company.

IV. BAITED HOOKS. ANGLING-TACKLE.

27. HOOKS WITH MOVABLE LINES.

Tackle for surface-fishing.

Fly-fishing tackle.

Salmon-tackle.

Trout-tackle.

Black-bass tackle.

Shad-tackle.

Tackle for surface-fishing.

Trolling-tackle:

Trolling-tackle.

Whiffing-tackle.

Drailing-tackle.

Gangs of hooks for minnow-bait.

The parts of these gears may be seen in their proper places, with hooks, lines, &c.

26683. Minnow-gang. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest and Stream Publishing Company.

Surf-tackle for throwing and hauling.

Striped-bass tackle.

Red-fish or bass tackle.

Blue-fish tackle.

Tide-drailing tackle.

Pasque and Cuttyhunk bass-tackle.

24808-9. Blue-fish line. Rigged with eel-skin squids. J. M. K. Southwick, Newport, R. I.

24802-7. Blue-fish lines. Rigged with cloth squid. Block Island. J. M. K. Southwick, Newport, R. I.

Tackle for fishing below the surface.

Short hand-gear.

25684. Mackerel-lines and cleats. Bradford & Anthony, Boston, Mass.

25940. Mackerel hook and line. A. McCurdy.

29293. "Otter," with line and flies attached. Used in lake and river fishing. William Morris, Lake City, Minn.

19047. Throw-line with minnow-hooks. Cooyuwee Pi-Utes. Pyramid Lake, Nevada. Stephen Powers.

Deep-sea gear.

25786. Hand-line gear for halibut and cod. Used in George's Banks fisheries. Alexander McCurdy, East Gloucester, Mass.

25687. Gear, used by American fishermen on George's Banks. Bradford & Anthony, Boston, Mass.

29471. Hand-line gear. Used in George's Banks cod and halibut fisheries. A. McCurdy, East Gloucester, Mass.

29483. Cod-fishing gear. Used from 1812-1830. Lemuel Cook, 2d, Provincetown, Mass.

25686. Cod hand-line and gear. Used chiefly on Western and Grand Banks of Newfoundland. Bradford & Anthony, Boston, Mass.

25685. Pollock line and gear. Bradford & Anthony, Boston, Mass.

24810-11. Rigged tautog-lines. J. M. K. Southwick, Newport, R. I.

25665. Lines. Rigged for pond-fishing. Wm. M. Young, Philadelphia, Pa.

1140. Halibut-hook, with kelp line. Makah Indians. Puget Sound, W. T. J. G. Swan.

Tackle for fishing below the surface.

Deep-sea gear:

Flounder-gear.

Shark-gear.

Other bottom-gear.

Bobs:

Eel-bobs.

28. HOOKS, WITH STATIONARY LINES.—SET TACKLE.

Surface lines.

Spilliards, or floating-trawl lines.

Bottom-set lines.

Trawl-lines, or bull-tows.

25688. Model of codfish-trawl, used by American fishermen on Western and Grand Banks of Newfoundland. Buoys, scale of one-sixth; anchors, scale of one-fifteenth. Bradford & Anthony, Boston, Mass.

29469. Section (one-fifth) of trawl-line. Used in George's Banks codfisheries. A. R. Crittenden, Middletown, Conn.

6560. Trawl-line and hooks. Indians of Vancouver's Island. Dr. T. T. Minor.

32705. One section or "skate" of a halibut trawl-line with (No. 32706) inner buoy with flag, (No. 32707) outer buoy with "black-ball," (No. 32708) buoy-line, and (No. 32709) anchor. Capt. Jos. W. Collins and Philip Merchant, Gloucester, Mass.

Set-traps.

25562. Pickerel-traps. With lines and flags for fishing through the ice. Bradford & Anthony, Boston, Mass.

25563. Set of implements for smelt-fishing through the ice.

25667. Fishing-bows. W. M. Young, Philadelphia, Pa.

29. (ACCESSORY.) PARTS AND ACCESSORIES OF ANGLING-APPARATUS AND OF HARPOON AND SEINE LINES.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Plain hooks.

25682. The ten processes through which American hand-made fish-hooks pass from the wire to the finished hook. Made entirely by hand-labor in the factory of J. W. Court, Brooklyn, N. Y. Bradford & Anthony, Boston, Mass.

25524. Double-refined, cast-steel, tapered point; Virginia hooks, flatted, Nos. 10 to 1 and 1-0 to 3-0. American Needle and Fish-Hook Company, New Haven, Conn.

25535. Superfine cast-steel blackfish-hooks, japanned, flatted, Nos. 1 to 8. American Needle and Fish-Hook Company, New Haven, Conn.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Plain hooks.

25536. Eel-hooks, No. 6. American Needle and Fish-Hook Company, New Haven, Conn.
25640. Halibut-hooks, ringed; Nos. 1 to 3. American Needle and Fish-Hook Company, New Haven, Conn.
25528. Cast-steel Kirby sea fish-hooks, flatted; Nos. 1 to 12. American Needle and Fish-Hook Company, New Haven, Conn.
25530. Cast-steel Kirby sea fish-hooks, ringed; Nos. 1 to 12.
25529. Superior cast-steel Kirby sea fish-hooks, galvanized, flatted; Nos. 1 to 8. American Needle and Fish-Hook Company, New Haven, Conn.
25522. Double-refined cast-steel Kirby river and trout fish-hooks, ringed; Nos. 1 to 12 and 1-00 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25523. Kirby river and trout fish-hooks, flatted, extra superfine; Nos. 1 to 12 and 1-0 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25519. Superfine spring steel Kirby salmon, flatted; Nos. 12 to 3-0. American Needle and Fish-Hook Company, New Haven, Conn.
25520. Carlisle trout-hooks, flatted; Nos. 12-20. American Needle and Fish-Hook Company, New Haven, Conn.
25521. Carlisle trout-hooks, ringed; Nos. 8 to 3-0. American Needle and Fish-Hook Company, New Haven, Conn.
25516. Superfine cast-steel Limerick salmon, flatted; Nos. 1-0 to 12 and 2-0 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25517. Superfine cast-steel Limerick salmon, ringed; Nos. 1-0 to 9 and 2-0 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25514. Double-refined cast-steel Limerick river and trout fish-hooks (spear-points, flatted); Nos. 1-0 to 12 and 2-0 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25515. Double-refined cast-steel Limerick river and trout fish-hooks (spear-head points, flatted, shanks ringed); Nos. 1-0 to 12 and 2-0 to 10-0. American Needle and Fish-Hook Company, New Haven, Conn.
25518. Extra spring-steel Aberdeen trout-hooks, flatted; Nos. 8 to 4-0. American Needle and Fish-Hook Company, New Haven, Conn.
25525. Superfine spring-steel Kinsey trout-hooks, flatted; Nos. 6 to 16. American Needle and Fish-Hook Company, New Haven, Conn.
25591. Superfine steel Kinsey trout-hooks, ringed; Nos. 10 to 16. American Needle and Fish-Hook Company, New Haven, Conn.
25534. Cast-steel drop-point mackerel-hooks, large and small wire, flatted; Nos. 1 A to 5 A, and 2 B to 4 B. American Needle and Fish-Hook Company, New Haven, Conn.
25527. Superfine cast-steel J. P. cod-hooks, ringed; Nos. 1 to 8. American Needle and Fish-Hook Company, New Haven, Conn.
25526. Superfine cast-steel J. P. cod-hooks, flatted; Nos. 1 to 8. American Needle and Fish-Hook Company, New Haven, Conn.
25532. Central-draught codfish-hooks, eyed; Nos. 10 to 17. American Needle and Fish-Hook Company, New Haven, Conn.
25533. Double-refined cast-steel, original, central-draught cod or mackerel hooks, ringed; Nos. 12 to 20. American Needle and Fish-Hook Company, New Haven, Conn.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Plain hooks.

25531. Double-refined cast-steel, original, central-draught cod or mackerel hooks, flatted. American Needle and Fish-Hook Company, New Haven, Conn.
25601. Cod-hooks. Used when fish rise to the surface. J. M. K. Southwick, Newport, R. I.
25538. Shark-hooks. Bradford & Anthony, Boston, Mass.
29465. Shark-hooks. M. W. Grant, Wellfleet, Mass.
25648. Shark-hook. (Extraordinary.) A. R. Crittenden, Middletown, Conn.
29464. Ground-shark hook. Style used forty years ago. Elisha Cook, Provincetown, Mass.
25602. Dog-fish hook with chain. Used at Newport, R. I. J. M. K. Southwick, Newport, R. I.
25641. Dog-fish hooks, ringed. American Needle and Fish-Hook Company, New Haven, Conn.
29467. Horse-mackerel hook. John Thomas, Belfast, Me.
29505. Hooks, probably lost by a French fishing-vessel. Found on St. George's Banks on a piece of trawl; fished up by Geo. H. Lewis, Provincetown, Mass.
32732. French cod-hooks; taken from codfish on Jeffries Ledge. Capt. James Tarr, Gloucester, Mass.
32731. French cod-hook; taken from codfish in Salvages' Shoals, Cape Ann, in 1856. Capt. James Tarr, Gloucester, Mass.
20654. Wooden fish-hooks. Indians of Northwest coast. Bella Bella, B. C. J. G. Swan.
- . Fish-hooks. Indians of Northwest coast of America. Straits of Fuca, Puget Sound. U. S. Exploring Expedition.
1051. Fish-hooks. Puget Sound. George Gibbs.
9765. Fish-hook. Wallapai Indians. E. Palmer.
5583. Fish-hook of wood and bone. Gens des Fous Indians. Yukon River, Alaska. W. H. Dall.
9807. Fish-hook and line. Chilkah Indians. Alaska. Lieut. F. W. Ring, U. S. A.
5590. Fish-hooks and sinkers. Premorska Indians. St. Michael's, Alaska. W. H. Dall.
19064. Fish-hooks. Cooyuwee Pi-Ute Indians. Pyramid Lake, Nev. Stephen Powers.
20651. Fish-hook. Bella Bella, B. C. J. G. Swan. Indian make.
9270. Halibut-hook. Alaska. Dr. Hoff, U. S. A. " "
- . Halibut-hook. Sitka, Alaska. J. G. Swan. " "
- 9103-4. Halibut-hooks. Alaska. Lieut. F. W. Ring, U. S. A. " "
1141. Butt-end of hemlock limb for making halibut-hook. Makah Indians. Puget Sound, W. T. J. G. Swan.
16346. Halibut-hooks. Yakutat Eskimo. W. H. Dall.
2630. Fish-hook. Northwest coast of America. Capt. Chas. Wilkes, U. S. N. U. S. Exploring Expedition.
1324. Hooks and lines. Eskimo. Anderson River. C. P. Gaudet.
1989. Fish-hook. Arctic America. B. R. Ross.
5118. Fish-hook. Anderson River Eskimos. Mackenzie's River district. R. Kennicott.
5116. Fish-hook. Fort Anderson Eskimos. Mackenzie's River district. R. MacFarlane.
26822. Fish-line of kelp (*Nereocystis*), fish-hook, and bladder buoy. Makah Indians. Neah Bay. J. G. Swan.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Plain hooks.

9807. Fishing line and hook. Chilkat Indians. Alaska. Lieut. F. W. Ring, U. S. A.
15630. Bone fish-hook with whalebone snood. Alaska. H. W. Elliott.
16315. Fish-hook. Sitka. W. H. Dall.
652. Halibut-hooks. Indians of Northwest coast of America. George Gibbs.
20656. Halibut-hooks. Indians of Fort Simpson, B. C. J. G. Swan.
15635. Fish-hooks. Eskimos. Poonook, Alaska. H. W. Elliott.
10142. Fish-hooks. Eskimos. Victoria Harbor. Capt. C. F. Hall.
14280. Fish-hooks. Neah Bay, W. T. James G. Swan.
16116. Bone hook. Magemut Eskimos. Nunivak, Alaska. W. H. Dall.
16311. Fish-hooks. Nunivak Islands, Alaska. W. H. Dall.
1051. Fish-hooks. Capt. Chas. Wilkes, U. S. N. U. S. Exploring Expedition.
10219. Codfish-hook. Eskimos. Coast of Greenland. Capt. C. F. Hall.
- 2191-92. Fish-hooks of stone, bone, and iron. Fort Anderson Eskimos. Mackenzie's River district. R. Kennicott.
- 2093, 2248. Fish-hooks of bone and iron. Anderson River Eskimos. R. MacFarlane.
- 16311-12. Bone hooks and line spreaders. Thlinket Eskimos. Sitka, Alaska. W. H. Dall.
- 5118-7441. Hooks of bone and iron. Mackenzie's River Eskimos. R. MacFarlane.
32660. Smelt-spreader and hooks. Gloucester, Mass. G. Brown Goode.

Jigs and drails.

29448. Bass and bluefish drail. Elisha Cook, Provincetown, Mass.
29425. Bluefish-drail. Provincetown style. Lemuel Cook, 2d, Provincetown, Mass.
25555. Bluefish-drails. Bradford & Anthony, Boston, Mass.
29485. Bluefish-drail. Used in Wellfleet, Mass., about 1830. Newell B. Rich, Wellfleet, Mass.
25555. Bluefish-drails. Bradford & Anthony, Boston, Mass.
- . Bluefish-hooks. Collected by A. R. Crittenden, Middletown, Conn.
25550. Bluefish-drail. Bradford & Anthony, Boston, Mass.
25771. Bluefish-drails. (Made in the form of a squid and very killing.) Peculiar to Provincetown, Mass. Coleman Cook, Provincetown, Mass.
25553. Bluefish-drail. Wm. H. Young, Brooklyn, N. Y.
25669. Bluefish-drail. Peculiar to Hyannis, Mass. Freeman Hallett, Hyannis, Mass.
25671. Bluefish-drail. Peculiar to Chatham, Mass. Sanford Freeman, Norwichport, Mass.
- 25671 (?) Bluefish-drail. J. H. Bartlett & Sons, New Bedford, Mass.
25537. Series of hollow bone bluefish-squids. Nos. 1 to 3. American Needle and Fish-Hook Company, New Haven, Conn.
25668. Bluefish-drail. Peculiar to Harwichport, Mass. Sanford Freeman, Norwich, Mass.
25708. Bluefish-drail. Central Wharf Company, Provincetown, Mass.
25598. Bluefish-drail. J. M. K. Southwick, Newport, R. I.
25670. Bluefish-drail. Made at sea from jaw-bone of sperm-whale (*Physeter macrocephalus*). J. H. Bartlett & Son, New Bedford, Mass.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Jigs and drails.

25669. Bluefish-drail. Peculiar to Hyannis, Mass. Freeman Hallett, Hyannis, Mass. When used, covered with an eel-skin.
25600. Weak-fish jigs. Used in Newport, R. I. J. M. K. Southwick, Newport, R. I.
9078. Metallic squid. Indians. Alaska. Lieut. F. W. Ring, U. S. A.
32657. Cahoon's improved trolling-hooks. (Patented March 24, 1874.) Thomas J. Gifford & Co., New Bedford, Mass.
12496. Mackerel-jigs. Cape Ann. J. P. Nason, Rockport, Mass.
32658. Mackerel-jig. Gloucester, Mass. G. Brown Goode.
29479. Mackerel-jig. John B. Parsons, Rockport, Mass.
32734. Mackerel-jigs. Used thirty years ago. A. McCurdy, Gloucester, Mass.
25599. Mackerel-jigs. J. M. K. Southwick, Newport, R. I.
25941. Mackerel-jigs. Used about the year 1840. Capt. Edward L. Rowe, Gloucester, Mass.
12495. Soapstone "jig" molds, No. 1. (Patented March 15, 1870.) Cape Ann. J. P. Nason, Rockport, Mass.
25780. Soapstone mackerel-jig mold. Capt. E. L. Rowe, Gloucester, Mass.
- 25781-2. Wooden, lead-lined, mackerel-jig molds. "
25721. Mackerel-jig mold. (Patented March 15, 1870; J. P. Nason, No. 2.) Central Wharf Company, Provincetown, Mass.
32656. Mackerel-jig mold. Gloucester, Mass. G. Brown Goode.
32654. Mackerel-jig ladle. " "
32661. Mackerel-jig rasp. " "
32662. Mackerel-jig file. " "
32663. Pewter for use in manufacture of jigs. Gloucester, Mass. G. Brown Goode.
29461. Codfish "trip" and "fly-jig." Styles used fifty years ago. Lemuel Cook, 2d, Provincetown, Mass.
25601. Codfish jig-hook. Used when the fish rise from the bottom. Massachusetts. A. R. Crittenden, Middletown, Conn.

Spoon-baits, plain and fluted.

25550. Fluted spoons for pickerel, bass, and trout. Manufactured by G. M. Skinner, Gananoque, Ontario. Patented United States and Canada, 1874. Bradford & Anthony, Boston, Mass.
25550. Trolling-spoons. For bass and pickerel. Bradford & Anthony, Boston, Mass.
25555. Bluefish-spoons. Bradford & Anthony, Boston, Mass.
25550. Spinners. For pickerel, trout, and bass fishing. Bradford & Anthony, Boston, Mass.
25549. Spoon-baits. For bass, pickerel, pike, and trout fishing (nickel-plated). John H. Mann, Syracuse, N. Y.
25551. Spoon-baits. For bass, pike, pickerel, and trout (silver-plated). J. T. Buel, Whitehall, N. Y.
25552. Spoon-baits. For pike, pickerel, bass, trout, and bluefish. Wm. H. James, Brooklyn, N. Y.
25553. Spoon-baits. For pike, bass, pickerel, and trout fishing. Wm. H. James, Brooklyn, N. Y.
26793. Series of fluted trolling-spoons. D. M. Skinner, Gananoque, Ontario, Canada.
26685. Spoon-hooks. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

Spoon-baits, plain and fluted.

26590. Trout-spoon. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest and Stream Publishing Company.
 25554. Spoon-baits. For pike, pickerel, bass, and trout. W. D. Chapman & Son, Theresa, N. Y.
 25656. Pearl minnows. W. M. Young, Philadelphia, Pa.
 25550. MacHarg's pearl spoons. For pickerel, trout, and bass. Bradford & Anthony, Boston, Mass.

Artificial flies on hooks.

32735. Bass-flies. Sara J. McBride, Mumford, N. Y.
 32736. Trout-flies. " "
 26105. Salmon-flies. " "

32737. Artificial flies for salmon, trout, and bass. Bradford & Anthony, Boston, Mass.

NOTE.—For convenience this entire collection is provisionally entered under a single catalogue number.

- a. Peacock, with water-color sketch of original.
 b. March Brown, with water-color sketch of original.

Body—Fur of the fox-squirrel's face ribbed over with olive silk. Tail—Two strands of brown feather of the wild mallard. Wings—From the side feather of the shoveller duck approaching the tail; the light yeast-colored feather is the best, and if nicely tied must be an excellent fly. Legs—A grizzled cock's hackle, wound twice or thrice at the shoulder. For Pennsylvania, hooks Nos. 6 to 8; for New York, hooks Nos. 5 and 6; New England, hooks Nos. 4 and 5.

- c. Great Red Spinner, with water-color sketch of original.
 d. Water-cricket, with water-color sketch of original.
 e. Great Dark Drone, with water-color sketch of original.
 f. Cow-dung.

Body—Yellow mohair mixed with a little dingy brown fur from the bear. Wings—From the quill-feather of the curlew or whimbrel. Legs—Of a ginger-colored cock's hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hook No. 8; for New England, hook No. 6.

- g. Red Fly, with water-color sketch of original.

Body—The red part of squirrel's fur mixed with an equal quantity of claret mohair. Wings—The softest quill-feather of the pea-hen's wing. Legs—Claret-colored hackle; clip some of the upper fibers off that the wings may lie flat. For Pennsylvania, hook No. 6; for New York, hook No. 4; for New England, hook No. 3.

- h. Blue Dun, with water-color sketch of original.

Body—Fur of a gray squirrel spun very thinly on fine yellow silk. Tail—Two fibers of a dun hackle. Wings—From a quill-feather of the blue-jay. Legs—Two or three turns of a ginger-dun hackle at the shoulder helps to keep the wings upright. For Pennsylvania, hook No. 6; for New York, hook No. 5; for New England, hook No. 4.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

i. Red Spinner, with water-color sketch of original.

Body—Bright brown silk ribbed, with fine gold twist. Tail—Two fibers of red cock's hackle. Wings—Upright from a mottled gray feather of the mallard stained a pale blue, the brighter in color the better. Legs—Plain red cock's hackle. For Pennsylvania, hook No. 6; for New York, hook No. 5; for New England, hook No. 4.

j. Nicholson.

k. Black Dog.

l. Atkinson.

m. Policeman.

n. Claret Wasp.

o. Blue Wasp.

p. Wren-tail, with water-color sketch of original.

Body—Ginger-colored fur ribbed with gold twist. Wings—Feathers from a wren's tail; if these cannot be procured a small scapular feather of the woodcock makes a good imitation, and may be hackled with the same kind of feather. For Pennsylvania, hook No. 10; for New York, hook No. 8; for New England, hook No. 6.

q. Red Ant, with water-color sketch of original.

Body—Peacock's herl tied with red-brown silk. Wings—From the quill-feather of the blue-jay. Legs—A small red cock's hackle.

r. Silver Horns, with water-color sketch of original.

s. Golden-dun Midge, with water-color sketch of original.

t. Sand-fly, with water-color sketch of original.

