The Stolen Bowline Knot Name

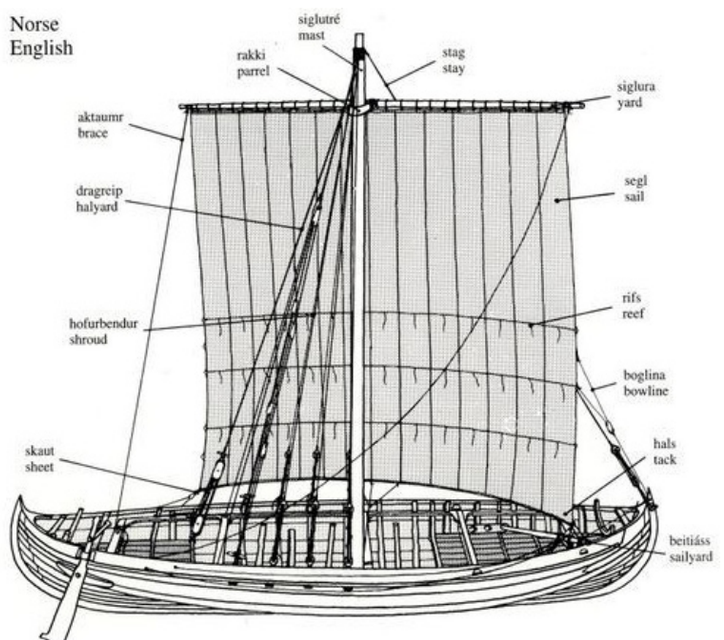
Summary

There is strong evidence from picture stones that Norse people (Vikings) before 900 CE developed the technology of a line from the forward curve of a square sail, to use their longships closer to the wind. Initially they used a pole (*beitiáss*) into a cringle on the forward leech. Later the poles were superseded by lines (ropes).

It is not known with certainty what the Norse people first called these lines, but by 1155 CE Wace used *boëline* in *Roman de Brut*, and words that sounded similar were used by sailors throughout Northern Europe (eg *bóglína* in 13th Century Norse, *bovline* in 18th Century Danish, and bowline in modern English). Probably *boë* referred to the curve (bow, pronounced *boʊ̈*) of the sail. Bowlines sometimes ran to poles arranged to the side of the vessel, and other ropes (including standing rigging for the mast) led to the front stem (later known also as the bow, pronounced *baʊ̈*).

At least some longships had hooks to attach bowlines to sails, but it is not known if other forms of attachment were used. On multi-masted tall ships (by the 18th Century), bowlines and their bridles were attached routinely by splices, seized clinches and toggles; not by fixed-eye knots. In European languages other than English, the seized clinch (*ABOK* #1130) is known as the bowline knot (*noeud de bouline, buleinstich, bouglin-steeg, bolinstek, buelta de bolina, boelyn-steek, volta di borina, nó de bolina,* etc). But in English only, some confusion arose whereby 'bowline knot' became the common name for a fixed-eye knot (*ABOK* #1010). There is no historical evidence that *ABOK* #1010 was used routinely on bowlines, though it would have served well temporarily, in an emergency.

Square sails with bowlines are now historical items, but *ABOK* #1010 (*noeud d'agui à élingue, noeud de chaise, liebknoten, psahl-stich, livknob, pael-steeg, lifknop, pålstek, asa de guia, balzo, lyfknoop, paal-steek, volta di quarnara, boca de lobo,* etc) is widely used on land and at sea as an easily-tied, readily-verified and jam-resistant fixed eye in cordage. It was certainly used on primitive bow-strings, and the confusion in English may have commenced when sailors assimilated the name bow-string knot as bow-line knot.



Some items related to the sail used by Vikings, inventors of the bowline rope.

ABOK #1010, known in English as the common bowline knot (though not used on bowline ropes) shown with a half-hitch 'lock'.

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Interlocked bowlines, arranged to show the front and back of the knot.

The eye knot known in modern English as the common bowline knot is depicted by Ashley (1944) as #1010. The first known published illustration is by Zabaglia (1743) as '*Nodo, e cappio del Barcaiolo*' (boatman's slipknot). *ABOK* #1010 is not a slipknot, but it can be used with a stretcher between two thwarts as a device to slip a boat rope (Fox, 1905).

There has been speculation that the name originated from the application of the knot to pass around a post or bollard, when tied in a rope or hawser used to secure the bow of a boat or ship (Nuttal, 2012). Such a hawser has been called a bow line (pronounced to rhyme with 'cow line'), in the USA at least (Department of the Army, 1999). Elsewhere it is generally called something else, such as a 'head line' (Ministry of Defence, 1995), 'head rope' (Royal Canadian Navy, 1960) or 'bow fast' (Fox, 1905); because 'bowline' has an older nautical use.

In the days of square sails, the name bouline (also found written as bawlyne, bowelyne, etc) applied in Middle English to a line used to hold the weather leech forward without flapping, allowing a ship to sail closer to the wind. Boulines (bowlines) had to run forward from the sail, but not necessarily to the bow.

In French, the adopted word remained as *bouline* (Bellin, 1752). *Nœud de bouline* (the bowline knot, used on boulines) was *ABOK* #1130 (Ashley's inside clinch); and *nœud d'agui à élingue* or *nœud de chaise* (the bowling knot, used to make a sling, hoist a man or bend hawsers) was *ABOK* #1010 (Ashley's bowline knot) (Lescallier, 1777-91; Larousse & Augé, 1897-1904). Likewise in German, *ein bulienſtich* was a clinch (*ABOK* #1130, a bowline knot, used on the *bulien* and other leech-lines), whereas *ABOK* #1010 was *pfahlſtich* or *leibknot* (bowling knot, used in docking, hoisting a man etc) (Röding, 1794). Other languages did not confound *bouline* & *nœud d'agui* (*bovline* & *haard knude* in early Danish, *bolina* & *vuelta fallida* in early Spanish, etc). But the terms were conflated or confused in English, as discussed below. Today, the accented syllable 'bow' is pronounced 'bōh' to rhyme with 'go'; and 'line' is usually pronounced indistinctly (to rhyme with 'stolen' or a swallowed 'tin' or 'Lynn').

In early English nautical texts, bouline was sometimes written as it was pronounced: 'bowling', 'boling' or 'bolin'. Thomas Harriot (1560-1621), a scholar and explorer whose sponsors included Walter Raleigh, explained that "small ropes making crow feet are spliced into the side bolt rope of the mayne sayle; this parte from the pulley is called the bowling bridles; the other end of the bowling is reeved through a block made fast with a strap nere towards the foremasts ... that the wether leech (side) be kept tought and not to lift or shake in the wind". He made no mention of bowling knots. Manwayring (1623) mentioned 'bowling' lines 38 times, and wrote (in error on at least one count) that "There are two ſort of Knotts which are uſed at Sea. The one is a Bowling knot, which is ſo made that it will not ſlip, nor ſlide; with this Knott the Bowling-Bridles are made-faſt to the Creengles, but it is alſo uſed many other waies. ...". Smith (1627) copied much from Manwayring (1623), paraphrasing that "A Boling knot is also so firmely made and fastened by the bridles into the creengles of the sailes, they will breake, or the saile split before it will slip". That is very poetic, and Manwayring and Smith were much quoted and paraphrased. But neither provided illustrations or tying instructions, so we cannot know whether the Bowling / Boling knot to which they referred was *nœud de bouline* or *nœud d'agui*. It is not surprising to see Bowling / Boling knot and clinch applied in English for what may be different uses of one structure. Different names were applied in French (*nœud de bouline, nœud d'étalingure de cable*), German (*bulienſtich, ankerſtich*), Spanish (*buelta de bolina, una malla*), Dutch (*boelyn-ſteek, ankerſteek*) and all four other European languages listed by Röding (1794) for different uses of the structure now called (in English) the inside clinch (*ABOK* #1130).

Nevertheless, 'Bowling' and 'Bow-Line' were presented as synonyms for the rope (but not explicitly for the 'Bowling Knot', which was defined by paraphrasing Manwayring) in the first alphabetical encyclopædia published in English: *Lexicon Technicum* (Harris, 1704). Then the 1705 English version of Guillet's *Gentleman's Dictionary* gave the 'bow-line-knot' by paraphrasing Manwayring and Smith. The French original had no corresponding entry. According to Rasor (2004) there was no

Comment [RGB1]: *Sprude spak to þe sprete þe spare bawlyne*: from *Patience* (story of Jonah) attributed to 14th C in Early English Alliterative Poems.

Comment [RGB2]: In 18th C Swedish, bowline was *bog-lina* & Bowling knot was *en hård knut ...* , (Serenius 1757, who did not mention bowline knot). Röding (1794) translated in 9 languages.

Comment [RGB3]: Harriot (before 1620) rarely writes of knots, bends, or hitches; but instead uses "made fast". Block(e)s, bow (of the ship), clew(e)s, cringles, dead(men) eyes, earinges, eyes of rope, nooses, & buttons of wood (toggles?) are all mentioned. The Anonymous "Treatise on Rigging" of ca 1625 uses similar terms; plus bowling(e) cringles, wale knots, timber hitches, hooks, splices, belays, deadman's eyes & seizings on running rigging. It does not specify the means by which "Bowlings" or their bridles are "fastened". On the one hand, these early English manuscripts make no mention of bowline or bowling knots; but on the other hand they show no distinction between bowline and bowling as implied in 18th C translation dictionaries.

Comment [RGB4]: A narrow use of "knott". Elsewhere there are many mentions of clinches (cable to anchor ring, top ropes & other standing parts in rigging), seizings (cable, garnets, clew lines & sheer legs), splices (cringles, martinet legs, slings & straps), hitching (parbuckles & martinet legs), bending (the sheets & the warp), fartheling (furling) & marling sails, weaving mats, rattling the shrouds, worming & woulding, lashings, grommets, nippers, stoppers, kneetles, plats etc. "Sheepe-Shanck" is complete in the 1626 hand-copy by Crane, but suffers an error of deletion in the printed version. In general "make fast" is used instead of specifying a knot or hitch - see "Robbins". But it is also used for methods other than knotting (eg secure by nailing).

Comment [RGB5]: *flip* (slip) meant spill (come undone, eg slip-knot) as distinct from *flide* (slide).

Comment [RGB6]: Similarly Roberts (1726) whose "running bowling Knot" Ashley interpreted as a running bowline *ABOK* #1117; though Roberts' emphasis on jamming may favour #1130.

Comment [RGB7]: "BOWLI NG, or rather *Bow-Line,* is a Rope faſtened to the *Leach, ...".*

Comment [RGB8]: *British Naval History to 1815* Chapter 19: Naval Dictionaries (p 339).

substantially new nautical manual in English between Smith (1627) and Falconer (1769). In his *Universal Dictionary of the Marine,* Falconer used 'bowline' 35 times, but mentioned 'bowline-knot' only once, in translating *anneau de corde*. Burney's 1815 revision gave "Bowline Knot, (*nœud de bouline*, Fr.)" by paraphrasing Smith in the text, but illustrating *nœud d'agui* (copied from Lever, 1808). Burney translated *nœud de bouline* as bowline-knot, *nœud d'agui à élingue* as standing bowline-knot, and *anneau de corde* as grommet. Inconsistency remained in later E-F *vs* F-E translations (Pirrie,1895). English terms for *bouline* and *nœud d'agui* are conflated in English dictionaries to the present day.

The first-known English-text illustration of *ABOK* #1010 is by Emerson (1754) who described "A bowline knot ... makes a loop that will not flip ... to hitch over anything", without mention of use on boulines / bowlines. Steel (1794) discussed bowlines in some detail. He copied *nœud de bouline* and *nœud d'agui* from Lescallier (1777-91) and labelled them as a 'clinch' and 'bowline knot', respectively. Steel described the use of clinches on anchor rings, bowline bridles and other leech lines, but he gave no use for the 'bowline knot'. The exchange of technology and terminology may have been affected by near-continuous wars between Britain and (Revolutionary to Napoleonic) France from 1792-1815.

Square sails with bowlines were superseded long before 1900, but Ashley (1944) interpreted Smith's 'Boling knot' to be #1010. Thus he indicated that clinches, fixed-eye knots and toggles have all been used to attach bowlines to cringles (#1010, 1845, 1916, 1917, 1926, 2837, 2842-2843). But there is little evidence that fixed-eye knots were so used (except in emergency, when they would serve well).

Lever (1808) described the use of clinches, thimbles and toggles on 'bow-lines' and their bridles. He drew 'bow-line knots' (based on *nœud d'agui*) but did not mention their use. Burney (1871) described many uses for 'bowline knots' (based on *nœud d'agui*) but not on bridles or bowlines, which in the Royal Navy were spliced and toggled. Bushell (1857-1893) agreed. Of 40 texts examined that did not merely paraphrase Smith or Manwayring, all published between 1628 and 1943, none described use of fixed-eye knots on bowlines. Most described other uses for such knots. Svensson (1940) explained that the compact form of (noose) clinches was an advantage on sail cringles and anchor rings, whereas (fixed-eye) bowline knots were preferred for docking, emergency chairs, and hawser bends. Splices or seizings are far more secure under cyclic loading (sail flapping) than a non-seized knot. In modern Dutch, German and Scandinavian languages, the name for *ABOK* #1010 commonly is *palstek* or similar (pile hitch); but also *leibknoten / lifknop* (body- / life-knot) (Öhrvall, 1916; Röding, 1794).

If the bowline knot was named in English after a use related to a ship's bow, why was it not pronounced to rhyme with 'cow'? If names have conflated, we need to allow for separate origins.

The origin of the bowline rope name is clearer. Square sails were used by Celts BC, but boulines were developed much later, perhaps by Vikings in the 9th - 11th C. In *Roman de Brut* (1155), Wace used *boëlines* (which Sayers in 1997-2006 attributed to ON *bóglína:* a line from the forward curve of a sail). But for the bow of a boat, Wace used *brant* (like ON *brandr,* ME *brand*: head of a ship). According to the OED of 1888 bouline appeared in written English by 1330, whereas bow (nautical) appeared after 1620.

The origin of the knot name is less clear. One difficulty with linguistic analysis of this period is that words could exist in the spoken vernacular for centuries before they were recorded in surviving written works. Spellings were less stable before the printing press, and unfamiliar homophones were easily confused. Judging from Emerson's conservative use of other names, 'bowline knot' was likely in common use for *ABOK* #1010 by 1754, but (excluding Smith's Boling knot discussed above) the earliest citations in the OED of 1880 are from 1823 and 1850. Although the OED treats 'bowline knot' as a combination from bouline, it is telling that neither of these citations has anything to do with boulines.

The archaeological record is scant, because knots were formed in transitory materials, and rarely depicted in detail in surviving artwork. But there are many uses for *ABOK* #1010 on land and at sea. It provides under many circumstances an easily-tied and verified, jam-resistant fixed eye. Given its structural similarity to the ancient common bend (figure below), it would be astonishing if this eye knot had not been developed and named (probably many ways) before the age of sail.

Comment [RGB9]: Blanckley (1750) paraphrased Manwayring but substituted 'bowline (knot)'.

Comment [RGB10]: Now meaning a fixed-eye knot, reflecting ambiguity over 'flip'.

Comment [RGB11]: Gower complained that Steel copied his text without acknowledgement, then Moore (1801) copied Steel.