Body—Of the sandy-colored fur from the rabbit's neck or from the fox-squirrel spun on silk of the same color. Wings—From the whimbrel wing made full. Legs—From a light-ginger feather from the neck of a hen. For Pennsylvania, hooks Nos. 6 to 8; for New York, hooks Nos. 5 and 6; for New England, hooks Nos. 4 and 5.

u. Stone-fly, with water-color sketch of original.

Body—Fur of the gray squirrel, when it is shortest is best, mixed with a little yellow mohair, leaving yellow about the tail. Tail—A strand or two of brown mottled feathers, say of mallard. Wings—From the soft inside feather of the pea-hen's wing. Legs—Blue-dun cock's hackle. For Pennsylvania, hooks Nos. 6 to 8; for New York, hooks Nos. 5 and 6; for New England, hooks Nos. 4 and 5.

v. Gravel-bed, with water-color sketch of original.

Body—Dark dun or lead-colored silk floss dressed very fine. Wings—From a covert-feather of the woodcock's wing. Legs—A black cock's hackle, rather long, wound twice only round the body. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

w. Grannum, with water-color sketch of original.

Body—Fur of a rabbit's face with a little fine green mohair worked in at the tail. Wings—From the inside wing-feather of a grouse. Legs—A pale ginger hen's hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

x. Yellow Dun, with water-color sketch of original.

Body—Yellow mohair mixed with a little pale blue from a mouse or yellow floss silk with the least blue rabbit fur spun upon it. Wings—Upright, from the inside wing-feather of a mallard or summer duck. For Pennsylvania, hook No. 10; for New York, hook No. 8; for New England, hooks Nos. 5 and 6.

y. Iron-blue Dun, with water-color sketch of original.

z. Hawthorn, with water-color sketch of original.

Body—Black ostrich's herl. Wings—From the quill-feather of the English snipe. Legs—A black cock's hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

aa. Jenny Spinner, with water-color sketch of original.

ab. Dennison.

Body—Green floss silk ribbed with silver twist. Tail—Orange-tipped fibres of tippet, wood-duck, ibis, and green parrot. Legs—A golden yellow hackle. Wings—Of the following kinds: wood-duck, tippet, brown mallard, bustard, green parrot, blue and yellow macaw, with a few strands of red macaw; black ostrich head. Hooks Nos. 1, 2, and 3.

ac. Deacon.

Body—Bright yellow seal's fur ribbed with silver tinsel backed with gold twist. Tail—Sprigs of gray mallard and ibis. Legs—Bright yellow hackle. Wings—Strips of gray mallard dressed full; black ostrich head. Hooks Nos. 2 and 3.

ad. Montreal.

Body—Claret mohair ribbed with gold tinsel. Tail—Three of four fibres of scarlet ibis. Legs—Claret hackle. Wings—Brown turkey. Hooks Nos. 1, 2, and 3.

ae. Rangely.

Body—Dark claret mohair ribbed with gold tinsel. Tail—Fibres of wood-duck and ibis. Legs—Dark claret hackle. Wing—Strips of wood-duck mixed with sprigs of scarlet ibis. Hooks Nos. 1, 2, and 3.

af. Tinselled Ibis.

Body—Silver tinsel ribbed with gold twist. Tail—A slip of wood-duck mixed with ibis. Legs—A covert wing-feather of the ibis. Wings—Strips from the large covert-feather of the ibis (the wing may be varied, adding a slip of wood-duck on each side); black ostrich head. Hooks Nos. 1, 2, and 3.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

ag. Lake George.

Body—Gold twist ribbed with silver twist. Tail—A small China topping. Legs—A bright orange hackle with a shoulder of bright claret. Wings—Two tippet feathers mixed with argus pheasant, brown mallard; black ostrich head. Hooks Nos. 1, 2, and 3.

ah. Chateaugay.

Body—Lemon-yellow floss ribbed with gold twist. Tail—A few fibres of brown mallard. Legs—A ginger-colored cock's hackle. Wings—Strips of shoveller duck mixed with fibres of argus pheasant.

ai. Yellow Drake.

Body—Yellow mohair ribbed with silver twist. Tail—Three fibres of yellow macaw. Legs—Yellow hackle with two turns of ibis on shoulder. Wings—Strips of gray mallard; black ostrich head. Hook No. 3.

aj. Richardson.

Body—A light-blue floss silk ribbed with silver twist. Tail—Three strands of brown mallard. Legs—Black cock's hackle. Wings—Strips of English blue-jay mixed with brown mallard. Hooks Nos. 3 and 4.

ak. Anthony.*al.* Snow-fly.*am.* Captain.*an.* Combination.

Body—First half, yellow seal's fur; second half, red-claret seal ribbed with silver tinsel (the fur to be picked out). Tail—A few fibres of gray mallard mixed with ibis. Legs—A natural red hackle dipped in yellow dye. Wings—A piece of the same kind of hackle with pale ibis strips. On each side a piece of gray mallard sufficiently large to make the wing full; black ostrich head. Hooks Nos. 1, 2, and 3.

ao. Silver Doctor.

Body—Silver tinsel ribbed with gold twist. Tail—China pheasant topping. Legs—A pale-blue hackle with a small teal or guinea-hen at the shoulder. Wings—Mixed fibres of wood-duck, brown mallard, guinea-hen, green parrot, blue macaw, teal, and bustard; black ostrich head. Hooks Nos. 2 and 3.

ap. Prouty.

Body—First joint, silver twist; second, black ostrich with three turns of the twist over it. Tail—Orange floss with a turn or two of twist, a topping mixed with fibres of English blue-jay. Legs—A yellow dyed list hackle wound over the ostrich. Wings—Strips of white swan dyed yellow. One each side a rib of teal-feather, red macaw feelers; black ostrich head. Hooks Nos. 2 and 3.

aq. Black Cricket.*ar.* Grasshopper.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

as. Great Blow.

at. Cadis.

au. Murray.

Black silk floss ribbed with silver twist. Tail—A small feather from the neck of the scarlet ibis. Legs—A golden yellow hackle. Wings—Dark mottled turkey; black ostrich head. Hooks Nos. 1 and 2.

av. Round Lake.

aw. Nameless.

Body—Brown ostrich herl, ribbed with gold twist, tag orange floss. Tail—Two or three short sprigs of yellow macaw. Legs—A small sooty orange hackle, wound from tag to shoulder. Wings—Alternate strips of brown peacock-wing feather and shoveller duck, with a sprig or two of wood-duck; peacock herl head. Hooks Nos. 1, 2, and 3.

ax. Racquette.

Is made in two joints of black orange mohair with gold tinsel. Legs—A dyed black hackle wound from tail to head. Tail—Bright yellow toucan. Wings—A mixture of gold pheasant tail, argus, and teal. Hooks Nos. 1, 2, and 3.

ay. Priest.

az. Francis Sykes.

ba. Duke.

bb. Dhoon.

bc. Dustin.

bd. Lascelles.

be. Snitching Sandy.

bf. Prouty.

bg. Grace.

bh. Powells.

bi. Hawthorne.

bj. Edmonson.

bk. Witcher.

bl. Carshalton.

bm. Professor.

Body—Yellow mohair or silk floss ribbed with silver twist or tinsel. Tail—Two or three strands of scarlet ibis-wing feathers. Wings—From the gray.

bn. Coughton.

bo. Alder.

bp. Chantry.

bq. Kingdom.

br. Hoflan Fancy.

bs. Coachman.

Body—Peacock's herl. Wings—From a white hen's wing-feather, or a pigeon-wing feather will answer the purpose. Legs—A red cock's hackle wound twice or thrice at the shoulder. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 5 and 6; for New England, hooks Nos. 4 and 5.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

bt. Willow.*bu.* Prouty.*bv.* Notion.

Body—First half gold twist, remainder brown mohair, with three turns of the twist over it. Tail—A topping mixed with blue kingfisher. Legs—Brown hackle. Wings—Two tippet feathers mixed with argus pheasant, brown mallard, teal, China pheasant-tail feathers, blue and yellow macaw, with a blue kingfisher on each side of the wing; black ostrich head. Hooks Nos. 2 and 3.

bw. Louise.

Body—Brown mohair ribbed with gold twist. Tail—China feather topping. Legs—Reddish brown hackle, blue-jay on shoulder. Wings—Pheasant tippet feather and tail mixed with sprigs of green parrot, blue macaw, and kingfisher. Head—Orange mohair. Hooks Nos. 1 and 2.

bx. Round Lake.

Body—Orange and red claret merging into each other, silver tinselled. Tail—Sprigs of gold pheasant tippet, blue macaw, and green parrakeet. Legs—A claret hackle with a turn or two of orange on the shoulder. Wings—Two strips of brown turkey, with a small jungle-cock's feather on each side. Hooks Nos. 1, 2, and 3.

by. Nicholson.*bz.* Our Pattern.*ca.* Saranac.

Body—Claret floss silk ribbed with gold tinsel, backed with silver twist. Tail—China pheasant crest-feather. Legs—A claret hackle. Wings—Two China pheasant tippet feathers on either side, a strip or two of brown mallard and argus pheasant; black ostrich head. Hooks Nos. 1-0, 2, and 3.

cb. Long Tom of Long Lake.

Body—Gray squirrel mixed with a little green mohair ribbed with silver tinsel. Tail—China pheasant crest-feather. Legs—A blue dun cock's hackle; at shoulder two or three turns of bright claret hackle. Wings—Strips of brown mallard mixed with strands of summer duck, peacock-wing, and upper coverts of the wild turkey, red macaw feelers; black plush head. Hooks Nos. 1, 2, and 3.

cc. St. Regis.

Body—Cinnamon mohair ribbed with double gold twist. Tail—A strip of China pheasant tippet mixed with a few strands of bustard. Legs—A chestnut hackle with three turns or so of orange-dyed guinea-hen, small and short in the fibres. Wings—Strips of brown mallard, brown turkey, English pheasant tail, and China tippet; black ostrich head. Hooks Nos. 1 and 2.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

cd. No. 8.

Body—Three or four turns of mohair, rest of black mohair ribbed with silver tinsel and backed with gold twist. Tail—A small topping. Legs—A dyed black hackle and a shoulder of red claret. Wings—Mixed fibres of mallard, guinea-hen tail-feather over wing, two strips of dark turkey tipped with white. Hooks Nos. 2 and 3.

ce. Highlander.*cf.* Lady of Mertoun.

Body—Water-rats fur ribbed with silver twist. Tail—A tip of common ostrich or mohair and a gold pheasant topping. Legs—Two or three turns of a small red hackle finished off with a black hackle. Wings—Strips of dark gray mallard. Head—Crimson ostrich or mohair. Hooks Nos. 1-0, 1, and 2.

cg. Topyy.

Body—Black mohair ribbed with silver tinsel. Tail—A topping tip crimson. Legs—A turn or two of red hackle, the rest black hackle. Wings—Black or brown turkey tipped with white. Head—Crimson. Hooks Nos. 1-0, 1, and 2.

ch. Sapper.

Body—Orange mohair ribbed with gold tinsel. Tail—Fibres of green parrot, guinea-hen, tippet feather, and ibis. Legs—Orange hackle, shoulder a dyed black hackle. Wings—Strips of peacock-wing feather, brown mallard, green parrot, guinea-hen, gold pheasant tail, blue macaw feelers; black ostrich head. Hooks Nos. 1-0 and 1.

ci. Stephens.

Body—Brick-colored, silk ribbed with gold twist and blue tip. Tail—Gold pheasant topping. Legs—Hackle, same color as body. Wings—Gold pheasant tippet and slight mixture of mallard; black ostrich head. Hooks No. 1.

cj. Jock Scott.

Body—In two joints, gold-colored floss the lowest, and black floss the upper; from the joint are tied two short toucan points, and over the butts of them at the joints two turns of black ostrich. Tail—One gold pheasant topping and one Indian crow feather. Legs—Black hackle over the black joint and speckled guinea-hen at the shoulder. Wings—A white tip turkey, slip in the middle fibres of bustard, teal, brown mallard, yellow, red, and green parrot, one topping over all; blue macaw feelers. A kingfisher on either cheek; black ostrich head. Hooks Nos. 1-0, 1, and 2.

ck. Whiteher.

Body—Black mohair ribbed with silver, tip yellow silk. Tail—Gold pheasant topping. Legs—Black hackle. Wings—A mixture of mallard and hooded merganser; black ostrich head. Hooks Nos. 1 and 2.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

cl. Nicholson.

Body—Blood-red mohair ribbed with gold tinsel. Tail—Sprigs of mallard and pheasant tippet feather. Legs—A blood-red and a dark-blue hackle wound on together. Wings—Brown mallard and blue macaw feelers; black ostrich head. Hooks Nos. 1 and 2.

cm. Caribou.

Body—Tip gold tinsel, tag golden-yellow silk, next a black silk joint, the rest of gray caribou. Legs—Gray hackle with a claret on the shoulder. Tail—Gold pheasant topping. Wings—Turkey and mallard with sprigs of macaw and pheasant tippet feather; black ostrich head. Hooks Nos. 1-0, and 1.

cn. Moose.

Body—Yellow floss ribbed with silver tinsel. Tail—A China pheasant topping. Legs—A yellow hackle; shoulder hackle a guinea-hen. Wings—Two tippet feathers of the China pheasant with fibres of mallard wood-duck on each side; black ostrich head. Hooks Nos. 1, 2, and 3.

co. Moosehead.

Body—Deep claret mohair ribbed with gold twist. Tail—A topping. Legs—A claret hackle with three turns of orange hackle at the shoulder. Wings—Strips of brown mallard and tippet feather with red macaw feelers; black ostrich head. Hooks Nos. 1, 2, and 3.

cp. Fiery-brown.

Body—Fiery brown mohair ribbed with gold tinsel. Tail—A small topping mixed with wood-duck. Legs—A brown-red hackle. Wings—Brown mallard with a little wood-duck and golden pheasant neck-feather mixed; black head. Hooks Nos. 1, 2, and 3.

cq. Parson.

cr. Gold Wing.

cs. Gold Mallard.

ct. Kircudbrightshire.

cu. Eagle.

cv. Tartan.

cw. Last Fly.

cx. Atkinson.

cy. Strachan.

cz. Parson.

Body—Black mohair tipped with orange and ribbed with silver twist. Tail—A small topping. Legs—A black hackle. Wings—Brown turkey-tail; black head. Hooks Nos. 2 and 3.

da. Ross.

Body—Cinnamon-colored floss ribbed with gold twist. Tail—Sprigs of green parrot. Legs—A furnace hackle. Wings—Brown mallard mixed with peacock herl; black ostrich head. Hooks Nos. 1-0 and 1.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

- db.* Forsyth.
- dc.* Chamberlin.
- dd.* Green.
- de.* Witcher.
- df.* Langrin.
- dg.* Emmet.
- dh.* Captain.
- di.* Major.
- dj.* Darling.
- dk.* Durham Ranger.
- dl.* Goldfinch.
- dm.* Britannia.
- dn.* Popham.
- do.* White Tip.
- dp.* White Wing.
- dq.* Drake Wing.
- dr.* Dun Wing.
- ds.* Black and Yellow.
- dt.* Blue Doctor.
- du.* Kate.
- dv.* Ruggles.
- dw.* Little yellow May Dun, with water-color sketch of original.
- dx.* Oak Fly, with water-color sketch of original.

Body—Orange floss silk ribbed with ash-colored silk thread or a little floss, the ash-color to be shown well at the tail and shoulders. Wings—From a scapular feather of the woodcock. Legs—A furnace hackle or red cock's hackle with a black list up the middle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

- dy.* Black Gnat, with water-color sketch of original.

Body—Black ostrich herl. Wings—From the quill-feather of the rice-bird or grakle. Legs—Black hackle. For Pennsylvania, hooks Nos. 10 to 12; for New York, hooks Nos. 8 to 10; for New England, hook No. 8.

- dz.* Fern Fly, with water-color sketch of original.

Body—Orange floss silk. Wings—From the quill-feather of the summer-duck wing; the smaller-sized hooks can be dressed from the wing-feather of the blue-jay. Legs—A red cock's hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

- ea.* Yellow Sally, with water-color sketch of original.

Body—Any yellowish fur ribbed with yellow or apple-green silk. Wings—From a wing-feather of a white hen or white pigeon stained pale yellow. Legs—A white cock's hackle stained in the same dye. For Pennsylvania, hooks Nos. 6 to 8; for New York, hooks Nos. 5 and 6; for New England, hooks Nos. 4 and 5.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for salmon, trout, and bass—Continued.

eb. Alder Fly, with water-color sketch of original.

Body—Peacock's herl. Wings—From a feather of a brown hen's wing. Legs—A red cock's hackle or a black cock's hackle will answer tolerably well. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 5 and 6; for New England, hooks Nos. 4 and 5.

ec. Sky Blue, with water-color sketch of original.

ed. Little dark Spinner, with water-color sketch of original.

ee. Turkey Brown, with water-color sketch of original.

ef. Magalloway.

Body—Half black ostrich and half brown mohair ribbed with gold twist. Tail—Short fibers of yellow macaw. Legs—A furnace hackle of the shoulder. Wings—Strips of brown quill-feathers of the peacock; black ostrich head. Hook No. 3.

eg. Bemis Stream.

Body—Chestnut mohair ribbed with gold tinsel. Tail—China pheasant topping. Legs—A chestnut hackle. Wings—Strips of brown peacock mixed with bustard. Hooks Nos. 1 and 2.

eh. Mooselocmaguntick.

Body—About equal parts mixed of gray squirrel's fur and pea-green mohair ribbed with gold twist. Tail—Four strands of argus feathers. Legs—A brown bittern hackle. Wings—Gray speckled turkey, white tipped (dye yellow), with a strip of argus feather on each side; green ostrich head. Hook No. 1.

ei. Molechunkemunk.

Body—Orange floss silk ribbed with gold tinsel, backed with silver twist. Tail—China pheasant topping. Legs—A furnace hackle. Wings—Brown mallard; black ostrich head.

ej. Willow Finch.

Body—Yellow seal's fur ribbed with silver twist. Tail—Sprigs of tippet feathers mixed with yellow macaw. Legs—A yellow hackle, at the shoulder a small guinea-hen stained yellow. Wings—Strips of swan feather dyed yellow with a spray of guinea-hen (tail-feather) dyed yellow; black ostrich head. Hooks Nos. 1, 2, and 3.

ek. Oquassac.

Body—Red claret mohair ribbed with pink floss. Tail—Yellow tag with pieces of argus and tippet feathers. Legs—A claret hackle. Wings—Strips from the quill-feather of the argus pheasant; black ostrich head. Hooks Nos. 1-0 and 1.

el. Welokennebago.

Body—Red pig's hair ribbed with broad gold tinsel, backed with silver twist. Tail—A mixture of black turkey tipped with white and scarlet ibis. Legs—Scarlet hackle. Wings—Fibers of red macaw mixed with strips of black and brown turkey tipped with white; black ostrich head.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for trout, salmon, and bass—Continued.

em. Capsuptuc.

Body—Silver tinsel ribbed with gold twist. Tail—Fibers of China pheasant tail mixed with guinea-hen and red macaw. Legs—A brilliant scarlet hackle. Wings—Mixed and to be made full. Two strips of brown turkey tipped with white-brown mallard, China pheasant tail and guinea-hen; black ostrich head. Hooks Nos. 1-0, 1, and 2.

en. Orange Grouse.

eo. Thunder and Lightning.

ep. Lough Gill.

eq. Lillie.

er. Black Ant.

es. Blue Blow.

et. Mare.

eu. Hare's Ear.

ev. Ibis.

ew. Seth Green.

ex. Red Creeper.

ey. Turkey Brown.

ez. Queen of the Waters.

fa. Governor.

fb. White Miller.

fc. Lion.

fd. Water-witch.

fe. Atkinson.

ff. Our Own Pattern.

fg. Green Drake, with water-color sketch of original.

Body—Pale straw-colored floss silk ribbed with brown silk thread or floss; the extremities are of brown peacock's herl. Tail—Three rabbit's whiskers. Wings—Made from a mottled feather of mallard stained a pale yellowish-green. Legs—A grizzled cock's hackle stained a yellowish-green in the same dye. For Pennsylvania, hooks Nos. 6 to 8; for New York, hooks Nos. 4 to 6; for New England, hooks Nos. 3 and 4.

fh. Gray Drake, with water-color sketch of original.

Body—The middle part of white floss silk ribbed with silver twist; the extremities of brown peacock's herl. Tail—Three rabbit's whiskers. Wings—Made from a gray mottled feather of the mallard. Size of hooks same as green drake.

fi. Orange Dun, with water-color sketch of original.

This fly is equally attractive to trout, and is a prime favorite in its day—the end of June, July, and August. Body—Dark orange silk. Tail—Two fibers of brown mallard feather. Wings—From the quill-feather of the large red-crowned woodpecker. For Pennsylvania, hooks Nos. 6 to 8; for New York, hook No. 6; for New England, hooks Nos. 5 and 6.

fj. Green Mackerel, with water-color sketch of original.

fk. Brown Mackerel, with water-color sketch of original.

fl. Marlow Buzz, with water-color sketch of original.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for trout, salmon, and bass—Continued.

fm. Pale Evening Dun, with water-color sketch of original.

fn. July Dun, with water-color sketch of original.

Body—Mole's fur and pale-yellow mohair mixed and spun on yellow silk.

Tail—Two or three whiskers of a dark dun hackle. Wings—From the quill-feather of a blue-jay. Legs—Dark dun hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hooks Nos. 5 and 6.

fo. Gold-eyed Gauge-wing, with water-color sketch of original.

fp. Butcher, No. 1.

fq. Blue Ranger.

fr. Black Ranger.

fs. Colonel.

ft. Children's Farlow.

fu. Candlestick Maker.

fv. Baker.

fw. Butcher.

fx. Namsen.

fy. Black and Teal.

fz. Guinea Hen.

ga. Claret.

gb. Inquichin.

gc. Maxwell Ranger.

gd. August Dun, with water-color sketch of original.

Body—Brown floss silk ribbed with yellow silk thread. Tail—Two rabbit's whiskers. Wings—Feather of a brown hen's wing. Legs—A dark red hackle. For Pennsylvania, hook No. 8; for New York, hook No. 6; for New England, hook No. 5.

ge. Orange, with water-color sketch of original.

Body—Orange floss silk ribbed with black silk. Wings—Dark part of the blue-jay's wing. Legs—A very dark furnace hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hooks Nos. 6 to 8; for New England, hook No. 6.

gf. Cinnamon, with water-color sketch of original.

Body—Fawn-colored floss silk ribbed with red silk thread. Wings—Feather of a yellow-brown hen's wing. Legs—A ginger hackle. For Pennsylvania, hook No. 8; for New York, hook No. 6; for New England, hook No. 6.

gg. Blue-bottle, with water-color sketch of original.

Body—Bright blue floss silk with a few turns of brown floss at the shoulder. Wings—From the quill-feather of a water-hen. Legs—Black hackle from a cock wrapped down the principal part of the body. For Pennsylvania, hook No. 8; for New York, hook No. 6; for New England, hook No. 5.

gh. Whirling-blue Dun, with water-color sketch of original.

Body—Squirrel's red-brown fur mixed with yellow mohair. Tail—One or two whisks of a pale ginger hackle. Wings—From the quill-feather of a mallard. For Pennsylvania, hook No. 8; for New York, hook No. 8; for New England, hook No. 6.

Hooks (including a full series of unmounted hooks, of recent and aboriginal manufacture).

32737. Artificial flies for trout, salmon, and bass—Continued.

gi. Willow, with water-color sketch of original.

Body—Mole's fur mixed with a little fine yellow mohair. Wings—From the quill-feather of a water-hen or coot. Legs—A dark dun hen's hackle. For Pennsylvania, hooks Nos. 8 to 10; for New York, hook No. 8; for New England, hooks Nos. 5 and 6.

gj. Snowy.

gk. Beauty Snow.

gl. Red Palmer, with water-color sketch of original.

Body—Red mohair ribbed with gold twist or tinsel. Legs—A blood-red cock's (saddle) hackle wrapped nicely over it, working the hackle closely together at the shoulder. For Pennsylvania, hooks Nos. 6, 8, and 10; for New York, hooks Nos. 4, 5, and 6; for New England, hooks Nos. 3, 4, and 5.

gm. Black and Red Palmer, with water-color sketch of original.

gn. Brown Palmer, with water-color sketch of original.

go. Furnace.

gp. Grizzle.

gq. Ginger.

gr. List.

gs. Soldier.

gt. White.

gu. Grizzle Peacock.

gv. Red.

gw. Black Peacock.

gx. Black.

gy. Brown Peacock.

gz. Scarlet.

25548. Salmon fly-book for carrying artificial flies.

25547. Trout fly-book for carrying artificial flies. Loaned by Bradford & Anthony, Boston, Mass. (\$4.50.)

26677. Fly-book. Forest & Stream Publishing Company. Property of J. A. [Nichols, Syracuse, N. Y.]

26678. Fly-book. " "

26679. Fly-book. " "

Lines (twisted and plaited).

Silk lines.

25633. Series of braided raw-silk lines. (50 yards; C to G.) G. H. Mansfield & Co., Canton, Mass.

25632. Oiled, braided, raw-silk lines. G. H. Mansfield & Co., Canton, Mass.

25628. XXXX silk fish-line. (50 yards.) "

25629. XX silk fish-line. (50 yards.) "

25634. Grass lines. Nos. 0, 1, and 3 cable, and 3 shroud. Bradford & Anthony, Boston, Mass.

25635. Braided grass lines. Bradford & Anthony, Boston, Mass.

Lines (twisted and plaited).

Linen lines.

25626. Hard-braid linen lines. (1 to 5; 50 yards each.) G. H. Mansfield & Co., Canton, Mass.
 25631. Series of braided linen fish-lines. (50 yards.) G. H. Mansfield & Co., Canton, Mass.
 25612. Linen fish-lines. J. & S. Allen, Walpole, Mass.
 25613. Linen fish-lines. "
 25618. Linen fish-lines. "
 25637. Linen bass-line. (600 feet.) Bradford & Anthony, Boston, Mass.

Cotton lines.

25619. Cotton fish-lines. (20 feet hank.) L. Crandall & Co., Ashaway, R. I.
 25620. Cotton fish-lines. (50 feet shroud, laid.) "
 25621. Cotton fish-lines. (28-fathom hawser.) "
 25622. Cotton fish-lines. (14-fathom hawser.) "
 26738. Fishing-line, No. 3. (Sea-Island fly-line.) J. W. Dresser, Castine, Me.
 26733. Fishing-line, No. 5. " "
 26743. Fishing-line, No. 5. (Golden mackerel, oiled.) " "
 26741. Fishing-line, No. 6. (Golden mackerel, oiled.) " "
 26735. Fishing-line, No. 6. " "
 26744. Fishing-line, No. 7. (Golden mackerel, white.) " "
 26739. Fishing-line, No. 7. (White.) " "
 26742. Fishing-line, No. 8. (Golden mackerel, oiled.) " "
 26740. Fishing-line, No. 9. (Golden mackerel, oiled.) " "
 26734. Fishing-line, No. 9. " "
 26745. Fishing-lines, No. 7, 8, and 9. (Sea-side cotton chalk-line, white.)
 J. W. Dresser, Castine, Me.
 26736. Fishing-line, No. 10. (14 fathoms, hawser-laid.) J. W. Dresser,
 Castine, Me.
 26732. Fishing-line, No. 11. (Bluefish.) (24 fathoms long, hawser-laid.)
 J. W. Dresser, Castine, Me.
 25624. Tarred cotton fishing-lines. (25-fathom shroud.) L. Crandall &
 Co., Ashaway, R. I.
 25623. Cotton fishing-lines. (50 feet shroud, laid.) L. Crandall & Co.,
 Ashaway, R. I.
 26016. Golden mackerel lines of assorted sizes. Made from pure Sea-Island
 cotton. J. W. Dresser, Castine, Me.
 25625. Braided cotton fishing-lines. G. H. Mansfield & Co., Canton, Mass.
 25636. Sea-Island cotton mackerel-lines. Bradford & Anthony, Boston, Mass.
 25627. Water-proof braided fish-lines. (B to G.) G. H. Mansfield & Co.,
 Canton, Mass.
 660. Fishing-line. Northwest coast of America. G. Gibbs.

Whalebone lines.

2193. Whalebone fish-line. Anderson River Indians. Anderson River.
 R. MacFarlane.
 2197. Whalebone line with hooks. Eskimo. Anderson River. R. Mac-
 Farlane.
 2016. Whalebone line. Arctic coast. B. R. Ross.

Lines (twisted and plaited).

Hide lines.

8787. Fishing-line made of seal-skin. Mahlemut Eskimo. W. H. Dall.
 8785. Fishing-line made of seal-skin. Kaviakemut Eskimo. Grantley Harbor, Alaska. W. H. Dall.
 8786. Fishing-line made of seal-skin. Unaleet Eskimo. St. Michael's, Alaska. W. H. Dall.
 16314. Harpoon-line. Nunivak Island, Alaska. W. H. Dall.
 15617. Harpoon-line. Made of skin of young walrus. Alaska. H. W. Elliott.
 19376. Harpoon-line made of seal-skin. Rev. James Curly.

Bark lines.

20655. Fishing-line made of cedar bark. Bella Bella, B. C. J. G. Swan.
 20888. Fishing-line made of spruce root-fibers. Hannegan Indians. Prince of Wales Islands, Alaska. J. G. Swan.
 26821. Harpoon-line, cedar bark. Makah Indians. J. G. Swan.

Kelp lines.

656. Fishing-lines of sea-weed. (*Nereocystis lutkeana*.) Northwest coast of America. G. Gibbs.
 6561. Fish-line of kelp. (*Nereocystis lutkeana*.) With halibut-hooks. Haidah Indians. Prince of Wales Archipelago. Dr. T. T. Minor.
 1052. Fish-line. (*Nereocystis lutkeana*.) Northwest coast. Lieut. J. W. White.
 26818. Halibut-line of kelp. (*Nereocystis lutkeana*.) Makah Indians. Neah Bay, W. T. J. G. Swan.
 26819. Fish-line of kelp with halibut-hooks. Clioquot Indians. Vancouver's Island. J. G. Swan.

(ACCESSORY.) APPARATUS FOR TWISTING LINES

Snoods, leaders, and traces.

“Cat-gut” (sheep) snoods and leaders.

Silkworm-gut snoods.

Flax snoods.

Gimp snoods.

Wire snoods.

Hooks mounted on leaders.

25540. Kinsey trout-hooks. (Tied to gut.) Bradford & Anthony, Boston, Mass.
 25542. Aberdeen hooks. (Tied to gut.) Bradford & Anthony, Boston, Mass.
 25543. Hollow-point Limerick hooks. (Tied to double gut.) Bradford & Anthony, Boston, Mass.
 25544. Hollow-point Limerick hooks. (Tied to twisted gut.) Bradford & Anthony, Boston, Mass.
 25545. Hollow-point Limerick hooks. (Tied to gimp.) Bradford & Anthony, Boston, Mass.
 25546. Carlisle hooks. (Tied to gimp.) Bradford & Anthony, Boston, Mass.
 25539. Hollow-point Limerick trout-hooks. (Tied to gut.) Bradford & Anthony, Boston, Mass.
 25541. New York bass-hooks. (Tied to gut.) Bradford & Anthony, Boston, Mass.

Sinkers.

Sinkers and swivels.

- . Sinkers and swivels. For fishing-lines. Bradford & Anthony, Boston, Mass.
25605. Series of sinkers used in fishing for cod and tautog. Newport models. J. M. K. Southwick, Newport, R. I.
25607. Hand-line sinkers. Rhode Island and Eastern Connecticut. A. R. Crittenden.
25716. Cod-line sinker. Central Wharf Company, Provincetown, Mass.
29456. Cod-lead mold. Used to make form in molding. John B. Parsons, Rockport, Mass.
15591. Sinker made of walrus ivory. Poroook Eskimos, Alaska. H. W. Elliott.

Net-sinkers.

- . Net-sinkers. Wilcox, Crittenden & Co., Middletown, Conn.
29393. Net-rings or sinkers. Wilcox, Crittenden & Co., Middletown, Conn.
29474. Primitive net-sinkers. Used in Wellfleet, Mass. Newell B. Rich, Wellfleet, Mass.
25800. Menhaden-net sinkers (old style). Formerly used about Beverly and Salem, Mass. George B. Foster, Beverly, Mass.
25603. Seine-sinkers. Newport model. J. M. K. Southwick, Newport, R. I.

Spreaders.

Chopsticks.

One-armed chopsticks or "revolving booms."

Floats.

Line-floats of wood, cork, and quill.

25661. Egg-shaped floats. Wm. M. Young, Philadelphia, Penn.
25662. Barrel-shaped floats. " "
25663. Snake-head floats. " "
25664. Quill floats. " "

Seine-floats of cork, wood, glass, and rubber tubing.

25597. Seine-corks. Used at Newport, R. I. J. M. K. Southwick, Newport, R. I.

Harpoon-floats of bladder, inflated skin, and wood.

20898. Seal-skin buoy. Sitka Alaska. J. G. Swan.
1035. Seal-skin buoy. Makah Indians. Puget Sound. J. G. Swan.
19515. Seal-skin buoy. North Greenland. G. Y. Nickerson.
26824. Seal-skin buoy. (Used in whale fisheries.) Clioquot Indians, Vancouver's Island. J. G. Swan.
26823. Seal-skin buoy. (Used in whale fisheries.) Clioquot Indians, Vancouver's Island. J. G. Swan.
20594. Seal's bladder buoy. Bella Bella, B. C. J. G. Swan.
- 827, 4970. Seal-skin buoy with rope. Makah Indians. Neeah Bay, Puget Sound, W. T. J. G. Swan.

Keg and other floats for lobster-pots, gill-nets, &c.

Whale-line drag.

29. (ACCESSORY.) ANGLING-APPARATUS.

Reels.

Simple reels for fly-fishing, with and without check.

25590. Brass fishing-reel. Plain, single, with ring. Bradford & Anthony, Boston, Mass.
25589. Brass fishing-reel. Plain, single, with plate. Bradford & Anthony, Boston, Mass.
25587. Brass fishing-reel. Plain, single, with stop and ring. Bradford & Anthony, Boston, Mass.
25588. Brass fishing-reel. Plain, single, with stop and plate. Bradford & Anthony, Boston, Mass.
25577. Hard-rubber fishing-reel, German-silver band. Rim very narrow, with leather case. Bradford & Anthony, Boston, Mass.
25568. Hard-rubber salmon-fishing reel. German-silver rim. Bradford & Anthony, Boston, Mass.
25581. Rubber trout-reel. (Fowler's patent.) Bradford & Anthony, Boston, Mass.
25582. Orvis' patent fishing-reel. German silver, nicked and perforated. Bradford & Anthony, Boston, Mass.
25567. Fine click brass fishing-reel. (25 yards.) Bradford & Anthony, Boston, Mass.
25586. Brass fishing-reel. Click, with plate. Bradford & Anthony, Boston, Mass.
25585. Brass fishing-reel. Click, with ring. Bradford & Anthony, Boston, Mass.
25575. German-silver trout-fishing reel. Click, with rim. Bradford & Anthony, Boston, Mass.
25565. German-silver trout click fishing-reel. (150 yards.) Bradford & Anthony, Boston, Mass.
25569. Hard-rubber trout-fishing reel. Click, German-silver rim.
25571. Hard-rubber trout-fishing reel. Click, plain rim. Bradford & Anthony, Boston, Mass.
25579. Celluloid trout click fishing-reel. Bradford & Anthony, Boston, Mass.
25560. German-silver trout click fishing-reel. (60 yards.) Bradford & Anthony, Boston, Mass.
25564. German-silver salmon-fishing reel, click. ($4\frac{1}{2}$ inch.) Bradford & Anthony, Boston, Mass.

Multiplying reels for bass-fishing, with and without check.

25580. Celluloid fishing-reel. Multiplying and click. Bradford & Anthony, Boston, Mass.
25583. Brass fishing-reel. Multiplying, stop and ring. Bradford & Anthony, Boston, Mass.
26688. Fowler reel. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26687. Fowler reel. " "
26686. Frankfort reel. " "
26689. Plain reel. " "
26916. Winans reel. J. Ross Winans, Baltimore, Md.
26666. Reel for trolling-line. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Reels.

Multiplying reels for bass fishing, with or without check.

25574. German-silver fishing-reel. Multiplying; 25 yards. Bradford & Anthony, Boston, Mass.
25570. Hard rubber trout-fishing reel. Multiplying; 60 yards. Bradford & Anthony, Boston, Mass.
25584. Brass fishing-reel. Multiplying stop and plate. Bradford & Anthony, Boston, Mass.
25573. Brass fishing-reel. Multiplying drag; 60 yards. Bradford & Anthony, Boston, Mass.
25572. German-silver fishing-reel. Steel pivot, multiplying drag, 300 yards. Bradford & Anthony, Boston, Mass.
25578. Celluloid fishing-reel. With multiplying click and extra spool. Bradford & Anthony, Boston, Mass.

Gunwale-winch.

Trawl-line rollers.

29432. Trawl-roller or hauler. Provincetown style. Andrew Kennedy, Provincetown, Mass.
29434. Trawl-roller or hauler. Cape Ann style. Samuel Elwell, jr., Gloucester, Mass.
29488. Trawl-roller and eye-plate. First used by Provincetown fishermen. Amasa Taylor, Provincetown, Mass.
29445. Improved trawl-roller and socket. Amasa Taylor, Provincetown, Mass.
25767. Trawl-roller. Used to haul in trawls over the sides of dory. Allen L. McDonald, Gloucester, Mass.
- . Trawl-winch. Gloucester, Mass. G. Brown Goode.

Dredge-line rollers.

Seine-windlasses.

Line-holders.

Whaleman's line-tub.

- 88 F. C. Sounding-line reel. U. S. Fish Commission.
25009. Harpoon-line and tub. Used in whale-boat. J. H. Thomson, New Bedford, Mass.

Tub for trawl-line. (See under Trawl.)

Winders.

Spools.

25592. Crab-line reel. Used in Newport, R. I. J. M. K. Southwick, Newport, R. I.

Seine-reels.

Rods.

25511. Common rod. Three pieces; ash and hornbeam; brass mounting. Bradford & Anthony, Boston, Mass.

Rods.

25501. General fishing-rod. Nine pieces; German-silver mounting. Bradford & Anthony, Boston, Mass.
25500. General fishing-rod. Six pieces; ash and lancewood; German-silver mounting. Bradford & Anthony, Boston, Mass.
26890. Trunk-rod of greenheart; five-jointed, with extra fourth piece and tip, seven pieces in all; weight, 8 oz.; length, 11 feet 6 inches. Thaddeus Norris, Philadelphia, Pa.
25512. Gudgeon-rod. Three pieces; ash and hornbeam; brass mounting; common. Bradford & Anthony, Boston, Mass.
25510. Common pickerel-rod. Four pieces. Bradford & Anthony, Boston, Mass.
25509. Bait-rod for trout. Four pieces; common. Bradford & Anthony, Boston, Mass.
25513. Jointed rod. Four joints, extra tips, tie guides; made of Calcutta bamboo; full mounted in brass. Bradford & Anthony, Boston, Mass.
25508. Common bass-rod. Four pieces; brass mounted. Bradford & Anthony, Boston, Mass.
25498. Light bass-rod. Four pieces; extra top; ash and lancewood; German-silver mounting. Bradford & Anthony, Boston, Mass.
25497. Bass-rod. Four pieces and extra top for sea-fishing; ash and lancewood; German-silver mounting; jeweled tip. Bradford & Anthony, Boston, Mass.
25496. Sea-bass rod. Ash butt joint, bamboo middle joint, lancewood stock; double guides, jeweled; German-silver mounting; jeweled tips. Bradford & Anthony, Boston, Mass.
25499. Black-bass rod. Four pieces and two extra tops; split bamboo; German-silver mounting. Bradford & Anthony, Boston, Mass.
25502. Fly-rod. Three pieces and extra top; cedar and split bamboo. Bradford & Anthony, Boston, Mass.
25504. Fly-rod. Three pieces and extra top; extra middle joint; bamboo tip case; ash and lancewood; German-silver mounting. Bradford & Anthony, Boston, Mass.
25505. Fly-rod. Four pieces and extra top; ash and lancewood; German-silver mounting. Bradford & Anthony, Boston, Mass.
26887. Salmon-rod of greenheart, four-jointed in cedar case, with extra third piece and tip; weight, 30 oz.; length, 17 feet 3 inches. Thaddeus Norris, Philadelphia, Pa.
25503. Fly-rod for trout. Three pieces and extra top; split bamboo; German-silver mounting. Bradford & Anthony, Boston, Mass.
25506. Trout-rod. Four pieces and extra top; ash and lancewood; German-silver mounting; agate-lined tips. Bradford & Anthony, Boston, Mass.
25507. Salmon-rod. Four pieces and extra tops; bamboo top-case; ash and lancewood; German-silver mounting. Bradford & Anthony, Boston, Mass.
25887. The "Cold Brook," hollow, fly-rod. (Patented June 22, 1875.) J. L. Graves, Springfield, Mass.
25886. The "Cold Brook," hollow, salmon, bass, and angling rod. Nickel-plated, with reel showing an attached line working. (Patented June 22, 1875.) J. L. Graves, Springfield, Mass.

Rods.

The following are the advantages claimed by Mr. Graves for his new rods:

1. The line is concealed and cannot be caught in underbrush or branches.
 2. The strain on the rod is equalized through the entire length.
 3. There is no friction through rings or guides except on the tip.
 4. The strength of the rod is greatly increased.
 5. The weight of the rod is diminished.
 6. The wet line is not reeled up to decay.
 7. The rod goes under the brush where the big trout lie.
 8. It adds greatly to the comfort and pleasure of 'the gentle art.'
26661. Plain fly-rod. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26662. Bait-rod. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26663. Bait-rod. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
23712. English fly-rods. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26707. Rod-case. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
25882. Split bamboo trout-rod. 11½ feet. H. L. Leonard, Bangor, Me.
26660. Split bamboo rod. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26888. Extra greenheart trout-rod; cedar case; three-jointed, with one extra middle and two extra tips, six pieces in all; weight, 8 oz.; length, 12 feet. Thaddeus Norris, Philadelphia, Pa.
26889. Rent and glued bamboo trout-rod in cedar case, with one extra middle and two extra tips, six pieces in all; weight, 8 oz.; length, 12 feet. Thaddeus Norris, Philadelphia, Pa.
26886. Plain trout-rod of greenheart; three-jointed, with extra middle and tip, five pieces; weight, 8 oz.; length, —. Thaddeus Norris, Philadelphia, Pa.
25881. Split bamboo grilse-rod. 14 feet. H. L. Leonard, Bangor, Me.
25883. Split bamboo salmon-rod. 16 feet. " "
25884. Piece of bamboo. Showing splitting process in construction of rods. H. L. Leonard, Bangor, Me.
25885. Piece of bamboo. Showing gluing process in construction of rods. H. L. Leonard, Bangor, Me.
25491. Chapman's combination trolling-pole. Harpoon-line holder and cane. W. D. Chapman, Theresa, N. Y.