Comment [RGB12]: *ABOK* #1917 indicates that clinches attached bowline bridles from the mid-19th C. But this was the only method in the illustrated manuals of the 1700s (Lescallier, Röding, Steel). Day (1947) was more cautious about the Smith citation. He said that clinches secured bowline bridles to cringles.

Comment [RGB13]: By 1841, well-cut sails set taut without bowlines, which (if used) attached to bridles by eye splices, hearts, hooks & toggles. Bowline knots rigged hammock girtlines, reefs & gaskets, or lowered a hand (Dana, Brady). Nares (1862) gave toggles on bridles, & a "running eye" on bowlines. Bushell described eye splices on (toggled) bowline ropes, and bowline knots (carefully sized) only for raising men or trestletrees.

Comment [RGB14]: Smyth (1867) repeated Manwayring & Smith: "The bowline knot ... slip". Yet he wrote that "the bowline is toggled or clinched".

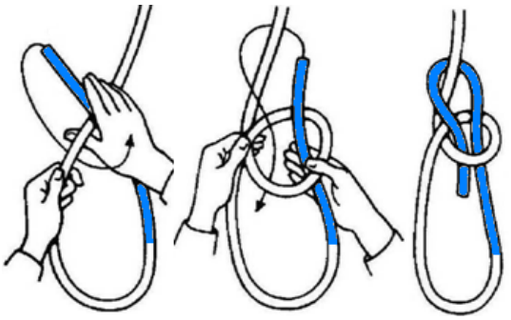
Comment [RGB15]: Svensson (1940) said clinches are "very strong", consistent with their use on anchors. Ashley noted their security (*ABOK* #1130). "Riggers never seem to tire of adding seizings" (*ABOK* #1719). Toss (1990) said seizings rival splices; but he also warned (2006) that they slip when lengthwise-loaded ropes shrink in diameter.

Comment [RGB16]: ON combinations for a line to the bow might be *brandrlína* or *hlýrlína;* words never found. *Bógr* (pl *bógu*) means shoulder(s). Poetic use for a sea-animal shoulder [ship's bow] occurs once in Snorri *Edda*. Some editions have a (later?) verse glossary (*þulur*) with *bóglína.*

Comment [RGB17]: Bow appears once (p 51) in manuscript 6788 of Harriot (1560-1621).

Comment [RGB18]: See 'Guillet' 1705, Blanckley 1750, Berthelson 1754.

Comment [RGB19]: Some ancient Egyptian and Greek paintings show potential bowlines, but there is no evidence that these vessels sailed close to the wind. The knot is said (without evidence) to have been on a ship entombed with Khufu (~2500 BC).



Left: Fast method to tie a 'bowline' knot (with Z chirality nipping turn). Swap hands for S chirality.

Right: Structural relatedness to a (Z) 'common, simple, single or sheet bend', known to have been used in nets for more than 10,000 years.

Modified from Svensson (1940).

English sailors adopted (and sometimes re-pronounced) many words and phrases with which they could make a phonological connection. As seamen, their work was with rope (line) not string. One possibility is that they favoured the nautical-sounding 'bowline knot' among variations on existing terms for such a versatile knot. The potential for ambiguity with boulines / bowlings (and bowling / boling knots) was unlikely to have been a deterrent, given the range of other terms with multiple and disparate uses aboard ship (eg becket, bend, box, burton, cat, galley, garland, nipper, pay, sheet, shoe, whip etc) (Leslie, 1890). As Admiral Smyth (1867) wrote: "in the lapse of time and mutation of dialect, vocables once differing in origin and meaning may become identical in sense and sound". Apart from 'bow line' (fore hawser) and 'bowling or bolling' (sailing rapidly); there are three nautical uses for 'bowline': sail-leech line (bouline), knot (*ABOK* #1010), and in ship construction "the curve of a ship's fore-body in a longitudinal vertical section" (OED; Anonymous, 1881; Patterson, 1891). The surname Bowling / Bolling is ascribed to ON *bauli / boli-eng* (bull pasture), but 'Tom Bowling' has been the personified British seaman since 1748.

The bow and arrow are much older than ships (ca 60,000 BC in Africa; 17,000 BC in Europe). Military use of the English longbow is recorded from the late 1200s, but none before 1600 survives. Spellings 'boga' and 'bowe' were used in Old and Middle English. Indeed, the first recorded English spelling for bouline (from a shipbuilding account of 1295) is 'boweline'. As pointed out by Leslie (1890) "the knot called a bowline ... probably took its name from being the knot used for the loop at the ... end of a bowstring". The bowline knot was certainly used on primitive bowstrings (Roth, 1929). Chinese examples are attributed to the Ming Dynasty (Pope, 1923). Cossacks before 1300 may have used what (in English) is sometimes called an outside-tail Eskimo bowline. Bowlines are not the only bowyer's knots, but it is perhaps ironic that "Tom Bowling" was criticised for calling one a bowline (*ABOK* #1024).

Loop or eye knots are known to have been used in ancient Egypt and China, for decorative and practical purposes. English use of bow in the sense of a loop or eye knot (especially but not only a decorative one) is first recorded as 'bowe knot' in *A Dictionary in Englyshe and Welsh* (1547).

Bowline. A rope leading forward connected by bridles to cringles on the leech of the square-sails; it is used to keep the weather-edge of the sail steady when the ship is close-hauled, and enables the ship to come nearer to the wind.

On a bowline and *on a taut bowline* are expressions to signify that a ship is sailing as close as possible to the wind. *To check, slack,* or *come up* a bowline is to let it go when the wind becomes free. *To clear away* a bowline is to let it go when preparing to swing the yard. *To sharp, haul taut,* or *steady out* a bowline is to pull it as taut as it can well bear.

Bowline-bridle. The span attached to the cringles on the leech of a square-sail to which the bowline is toggled or clinched.

Bowline-cringle. An eye worked into the leech-rope of a sail, to which a bowline or the bowline-bridle is attached.

Bowline-bend. The mode of bending warps or hawsers together by making a bowline in the end of one rope, and passing the end of the other through the bight, and making a bowline upon it.

Bowline-knot. A knot much in use on board ship. The loop can be made of any size, and does not jamb nor render.

Bow-lines. Longitudinal curves representing the ship's fore-body.

Bowling Along. Sailing rapidly with a free wind.

Definitions from *A Naval Encyclopædia* (Anon. 1881). The hyphens probably had meaning, but they were used inconsistently. In current usage they are variously replaced by a space or deleted.

All forms of 'bow' (and perhaps even 'bough') seem to be derived from an Indo-European or Germanic root meaning bend (Germanic root), curve or flex (Latin roots). Think of elbow, rainbow, shoelace bow, cross bow, a bow of the head, or a ship's bow. It is interesting to note the two pronunciations of 'bowman' used to distinguish an archer from a rower near the front of a boat.

The core of the name 'bowline knot' assimilated by English sailors may well have arisen before the age of sail or even the age of ships (from bow as a synonym for bend). A line must be flexed to form any knot. Perhaps the ancients preferred 'bow' when the knot formed an eye (slip or fixed) and 'bend' when the purpose was to join two lines. Or is that drawing too long a bow?

We will never know with certainty the origin of this or any other simple structure in knotting, though that question is separate from the origin of their names.

Comment [RGB20]: "'Haul on th' bowlin'... is probably the oldest known sea shanty (~1500). Bolin & Bowling (ropes) appear in Shakespeare's *Pericles* & *Two Noble Kinsmen* (~1610).

Comment [RGB21]: With the wind behind the beam.

Comment [RGB22]: Also rumbowline: re-manufactured rope; larbowlines: men of the port watch (Burney 1871; Leslie 1890).

Comment [RGB23]: Old Norse or Middle English for bull paddock: OE *bula*, ME *bole, bule,* ON *bauli*, *boli* "bull"; and NE OE *ing*, ON *eng* "pasture or meadow". https://archive.org/details/englishsurnames00ferggoog *English Surnames* (1858) R Ferguson; https://forebears.io/surnames/bowling#meaning *Surnames of the United Kingdom* (1912) H Harrison.