Swivels.

25798. Horn cod-line swivel. Much used in olden time by Grand and George's Banks fishermen. George B. Foster, Beverly, Mass.
25945. Cod-line swivel. Central Wharf Company, Gloucester, Mass.
26017. Cod-line gange-swivel. A. R. Crittenden, Middletown, Conn.
- 25944-6. Patent gange-swivel. Used in cod-fishing. Central Wharf Company, Gloucester, Mass.
29486. Cod-gange swivel. Showing mode of fastening. Lemuel Cook, 2d, Provincetown, Mass.
29487. Haddock-gange swivel. Showing mode of fastening. Lemuel Cook, 2d, Provincetown, Mass.
29392. Wood horse-swivel. Used on cod-line. Capt. E. L. Rowe, Gloucester, Mass.

Swivels.

25942. Halibut-gange. Showing mode of fastening on the hook. A. R. Crittenden.
29457. Shark-hook swivel. Wilcox, Crittenden & Co., Middletown, Conn.
29395. Primitive trawl-buoy swivels. George B. Foster, Beverly, Mass.
29476. Halibut trawl-buoy swivel. Used by the George's Banks fishermen. Amasa Taylor, Provincetown, Mass.
29498. Trawl-buoy swivels. Alex. McCurdy, East Gloucester, Mass.
25187. Trawl-buoy ropeswivel. Wilcox, Crittenden & Co., Middletown, Conn.
25946. Trawl-buoy rope swivel. Central Wharf Company, Provincetown, Mass.

Clearing-rings.**Disgorgers.**

29435. Trawl-sheave bushing. Samuel Elwell, jr., Gloucester, Mass.
- Halibut "gob-stick." Philip Merchant, Gloucester, Mass.

V. NETS.

ENTANGLING-NETS.**Meshing-nets** (entangling in meshes).‡ *Barrier-nets.*

Rabbit-nets, used by Indians of the Southwest.

- 14405-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21. Small rabbit-nets. Pi-Ute Indians, Southern Utah. Maj. J. W. Powell.
14500. Small rabbit-net. Pi-Ute Indians, Southern Utah. Maj. J. W. Powell.
11245. Small rabbit-net. " " "
12058. Small rabbit-net. " " "
- 12051, 53. Large rabbit-net. " " "
11247. Large rabbit-net. " " "
- 14430-31. Large rabbit-net. " " "
- 14401-2-3. Large bunt net (for rabbits). " "
19049. Rabbit-net. Cooyuwee Pi-Ute Indians, Southern Utah. Stephen Powers.

These nets are used largely in the capture of rabbits for food; they are stretched in long lines by means of slender crotched sticks which support the upper edge. The chaparral is then scoured for miles by the Indians on horseback and on foot, and the rabbits, which are very abundant in the sage-brush, are driven into the meshes of the nets. The species thus captured are the sage-hare (*Lepus sylvaticus* var. *artemisiæ*), and the mule or jackass hare (*Lepus callotis*).

Bird mesh-nets.**Gill-net.****Gill-nets used in Great Lakes.**

25751. Model of Lake Michigan gill-net. Scale: Depth, 1 inch to the foot; length, $\frac{1}{3}$ of inch to the foot. J. W. Milner.

The gill-netting in use on the Great Lakes is knit from linen thread, two and three ply (25-4, 2-cord, and 30-50, 3-cord), from eleven to twenty-

Meshing-nets (entangling in meshes).

Gill-nets used in the Great Lakes.

two meshes in depth, $3\frac{3}{4}$ to 5 inch mesh. The nets when hung or mounted for use contain from one to three pounds of webbing, and range in length from 60 to 120 yards, and in depth from $4\frac{1}{2}$ to 6 feet. They are set in gangs of from three to five nets, and three to five gangs are laid out in one setting usually by aid of sailboats or steamers. (See models of Mackinaw boat and lake gill-net steamer.)

For floating the upper line, round or octagonal floats of bark, or wooden pickets about two and one-half feet in length, are used. Sinkers are of lead or stone. The nets are set in from 20 to 100 fathoms of water, the lead-line resting upon the bottom. They are taken out once a week and dried.

They are used principally for the capture of the whitefish (*Coregonus albus*, &c.), and the lake trout (*Salmo namaycush*), though most of the common lake fishes are taken in these meshes. Sea-Island cotton (3, 4, 5, and 6 thread) is being largely substituted for linen in their manufacture.

The weight of the twine preferred by fishermen varies in different localities, that used in Green Bay being the finest, that in Lake Erie next, then Lakes Michigan and Superior, and heaviest in Lake Huron. Lake Ontario consumes about 5,000 pounds of netting annually, Erie 7,500, Huron 6,000, Michigan 20,000, Green Bay 2,500, and Lake Superior 5,000. The aggregate length of this netting is probably about 4,575,000 yards.

Sisco and herring gill-nets.

Used in the Great Lakes in the capture of the sisco (*Salmo siscowet*) and the lake herring (*Argyrosomus clupeiformis*).

* These nets are hung and set like the whitefish-nets previously described.

They are knit from linen thread (35-60, 2-cord) 30 to 40 meshes in depth, and $2\frac{1}{8}$ to 3 inch mesh. About 2,500 pounds are annually consumed, chiefly about Sacket's Harbor, N. Y., and Lakes Huron and Michigan. (E. B. French.)

Anchored gill-nets.

Used on the coast from Cape Cod to Cape Hatteras in the capture of the bluefish (*Pomatomus saltatrix*).

* These nets are knit from cotton twines (12-18 thread, $\frac{1}{2}$ patent), and are 75 to 100 fathoms in length, and 80 to 200 meshes in depth, from $4\frac{1}{2}$ to 6 inch mesh. They are heavily leaded and anchored with lead-line on the bottom, off-shore, in from 10 to 20 fathoms of water. They are chiefly used by New York fishing vessels; probably 1,000 or more are in use on the coast. In the winter season the fishing vessels follow the bluefish as far south as Cape Hatteras. (E. B. French.)

Hook or trap gill-nets.

Used on the coast of New Jersey in the capture of the Spanish mackerel (*Cybium maculatum*), &c.

* These nets are peculiar in shape. They are straight nets, anchored in the form of an L with a hook-like continuation, heavily leaded, and with anchors at the angles. They are knit from cotton twines (9-12 thread, $\frac{1}{2}$ patent), the outer end being of finer twine. Their length is about 100 fathoms, depth 75-100 meshes, $3\frac{3}{4}$ to 4 inch mesh. About 100 of these are in use on the coast, mostly between Sandy Hook and Barnegat Light. (E. B. French.)

* The nets belonging to this series are enumerated below, among Nos. 26848-26880.

Meshing-nets (entangling in meshes).

Salmon hook-gill-net of the Saint Lawrence.

‡ *Drift-nets.*

† *Those drifting across the tide.*

Shad gill-nets used in Southern rivers.

26126, 26131-2. Model of shad gill-net. American Net and Twine Company, Boston and New York.

Used in rivers of the Atlantic coast.

These nets are knit of linen thread (22-50, 3-cord, and 20-60, 2-cord). They range in length from 50 to 200 fathoms, and in depth from 25 to 90 meshes, $4\frac{3}{4}$ to 5 inch mesh. They are used exclusively as drift-nets.

On the Connecticut River about 4,000 pounds of this netting are used annually. The average weight of a net is 30 to 40 pounds, its depth 45 to 50 meshes, $5\frac{1}{4}$ to $5\frac{1}{2}$ inches.

On the Hudson River about 7,500 pounds are annually used, fine threads (50-75, 2-cord), 100 to 200 fathoms in length, and from 50 to 90 meshes in depth, $4\frac{3}{4}$ to 5 inch, weight from 15 to 30 pounds to the net.

In the Delaware, Potomac, and Chesapeake 20,000 pounds are used, from 30 to 60 meshes in depth, and $5\frac{1}{8}$ (30 to 40, 2-cord) length, 75 to 100 fathoms.

In the rivers of North Carolina nets are made from coarse twine (22-35, 3-cord, and 20-35, 2-cord) 25 to 40 meshes in depth, 5- $5\frac{1}{2}$ gauge. Their length is about 100 yards. About 25,000 pounds are used annually.

In the rivers of South Carolina the twine is slightly finer than in North Carolina (25-35, 3-cord), 25 to 60 meshes deep, the size otherwise about the same. 1,500 pounds are used annually.

In Georgia and Florida about 6,000 pounds are used. This netting is knit from linen thread (30-40, 3-cord, and 25-35, 2-cord) 40 to 60 meshes in depth; $4\frac{3}{4}$ to $5\frac{1}{4}$ mesh. About 18 to 24 pounds are used in a net; its length 100 yards. (E. B. French.)

Herring gill-nets.

Used in Hudson and Delaware Rivers in capture of the alewife or herring (*Pomolobus pseudoharengus*).

* Knit from 30-40, 2-cord, thread, from 45 to 100 meshes in depth, $2\frac{1}{2}$ to 3 inch mesh; about 13 pounds to a net on the Hudson and 6 to 7 pounds on the Delaware; the nets on the Hudson, 60 to 100 meshes, on the Delaware from 35 to 60. About 2,500 pounds used annually. (E. B. French.)

Mullet gill-nets.

Used principally on the Saint John's River, Florida.

Knit from coarse linen thread (16-25, 3-cord) and from 33 to 50 meshes in depth. The size of mesh varies with the season: in July $3\frac{1}{2}$, August $3\frac{3}{4}$, September 4 inch. The average length of the nets is 100 to 150 yards. About 1,500 to 2,000 pounds in use on Saint John's River, and about 1,000 pounds of cotton ($\frac{1}{5}$ and $\frac{1}{6}$ to $\frac{2}{6}$) nets on the Gulf coast from 30 to 40 meshes in depth, $3\frac{1}{2}$ to $3\frac{3}{4}$, not varying with seasons. (E. B. French.)

* The nets belonging to this series are enumerated below, among Nos. 26848-26880.

Meshing-nets (entangling in meshes).

Series of samples of gill-netting. American Net and Twine Company, Boston and New York :

26848.	Depth 15 meshes,	size of mesh	$1\frac{1}{4}$ inch,	No. 20 (3) thread.
26849.	" 35	"	" $2\frac{1}{4}$	" " 40 (2) "
26850.	" 100	"	" $2\frac{1}{4}$	" " 25 (3) "
26851.	" 35	"	" $2\frac{1}{2}$	" " 30 (3) "
26852.	" 50	"	" $2\frac{3}{4}$	" " 25 (3) "
26853.	" 22	"	" $2\frac{3}{4}$	" " 35 (2) "
26854.	" 50	"	" $2\frac{3}{4}$	" " 16 (3) "
26855.	" 100	"	" $2\frac{7}{8}$	" " 25 (3) "
26856.	" 100	"	" 3	" " 25 (3) "
26857.	" 100	"	" $3\frac{1}{4}$	" " 25 (3) "
26858.	" 16	"	" $3\frac{1}{2}$	" " 25 (2) "
26859.	" 16	"	" $3\frac{1}{2}$	" " 30 (2) "
26860.	" 40	"	" $3\frac{3}{8}$	" " 18 (3) "
26861.	" 50	"	" 4	" " 20 (3) "
26862.	" 17	"	" 4	" " 35 (3) "
26863.	" 35	"	" 4	" " 40 (3) "
26864.	" 16	"	" $4\frac{1}{8}$	" " 35 (3) "
26865.	" 45	"	" $4\frac{1}{8}$	" " 40 (3) "
26866.	" 14	"	" $4\frac{1}{4}$	" " 35 (3) "
26867.	" 14	"	" $4\frac{1}{4}$	" " 50 (3) "
26868.	" 14	"	" $4\frac{1}{2}$	" " 35 (2) "
26869.	" 14	"	" $4\frac{1}{2}$	" " 35 (2) "
26870.	" 16	"	" $4\frac{1}{2}$	" " 35 (3) "
26871.	" 16	"	" $4\frac{1}{2}$	" " 50 (3) "
26872.	" 18	"	" $4\frac{1}{2}$	" " 50 (3) "
26873.	" 16	"	" $4\frac{3}{4}$	" " 35 (3) "
26874.	" 45	"	" 5	" " 30 (2) "
26875.	" 12	"	" 5	" " 30 (2) "
26876.	" 60	"	" 5	" " 35 (2) "
26877.	" 65	"	" 5	" " 40 (2) "
26878.	" 35	"	" $5\frac{1}{8}$	" " 35 (3) "
26879.	" 75	"	" $5\frac{1}{4}$	" " 35 (3) "
26880.	" 11	"	" 6	" " 35 (3) "

‡ *Drift-nets.*

† *Those drifting across the tide.*

26135. One bale of brown gill-netting. American Net and Twine Company, Boston, Mass.

26139. One bale of white gill-netting. American Net and Twine Company, Boston, Mass.

†† *Those drifting along the tide.*

Mackerel gill-nets.

Herring gill-nets.

26124-28-38. Herring gill-net. Used on the coast of New England and the Provinces in the capture of the herring (*Clupea harengus*). American Net and Twine Company, Boston, Mass.

Meshing-nets (entangling in meshes).**Herring gill-nets.**

These nets are about 40 yards long and 150 meshes in depth. They are stretched together in big gangs, floated by pieces of wood and weighted by stones. They are made of 45 and 6 thread cotton from 14 to 20 yarn, $2\frac{1}{2}$ inch average mesh. American Net and Twine Company, Boston, Mass.
 —. Model of herring gill-net. American Net and Twine Company, Boston, Mass.

Other gill-nets.

1667. Gill-net. Anderson River Eskimos. Anderson River, H. B. T. R. MacFarlane.
 7962. Gill-net made of animal fiber. Kawquettle Indians. Vancouver's Island, B. C. Dr. T. T. Minor.
 19043. Gill-net. Cooyuwee Pi-Ute Indians. Pyramid Lake, Nev. Stephen Powers.
 4765. Gill-net made of "Babiche." Anderson River Indians. Mackenzie's River district, H. B. T. MacFarlane.

Pocket-nets (entangling in pockets).**Trammel-nets.**

25270. Model trammel-net. 10 feet long, 2 feet wide, 2 and 5 inch mesh. William E. Hooper & Sons, Baltimore, Md.
 26118-29. Trammel-net. American Net and Twine Company.
 Used for general fishing in rivers and ponds of Northern Mississippi Valley.

These nets range from 20 to 75 yards in length, 4 to $6\frac{1}{2}$ feet in depth. The inside netting of finer linen thread (20-25, 3-cord), mesh $2-2\frac{1}{4}$, $\frac{1}{8}$ deeper than the outside. The outside netting-wall from cotton (15-21 thread), mesh 8 to 10 inches. (E. B. French.)

31. ENCIRCLING-NETS.

Seines.**Seines.**

26134. Seven bales of brown seine-netting. Used for manufacture of pounds, traps, seines, fykes, &c. American Net and Twine Company, Boston, Mass.
 26139. Eighteen bales of white seine-netting. American Net and Twine Company, Boston, Mass.

Seal-seines.

17270. Seal-net made of sinew. Found wrapped about a mummy. Kagamil Island, Alaska. Alaska Commercial Company, San Francisco, Cal.

Manatee-seines.**Shad-seines.****Mullet-seines.****Menhaden-seines.**

Seines.

Bass-seines.

Bluefish-seines.

Capelin-seines.

Herring-seines.

26119. Model of herring-seine. Used on coasts of New England and the Provinces in capture of herring (*Clupea harengus*), and in the Hudson, Potomac, Delaware, and Chesapeake, and in North Carolina. American Net and Twine Company, Boston, Mass.

26127. Model of herring-seine. American Net and Twine Company, Boston, Mass.

Shad-seines.

These are used in the rivers of the Atlantic and Gulf coast.

These seines are knit from cotton thread. On the Connecticut River, the seines are of nine-thread twine, 5-5½ mesh; on the Hudson, the mesh is four inches, knit of six-thread twine in the wings and nine thread in the bunt. In the Delaware, Potomac, and Chesapeake, the mesh is 3½ to 4½ inches, the twine 12, 15, and 18 thread; in North Carolina, the mesh is 2½ to 3½ inches, and the cotton twine twelve-thread. (E. B. French.)

Cod-seines.

26137. Model of cod-seine. Used in Provinces in capture of cod (*Gadus morrhua*). American Net and Twine Company, Boston and New York. 30 to 40 feet deep. Mesh 5 inches, 18 to 21 thread, cotton.

Lance-bunts.**Baird collecting-seines.**

26136. Baird net. Designed by Prof. S. F. Baird. Used by naturalists in collecting small fishes in brooks and ponds and in following behind large seines to secure the small species which escape through the meshes, six-thread coarse cotton. American Net and Twine Company, Boston, Mass.

26126. Model of Baird net. American Net and Twine Company, Boston, Mass.

Bait-seines.

26123, 26130. Model of minnow-seine. Used by amateurs in capture of minnow-bait. ½ to ⅝ inch mesh, six-thread cotton twine. American Net and Twine Company, Boston, Mass.

26121. Model of minnow-seine, with bag. Used by fishermen to secure bait for eel-pots. American Net and Twine Company, Boston, Mass.

26668. Minnow-seine. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Other seines.

2232. Seine. Anderson River Eskimos. Mackenzie's River district. Robert MacFarlane.

2444. Seine made of "babiche." Tschutchi Indians. Capt. John Rodgers, U. S. N., North Pacific Exploring Expedition.

Seines.

Other seines.

2445. Seine made of "babiche." Tschutchi Indians. Capt. John Rodgers, U. S. N., North Pacific Exploring Expedition.
2446. Hand-seine made of grass. Tschutchi Indians. Capt. John Rodgers, U. S. N., North Pacific Exploring Expedition.
2447. Hand-seine made of grass. Tschutchi Indians. Capt. John Rodgers, U. S. N., North Pacific Exploring Expedition.
19234. Salmon-net. McCloud River Indians. Shasta County, Cal. Livingston Stone.
20648. Salmon-net. Indians of Northwest coast. Fort Simpson, B. C. J. G. Swan.
2231. Hand-seine. Anderson River Eskimo. Mackenzie's River district, H. B. T. R. Kennicott.
21368. Fishing-net. Made from fiber of milkweed (*Asclepias* sp.). Hooch-norre Indians. South Eel River, Cal. Stephen Powers.
7929. Fishing-net. Made from fibers of pineapple (*Tillandsia* sp.). Mirador, Mex. Dr. Sartorius.
897. Fishing-net made of willow bark. Kootchin Indians. Mackenzie's River district, H. B. T. R. Kennicott.
4883. Net made of "silkweed." Fort Crook Indians. Fort Crook, Cal. Capt. J. W. T. Gardiner.

Hoop-nets.

Handle, or dip nets.

Bull-nets (worked with ropes and blocks).

Scoop-nets (herring-nets, pound-scoops, car-scoops, &c.).

25608. Bow of scoop-net. Used in dipping fish from smack's well. J. M. K. Southwick, Newport, R. I.
25165. Series of scoop-net hoops. Wilcox, Crittenden & Co., Middletown, Conn.
- 83, F. C. Frame of dip-net. Used in Bay of Fundy herring fisheries. U. S. Fish Commission.
25229. Folding dip-net frame. U. S. Fish Commission.
26141. Dip-nets. American Net and Twine Company, Boston, Mass.
26141. Minnow dip-nets. " " "
26141. Crab dip-nets. " " "

Landing-nets.

25494. Jointed staff and folded net-ring. Bradford & Anthony, Boston, Mass.
25492. Nason's patent net-staff and ring. Flexible ring carried inside of staff. C. F. Nason, patent August 31, 1875. Bradford & Anthony, Boston, Mass.
25493. Nason's patent solid net-staff. With flexible ring. C. F. Nason, patent August 3, 1875. Bradford & Anthony, Boston, Mass.
25235. Folding handles for dip-net or lance. U. S. Fish Commission.
25638. Braided linen landing-net (waterproofed). Bradford & Anthony, Boston, Mass.
25639. Braided silk landing-net. Bradford & Anthony, Boston, Mass.
658. Dip-net. Used in the capture of the oulachan (*Osmerus pacificus*). Northwest coast of America. G. Gibbs.
21725. Dip-net. Used by McCloud River Indians in fishing in small streams. Shasta County, Cal. Livingston Stone.

Hoop-nets.

Landing-nets.

26669. Landing-net. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26711. Landing-net. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26664. Landing-net and rod. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Eskimo auk-nets.

15616. Bird-net frame. Aliut Eskimos. Alaska. Henry W. Elliott.

Baited hoop-net:

Crab-nets.

- 26591-2. Models of lobster-nets. Used on the coast of California. Johnson & Young, Boston, Mass.
26801. Crab-nets. American Net and Twine Company, Boston and New York.
32710. Open cunner-net. Gloucester, Mass. G. Brown Goode.
32711. Folding cunner-net. " " "

Trailing-nets.

Trawls:

Beam-trawl.
(Otter-trawl.)

26882. Model of beam-trawl. American Net and Twine Company, Boston and New York.
32720. Model of beam-trawl. Made by J. G. Adam. U. S. Fish Commission.

Dredges:

Flange, or ordinary dredge.
Rake-dredge.
Oyster-scraper.
(Coral-dredge.)

26140. Four brown dredge-nets. Oyster-dredging, &c. American Net and Twine Company, Boston and New York.

Towing-nets:

Surface tow-nets.