Comment [RGB24]: The nautical link is older than: 1. A character in Smollett's *The Adventures of Roderick Random* (1748). Nautical references lace the conversation of Tom Bowling. 2. A song by Charles Dibdin written on the death at sea of his eldest brother, an East India ship captain. First performed in 1789, it is also known as the *Sailor's Epitaph*: "Here a sheer hulk, lies poor Tom Bowling, the darling of our crew ...". Similarly, 'Jack Tar' was a sailor long before the 1790 song of that name. In Britain, there was an impressed fleet by Royal decree, and 'privateering' before Henry VIII created a standing Navy Royale in 1545. The Royal Navy was established in 1660.

Comment [RGB25]: OE *boga* "arch or bow"; related to Old Norse *bogi*, OHG *bogo*, Old Dutch *boog*, Old Irish *bocc.*

Comment [RGB26]: Lewis RE et al (1958) *Middle English Dictionary.* Uni Michigan. https://books.google.com/books?id=Xs2av7r9P6YC bouline B.5- 1083.

Comment [RGB27]: I-E: *bhāĝhu / bheug, bheugh*
Germanic: *bōguz / bugōn, beug*
Celtic: *buggo* "flexible"
Old English: *būgan* "to bend"
All modern 'bows' have one ancient derivation. They are homographs, but not all are homophones (reflecting slight divergence in meanings).

Comment [RGB28]: Even some sheet bends have been called bowlines (Day 1947, #61).

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Comment [RGB29]: The 1st edn (1754) is in the Gale 18th Century Collection, accessible from some public libraries.

Falconer W (1769) *An Universal Dictionary of the Marine.* T. Cardell, London. http://nla.gov.au/nla.obj-33758616/ https://archive.org/details/universaldiction00will Knots are not illustrated. However the 1815 revision by W Burney confuses bowline knot with *nœud de bouline* in the text, and illustrates *nœud d'agui*. https://books.google.com/books?id=ZjDwy8xhu-AC

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Leslie RC (1890) *Old Sea Wings, Ways, and Words.* Chapman and Hall, Limited, London. https://archive.org/details/oldseawingsways01leslgoog Bowline knot origin on pp 19, 278.

Lever D (1808) *The Young Sea Officer's Sheet Anchor.* Thomas Gill, Leeds. https://catalog.hathitrust.org/Record/010745004 Also the American edition of 1853 (https://books.google.com/books?id=HmJJAAAAYAAJ&dq). See Figs 321-324 for bowlines, bridles and the inside clinch, pp 52, 57 for splices, thimbles and toggles.

Lescallier D (1777) *Vocabulaire des Termes de Marine Anglois et François.* De L' Impremerie Royals, Paris. https://books.google.com/books?id=jOhWAAAAcAAJ pdf pp 236-237 distinguish Fig 178 *nœud de bouline* "bowline knot" (Ashley clinch) from Fig 183 *nœud d'agui à élingue* "bowling knot" (Ashley bowline). Captions on pp 388-389: *nœud de bouline* used on boulines; *nœud d'agui à élingue* used to hoist a man. Today, *nœud d'agui* is most used for the interlocked bowline bend. Some Figs are improved in Lescallier (1791) *Traité Practique du Gréement des Vaisseaux* https://archive.org/details/bub_gb_u_FWAAAAcAAJ

Manwayring (Mainwaring) H (1623) *The Sea-mans Dictionary.* 1626 manuscript at https://catalog.hathitrust.org/Record/100577601; At least 14 folio copies were in wide circulation before 1644 https://nonsolusblog.wordpress.com/2014/04/16/shakespeares-scribe... when printed by John Bellemy, London (with many errors) for sale. 1670 printing at https://books.google.com/books?id=kctlAAAAcAAJ

Ministry of Defence (Royal Navy) (1995) *Admiralty Manual of Seamanship (BR 67).* HMSO, London. ISBN 0117726966 https://www.amphion.ca/wp-content/uploads/2019/02/br-67-admiralty-manual-of-seamanship-1995-05-01.pdf

Nuttal OK (2012) The bow-line-knot. *Knotting Matters* 114**,** 10-11.

Öhrvall H (1916) *Om Knutar.* 2nd Edition. Albert Bonniers förlag, Stockholm. http://runeberg.org/knutar/

Patterson H (1891) *Illustrated Nautical Dictionary.* Howard Patterson, New York. https://archive.org/details/cu31924030750776

Pirrie W (1895) *A Technical Dictionary of Sea Terms, Phrases, and Words.* Crosby Lockwood and Son, London. https://archive.org/details/atechnicaldicti00pirrgoog Translations from E-F (pp 84-85) vs F-E (p 293) contradict.

Pope ST (1923) *A study of Bows and Arrows.* University of California Press, Berkeley. https://archive.org/details/studyofbowsarrow01pope Chinese (attributed Ming Dynasty) bowline on p 23.

Röding JH (1794) *Allgemeines Wörterbuch der Marine.* Licentiat Nemnich, Hamburg. 4 Volumes, Figures are in Vol 4: https://books.google.com/books?id=qzIR0wBK2cEC

Roth WE (1929) *Additional Studies of the Arts, Crafts, and Customs of the Guiana Indians.* U.S. Government Printing Office, Washington DC. https://books.google.com/books?id=uXUtAAAAMAAJ Fig 6, pp 8-9 for bow strings

Royal Canadian Navy (1960) *Seaman's Handbook (BRCN 3029).* Royal Canadian Navy, Ottawa. http://www.forposterityssake.ca/RCN-DOCS/BRCN3029.pdf

Sayers W (1997) Norse nautical terminology in twelfth-century Anglo-Norman verse. *Romanische Forschungen* 109**,** 383-426. www.jstor.org/stable/27941006 See also (2006) www.jstor.org/stable/43801803

Smith J (1627) *A Sea Grammar.* John Haviland, London. pp. 209-299 in https://archive.org/details/generalhistorieo02smituoft Smith copies much from Manwayring, with spelling later updated by editors. Smith's brief "*Accidence*" of 1626 uses for the ropes: bowlin, bowlin[e], bowline and bowling; but not boling, and no knots. (pp. 785-804 in https://archive.org/details/works1608163100smit_0)

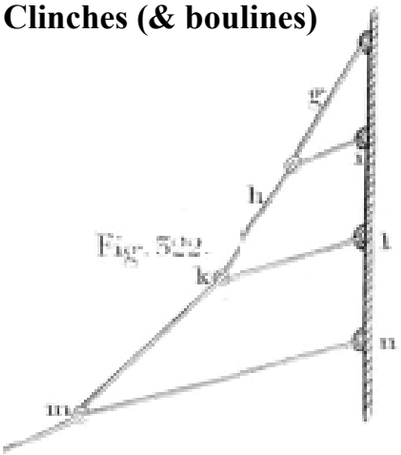
Smyth WH (1867) *The Sailor's Word-Book.* Blackie and Son, London. Smyth paraphrases Manwayring, describes *ABOK* #1010, and mentions toggles and clinches in similar context. He later paraphrases Smith https://archive.org/details/sailorswordbook00smytgoog

Steel D (1794) *The Elements and Practice of Rigging and Seamanship.* David Steel, London. Steel does not follow Lescallier (1777) in naming for the (copied) clinch / *bouline* and bowline / *d'agui* knots. https://www.maritime.org/doc/steel

Svensson S (1940) *Handbook of Seaman's Ropework.* Adlard Coles Limited, London. English version, translated by Inger Imrie, published 1971, ISBN 0229986544.

Zabaglia N (1743) *Castelli, E Ponti.* 1st Edition. Del Cavaliere Domenico Fontana, Roma. The 2nd Edition (1824) is at https://doi.org/10.3931/e-rara-11252 Knots are illustrated on p 147 (Tabulae II). See also *KM* 139, 40-43.

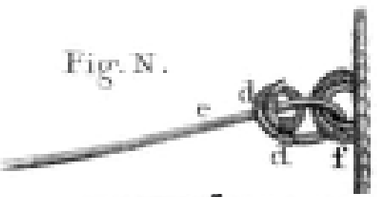
Clinches (& boulines)



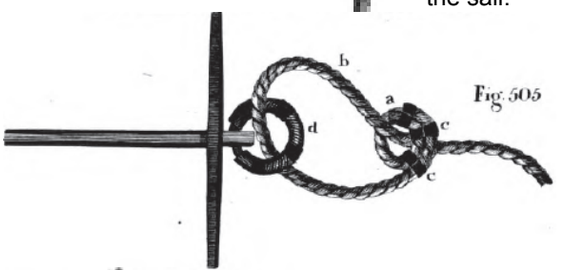
Lever, 1808 (or American edition of 1853) p 57:

The MAIN TOP-SAIL has sometimes four reefs, and in men-of-war four bow-line cringles, consequently three bridles, the middle and lower one having an eye and thimble spliced in the end of each, leading thus:—The upper bridle (g), Fig. 322, is clinched to the upper cringle, reeved through the thimble in the end of the middle bridle (h), and clinched to the second cringle (i) : the middle bridle (h) is reeved through the thimble in the end of the lower bridle (k), and clinched to the third cringle (l) : the lower bridle (k) is reeved through a thimble in the end of the bow-line (m), and clinched to the fourth cringle (n).

The clinch is made like Fig. N: the end of the bridle is reeved through the cringle (f), taken round the standing part (e), forming a circle; two round seizings (d) are then clapped on.—N. B. *The clinch on any rope is always made less than the cringle, &c., through which the rope is reeved.*

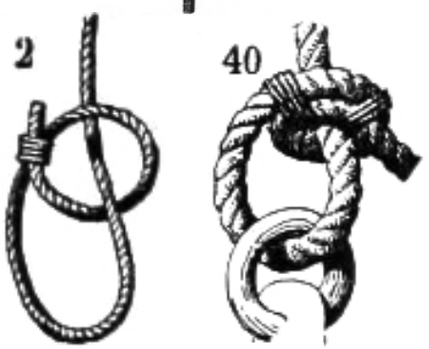


The FORE BOW-LINE is reeved through a block which is lashed to the fore stay collar, or sometimes strapped to an eye-bolt in the bowsprit close to it, leading in upon the fore-castle. The fore bow-line in the Merchant Service frequently goes with a toggle, so that when going long on one tack, the lee one is cast off, which prevents it from chafing the sail.



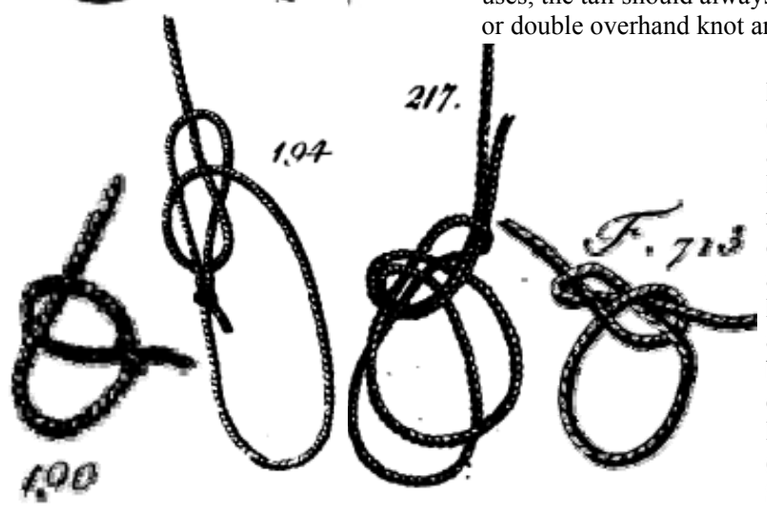
p 94:

The end of each cable (a), Fig. 505, is taken over and under the bight (b), forming the shape of the clinch, which must not be larger than the ring of the anchor (d). The seizings (c), which are called the BENDS, are then clapped on and crossed.



The inside clinch is a U turn with a half hitch - seized as a circle - around the stand (images 2 *nœud de bouline simple* and 40 *nœud d'étalingure de câble* from Larousse, 1897).

Seized clinches are rarely used today. Shackle splices, chain splices or eye splices with thimbles and shackles are used on anchor rings or chains. Square sails and boulines are historical items. But the bowline knot (*nœud d'agui* or *de chaise*) shown below retains many uses as an easily-tied, readily-verified and jam-resistant fixed eye in cordage, on land and at sea. For critical uses, the tail should always be secured, eg by means of a seizing or double overhand knot around the adjacent limb of the bight.



Röding (1794) copied some material (including the *bulienſtich* image 190 and the *leibknot* image 194) from Lescallier (1777), but he also provided new illustrations including a *leibknot* on the bight (image 217) and one tied as a pile hitch (*pfahlſtich*, image 713). He gave translations in 8 languages, and concurred with Lescallier on the bowline (190) / bowling (194-713) distinction in English. Nevertheless, in England these became known as clinch (190) and bowline (194, 217, 713) (eg Steel, 1794; Lever 1808).

Comment [RGB30]: It appears that instruction in the means by which lines were made fast to sails must have been entirely verbal with manual demonstration, until the advent of published engravings in the 18th Century. Knots were sometimes mentioned in earlier nautical manuals or treatises, by names used in the locality of the authors at that time. But no detailed textual descriptions or drawings of such fastenings (allowing identification of the structure) have been located in manuals or treatises before 1750. Presumably there was no earlier market, as sailors who tied knots, if literate, could not afford to purchase illuminated manuscripts.

Some of the earliest engraved illustrations (and associated text) are shown here and below.

A non-seized bowline knot is secure under tension, but insecure when slack or under cyclic loading, especially in stiff (salty) rope. Usually, a square-rigged ship sailing 'on a bowline' (close to the wind) must tack to maintain the desired overall course. While the bowline is hauled taut on the windward side, it has to be slack (and likely to be shaken by the sail) on the leeward side. Given these conditions of periodic slack and shaking, a non-seized bowline knot would be an inappropriate choice to use on the bridles, or elsewhere on a bowline rope.

If seizing is used for security, it is easier (and advantageously more compact) to use a (seized) clinch. Clinches had multiple uses aboard ship, including attachment of (i) standing rigging to mast tops, (ii) running rigging to deck rings, (iii) cables to anchors (Manwayring 1623) and (iv) cannon breechings. The bitter end of the cable was also clinched around the orlop beams or the main mast (Burney 1815). Surely in all of these cases, the knot was "ſo made that it will not ſlip, nor ſlide". To quote Manwayring: "The word ſeaſing, implies ... binding anything together, ſo as they cannot ſlip".

Thus there is every reason to doubt that the Bowling or Boling knot mentioned by Manwayring and Smith for use on *boulines* was in fact a bowline knot. More likely it was a clinch (*nœud de bouline*). Later authorities (eg Day CL 1947-1986 *The Art of Knotting & Splicing*. Dodd, Mead & Co., NY /Naval Inst. Press, Annapolis ISBN 0870210629) are explicit that a clinch was used for the purpose (despite the frequent citation of Smith as if he linked Boling and bowline knots) .

BOULINEN (bowlines) are ropes attached to square sails, near the middle of each side (Fig 286 cde). They keep the sails stiff when the wind blows in a direction unfavorable to the path of the ship. On each side of the sail there are 3 cringles (Fig 64 eee) where a bridle (ddd) is attached. The bowline (g) is a simple rope attached to the bridle by means of a thimble (f) ...