25228. Towing-net frame. U. S. Fish Commission.

Folding or jerk nets.

Purse-nets:

Mackerel purse-seines (pursed by weight).
Menhaden purse-seines.

29387. Model of mackerel purse-seine. Used on North Atlantic coast in capture of mackerel (*Scomber scombrus*). American Net and Twine Company, Boston, Mass.

Folding or jerk nets.

Menhaden purse-seines.

26,120. Model of mackerel purse-seine. American Net and Twine Company, Boston, Mass.

These purse-seines range in length from 120 to 220 fathoms, and from 750 to 1,000 meshes in depth, reaching the depth of 20 to 30 fathoms of water. The average mesh is $2\frac{1}{2}$ inches. They are made of fine Sea-Island cotton twine, and cost from \$750 to \$1,500 complete. About 300 are now in use on the coast of North America. The pursing weight varies from 100 to 150 pounds.

26122-26125. Model of purse-seine. American Net and Twine Company, Boston, Mass.

90 to 150 fathoms in length, 300 to 650 meshes in depth, $1\frac{3}{4}$ to $2\frac{3}{4}$ fine Sea-Island twine. Wings, 9 to 12; bag, 15 to 21, coarse.

25179. Snatch-block used in pursing-seine. Higgins & Gifford, Gloucester, Mass.

25186. Ring or thimble for pursing-seine. Wilcox, Crittenden & Co., Middletown, Conn.

Cast-nets:

Mullet cast-nets.

Pompano cast-nets.

Bait cast-nets.

25046. Casting-net. Diameter $4\frac{1}{2}$ feet. William E. Hooper & Sons, Baltimore, Md.

26799. Mullet cast-net. Diameter $5\frac{1}{2}$ feet, $1\frac{1}{2}$ -inch mesh.

26800. Shrimp cast-net. Diameter $4\frac{1}{2}$ feet, $\frac{3}{4}$ -inch mesh.

Clap-nets for birds.

Rabbit spring-nets.

Spring-weirs (St. Lawrence).

Sieve-traps (for birds).

(Accessory.) Parts of nets and apparatus for manufacture.

Raw material of nets.

Babiche. (See under D. 20.)

Netting-fiber.

Netting-twine.

659. Netting-twine. Indians. Northwest coast of America. G. Gibbs.

14432. Fiber used for making nets. Pi-Ute Indians. Southern Utah. Maj. J. W. Powell.

29376. 38 bales of white netting-twine. American Net and Twine Company, Boston, Mass.

Samples of netting hung to lines. William E. Hooper & Sons, Baltimore, Md.:

25048.	1-inch	mesh,	12	thread,	1	fathom	long,	2	feet	deep.
25049.	$1\frac{1}{8}$	"	12	"	1	"	2	"		
25047.	$1\frac{1}{4}$	"	12	"	1	"	2	"		
25051.	$1\frac{1}{2}$	"	12	"	1	"	2	"		
25050.	2	"	12	"	1	"	2	"		

(Accessory.) Parts of nets and apparatus for manufacture.

Netting-needles.

Mesh-needles.

Hanging-needles.

Eskimo netting-needles.

25596. Seine-needle (home made). J. M. K. Southwick, Newport, R. I.
 25593. Seine-needle. " "
 25712. Seine-needle (called hanging-needle). N. H. Payne, Wellfleet, Mass.
 ——. Knitting-gauge. Used in regulating size of mesh. American Net
 and Twine Company, Boston and New York.
 9839. Seine-needle. Eskimos. Northeastern America. S. F. Baird.
 16202. Seine-needle. Magemut Eskimos. Nunivak Island, Alaska. W. H.
 Dall.
 5613. Seine-needle of wood. Yukon River. W. H. Dall.
 5614. Needle of bone. Norton Sound Eskimos. "
 16170, 16169, 16166, 16167, 16168, 16171, 16196. Seine-needles of bone. Mage-
 mut Eskimos. Nunivak Island. W. H. Dall.
 1180. Seine-needle of wood. Chirikoff. W. H. Dall.
 1315. Netting-needle. Eskimos. Smithsonian Institution.
 9839. Seine-needle of bone. Eskimos of Northeastern America. S. F.
 Baird.

VI. TRAPS.

32. PEN-TRAPS.

Pocket-traps.

Pitfalls :

Pits, covered.

Barrel-traps.

Jar mole-traps.

"Rabbit-tipe," used in England.

Salmon-baskets (Columbia River).

Salmon-weirs (Upper Columbia River).

River-weirs, with pockets :

Eel-traps.

Fish-slides :

Shad-slides, used in the rivers of North Carolina.

25830. Fish-slide. Used in James River, Virginia. Scale 1 inch to the foot.
 J. G. Adam.

25831. Fish-slide (with box). Used in rivers of Virginia. Scale 1 inch to
 the foot. J. G. Adam.

Labyrinth-traps.

Corrals.

Turkey-traps.

Labyrinth-traps.

Weirs, or pounds.

12102. Bar-weir. Used in Bay of Fundy herring fisheries. Scale, 1 inch to 15 feet. Capt. W. S. Treat, Eastport, Me.
12101. Fish-weir. Used in Dennis River, Me. Scale, $\frac{1}{2}$ inch to the foot. Prof. S. F. Baird.
12103. Salmon-weir. Used in rivers of Maine. Dennis River. Scale, 1 inch to $8\frac{1}{2}$ feet. Prof. S. F. Baird.
26833. Model of heart-weir. American Net and Twine Company.
25750. Model of pound-net. Used in Lake Michigan. Scale, $3\frac{1}{2}$ feet to 1 inch. Waukegan, Ill. D. D. Parmalee.
- Model of weir, or heart-net. Used on southern coast of New England. Scale, 1 inch to 8 feet. Spindel's Cove, Wood's Holl, Mass. Prof. S. F. Baird.
- 26731, 26746. Models of brush-weirs. Used in the Bay of Fundy in capture of herring (*Clupea harengus*). W. B. McLaughlin, Grand Manan, N. B.
25829. Model of fish-weir. Used by aborigines of Virginia in the fifteenth century. From figures in De Bry. J. G. Adam.
25820. Model of fish-trap. Valley of Yukon River. Scale, 1 inch to the foot. W. H. Dall.

Funnel-traps.

Fish-pots.

1754. Wicker fish-pot (model). Used in West Indies. 5 to 15 fathoms. Scale, 1 inch to the foot. H. O. Claughton, St. Martin's, W. I.
32738. Fish-pot (model). Bermudas. Scale of $\frac{1}{4}$. Made from wood of submerged cedar. G. Brown Goode.

Lobster-pots.

12100. Lobster-pot. Used in Bay of Fundy. 4 to 10 fathoms. Scale, $\frac{3}{4}$ inch to the foot. Prof. S. F. Baird.
24801. Lobster-pot. Used in Narragansett Bay, in 10 to 15 fathoms. Scale 3 inches to the foot. J. M. K. Southwick, Newport, R. I.
29296. Model of Noank lobster-pot. G. L. Green, Noank, Conn.
29531. Lobster-pot net. Used on coast of New Jersey. American Net and Twine Company, Boston and New York.
- 26586-7-8-9. Models of lobster-pots. Used on the coast of New England. Johnson & Young, Boston, Mass.
29363. Model of lobster-pot. N. C. Smith, Stonington, Conn.

Eel-weirs, with leaders.

Eel-pots, without leaders.

- Eel-pot. Used in Fisher's Island Sound, Conn. Scale, one-half. James H. Latham, Noank, Conn.
- 25015-16. Wicker eel-pot, two funnels, with leaders. Used about Martha's Vineyard, in 3 to 10 fathoms. Capt. Josiah Cleveland, maker, Vineyard Haven, Mass.
25014. Wicker eel-pot (three funnels). Used about Martha's Vineyard. Capt. Josiah Cleveland, maker, Vineyard Haven, Mass.
29530. Eel-pot net. Used on the coast of New Jersey. American Net and Twine Company, Boston and New York.

Labyrinth-traps.

Eel-pots, without leaders.

25016. Leaders for eel-pot (Nos. 25014-15-16). Used in Martha's Vineyard. Capt. Josiah Cleveland, Vineyard Harbor, Mass.
26802. Basket eel-pot. American Net and Twine Company.
25018. Roots of young pine trees (*Pinus strobus*). Used in manufacture of eel-pots. Vineyard Haven, Mass. G. Brown Goode.

Barrel-pots for eels.

Set-nets.

32733. C. Set-net. Diameter of largest hoop, 15 inches. U. S. Fish Commission.

Fykes (set-nets with leaders).

25045. Fyke-net with wings. Diameter, 3 feet. Wm. E. Hooper & Sons, Baltimore, Md.
26113. Model of minnow-fyke. American Net and Twine Company, Boston [and New York.
26114. Minnow-fyke. " "
26117. Minnow-fyke. " "

Bird-fyke.

- 26115, 26116. Model of bird-net. American Net and Twine Company, Boston and New York.

Bass-traps.

25704. Bass-trap. Used in Peconic Bay and Fisher's Island Sound. Scale, $\frac{1}{2}$ inch to the foot. Charles T. Potter.

Door-traps.

† *Closed by the falling of a door.*

Box-traps (figure 4).

25833. Horan's box-trap. Used in Philadelphia Zoological Gardens. Scale, one-half. Henry Horan.
25478. Box-trap. Used in capture of hares, possums, etc. Scale, one-half. T. N. Woltz.

Traps with hanging doors.

- . Self-setting trap. Used in capture of muskrats, hares, &c. Scale, one-half. Henry Horan.
25703. Self-setting trap. To be set in mouth of rabbit-burrow. Scale, one-half. E. Herron.

Double box-traps.

25477. Double box-trap. Used in capture of hares, possums, &c. Scale, one-half. T. N. Woltz.

Door-traps.

Spring-door traps.

†† *Closed by falling of whole trap.*

Bowl-traps.

Cob-house bird-traps.

25659. Fall-trap. Used for partridges and other birds. Scale, one-half.
T. N. Woltz.

25705. Fall-trap. Used in capture of partridges, &c. Scale, one-half.
Henry Horan.

Pigeon-nets.

††† *Closed by falling of tide.*

Bar-weirs, arranged with the other weirs.

Sheaf-traps.

Sheaf-traps (New York Harbor).

33. CLUTCHING-TRAPS.

Noose-traps.

Snares:

Foot-path and barrier snares.

2033. Snare (made of sinew). Used in capture of lynxes, rabbits, &c.
Fort Resolution, H. B. T. R. Kennicott.

19063. Rabbit-snare. Coowoye Pi-Ute Indians. Pyramid Lake, Nevada.
Stephen Powers.

25660. Spring-trap (model). Used in capture of hares, grouse, &c. Scale,
one-half. E. Herron.

25479. Spring-trap (model). Used for capture of hares, grouse, &c. Scale,
one-half. T. N. Woltz.

25832. Model of grouse-snare. Yukon River, Alaska. W. H. Dall.

Springes.

“Round mouse-traps.”

Jawed traps.

“Steel traps:”

Newhouse traps.

25262. Newhouse trap. No. 0 for rats. Spread of jaws, $3\frac{1}{2}$ inches; strong
enough to hold muskrat. Oneida Community, N. Y.

25231. Newhouse trap. No. 1 for muskrats. Spread of jaws, 4 inches;
adapted to capturing the smaller fur-bearing animals. Oneida
Community, N. Y.

25260. Newhouse trap. No. $1\frac{1}{2}$ for minks and fishers. Spread of jaws, $4\frac{1}{2}$
inches; strong enough to hold fox or fisher. Oneida Community,
N. Y.

25259. Newhouse trap. No. 2, for foxes. With double spring; spread of
jaws, $4\frac{1}{2}$ inches; strong enough to hold an otter. Oneida Commu-
nity, N. Y.

Jawed traps.

"Steel traps:"

Newhouse traps.

25258. Newhouse trap. No. 3, for otters. Double spring; spread of jaws, 5½ inches. Oneida Community, N. Y.
25256. Newhouse trap. No. 4, for deer. Double spring; spread of jaws, 6½ inches. Oneida Community, N. Y.
25257. Newhouse trap. No. 4, for beavers. Double spring; spread of jaws, 6½ inches. Oneida Community, N. Y.
25255. Newhouse trap. No. 5, for bears. Spread of jaws, 11¾ inches; weight of each spring, 2 pounds and 10 ounces; weight of trap 17 pounds, suitable for taking the common black bear. Oneida Community, N. Y.
25254. Newhouse trap. No. 6, for grizzly bears and moose. Spread of jaws, 16 inches; weight of each spring, 6 pounds and 10 ounces; weight of trap with chain, 42 pounds; made throughout, except the pan, of wrought iron and steel; strong enough to hold the moose or grizzly bear. Oneida Community, N. Y.
29250. Spring fish-trap. (Patented Dec. 9, 1856.) Edwin W. Judge, New Haven, Conn.

Spring bird-nets.

(French bird-trap.)

13153. Spring bird-trap. Used in France. Dr. H. C. Yarrow, U. S. A.

34. FALL-TRAPS.

Crushing-traps.

Dead-falls.

Figure-four traps.

25749. Log dead-fall (model). Used in Mississippi Valley. Scale, 1 inch to the foot. Henry Horan.
15614. Fox-trap. Used by Mahlemut Eskimos. Henry W. Elliott.

Piercing-traps.

Spear-falls.

Mole-traps.

Harpoon-traps.

Spring-hooks.

Pickerel-hooks, arranged with other hooks.

35. MISSILE-TRAPS.

Cross-bow traps.**Spring-guns.**

36. ADHESIVE PREPARATIONS.

Bird-lime, &c.**Hoods, boots, &c.**

VII. APPARATUS FOR WHOLESALE DESTRUCTION.

37. POISONS.

Food poisons.

Phosphorus poisons.
 Strychnine.
 Arsenic.
 Corrosive sublimate.
 Cyanide of potassium.
 Opium poisons.

For obvious reasons this series is not exhibited.

Blood poisons: Woorara.

38. ASPHYXIATORS.

Apparatus for smoking out.

(**Apparatus for suffocating with fumes of sulphur.**)

Apparatus for drowning out.

39. TORPEDOES.

39½. STOMACH-SPRINGS.

Eskimo whalebone springs (used for killing bears).

7442. Stomach-springs. Used by Eskimo in capturing bears, &c. Fort Anderson, Arctic coast. R. McFarlane.

VIII. HUNTING-ANIMALS.

40. HUNTING-MAMMALS.

Dogs.

Hunting-leopard (*Cynailurus jubatus*).

Weasels and ferrets.

Otters.

41. ACCESSORIES TO HUNTING-DOGS.

Dog-whips.

Dog-whistles.

29255. Dog-call (double).	Edwin M. Judge, New Haven, Conn.
29256. Dog-call.	“ “
29257. Dog-call.	“ “
29258. Dog-call.	“ “
29259. Dog-call.	“ “

Dog-whistles.

29260. Dog-call.	Edwin M. Judge,	New Haven,	Conn.
29261. Dog-call.	"	"	"
29262. Dog-call for whip.	"	"	"
29254. Police-call.	"	"	"
29255. Railroad-call.	"	"	"

Dog-collars.**Dog-food.****Dog-carts.****Dog-muzzles.**

42. HUNTING-BIRDS.

Falcons.**Owls.**

Cormorants (*Carbo sinensis*). Used in fishing in China.

43. ACCESSORY TO HUNTING-BIRDS.

Hoods.**Perches.****Cormorant-collars.**

44. HUNTING-FISHES.

Remora (used in West Indies and Australia).

IX. DECOYS AND DISGUISES.

45. BAITES.

Natural baits.

Flies and other insects. (This should include a collection of those insects which, as the favorite food of fishes, are imitated in making artificial flies.) Arranged with hooks. (See under 29 a.)

Worms.

Mollusks.

Salted baits (prepared).

Menhaden.

Herring.

Squids.

Clams, long.

Clams, hen.

Pea-roe of cod (used in French sardine-fisheries, and largely exported).

Grasshopper paste, used as a substitute for pea-roe.

Tolling baits, "stosh," &c.

These articles, on account of their perishable nature, cannot well be exhibited.

Natural baits.

(Accessories.) Methods of preparing baits:

Bait-cutters.

Bait-mills.

Bait-ladles.

Wheelbarrows for bait-clams (Nantucket).

32740. Beach-cart. Nantucket, Mass. W. H. Chase, 2d.

Bait-boxes and cans.

25560. Five bait-boxes. Bradford & Anthony, Boston, Mass.

26394. Bait-box. Forest & Stream Publishing Company. Property of John
[A. Nichols, Syracuse, N. Y.]

26393. Minnow-pail. “ “

26692. Crab-can. “ “

25691. Grasshopper-can. “ “

Bait-needles.**Artificial baits.¹**Trolling-spoons.¹Spinners.¹Squids and jigs.¹“Bobs,” used in southern waters.¹Artificial flies.¹**Accessories to artificial baits.¹**a. Fly-hooks.¹b. Raw materials for making artificial flies.¹c. Tools for making artificial flies.¹**Pastes.****DECOYS.****Scent-decoys.****Sound-decoys.**

Animal-calls, whistles, &c.

7452, 2149. Deer-call. Eskimos. Mackenzie's River district. R. Mac-
Farlane.

2253. Deer-call. Eskimos. Mackenzie's River district. R. Kennicott.

Bird-calls.

26653. Turkey-call. Used in Illinois. J. W. Milner.

26654. Turkey-call. Used in Maryland. G. W. Woltz.

¹Arranged with hooks.

Sight-decoys.

Living decoy animals and birds.

Decoy-dogs, used in hunting ducks.

Stool-pigeons.

Tame decoy-ducks.

Tame decoy-brants.

Imitations of animals and birds.:

Decoy-waders (carved in wood).

25042. Black-breasted plover (*Squatarola helvetica*). P. Brasher, New York.
 25041. Long-billed curlew (*Numenius longirostris*). " "
 25043. Yellow-shanks (*Gambetta flavipes*). " "

Decoy-waders (stamped in tin).

25909. Black-breasted plover (*Squatarola helvetica*). Herman Strater & Sons,
 [Boston, Mass.
 25908. Golden plover (*Charadrius virginicus*) " "
 25906-7. Red-breasted snipe (*Macrorhamphus griseus?*). " "
 25910-11. Monstone (*Strepsilas interpres*). " "

These decoys are made hollow, stamped out in halves, hinged at head and tail to open and nest together. One dozen plover weigh 3 pounds, with box occupying a space of 8½ by 9 inches, 3 inches deep. Patented.

Decoy swimming-birds (made from the skins of birds).

7127. Skin of canvas-back duck (*Fuligula vallisneria*) stuffed with dry tulé grass and fitted for decoy with strings and weights. Pi-Ute Indians. Robert Ridgway.
 7128. Skin of red-head duck (*Fuligula ferina*, var. *americana*), fitted for use as decoy. Pi-Ute Indians. Robert Ridgway.
 7129. Same. Robert Ridgway.
 4783. Same. Pi-Ute Indians. Carson Lake, Utah. Capt. J. H. Simpson.
 19031. Skin of widgeon (*Mareca americana*), fitted for use as decoy. Cooyuwee Pi-Ute Indians. Pyramid Lake, Nevada. Native name, *Imoodoowe*. Stephen Powers.
 29532. Skin of a pin-tail duck (*Dafila acuta*), stuffed for use as a decoy. P. Louis Jouy, Washington, D. C.

Decoy swimming-birds (carved in wood).

25040. Brant (*Bernicla brenta*). P. Brasher, New York City.
 25035. Mallard (*Anas boschas*). Henry A. Stevens, Weedsport, N. Y.
 25242. " " Male. John Krider, Philadelphia.
 25241. " " Female. " "
 29540. Black duck (*Anas obscurus*). Francis Burritt, South Norwalk, Conn.
 25034. " " A. Stevens, Weedsport, N. Y.
 26051. Pin-tail duck (*Dafila acuta*). John Krider, Philadelphia.
 26054. Bald-pate duck (*Mareca americana*). Male. John Krider, Philadelphia.
 26055. " " Female. " "
 25038. " " P. Brasher, New York City.
 25031. Blue-wing teal (*Querquedula discors*). Henry A. Stevens, Weedsport, N. Y.

Sight-decoys.

Imitations of animals and birds:

Decoy swimming-birds (carved in wood).

25245. Blue-wing teal (*Querquedula discors*). Female. John Krider, Philadelphia.
25246. " " " Male. " "
25244. Green-wing teal (*Nettion carolinensis*). " " "
25243. " " " Female. " "
25039. Broad-bill duck (*Fuligula marila*). P. Bracher, New York City.
26058. " " " Male. John Krider, Philadelphia.
26059. " " " Female. " "
29541. " " " Francis Burritt, South Norwalk, [Conn.]
25029. Scaup duck (*Fuligula affinis*). Henry A. Stevens, Weedsport, N. Y.
25032. Red-head duck (*Fuligula ferina*, var. *americana*). Henry A. Stevens, [Weedsport, N. Y.]
26056. " " " Male. John Krider, [Philadelphia.]
26057. " " " Female. "
25033. Canvas-back duck (*Fuligula vallisneria*). Henry A. Stevens, Weedsport, N. Y.
25037. " " " Male. John Krider, Philadelphia.
26053. " " " Female. " "
25036. Whistle-wing duck (*Bucephala americana*). Henry A. Stevens, Weedsport, N. Y.
25030. Butter-ball duck (*Bucephala albeola*). Henry A. Stevens, Weedsport, N. Y.