Fig. 64. Ein Theil von dem groſſen Segel um zu zeigen wie die Geitaue und Gordingen fahren.
b, b. Bauch-Gordingen.
aa. Nockgordingen.
cc. Geitaue.
x. Der Brafsſchenkel.
e, e, e. Die Bulienlägels.
d, d, d. Das Bulienſpreut.
g. Die Bulien.

BULIEN oder Bulin.

Holl. Boelyn.
Dän. Bovline eller Bougline.
Schw. Bolina.
Engl. Bowline.
Franz. Bouline.
Ital. Bolina o borina.
Span. Bolinas *die Bulienen der groſſen Segel*, Boliches *die Bulienen der Mars- und Bramſegel.*
Port. Bolina.

Bulienen werden die Taue genannt, die an jeder Seite der Raaſegel ungefähr in der Mitte des ſtehenden Leiks befeſtigt ſind. (Fig. 286. c. d. e.) Sie dienen die Segel ſteif bey dem Winde zu halten, damit ſie denſelben von der Seite zu, beſſer faſſen können, wenn er in einer ſchiefen, oder mit dem Wege des Schiffs ungünſtigen Richtung wehet. Die Bulien wird auf folgende Weiſe an das Segel befeſtigt: an jeder Seite des ſtehenden Leiks befinden ſich 3 Lägels, (e. e. e. fig. 64.) woran zwey Stücke d. d. von einem Tau geſtochen werden, das Ende des einen Stücks iſt nämlich an dem unterſten Lägel feſt, und fährt durch eine an der Bulien g befindliche Kauſch f; an dem andern Ende dieſes Stücks befindet ſich eine Kauſch h, wodurch das zweyte Stück fährt, deſſen beyde Enden an die beyden obern Lägel befeſtigt ſind, ſo daſs das ganze die Geſtalt eines Gänſefuſſes hat. Man nennt es das *Bulienſpreut*. Bey Everſegeln, welche ſehr tief ſind, iſt das Bulienſpreut an mehrere Lägels befeſtigt, und beſteht folglich aus mehrern Enden. Die Bulien ſelbſt beſteht aus einem einfachen Tau und iſt wie wir geſagt haben, vermittelſt einer Kauſch an dieſes Spreut befeſtigt. Alle Raaſegel haben Bulienen, ausgenommen die Blinde und Schiebblinde, weil man ſolche ſelten bey ſchiefem Winde gebraucht, und wenn es etwa ſeyn ſollte, ſo hängt man Kugeln oder Gewicht an ihre Luvſchoote.

Pfahl-STICH, Dückdalben-Stich (Fig. 713)
It is a kind of *leibknoten* that does not go around a human. With such a hitch, ships are attached to piles in a harbor. It is created by making a half-hitch with the stand and then taking the wend around the stand through the eye of the half-hitch. Pile / Dolphin? Hitch ≡ *ABOK* #1010, #1716.

LEIBKNOTEN
Is a hitch or knot (Fig. 194) for a man to sit in the eye and be lifted. The knot also serves to make a hitch at a pile in the water. The rope then drops owing to its weight and other hitches can go over it. Other types of *leibknoten* are shown in Fig. 217 and 218. Body Knot ≡ *ABOK* #1010 (#1080, #?)

LEIBKNOTEN.

Holl. Lyfknoop.
Dän. Livknob.
Schw. Lifknop.
Engl. Bowling knot.
Franz. Noeud d'agui à elingue.
Ital. Volta di quarnara, Bazigo.
Span. Aſa de guia, Balzo.
Port. Boca de lobo.

Iſt ein gewiſſer Stich oder Knoten (Fig. 194), der ſich nicht zuſchliert und dazu dient einen Menſchen, der ſich in das offenbleibende Auge ſetzt, in die Höhe zu winden. Dieſer Knoten dient auch ein Schiff an einem im Waſſer ſtehenden Pfahl feſt zu machen. Das Tau ſinkt alsdann ſeiner Schwere wegen nieder und andere Schiffe können darüber hinfahren. Andere Arten Leibknoten ſieht man Fig. 217 und 218.

Pfahl-STICH, Dückdalben-Stich (Fig. 713.)

Holl. Paal-ſteek.
Dän. Pæl-Steeg.
Schw. Pälſtek.
Engl. Bowling knot.
Franz. Noeud daguy à elingue.
Ital. Volta di quarnara.
Span. Balzo.
Port. Boca de lobo.

Iſt eine Art Leibknoten der ſich nicht zuſchliert. Mit ſolchem Stich befeſtigt man Schiffe in einem Hafen an Pfähle. Er entſteht indem mit dem feſten Part ein Halbſtich gemacht worden und der loſe Part wieder um den feſten durch das Auge des Halbſtichs geſteckt wird.

Bulien-STICH (Fig. 190.)

Holl. Boelyn-ſteek.
Dän. Bouglin-Steeg.
Schw. Bolinſtek.
Engl. A bowline knot.
Franz. Noeud de bouline.
Ital. Volta di borina.
Span. Buelta de bolina.
Port. Nó de bolina.

Mit ſolchem Stich werden die Bulienen, Geitaue, Nock- und Bauchgordingen an ihre Lägels feſtgemacht.

Bulien-STICH (Fig. 190)
With this hitch, the bowlines, clewlines, leechlines and buntlines are made fast to their cringles. Bowline Hitch ≡ *ABOK* #1130, #1917 (clinch)

Comment [RGB31]: It is interesting that in English-Danish dictionaries, Berthelson (1754) gave: bowline, *bovline;* & bowline-knot, *haard knude.* Bay (1806) gave: bowline, *bulinen*; bowline-knot, *et bulineſtik;* & bowling-knot, *et Livknop efler et faadant Stik, hvor paa et Mennneſke fetter ſig i det aadne Øje for at h ſſes i Vejret* (a life knot, a kind of eye knot in which a man sits to be raised in the air?)

In his English-Swedish dictionary, Serenius in 1734 gave bowling-knot, *pålſtåck* (but nothing for bowline). The 2nd edition (Serenius 1757) has KNOT ... bowling-knot, *pålſtåck;* and also bowline, *bog-lina*; & bowling knot, *en hård knut, ſom icke går up igen eller lofnar* (a strong knot that does not slip or slide?) ... but no entry for bowline knot.

Röding (1794) gave Swedish for bowline knot (*nœud de bouline*) as *bolinſtek*; & bowling knot (*nœud d'agui*) as *lifknop* or *pålſtek*.

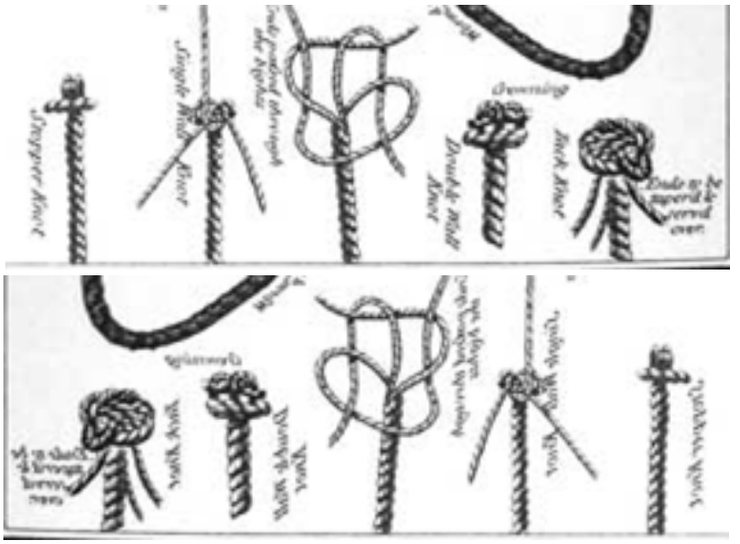
It appears that only in English were terms for the rope (*bouline*) and the (functionally unrelated?) eye knot (*nœud d'agui = palstek = lifknop*) conflated (as bowline = bowling). The assertion that the 'bowling knot' must have been used on the 'bowline' (rope), based on the shared name, seems to be mere folk etymology. The assertion that the term 'bowline knot' must be a combination derived from 'bowline' (rope) and 'knot' seems to be circular reasoning, based on acceptance of this folk etymology.