Decoy swimming-birds (stamped in tin, with wooden bottoms and head balance weights).

26047. Mallard (*Anas boschas*). Male. Herman Strater & Sons, Boston.
25905. " " " Female. " "
26048. Black duck (*Anas obscura*). Male. " "
26049. " " " Female. " "
26045. Red-head duck (*Fuligula ferina*, var. *americana*). Male. Herman Strater & Sons, Boston.
26046. Red-head duck (*Fuligula ferina*, var. *americana*). Female. Herman Strater & Sons, Boston.
26043. Canvas-back duck (*Fuligula vallisneria*). Male. Herman Strater & [Sons, Boston.]
26044. " " " Female. "
25901. Whistle-wing duck (*Bucephala americana*). Male. "
25902. " " " Female. "
25903. Sheldrake (*Mergus americanus*). Male. "
25904. " " " Female. "
25900. Surf duck (*Ædemia perspicillata*). "
26702. Decoys. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Imitations of fishes.

29366. Lure-fish. D. H. Fitzhugh, Bay City, Mich. Used in fishing through the ice for salmon-trout.

Sight-decoys.

Imitations of fishes.

29294. Lure-fishes. William Morris, Lake City, Mich. Used in fishing through the ice for pickerel.

These lure-fishes are used to decoy large fish under holes in the ice so that they may be within reach of the spear.

Blanket decoy (for antelopes).

Lanterns and other apparatus for fire hunting and fishing.

Lanterns for still-hunting.

25238. Centennial dash-lamp. For sportsman's hunting-wagons. White Manufacturing Company, Bridgeport, Conn.

25239. Dash-lamp. Used for hunting and fishing. White Manufacturing Company, Bridgeport, Conn.

25236. Jack-lamp. For night-hunting and general camp uses. White Manufacturing Company, Bridgeport, Conn.

25240. Johnson's jack-lamp support. For night hunting and fishing. White Manufacturing Company, Bridgeport, Conn.

25237. Fishing-lamp. White Manufacturing Company, Bridgeport, Conn.

Lanterns for weequashing, or fire-fishing, for eels.

29365. Boat-lanterns. Used in bow of boat in weequashing or spearing eels by night. Southern New England, James H. Latham, Noank, Conn.

12107. Birch-bark used for torchlight fishing. Passamaquoddy Indians. Eastport, Me. Dr. E. Palmer.

32739. Torch for night fishing. Halifax, N. S. Capt. H. C. Chester.

47. COVERS. •

Movable covers.

Masks.

Deer heads and antelope heads.

8420. Antelope decoy. Made from head of prong-horn antelope (*Antilocapra americana*). Prescott, Ariz. Dr. E. Coues, U. S. A.

— . Antelope decoy. Arizona. Dr. J. B. White, U. S. A.

5537. Deer decoy. Made from head of mule-deer (*Cervus macrotis*). Apache Indians. Edward Palmer.

Movable copses.

Covers for hunters.

Covers for boats.

Stationary covers.

Hunting-lodges.

X. PURSUIT, ITS METHODS AND APPLIANCES.

48. METHODS OF TRANSPORTATION.

Personal aids.

Snow-shoes.

Skates.

Alpenstocks and staves.

Portable bridges.

Animal equipments.

Harness:¹

Horse-trappings.

Dog-harness.

Girths, sinches.

Bits, cabrestos, spurs.

Saddles:¹

Riding-saddles.

Pack-saddles.

Aparejos.

Riding-pads (for buffalo hunting).

Fur pack-saddle (Hudson's Bay Territory).

Vehicles:¹

Deer-sledges.

Dog-sledges.

Wagons.

Dog-carts.

Fish-carts, used in Nantucket.

Boats.

Hunting-boats, fishing-boats:

Birch canoes.

Birch-bark canoes.

Used by Indians in hunting and fishing.

26615. Bark canoe. Passamaquoddy Indians. Eastport, Me. E. Palmer.

26614. Bark canoe. Sixteen feet long, thirty-seven inches wide. Montagnard Indians of Besamis. Labrador. R. H. Powell.

7630. Bark canoe. (Model.) Lower Ingalik, Alaska. W. H. Dall.

858. Bark canoe. (Model.) Chippeway Indians, Athabasca and Great Slave Lakes. B. R. Ross.

2358. Bark canoe. (Model; scale, about 1 inch to foot.) Northeastern America. J. Varden.

¹ Arranged with Ethnological series.

Boats.

Birch-bark canoes.

859. Bark canoe. (Model.) Slave Indians of Mackenzie's River. Fort Simpson, H. B. T. B. R. Ross.
 641. Bark canoe. (Model.) Upper Columbia River. G. Gibbs.
 12107. Birch-bark, used in manufacture of canoes. Passamaquoddy Indians. Eastport, Me. E. Palmer.

Wooden sea canoes.

Used by Indians of Northwest coast in hunting and fishing.

20592. Wooden canoe. Northwest coast. J. G. Swan.
 13102. Wooden canoe. (Model.) Queen Charlotte Island. J. G. Swan.
 2616. Wooden canoe. (Model.) Northwest coast. U. S. Exploring Expedition. Capt. Charles Wilkes, U. S. N.
 20592. Wooden canoe. (Model.) Bella Bella, B. C. J. G. Swan.
 2583. Wooden canoe. (Model.) Oregon. U. S. Exploring Expedition. Capt. Charles Wilkes, U. S. N.
 1785. Wooden canoe. (Model.) Northwest coast. Dr. George Suckley.
 11082. Wooden canoe. (Model.) Alaska. Lieutenant Ring, U. S. N.
 20895. Wooden canoe. (Model.) Haidah Indians. Prince of Wales Island, Alaska. J. G. Swan.

Wooden canoes.

Used by Indians of the Northwest coast in whaling and sea fisheries.

26785. Wooden canoe. (60 feet long.) British Columbia. J. G. Swan.
 16269. Wooden canoe. (Model.) Sitka, Alaska. W. H. Dall.
 21595. Wooden canoe. (Model.) Alaska. Dr. J. B. White.
 21594. Wooden canoe. (Model.) Alaska. "
 639. Wooden canoe. (Model.) Northwest coast. George Gibbs.
 7285. Wooden canoe. (Model.) Neah Bay, Washington Territory. J. G. Swan.
 16269. Wooden canoe. (Model, painted.) Ihliuket Indians. Sitka, Alaska. W. H. Dall.
 640. Wooden canoe. (Model.) Northwest coast. George Gibbs.
 1871. Wooden canoe. (Model.) Vancouver's Island. Dr. C. B. Kennerly.
 811. Wooden canoe. (Model.) "
 26761. Wooden canoe. Model of Haidah canoe (with masts and pushing-sticks, for traveling, fishing, &c.). Queen Charlotte Island. J. G. Swan.
 26760. Wooden canoe. Model of Haidah canoe (for deep sea and war). Queen Charlotte Island. J. G. Swan.
 26763. Wooden canoe. Model of wooden canoe (with masts, paddles, pushing-sticks, and ivory harpoons). J. G. Swan.
 26762. Wooden canoe. Model of Cogwell canoe (for deep sea and war). Flathead Indians. J. G. Swan.
 26787. Wooden canoe. British Columbia. J. G. Swan.
 26786. Wooden canoe. "
 26785. Wooden canoe. Dug-out canoe (60 feet long). British Columbia. J. G. Swan.

Boats.**Kyaks or bidarkas.**

Used by Eskimos of Arctic America in hunting and fishing.

26617. Kyak. (13 feet 9 inches long, 30 inches wide.) Northwest coast.
Sitka, Alaska. William Burling.
14971. Kyak. (Model.) Alaska. W. H. Dall.
16275. Kyak. (Model.) Kodiak. “
14971. Kyak. (Model, one hole.) Alaska. W. H. Dall.
21609. Kyak. (Model, one hole.) Alaska. Dr. J. B. White.
1127. Kyak. (Model, two-hole.) Koloshes, Aleutian Islands. Capt. J.
R. Sands.
14970. Kyak. (Model.) Aleutian Islands. W. H. Dall.
21604. Kyak. (Model, 2-hole.) Alaska. Dr. J. B. White.
21605. Kyak. (Model, 3-hole.) Alaska. “
21610. Kyak. (Model, 3-hole.) Alaska. “
21606. Kyak. (Model, 4-hole.) Alaska. “
8788. Kyak. (Model.) Unabeet Eskimo. Norton Sound, Alaska. W.
H. Dall.
26618. Kyak. Eighteen feet long, 22 inches wide. Greenland. Eskimo Joe.
562. Kyak. (Model.) East coast, Upernavik. Dr. Hayes.
14750. Kyak. (Model, with bird-spear, harpoon, and seal-skin float.)
Eskimos, Tusiack, North Greenland. Prof. S. F. Baird.
2230. Kyak. (Model, with bird-spear, lances, and spear-rest.) Anderson
River Eskimos. Mackenzie's River district. R. MacFarlane.

Umiaks or bidarras.

Used by Eskimos in whaling and sea fisheries.

1098. Umiak. (Model.) Fort Anderson, H. B. T. Robert MacFarlane.
15618. Umiak. (Model of frame.) Saint Lawrence Island, Alaska. H. W.
Elliott.

Indian raft-boats.

Used in hunting and fishing.

19028. Raft of tulé grass. (Model.) Pi-Ute Indians. Pyramid Lake, Nev.
Stephen Powers.

Dug-out canoes.

Used by Indians of Pacific coast.

21358. Dug-out canoe. (Model.) Hoopah Indians, Trinity River, Cal. S.
[Powers.]
21359. Dug-out canoe. (Model.) “ “

Dug-out canoe.

Used in river fisheries of the Southern States.

25728. Dug-out canoe. (Model; scale, inch to foot.) Saint John's River,
Florida. Francis C. Goode.

Boats.

Portable boats.

29506. Hegeman portable folding boat. Length, 10 feet; width, 3 feet.
Hegeman Portable Folding Boat Company, Ballston Spa, N. Y.

Directions for setting up boat:

1. Unfold the frame.
2. Place the knees and seats in position before fastening the bottom-end section at the ends of the boat.
3. Fasten the bottom-end section to the ends of the boat by the thumb-screws.
4. Place on the canvas with the cords and tie in a single loop (or bow knot).

22218. Model of Colvin portable canvas boat. (Patented Oct. 6, 1874.) R. A. Scott & Co., Albany, N. Y.

"This boat consists of a canvas exterior made thoroughly water-proof by a preparation which preserves the strength of the canvas and prevents decay and oxidation. It is shaped like a canoe, sharp at both ends, and cuts the water handsomely. Along the sides and bottom are leather thongs, by which the boughs and limbs cut for frame can be lashed securely to the canvas, with the assistance of the four leather framing blocks or sockets (two for each end), which connect the stem and stern posts (or prow pieces) with the keelson, and it can be readily put together anywhere in the woods, no tools being required for the purpose, excepting such as are *always carried* by a party of sportsmen, or others, an ax or hatchet only being needed. The whole of it can be packed away in a space 24 inches long, 6 inches wide, and 3 inches thick. The size now made (No. 3), although but 12 feet long, will carry six men, or four men with their necessary baggage, and weighs but 12 pounds when rolled up. It has been tested in a heavy sea with a frame of green boughs cut only two hours before, and carried a weight of 700 pounds safely and easily."

25879-26-112. Model of Fenner's portable boat. With canvas bottom. C. A. Fenner, Mystic River, Connecticut.

One of these models is shown closed up in its case ready for transportation, the other set up for use.

Canoes.

26619. Paper canoe "Maria Theresa." N. H. Bishop, Lake George, N. Y.

Designed by Rev. Baden Powell, of England; built by E. Waters & Sons, of Troy, N. Y. Dimensions: length, 14 feet; beam, 28 inches; depth (amidship), 9 inches; weight of canoe, 58 pounds; weight of canoeist, 130 pounds; weight of outfit, 90 pounds; total, 278 pounds. Rowed by Mr. N. H. Bishop (from Troy, N. Y., 2,000 miles) while on his first geographical journey from the Gulf of Saint Lawrence to the Gulf of Mexico, 2,500 miles, during 1874 and 1875. Since the completion of the voyage all injuries the hull sustained were remedied by the simple application of a sheet of paper and a coat of shellac varnish to the outside of the boat. When in use a piece of canvas covers the undecked part of the canoe and keeps the interior dry. Water-courses traversed by Mr. Bishop during 1874 and 1875: From Quebec, rivers Saint Lawrence and Richelieu,

Boats.**Canoes.**

Lake Champlain, and canal to Albany; the Hudson, Kill Von Kull, and Raritan rivers and canal, and the Delaware to Philadelphia; Delaware River and bay to Cape Henlopen, and interior salt-water passages on coast of Maryland and Virginia to Norfolk; the Elizabeth River and canal to Currituck Sound, Albemarle, Pamlico, Cove, Bogue, Stump, and other sounds, to near Wilmington, N. C.; Waccamau River to Georgetown, S. C.; by salt-water creeks, rivers, bays, and sounds along the coast of the United States to Florida; from Atlantic coast, via Saint Mary's and Suwannee rivers, to Gulf of Mexico.

26628. Rice Lake canoe. William English, Peterborough, Ontario.

Coracles or skin boats.

9785. Skin boat. Hidatza (*Gros Ventres*) Indians. Fort Buford, Dakota.
Dr. W. Mathews, U. S. A.

Whale boat (used in whale fisheries).

24880. Whale-boat. (Model, with all fittings; scale, 1 inch to foot.) Capt. L. Howland, New Bedford, Mass.

24868. Whale-boat. (Model.) C. H. Shute & Son, Edgartown, Mass.

26839. Whale-boat, 35 feet long. Williams, Haven & Co., New London, Conn.

This boat is mounted with all the gear used in the capture of the whale.

Seine-boat.

25827. Model of Cape Ann seine-boat. Higgins & Gifford, Gloucester, Mass.

This model shows the fittings manufactured for seine-boats by Wilcox, Crittenden & Co., Middletown, Conn., to wit: cleat, stern-cap, snatch-block for pursing-seine, steering-oarlock with stern socket, socket used on side of stern for steering, davit-iron, tow-iron, tow-link and hook, belaying-pin, oar-holder, davit-guard and step-plate, breast-brace and eye-plate or oar-holder swivels, all of which are shown in their proper places by full-size models.

Dorys, sharpies, and dingies.

25657. Nantucket dory. (Model; scale, 1 inch to the foot.) William H. Chase.

Used in gathering clams for codfish-bait.

12678. New England dory. (Models; scale, 1 inch to the foot.) Starling & Stevens, Ferryville, Me.

13493. New England dory. (Model; scale, 1 inch to the foot.) Starling & Stevens, Ferryville, Me.

Used in coast fisheries and bank cod fisheries.

24752. Connecticut sharpie. (Scale, 1 inch to the foot.) Capt. H. C. Chester, Noank, Conn.

Boats.

Italian fishing-boats.

Used in harbor fisheries of California.

22213. Italian fishing-boat. (Model; felucca rig.) San Francisco. Livingston Stone.
 [ingston Stone.
 22214. Italian fishing-boat. (Model; felucca rig.) " "
 22215. Italian fishing-boat. (Model; felucca rig.) " "
 22217. Italian fishing-boat. (Model.) Chinese fishing-boat. San Francisco. Livingston Stone.

Pinkies.

25729. Martha's Vineyard pinkie-boat. (Model; scale, $\frac{1}{2}$ inch to the foot.) William H. Chase.
 Used in shore fisheries.
 25898. Norman's Land pinkie-boat. (Model; scale, inch to the foot.) Capt. William Cleveland, Vineyard Haven, Mass.
 Used in cod and coast fisheries.

Hunting-skiffs.

Used for hunting and fishing in mountain lakes.

26621. Adirondack boat. Full size. Frederick D. Graves, maker, Boston, Mass.
 25631. Adirondack boat. (Model; scale, $\frac{1}{2}$ inch to the foot.) Frederick D. Graves, maker, Boston, Mass.
 Dimensions: 15 feet long, 3 feet 6 inches wide; weight, 75 to 80 pounds. For the use of sportsmen this boat is claimed to excel, on account of its *extreme lightness* and *durability*, one man being able by means of a yoke to carry the same to any distance without fatigue. This boat is also adapted for family purposes, the *patent rowlock* enabling the most inexperienced rower of either sex to propel the boat with ease and perfect safety, and without any possible chance of losing the oars.
 25899. Ausable boat. (Model.) D. L. Fitzhugh, jr., Bay City, Mich.
 Used in trout and grayling fishing, with well for live fish.
 Length, 16 feet; sides twelve inches high inside, 2 feet 10 inches wide on top, 2 feet 4 inches at bottom.
 26624. Saint Lawrence boat. (Length, 19 feet; width, 43 inches.) Henry Sweetman, Clayton, N. Y.
 Used in trolling in the Thousand Island region. Length, 19 feet; width, 43 inches.
 25053. Alexandria Bay boat. (Model.) Cornwall & Walton, Alexandria, N. Y.
 Used for hunting and fishing in the Adirondacks and the Saint Lawrence.

Sea boats.

24999. New England surf-boat. (Model; scale, 2 inches to the foot.) Cragin & Sheldon, makers, Boston, Mass.
 Used in harbor, lake, and river fisheries.
 25001. Whitehall boat (18 feet). (Model; scale, 2 inches to the foot.) Cragin & Sheldon, Boston, Mass.
 25000. Ship's yawl. (Model; scale, 2 inches to the foot.) Cragin & Sheldon, Boston, Mass.
 Carried by coasters and fishing smacks.

Boats.

Sea boats.

22216. San Francisco yawl. (Model.) Livingston Stone.
Used by Italian fishermen on coast of California.
25028. Nantucket Harbor boat. (Model; scale, 1 inch to the foot.) W. H. Chase.
Used in harbor fishing.

Oyster-canoes.

25003. Chesapeake oyster-canoe (made from two logs). (Model; scale, 1 inch to the foot.) Major T. B. Ferguson, Maryland Fish Commission.
Used for oyster-raking in Chesapeake Bay.
25002. Chesapeake canoe-pungy. (Model; scale, 1 inch to the foot.) Major T. B. Ferguson, Maryland Fish Commission.
Used in oyster-dredging in Chesapeake Bay.

Ducking-boats.

25658. Egg Harbor boat. (Model; scale, inch to the foot. P. Brasher, New York City.
Used for hunting in marshes and bays.
26620. Cedar duck-boat "Central Republic." Built by Capt. George Bogart, surfman, Manahawken, Ocean County, New Jersey. Dimensions: 12 feet long, beam 3 feet 11 inches, depth 12 inches. N. H. Bishop, Lake George, N. Y.
This is the boat in which Mr. Nathaniel H. Bishop, of Lake George, Warren County, New York State, rowed from Pittsburg, Pa., via Ohio and Mississippi Rivers and the Gulf of Mexico (2,600 miles) to Cedar Keys, Fla., while on his second geographical expedition during 1875-76.
26623. New Jersey sneak-box. (Model; scale, 1 inch to the foot.) John D. Gifford, Tuckerton, N. J.

These boats are from twelve to fourteen feet in length; the shelving or sideboards on the stern of the boat are used to hold the decoys while the hunter rows to and from the shooting ground. Used by gunners on Barnegat and Little Egg Harbor Bays, New Jersey.

26622. Maryland ducking-sink. (Model; scale, 1 inch to foot.) J. G. Adam.
Used by gunners on the Potomac River and Chesapeake Bay.

Cat-rigged fishing-boats.

12099. Bay of Fundy cat-boat. (Model; scale, $\frac{1}{2}$ inch to the foot.) Captain Hallet, Eastport, Me.
Used in herring fisheries.
25026. Martha's Vineyard cat-boat. (Model; scale, $\frac{1}{2}$ inch to the foot.) William H. Chase.
Used in coast fisheries.
29537. Providence River cat-boat. (Model; scale, inch to the foot.) J. M. K. Southwick, Newport, R. I.

These boats vary in length from 14 to 19 $\frac{1}{2}$ feet, and cost from \$225 to \$425. Used by lobster fisheries and hook and line fisheries. Built by J. U. Stoddard.

26585. Two-masted cat-boat. (Model; scale, about $\frac{1}{2}$ inch to the foot.) Johnson & Young, Boston, Mass.
Used in New England lobster fisheries.

Boats.**Schooner-rigged fishing-vessels.**

26809. Noank lobster-boat. (Model.) Capt. H. C. Chester, Noank, Conn.
 25825. Block Island boat. (Model; scale, $\frac{1}{2}$ inch to the foot.) Capt. H. C. Chester.
 Used in cod fisheries and shore fisheries.
25730. Massachusetts schooner-smack. (Model; scale, $\frac{1}{8}$ inch to the foot.) William H. Chase, Boston, Mass.
 Used in mackerel fisheries and winter oyster trade.
25731. Maine schooner-smack. (Model; scale, $\frac{1}{4}$ inch to the foot.) Capt. H. C. Chester.
 Used in bank cod fisheries and eastern mackerel fisheries.
26536. Oyster-schooner. (Model; scale, 1 inch to the foot.) T. B. Ferguson, Maryland Fish Commission.
 Used in oyster-dredging in Chesapeake Bay.
26584. Schooner-smack. (Model; scale, about $\frac{1}{2}$ inch to the foot.) Johnson & Young, Boston, Mass.
 Employed in the New England lobster fisheries.
25727. Noank well-smack. (Model; scale, $\frac{1}{2}$ inch to the foot.) H. C. Chester, Noank, Conn.
 Supplies fresh fish to local markets and New York iced-fish trade.
24883. Schooner-yacht. (Model; scale, $\frac{1}{8}$ inch to the foot.) William H. Chase.
 Used in pursuit of sword-fish and blue-fishing.
22220. Gloucester schooner-smack, style 1835. (Model.) M. M. McFadyn.
 First form of sharp-bowed schooner, out of which the present Gloucester schooner was developed.
22219. Old-fashioned topmast schooner. (Model.) A. R. Crittenden.
26584. Schooner-smack. (Model; scale, about $\frac{1}{2}$ inch to the foot.) Johnson & Young, Boston, Mass.
 Used in the New England lobster fisheries.

Ships.

25723. Whaling-ship. (Model.) C. H. Shute & Son, Edgartown, Mass.
 Crew engaged in cutting in the blubber.
24881. Whaling-bark. (Model; scale, $\frac{1}{4}$ inch to the foot.) U. S. Fish Commission.
 Used in northern whale fisheries.
24882. Merchant ship. (Model; scale, $\frac{1}{8}$ inch to the foot.) U. S. Fish Commission.
 Used in foreign trade.

Boats of Great Lakes.

26625. Mackinaw boat. (Model.) J. W. Milner.
 Used in fisheries of the upper great lakes.
25626. "Norwegian boat" (Model.) J. W. Milner.
 Used in Lake Michigan fisheries.
26790. Lake Erie pound boat. (Model.) J. W. Milner.
26627. Square-stern boat. (Model.) J. W. Milner.
 Used in Great Lake fisheries.

Steamers.

25824. Menhaden steamer with seine-boats. (Model.) Joseph Lawler, Bristol, Me.
 —. Gill-net steamer. (Model.) N. Crooks, Milwaukee, Wis.

Boats.

Steamers.

25027. Gill-net steamer. (Model; scale, 1 inch to 5 feet 5 inches.)
Used in Lake Michigan fisheries.
25027. "Camel" floating-dock. (Model; scale, 1 inch to 5 feet 5 inches.)
William H. Chase.
26808. "Camel" floating-dock. Model of steamship Cuba. Deposited by
F. McFadden, Philadelphia.
Built in 1842 for floating loaded ships over Nantucket bar.

Apparatus accessory to rigging fishing-vessels.

Blocks.

25821. Three single iron-sheaved, plain-hook tackle blocks. Walter Coleman & Sons, Providence, R. I.
25820. Two double iron-sheaved, plain-hook tackle blocks. Walter Coleman & Sons, Providence, R. I.
25803. "Dead-eye" block. Used to secure the standing or fixed rigging to the hull of the vessel. Walter Coleman & Sons, Providence, R. I.
25804. "Heart" block. Used to secure the standing or fixed rigging to the hull of the vessel. Walter Coleman & Sons, Providence, R. I.
25805. "Bull's-eye" block. Used to secure the standing or fixed rigging to the hull of the vessel. Walter Coleman & Sons, Providence, R. I.
25819. One single brass-sheaved, sister-hook tackle block. Walter Coleman & Sons, Providence, R. I.
25152. Series of boat-blocks. Used on small fishing-boats around Cape Cod and Newport. Wilcox, Crittenden & Co., Middletown, Conn.
25817. One single brass-sheaved, sister-hook tackle block. Walter Coleman & Sons, Providence, R. I.
25818. One double iron-sheaved, sister-hook tackle block. Walter Coleman & Sons, Providence, R. I.
25812. Round block. For jib-sheets and small craft. Walter Coleman & Sons, Providence, R. I.
25816. Two double brass-sheaved, plain-hook tackle block. Walter Coleman & Sons, Providence, R. I.
25815. Common iron sheave. Walter Coleman & Sons, Providence, R. I.
25814. Plain brass sheave. Walter Coleman & Sons, Providence, R. I.
25813. Patent brass-roller sheave. Walter Coleman & Sons, Providence, R. I.
29444. Improved swivel-hook. For blocks and general use. Daniel Walker, Providence, R. I.

Clews and hanks.

25139. Ship's clew for courses. Wilcox, Crittenden & Co., Middletown,
[Conn.]
25140. Earing-ring. " "
25141. Throat-ring. " "
25221. Sail-clew. " "
25135. Series of spectacle or fore-and-aft clews. With patent clew-thimbles. Wilcox, Crittenden & Co., Middletown, Conn.
25136. Improved heart-clew. Wilcox, Crittenden & Co., Middletown, Conn.
25142. Tack-ring. " "
25137. Series of topsail clew-bows. " "
25138. Series of clew-bars. " "

Apparatus accessory to rigging fishing-vessels.**Clews and hanks.**

29475. Clement's patent self-adjusting jib-hank. Wilcox, Crittenden & Co., Middletown, Conn.
25143. Jib-head, with patent clew-thimble, used where the jib has been stretched too much; the jib is shortened at the head; and the jib-head is attached to the sail. Wilcox, Crittenden & Co., Middletown, Conn.
25803. Jib-hank. Goes on jib-stay to hold the sail to it. Walter Coleman & Sons, Providence, R. I.
25777. Wooden jib-hank. Samuel Elwell, jr., Gloucester, Mass.
25156. Series of single-stay jib-hanks. Wilcox, Crittenden & Co., Middletown, Conn.
25157. Series of double-stay jib-hanks. " "
25215. Self-adjusting jib-hank for double stay. Clement's patent. Wilcox, Crittenden & Co., Middletown, Conn.
25214. Patent self-adjusting jib-hank. Clement's patent. Wilcox, Crittenden & Co., Middletown, Conn.
29460. Jib-sheet block (peculiar to Gloucester fishing-vessels). Samuel Elwell, jr., Gloucester, Mass.
25158. Pratt's patent jib-hank or yacht-jib. Wilcox, Crittenden & Co., [Middletown, Conn.]
25207. Hook-and-eye for bonnet of jib. " "

Chocks.

29468. Line-chock for whale-boat. Provincetown style. William W. Smith, Provincetown, Mass.
25180. Line-chock for whale-boat. Wilcox, Crittenden & Co., Middletown, [Conn.]
25216. Bow-chocks. " "
25195. Boat-chocks. " "

Boat-hooks.

25923. Whaler's large-ring boat-hook. E. B. & T. Macy, New Bedford, Mass.
25614. Whale-boat boat-hook (peculiar to New Bedford). Humphrey S. Kirby, New Bedford, Mass.
25196. Series of wrought-iron boat-hooks. Wilcox, Crittenden & Co., [Middletown, Conn.]
25200. Boat-hook for gunboat. " "
25223. Boat-hook. U. S. Fish Commission (deposited).
25197. Double Navy boat-hooks with ball points. Wilcox, Crittenden & [Co., Middletown, Conn.]
25198. Series of Navy boat-hooks with ball points. " "
25199. Series of sharp-pointed boat-hooks. " "

Belaying-pins.

25161. Series of belaying-pins. Wilcox, Crittenden & Co., Middletown, [Conn.]
25169. Belaying-pin for Cape Ann seine-boat. " "
25763. Two belaying-pins. Samuel Elwell, jr., Gloucester, Mass.

Apparatus accessory to rigging fishing-vessels.

Riggers' hooks.

25194. Deck or hammock hook. Wilcox, Crittenden & Co., Middletown,
[Conn.]
25195. Hammock-hook. " " "
25206. Series of riggers' sister-hooks. " " "
25145. Wide-mouthed single-hooks, or Cape Ann bonnet-hooks. Wilcox,
[Crittenden & Co., Middletown, Conn.]
29478. Bonnet-hook and grommet. " " "
29452. Bonnet-hook-and-eye, for removing the jib. Wilcox, Crittenden &
[Co., Middletown, Conn.]
25155. Series of hooks and thimbles. " "
25943. Purrel hooks. S. Elwell, jr.
25144. Sister-hooks. Wilcox, Crittenden & Co., Middletown, Conn.
25150. Sailmaker's bench-hook. " "
25149. Sailmaker's heaver. " "
25207. Hook-and-eye for bonnet of jib. " "
25185. Hook-and-eye plate. " "

Grommets.

25116. Series of galvanized-iron sail-grommets (Wilcox's patent). Wilcox,
Crittenden & Co., Middletown, Conn.
25117. Series of brass sail-grommets (Wilcox's patent). Wilcox, Crittenden
& Co., Middletown, Conn.
25118. Series of brass grommets. Conical point, rolled rim. Wilcox, Crit-
tenden & Co., Middletown, Conn.
25119. Series of metallic grommets. First used in America. Wilcox, Crit-
tenden & Co., Middletown, Conn.
25120. Series of brass grommets. First patented in America. Wilcox, Crit-
tenden & Co., Middletown, Conn.
25121. Rope-yarn grommets (with worked holes showing mode of use).
Wilcox, Crittenden & Co., Middletown, Conn.
25128. Series of light, galvanized grommet-rings. Wilcox, Crittenden &
Co., Middletown, Conn.
25129. Series of heavy galvanized sail-thimbles. Wilcox, Crittenden &
Co., Middletown, Conn.
25130. Series of heavy iron sail-thimbles (Navy pattern). Wilcox, Critten-
den & Co., Middletown, Conn.
25122. Galvanized-iron ring grommet, with worked holes showing mode of
use. Wilcox, Crittenden & Co., Middletown, Conn.
25123. Series of buntline leaders and earing grommets. Wilcox, Critten-
den & Co., Middletown, Conn.
25124. Series of eyelet grommets. Used to line worked holes and couplings
to Wilcox's patent grommets. Wilcox, Crittenden & Co., Middle-
town, Conn.
25125. Setting-die. Used for inserting eyelets. Wilcox, Crittenden & Co.,
Middletown, Conn.
25126. Cutting-punch. Used for cutting grommet-holes. Wilcox, Critten-
den & Co., Middletown, Conn.
25127. Series of heavy grommet-rings. Used for earings. Wilcox, Crit-
tenden & Co., Middletown, Conn.
25131. Series of light iron sail-thimbles. Wilcox, Crittenden & Co., Mid-
dletown, Conn.

Apparatus accessory to rigging fishing-vessels.**Grommets.**

25132. Series of throat-thimbles. Gloucester pattern. Wilcox, Crittenden & Co., Middletown, Conn.
 25133. Series of reef-tackle or saddle-thimbles. Wilcox, Crittenden & Co., Middletown, Conn.
 25134. Series of brass sail-thimbles. Wilcox, Crittenden & Co., Middle-
 [town, Conn.
 25152. Series of open or riggers' thimbles. " "
 25153. Series of wire-rope thimbles. " "

Anchors.

25162. Boat-anchor. Wilcox, Crittenden & Co., Middletown, Conn.
 25163. Grappling-iron for dory. " "
 25219. Wooden killick or coast anchor. H. C. Chester, Noank, Conn.
 29249. Series of sailors' palms (from best to the poorest). Wilcox, Crittenden & Co., Middletown, Conn.
 29423. Sailor's palm (left hand). Wilcox, Crittenden & Co., Middletown,
 [Conn
 29424. Sailor's roping palm, A 1 (right hand). " "
 29454. Superior cast-steel sail-needles. " "

Mast-gear.

25802. Six "purrel trucks." Used on a rope around the mast to keep the gaff on the mast. Walter Coleman & Sons, Providence, R. I.
 25807. Mast-hoop. Used to hold the sail to the mast. Walter Coleman & Sons, Providence, R. I.
 25808. Lace trucks. Used on the foot of sail to attach it to the boom. Walter Coleman & Sons, Providence, R. I.
 25159. Series of boat-mast hoops. Wilcox, Crittenden & Co., Middletown, Conn.
 25810. Mast-head truck. Used on top of mast to display bunting and signals. Walter Coleman & Sons, Providence, R. I.
 25811. Mast-head ball. Used on top of the topmast to display bunting and signals. Walter Coleman & Sons, Providence, R. I.
 29480. Mast-head gear for dory. Amasa Taylor, Provincetown, Mass.
 29481. Mast and boom attachment for dory. " "
 29484. Mast and gaff attachment for whale-boat (new style). Used by Provincetown whalers. Wilcox, Crittenden & Co., Middletown,
 [Conn.
 25181. Mast-hinge for whale-boat. " "

Leaders and foot-stops.

25604. Series of sail-leaches and boom foot-stops. Used by Newport smackmen. J. M. K. Southwick, Newport, R. I.
 25193. Boom foot-stops. Wilcox, Crittenden & Co., Middletown, Conn.
 25181. Mast-hinge for whale-boat. " "
 29450. Fair-leader. Used on the booms of Gloucester vessels. Samuel Ellwell, jr., Gloucester, Mass.
 29463. Patent topsail travelers. Used on square-rigged vessels. Wilcox, Crittenden & Co., Middletown, Conn.
 29449. Mast-hook clutch. E. A. Sawyer, Portland, Me.

Apparatus accessory to rigging fishing-vessels.

Boat-builders' materials.

25170. Ring-bolts. Wilcox, Crittenden & Co., Middletown, Conn.
 25201. Series of screw eye-bolts. " " "
 25202. Series of screw ring-bolts. " " "
 25203. Series of ring-bolts. " " "
 25211. Common oval head clinch boat-nail. Wilcox, Crittenden & Co.,
 [Middletown, Conn.]
 25212. Chisel-point clinch boat-nails. "
 25213. Countersunk clinch boat-nails. "
 25220. Series of boat-rivets. "
 25223. Washers or clinch-rings for rivets. "
 25178. Stem cap for Cape Ann seine-boat. "
 25173. Davit-guard and step-plate for Cape Ann seine-boat. "
 25175. Eye-plate or oar-holder swivels for Cape Ann seine-boat. "
 25176. Gunwale supporter for Cape Ann seine-boat. "
 25173. Davit-guard and step-plate for Cape Ann seine-boat. "
 25174. Breast-brace for Cape Ann seine-boat. "
 25166. Davit-iron for Cape Ann seine-boats. "
 25167. Tow-iron for Cape Ann seine-boats. "
 25168. Tow-link and hook for Cape Ann seine-boat. "
 29482. Boom-rest or crotch-socket. Used on the taffrail of Cape fishing-
 vessels when they are "laying to" on George's Banks. Theo.
 Brown, Wellfleet, Mass.
 25204. Water-deck iron. Wilcox, Crittenden & Co., Middletown, Conn.

Rudder-fixtures.

29496. "W. N. Clark's rudder-hanger." (Patented September 3, 1867.)
 James B. Clark, Chester, Conn.

"Advantages claimed for this hanger: To ship the rudder one has only to enter the tongue (which has the rudder already attached) in the grooved plate from the top just far enough to get it steady, and then let it down, when it will go to its place without further care. Hence arises the first great advantage which this hanger possesses over the old way, viz, the ease and dispatch with which the rudder can be shipped under all circumstances.

Every boatman knows the trouble he has been to, at times, in trying to ship his rudder, while in a seaway, in the dark, or in muddy water, when the eyes in the boat could not be seen; often being obliged to reach down with his hand to get the lower pintle entered.

From the quickness with which the rudder can be shipped, in any position of the boat, and under any circumstances, and its security when shipped, it must recommend itself for all life-boat purposes, where, in case of an emergency, time is of vital importance.

Another advantage is that with this hanger the rudder cannot of itself unship as has often been the case with the common hanger, when the boat has been left for a short time and the tiller worked out, thereby leaving the rudder free, by striking the bottom or anything sufficient to raise it three or four inches, to unhinge and float away. As will readily be seen, this cannot get away until the rudder has risen the whole length of the tongue, which, of itself, would never happen.

Again, with this hanger the rudder can be shipped and unshipped while under full sail, thus making it very convenient for fishermen or

Apparatus accessory to rigging fishing-vessels.**Rudder-fixtures.**

any one sailing over a line or seine, as the rudder can be easily raised far enough to pass over and prevent a line getting caught between the rudder and boat, as would otherwise likely ensue, and when over, by simply letting down the rudder, it will go to its place again ready for use.

By this arrangement we are enabled to get the hinges further down on the rudder, thereby bringing the strain on both of them, while in the old way, the lower eye and pintle are so far from the bottom of the boat, in order to facilitate the shipping of the rudder, that this one has to bear nearly all of the strain." (W. N. Clark.)

25190. Rudder-gudgeons. Wilcox, Crittenden & Co., Middletown, Conn.
 25182. Rudder-braces for whale-boat. Wilcox, Crittenden & Co., Middle-
 [town, Conn.
 25209. Series of common wrought-iron rudder-braces. " "
 25189. Series of rudder braces. " "
 25210. Rudder-braces for New Orleans cat-boat. " "
 25183. Rudder-braces for metallic life-boat. " "
 29472. Dory breast-hook and stern braces. " "

Cleats.

25779. Stay-sail snatch-cleat. Used by Gloucester fishing-schooners. Al-
 len L. McDonald, Gloucester, Mass.
 25809. Wooden cleats. Used to fasten ropes to. William Coleman & Sons,
 Providence, R. I.
 25218. Series of small cleats. Wilcox, Crittenden & Co., Middletown, Conn.
 25217. Small brass cleats. " "
 25177. Cleats for Cape Ann seine-boat. " "
 25191. Boat-cleats. " "

Rowlocks.

25088. Whale-boat rowlock. Wilcox, Crittenden & Co., Middletown, Conn.
 25086. Brass wash-streak rowlock. " "
 25113. Steering rowlock with stem socket for Cape Ann seine-boat. Wilcox,
 Crittenden & Co., Middletown, Conn.
 25114. Socket used on side of stern for steering. Used on Cape Ann seine-
 boat. Wilcox, Crittenden & Co., Middletown, Conn.
 25085. Seine-boat rowlock. Wilcox, Crittenden & Co., Middletown, Conn.
 25070-72. Polished brass rowlocks. " "
 25076, 25077. Polished brass rowlock used on gunning-skiff. Wilcox, Crit-
 tenden & Co., Middletown, Conn.
 25104-5 Galvanized socket rowlocks. Wilcox, Crittenden & Co., Middle-
 [town, Conn.
 25082-3-4. Brass socket rowlocks. " "
 25091-2-3. Plain brass patent swivel rowlock. " "
 25094. Galvanized-iron patent swivel rowlock. " "
 25101. First patent swivel rowlock put in market. Wilcox, Crittenden &
 Co., Middletown, Conn.
 25079-80-81. Plain brass rowlock used on gunning-skiff. Wilcox, Critten-
 den & Co., Middletown, Conn.
 25106-7-8. Side-plate rowlock used on gunning-skiff. Wilcox, Crittenden
 & Co., Middletown, Conn.

Apparatus accessory to rigging fishing-vessels.

Rowlocks.

25188. Rowlock for dory. Showing new mode of fastening. Wilcox, Crittenden & Co., Middletown, Conn.
25765. Dory thole-pin rowlock. Samuel Elwell, jr., Gloucester, Mass.
25090. Gun-metal dory rowlock with Southwick's patent fastening. Wilcox, Crittenden & Co., Middletown, Conn.
25100. Dory rowlock, showing patent mode of fastening. Wilcox, Crittenden & Co., Middletown, Conn.
26902. "Lyman's patent bow-facing rowing-gear." William Lyman, Middlefield, Conn.

This bow-facing, *i. e.*, front view, rowing-gear is an invention which allows the rower to face forward instead of backward, pulling in the same manner as with the ordinary oars. This reverse movement is obtained by having the oar in two parts, each part having a ball-and-socket joint, which is attached to the wale of the boat by means of a slot and button, and the two parts connected by a rod (with hinged bearings) which crosses the wale of the boat.

The advantages claimed for this rowing-gear over the ordinary oar, are:

- "1. *The oarsman faces the direction in which he goes.*
2. The arrangement of the levers is such that the oarsman applies his strength to the best mechanical advantage, enabling him to row faster and more easily than with any other oar.
3. During the stroke the bow of the boat is slightly raised by the motion of the rower instead of being lowered by his motion as in ordinary rowing.
4. The stroke is longer than with ordinary oars.
5. The oars can be closed up out of the way along the side of the boat without detaching them from the gunwale.
6. It is better from the fact that the blade of the oar is in front and can be *seen* at the beginning of the stroke, so that there is no difficulty in avoiding obstacles, and in a rough sea there is little danger of "catching crabs."
7. With these oars the boatman makes no more effort in steering than in directing his course while walking, and this advantage lessens greatly the effort of rowing.
8. While rowing there is no noise from the bearings.
9. A pair of these oars weigh about 5 pounds more than the oars, but this additional weight has this advantage, that at the beginning and end of the stroke it helps to lower and raise the blade owing to the peculiar position of the oar.
10. When these oars are detached from the boat, no wood or iron projections are left on the wale of the boat, as in ordinary rowing-gear, and thus a serious inconvenience is obviated.

These oars can be attached to and detached from the boat very quickly and they can be closed up in a convenient form for carrying.

These several advantages, *viz*, *the front view*, the increased ease and speed in rowing, the raising of the bow instead of depressing it, the closing up of the oar out of the way while on the boat, the increased facility in avoiding obstacles, the diminished effort of hand and eyes in steering, the rowing without noise, the better balance and swing of the oars, have commended this new gear to all who have tried it.

This gear can be attached to almost any boat, and is especially adapted to hunting, fishing, and all kinds of pleasure boating.

Apparatus accessory to rigging fishing-vessels.**Rowlocks.**

Almost any one (even if he has never rowed a boat) with an hour's practice can use these front view oars well; it being much easier to learn to use a pair of these oars than a pair of the back view oars." (William Lyman.)