The *palstek* (or preferably an eye splice in synthetic ropes) has certainly been used on head (bow) lines, and on stern and breast lines, when docking.

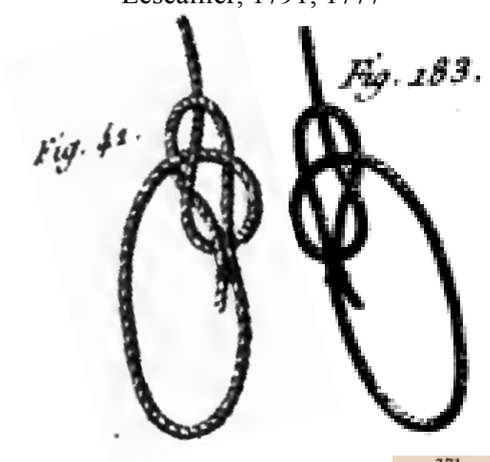
Bay CF (1806) *Fuldstændig Engelsk og Dansk Ordbog.* Gyldendalske, Kjøbenhavn. https://catalog.hathitrust.org/Record/100616654
Berthelson A (1754) *An English to Danish Dictionary.* J. Haberkorn, London. https://catalog.hathitrust.org/Record/008671058
Röding JH (1794) *Allgemeines Wörterbuch der Marine.* Licentiat Nemnich, Hamburg. 4 Volumes, Figs from Vol 4, text Vols 1-2. https://books.google.com/books?id=qzIR0wBK2cEC
Serenius J (1757) *An English and Swedish Dictionary:.* 2nd Edition. Harg and Stenbro, Nykoping. https://archive.org/details/englishswedishdi00sere
The 1st Edition (1734) is in the Gale 18th C Collection.

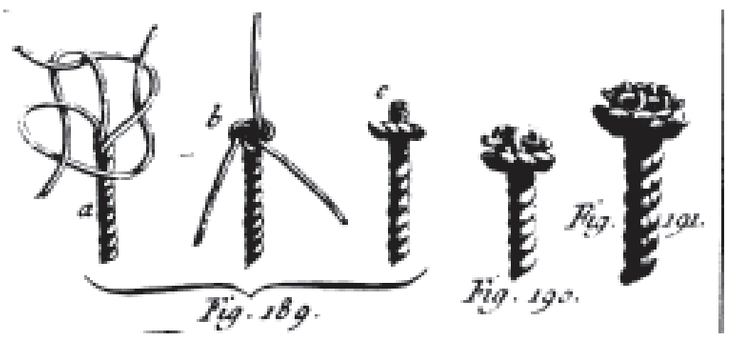
Bowline knots etc:

Steel, 1794

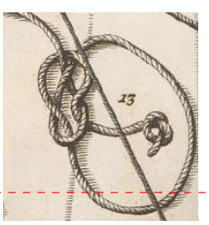


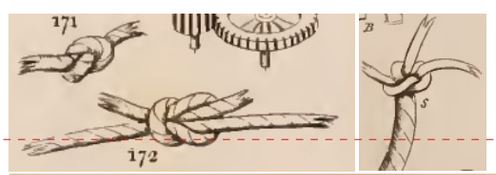
Lescallier, 1791, 1777





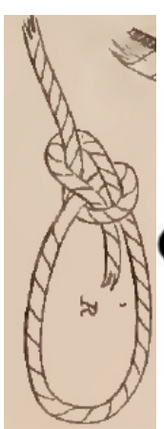
Zabaglia, 1743

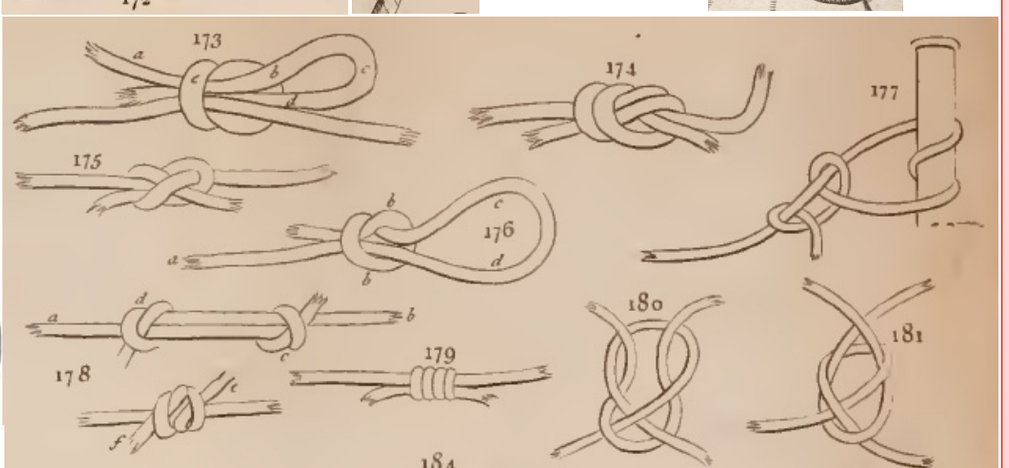




Emerson, 1754

(1825)





In the 1754 bowline, the lay of the rope is mistakenly reversed from the stand to the eye. Deloncle (1891) makes the same error.

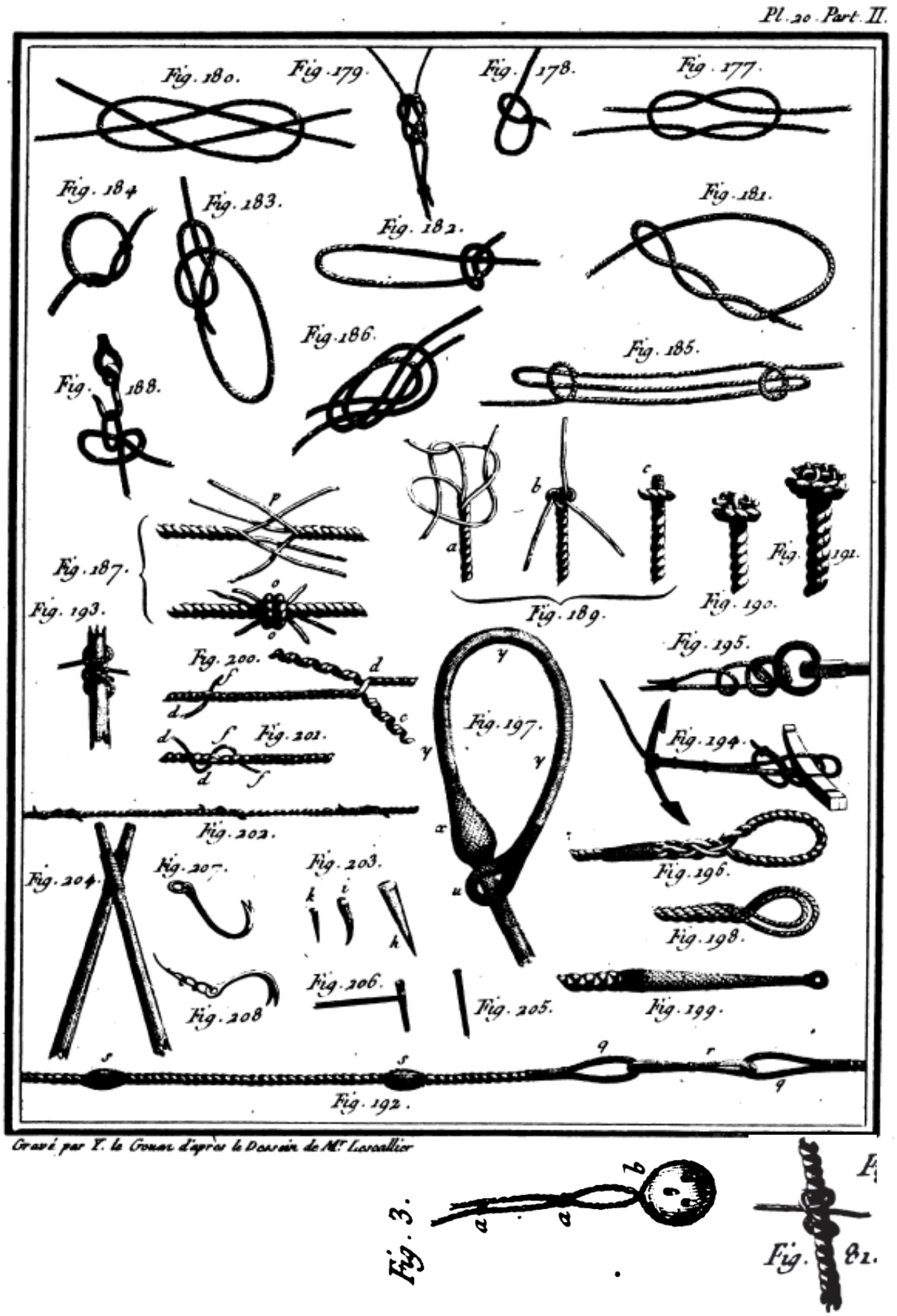
Comment [RGB32]: Once the English version of Guillet (1705) used "bow-line-knot ' and Blanckley (1750) used 'bowline knot', both in paraphrasing Manwayring (who used "Bowling knot" and likely meant *nœud de bouline: ABOK* #1130); then Emerson (1754) and Steel (1794) used 'bowline knot' for *nœud d'agui: ABOK* #1010; the confusion became inevitable in English, and in attempts to translate English. This confusion is seen explicitly as early as Burney (1815) and it persists to the present day.