28292. Frederick D. Graves's improved noiseless rowlock. Fred. D. Graves, Boston, Mass.

"The object of this invention is to improve the construction and operation of the class of rowlocks in such manner as, first, to insure the proper inclination of the blade of the oar, and prevent the liability of its catching the water when feathering in recovering, as well as to insure the proper position of the blade of the oar when making the stroke; secondly, to enable the outer end of the oar to be raised when it is being feathered, in order to prevent its contact with the water in rough weather. My improved rowlock, which is composed of an inclosing ring located on a pintle, and an inner ring inclosed by the ring and adapted to be partially rotated therein; the inside of the inclosing ring is provided with a groove which extends almost around it, its continuity being broken only by a stop. The pintle of the rowlock is inserted in a socket attached to the gunwale of the boat, the pintle and rowlock being adapted to turn freely in the socket. From the foregoing it will readily be seen that an oar pivoted in the inner ring is adapted to be partially rotated, in addition to its oscillating movements, so that when its stroke is completed it can be turned, so as to feather the blade in the recover stroke. The stop and shoulders of the inner ring are arranged in such mutual relation that the shoulder abuts against the stop, in feathering the oar, before the blade becomes horizontal in cross-section, so that the cross-section of the oar is necessarily inclined downward from its forward to its rear edge during the feathering stroke, this inclination of the blade preventing its forward edge from engaging with the water and overturning the rower, or, in other words, causing him to "catch a crab." This limitation of the oar in its rotation prevents awkward accidents in feathering, and enables an unskilled person to row with a considerable degree of certainty." (F. D. Graves.)

25098-9. Galvanized-iron patent swivel rowlock. Wilcox, Crittenden & [Co., Middletown, Conn.

25095. Galvanized-iron patent swivel rowlock. " "

25097. Galvanized-iron patent swivel rowlock. " "

25096. Galvanized-iron patent swivel rowlock. " "

25073-4-5. Polished brass patent swivel rowlock. " "

25102-3. Galvanized socket rowlock. " "

25111. Countersunk rowlock. Used on Ohio River flat-boats. Wilcox, Crittenden & Co., Middletown, Conn.

29459. Rowlock. Newport and Providence River style. Wilcox, Crittenden & Co., Middletown, Conn.

25087. North River pattern rowlock. " "

25089. East River pattern rowlock. " "

29319. Socket-joint rowlock. Frederick A. Gower, Providence, R. I.

"The socket-joint rowlock is intended to increase the speed and improve the convenience of racing boats. Its advantages have proved so easily apparent to oarsmen that there is little need of detailing its strong points, but the following are among its leading features:

Apparatus accessory to rigging fishing-vessels.**Rowlocks.**

Wabbling of the oar is wholly avoided. If the oar is a properly good fit, it will have less than $\frac{1}{4}$ inch of fore-and-aft motion in the lock.

"Catching crabs" is largely avoided by preventing the oar from jamming in the lock at the beginning or end of the stroke. If a "crab" should be caught, the rowlock is not strained, and the oar can be recovered without stopping the boat.

A good grip of the water is assured to even the inexperienced oarsman by the shape of the back of the rowlock, which corresponds to that of the oar. The oar settles itself into the proper position on beginning the stroke.

Any length of reach may be taken by long-built men in going forward, avoiding an evil often complained of.

A space half as wide admits passage of the boat. Equipped with this rowlock a six or four oared shell passes through an opening the width of the outriggers. Crews rowing on narrow or bridged water will find this advantage worth the price of the rowlocks in a single season.

Uniting the rods at a single point brings the whole strength of the outrigger into play at every part of the stroke, and an outrigger thus made can hardly be demolished while the boat stands.

Any oars may be used if of recent pattern, *i. e.*, without the unsightly "bulge" on the loom. It is only necessary to make a slight change in the button, as described below.

Better time may be made. Experiments thus far indicate that the socket-joint rowlock is perceptibly speedier than the common pattern, by the stoppage of wabbling, and general smoothness of action.

Easing a rowlock with the common outrigger is a half hour's trouble with rusty nuts (one or two of which usually twist the bolt off in starting) and experimenting to get the right thickness of washers. With the socket-joint rowlock the same thing is done in two minutes by slipping half or three-quarters of an inch of washers on the shaft under the top rod.

Superior strength. The ordinary iron thole-pins are strong in one direction only; a backward or sidewise blow is likely to bend them. The supporting shaft of the socket-joint rowlock is equally strong all around and withstands a greater strain than the best oars made can apply to it. The whole rowlock is made of the best bronze-metal, which will not rust nor suddenly snap on a frosty morning. Under great mechanical pressure the lower part of the lock has been bent out nearly straight without breaking.

Minor conveniences continually appear in the use of this improvement. There is no wiring to do; no reaching out-board to ship oars; no wriggling the button through the rowlock; no getting grease on the oar-handle by passing through the rowlock; no "losing the button" outside the outrigger; no jamming the button between the thole-pins. When the outriggers are taken off the boat the rods turn on the shaft as a hinge and fold up into a compact bundle not easily bent out of shape nor injured. The rowlocks can be detached entirely, if desired, and each set of rods made into a package as easily carried as a walking-stick, while the rowlock may be put into the oarsman's coat-pocket. Oarsmen having occasion to travel with boats by rail will appreciate this convenience.

This rowlock cannot pretend to be a cheap contrivance; it is made of the best material, and requires expensive labor. Its first cost is more than that of the common pattern, but considering its advantages it will be found cheaper in the end." (F. A. Grower.)

Apparatus accessory to rigging fishing-vessels.**Rowlocks.**

25185. Thole-pins for metallic life-boat. Wilcox, Crittenden & Co., Middle-
[town, Conn.
25115. Whitehall pattern rowlock. " "
25112. Detroit or Lake Michigan rowlock. " "
22227. "Acme" oarlock. Pattern invented 1876. " "
25172. Oar-holder for Cape Ann seine-boat (old model). Higgins & Gifford,
Gloucester, Mass.
25171. Oar-holder for Cape Ann seine-boat. Wilcox, Crittenden & Co.,
Middletown, Conn.

Oars.

25022. One pair white-ash oars (9 feet). R. T. Dodge, maker, Boston, Mass.
25021. One pair white-ash oars (6 feet). " "
25041. Pair white-ash oars (12 feet). " "
25011. Pair pine oars (8 feet). " "
25023. Pair white-ash oars (9 feet). " "
25012. Pair spoon oars (10 feet). " "
26811. Pair of oars (7 feet 8 inches). Waters & Son, Troy, N. Y., makers;
Delong & Sons, Glens Falls, N. Y.

Paddles.

25020. White-ash paddles. R. T. Dodge, maker, Boston.
643. Indian paddles. Northwestern coast. George Gibbs.
644. Indian paddles. " "
645. Indian paddles. " Cape Flattery. George Gibbs.
646. Indian paddles. " Whaling. "
1790. Indian paddles. " "
1791. Indian paddles. " "
14284. Indian paddles. " "
14285. Indian paddles. " "
11471. Indian paddles. Fort Townsend, W. T. J. G. Swan.
11473. Indian paddles. " "
11474. Indian paddles. " "
11363. Indian paddles (for skin canoe used by Aleutians). Alaska. V. Colyer.
11369. Indian paddles (for skin or wooden canoe). " "
11366. Indian paddles. " " "
20902. } Indian paddles (used by Trimsein Indians): Fort Simpson, B. C.
20903. } J. G. Swan.
11434. Indian paddles. Passamaquoddy Indians, Eastport, Me. E. Palmer.
2652. Indian paddles. Northwestern coast. Exploring Expedition.
Lieut. Wilkes, U. S. N.
2652. Indian paddles. Northwestern coast. Exploring Expedition.
Lieut. Wilkes, U. S. N.
26783. Whaling paddle. Makah Indians, Neeah Bay. J. G. Swan.
26781. Whaling paddle. " "
26782. Whaling paddle. " "
26780. Whaling paddle. " "
26779. Whaling paddle. " "
26778. Whaling paddle. " "
26777. Whaling paddle. " "
26776. Whaling paddle. " "

Apparatus accessory to rigging fishing-vessels.

Paddles.

25775.	Whaling paddle.	Makah Indians, Neeah Bay.	J. G. Swan.
26774.	Whaling paddle.	"	"
26773.	Canoe paddle.	"	"
26772.	Canoe paddle.	"	"
26771.	Canoe paddle.	"	"
26770.	Canoe paddle.	"	"
26769.	Canoe paddle.	"	"
26768.	Canoe paddle.	"	"
26767.	Canoe paddle.	"	"
26766.	Canoe paddle.	"	"
26765.	Canoe paddle.	"	"
26764.	Canoe paddle.	"	"
26810.	Double paddle.	Made by Waters & Son, Troy, N. Y.; De Long & Sons, Glens Falls, N. Y.	

Poles and pushing sticks.

15653.	Bidarka pole.	Nunivak, Alaska.	W. H. Dall.
15653.	Bidarka pole.	"	"
17443.	Bidarka pole.	Cave, Kagamil Island, Alaska.	Alaska Commercial Company.

Candlestick.

Used in hold of vessel while storing fish.

32741.	Candlestick.	A. McCurdy, Gloucester, Mass.
32692.	Candlestick or "Sticking Tommy."	Gloucester, Mass. G. Brown Goode.

Fog-horns.

29382.	Series of common reed fog-horns, Nos. 1, 2, 3, and 4.	Wilcox, Crittenden & Co., Middletown, Conn.
25783.	Grand Bank fog-horn. Called by the fishermen "lipper" or "ripper."	William H. Weston, Provincetown, Mass.
25281.	The Anderson fog-horn.	U. S. Fish Commission. (Deposited.)

Deck-scrapers.

25160.	Series of ships' deck scrapers.	Wilcox, Crittenden & Co., Middletown, Conn.
--------	---------------------------------	---

Dory scoop.

25222.	Dory scoop.	S. Elwell, jr., Gloucester, Mass.
--------	-------------	-----------------------------------

Flagging irons, &c.

Used by mackerelmen of Capes Cod and Ann to separate barrel staves for the insertion of stems of flag to stop leakage.

29492-94.	Flagging iron, hoop-drivers, and adze.	M. W. Grant, Wellfleet, Mass.
-----------	--	-------------------------------

Pump-bolt or toggle-pin.

Used on fishing-vessels of Cape Cod and Cape Ann.

29470.	Pump-bolt or toggle-pin.	Wilcox, Crittenden & Co., Middletown, Conn.
--------	--------------------------	---

Apparatus accessory to rigging fishing-vessels.

Pump box and haft for seine-boat.

29497. Pump box and haft for seine-boat. Andrew Kennedy, Provincetown,
| Mass.
29499. Pump box and haft for seine-boat. " " " "

Bung-bucket or "water-thief."

25784. Bung-bucket or "water-thief." Wm. H. H. Weston, Provincetown,
Mass.

Devil's claw.

Used to stop the chain when the windlass is wanted for other uses.

29442. Devil's claw. W. H. Hesbolt, Provincetown, Mass.

Box hook.

Used in closing boxes packed full of fish.

32680. Bilge hooks. Gloucester, Mass. G. Brown Goode.
32695. Box hook or "devil's claw." Gloucester, Mass. G. Brown Goode.

Barrel-lifters.

Used for stowing away mackerel-kegs in holds of vessels.

29291. Barrel-lifters. Wilcox, Crittenden & Co., Middletown, Conn.
32679. Chime barrel-hooks. Gloucester, Mass. G. Brown Goode.

Ice-hooks.

For lifting ice on vessel from wharf.

32674. Ice-hooks. Gloucester, Mass. G. Brown Goode.

Lance-hooks.

Fastened on side of whale-boat to hang lance on.

25919. Lance-hooks. E. B. & F. Macy, New Bedford, Mass.

Grappling gear.

Used to recover lost trawls.

25936. Grappling gear. A. McCurdy, Gloucester, Mass.

Marline spikes.

29418. Marline spike or pricker. Used for splicing trawl-lines. Wilcox,
Crittenden & Co., Middletown, Conn.
29455. Marline spike. Made from the jawbone of sperm whale. Robert D.
Baxter, Provincetown, Mass.
29419. Marline spike. Made from the jawbone of whale. Frank O. Blake,
Portland, Me.
25147. Sailmakers' marline spike. Wilcox, Crittenden & Co., Middletown,
[Conn.
25148. Sailmakers' marline pricker. " " "
25164. Series of marline spikes. " " "
25778. Fishermen's marline spike or trawl-line splicer. Alex. McCurdy,
East Gloucester, Mass.

Apparatus accessory to rigging fishing-vessels.

Marline spikes.

25146. Series of hickory hand fids. Wilcox, Crittenden & Co., Middletown, Conn.
 25672. Copper marline spike. Made at sea by Thomas Freeman. Used for splicing trawl-lines. Sanford Freeman, Norwichport, Mass.
 32693. Splicer. Gloucester, Mass. G. Brown Goode.

Rest for harpoon, &c.

11392. Rest for harpoon and bow and arrow. Aleutian Island. Vincent Colyer.
 Used on deck of kyak.

Stretchers for kyak-line.

9836. Stretchers for kyak-line. Eskimos.

Stool.

3978. Stool. R. MacFarlane.
 Used by Eskimos to stand on while watching for seal in water.

49. CAMP-OUTFIT.

Shelter.

- Lodges.
 Tents.
 Hunting-camps.
 Hunters' houses.
 Fishing-houses.

Furniture.

- Hammocks.
 Beds, couches, stretchers, and lounges.
 Blankets (rubber and mackinaw), and fur robes.
 Fuel.
 Apparatus for kindling fire.
 Lamps and lanterns.
 Tools.

Commissary supplies.

- Cooking apparatus, kettles, and stoves.
 Commissary supplies.

29295. Portable camp-stove. H. L. Duncklee, Boston, Mass.
 25689. Portable camp-stove. " "
 Open, showing utensils, viz:
 25690. Six tin plates.
 25691. Six tin cups.
 25692. Six-quart kettle.
 25693. Eight-quart kettle.
 25694. Stew-pan.

Commissary supplies.

Commissary supplies.

25695. Coffee-pot.
 25696. Dipper.
 25697. Toast-rack.
 25698. Frying-pan.
 25699. Bread-pan.
 F. & S. 60. Camp-stove and utensils. Property of John A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26673. Coffee-heater. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26713. Camp-stove. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26843. Lehmen's patent folding camp-baker. Scoville & Johnson, Marquette, Mich.

Table-furniture.

Preserved meats, &c.

Canned meats.

24917. Fresh tomato soup. Wm. Underwood & Co., Boston, Mass.
 26649. Ox-tail soup (star brand). Portland Packing Company, Portland, Me.
 24913. Fresh soup and bouilli. Wm. Underwood & Co., Boston, Mass.
 26648. Soup and bouilli (star brand). Portland Packing Company, Portland, Me.
 24921. Mock-turtle soup. Wm. Underwood & Co., Boston, Mass.
 26641. Cumberland potted sausage (star brand). Portland Packing Company, Portland, Me.
 24927. Ox-tail soup. Wm. Underwood & Co., Boston, Mass.
 24929. Original deviled ragout. " "
 24928. Deviled tongue. " "
 24930. Deviled ham. " "
 26645. Cumberland roast mutton (star brand). Portland Packing Company, Portland, Me.
 24920. Fresh chicken. Wm. Underwood & Co., Boston, Mass.
 26640. Cumberland roast chicken (star brand). Portland Packing Company, Portland, Me.
 24931. Deviled chicken. Wm. Underwood & Co., Boston, Mass.
 26646. Cumberland roast veal (star brand). Portland Packing Company, Portland, Me.
 24916. Fresh mutton. Wm. Underwood & Co., Boston, Mass.
 26647. Cumberland roast beef (star brand). Portland Packing Company, Portland, Me.
 24910. Beef à la mode. Wm. Underwood & Co., Boston, Mass.
 24911. Fresh mince-meat. " "
 24915. Fresh veal. " "
 26639. Champion shell-beans (star brand). Portland Packing Company, [Portland, Me.
 26638. Portland blueberries (star brand). " "
 22238. Fresh blueberries. Castine Packing Company, Castine, Me.
 24919. Fresh beef. Wm. Underwood & Company, Boston, Mass.
 26637. Yarmouth sugar-corn. (Patented April 8, May 13 and 20, and August 26, 1862.) (Star brand.) Portland Packing Company, Portland, Me.

Commissary supplies.

Canned meats.

26652. Yarmouth succotash. Made from Yarmouth sugar-corn and champion shell-beans (star brand). Portland Packing Company, Portland, Me.

50. PERSONAL EQUIPMENTS.

Clothing.

Hunting suits.

26655. Canvas hunting-coat. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26658. Fur vest. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26659. Buckskin coat. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26670. Mole-skin pants. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26671. Corduroy hunter's coat. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26675. Corduroy hunter's pants. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26676. Corduroy vest. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26701. Chamois shirt. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
26594. Hunter's water-proof suit, with patent cartridge-holding vest. Geo. C. Henning, Washington, D. C.

This suit includes:

1. Pantaloon so made that they can be folded close to the legs.
2. Gaiters.
3. Vest with sleeves.
4. Reversible shooting-coat, with seventy-six receptacles for shell or cartridges so arranged as to permit them to be carried either end up, and secured from loss or from injury by rain, by means of the flaps which button over them. The coat is of the same shape before and behind, so that when the hunter exhausts his shells in front he can reverse the coat and have a fresh supply. There are eight pockets opening on the outside of the skirt, and two large game pockets on the inside arranged with openings in the bottoms for ventilation and drip.
5. A double-visored cap.

26710. Hunting-coat. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Water-proof suits.

26656. Rubber hunting-coat. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Oil-skin suit.

29543. Cape Ann coats. J. F. Carter, Gloucester, Mass.
29544. Cape Ann pants. " "

Clothing.

Boots, moccasins, leggings.

26015. Fishermen's red cod boots. Jonathan Buck, Harwich, Mass.
 26015. Fishermen's red-leather slippers. " "
 26014. Fishermen's black boots. " "
 25823. Slippers made of sheep-skin, with the wool on the inner surface.
 Worn by fishermen inside of their boots. A. R. Crittenden, Middletown, Conn.
 26671. Boot-packings. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26672. Moccasins. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 26708. Rubber boots. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Hats and caps.

25722. Fisherman's cap, called "Russian cap." E. R. Cook, Provincetown, Mass.
 26651. Hunter's rubber cap. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
 29542. Series of sou'westers and oil-cloth hats (Cape Ann pattern). J. F. Carter, Gloucester, Mass.

Clothing for the hands.

25788. Pair of mittens. Called "Newfoundland cuffs" by fishermen. Peculiar to Gloucester. A. R. Crittenden, Middletown, Conn.
 25790. Mackerel cots. Used on the fingers when taking mackerel by hook and line. Capt. Samuel Elwell, Gloucester, Mass.
 25787. Pair of "hand-haulers." Used by fishermen off the Newfoundland Banks. Joseph Parsons, jr., East Gloucester, Mass.
 25789. Pair of nippers; peculiar to Gloucester, Mass. Joseph Parsons, East Gloucester, Mass.
 25718. Pair of nippers. Used by fishermen to protect the fingers while hauling in trawls. David Conwell.
 25717. Pair of nippers. Central Wharf Company, Provincetown, Mass.
 26709. Rubber gloves. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Protection from insects:

Nets for beds and for face.

26700. Mosquito-net. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Ointments (such as tar and sweet-oil).

Smudges (such as pyrethrum powder).

Shields, breastplates, and defensive armor.

Trappings.

Belts.

26665. Belt for sheath-knife. J. A. Nichols, Syracuse, N. Y.

Trappings.

Cross-belts.

Game-bags.

26667. Game-bag. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.
2523. Game-bag. Indians of Northwest coast. U. S. Exploring Expedition.
1473. Game-bag. Comanche Indians. Lieut. D. N. Couch, U. S. A.
2023. Game-bag of knit leather thongs. Dog-rib Indians. Fort Simpson, B. C. R. R. Ross.
2047. Hunting-bag of "babiche." Fort Simpson, H. B. T. R. R. Ross.
2020. Hunting-bag made of "babiche." Dog-rib Indians. Fort Simpson, H. B. T. R. R. Ross.
2551. Hunting-bag of "babiche." Fort Rae Eskimos. Mackenzie's River district. Stratton Jones.
2498. Game-bag. Indians of Northwest coast. U. S. Exploring Expedition.

Wrist-guards.

6927. Wrist-guard. Used in shooting with the bow. Kiowa Indians. Fort Cobb, I. T. E. Palmer.
5520. Wrist-guard. Apache Indians. Arizona. E. Palmer.

Optical instruments, &c.

Snow-goggles.

1651. Snow-blind. Anderson River Eskimos. R. MacFarlane.
10292. Snow-goggles.
- 1650, 2147, 2157. Snow-goggles. Anderson River Eskimos. R. MacFarlane.
5589. Ingaleet Eskimos. Yukon River, Alaska. W. H. Dall.
5579. Mahlemut Eskimos. Lower Yukon, Alaska. "
10200. Snow-goggles.

Telescopes.

Field-glasses, &c.

Water-telescopes.

26884. Water-telescope. U. S. Fish Commission.
Used in examination of submarine objects.

Compasses.

26682. Hunter's compass. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Scales.

26681. Scales. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Game and fish baskets and slings.

Wallets for lines and other tackle.

Medical outfit.

Medicine-chests.

Hunter's and fishermen's flasks.

26684. Flasks. Property of J. A. Nichols, Syracuse, N. Y. Contributed by Forest & Stream Publishing Company.

Artificial lights.

Lanterns for camp and ship use.¹

Torches.

¹ See under *Sight decoys* above, p. 141.