One could argue that the inevitability of confusion arose earlier, through the use of homophones 'bowling' and 'bowline'. It could have been avoided by the adoption in English of a name like 'pile hitch' for *ABOK* #1010, equivalent to use of *palstek* or similar in many European Languages. That opportunity no longer exists (even if the common name of a knot as popular as *ABOK* #1010 could be changed), because 'pile hitch' applies in English as the common name for another structure (*ABOK* #1815).

The alternatives from other languages (body-, chair-, guide- or life-knot) also seem inappropriate today because most rescue agencies advise against *ABOK* #1010 to support a live body (preferring *ABOK* #1047 or #1053).

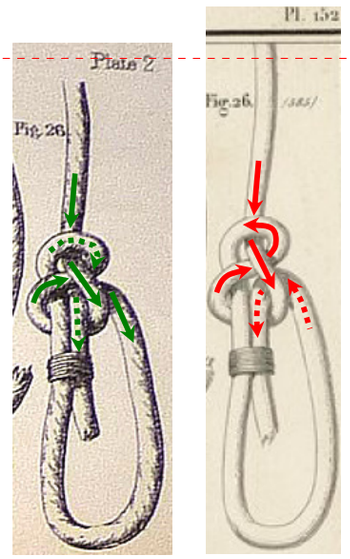
The interesting ambiguity in the Portuguese *boca de lobo* (lobe knot / wolf mouth?) would be lost in translation.

As bouline / bowline ropes are now historical items (though bow lines are not), perhaps the best we can hope is that future confusion is minimised by understanding (i) the origin of the English common name for *ABOK* #1010, and therefore (ii) the reason it conflicts with common names in other languages.


Pl. 20. Part. II.
Fig. 180.
Fig. 179.
Fig. 178.
Fig. 177.
Fig. 184.
Fig. 183.
Fig. 182.
Fig. 181.
Fig. 186.
Fig. 185.
Fig. 188.
Fig. 187.
Fig. 193.
Fig. 189.
Fig. 191.
Fig. 190.
Fig. 200.
Fig. 201.
Fig. 195.
Fig. 197.
Fig. 194.
Fig. 202.
Fig. 196.
Fig. 204.
Fig. 207.
Fig. 203.
Fig. 198.
Fig. 208.
Fig. 206.
Fig. 205.
Fig. 199.
Fig. 192.
Gravé par Y. le Gouaz d'après le Dessein de Mr. Lescallier
Fig. 3.
Fig. 81.

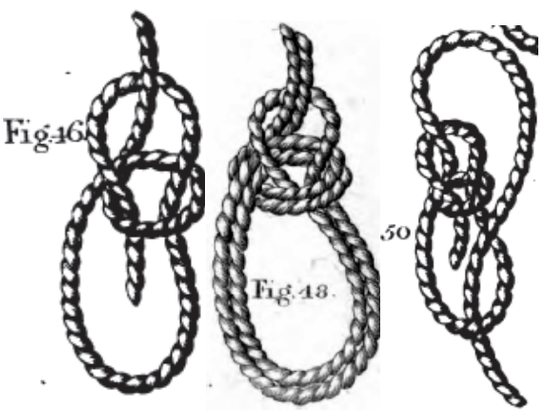
Lescallier, 1777 p original (PDF)

Fig #	**English** p 102 (236) **... Knot** (Ashley name)	***French*** *p 254 (388)* ***Nœud de ...***
3a	Seizings	*Amarrage à Plat* *Amarrage en Étrive*
81	Two Half Hitches / Clove Hitch	*Deux Demi-Clés*
177	Carrick / Sailors (Reef)	*Plat / Marin*
178	Bowline (Clinch)	*Bouline*
179	Sheet (Bend)	*Écoute*
180	Granny's (Carrick)	*Vache*
181	Timber Hitch	*Anguille*
182	Jamming (Noose)	*Bois*
183	Bowling (Bowline)	*Agui / Élingue*
184	Overhand	*Demi-Nœud*
185	Sheepshank	*Jambe de Chien*
186	Overhand (Ring / Water)	*Plein Poing*
187	Double Wall	*Haubans / Cul-de-Porc Double*
188	Cat's Paw	*Gueule de Raie*
189	Single Wall	*Cul-de-Porc Simple*
190	Crown	*Cul-de-Porc Avec Tête de Mort*
191	Double Crown	*Cul-de-Porc Avec Tête d'Alouette*
192r	Lashing Eyes Together (Wedding)	*Mariage de Tournevire*
193	Clove Hitch with Round Turn (Magnus Hitch)	*Tour Mort, Avec Deux Demi-Clés*
195	(U-Turn with Two Half-Hitches)	*Ét Alingure de Grapin*
196	(Eye Splice)	*Geillet*
199	(Pointed Eye)	*Queue de Rat*
200-2	(Long Splice)	*Épissure*
204	(Shear Leg Lashing)	*Portugaise*



Bowling (1866) / Émy (1841) Bowline Knot

In Bowling, ambiguously a rear view of either *ABOK* #1010, or a variant of *ABOK* #1025. It is clearer in the original from Émy, that *nœud d'agui à étalingue* is mis-drawn. Could this be the original error of engraving that was embellished by some subsequent authors as a "true bowline"?

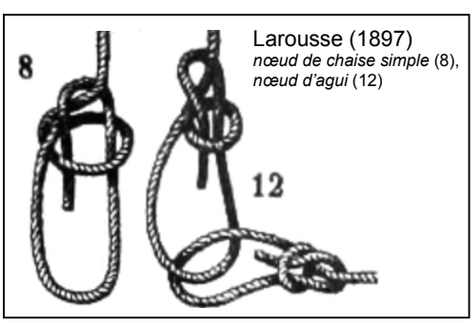


Lever (1808) Bow-line Knots
(no uses discussed)

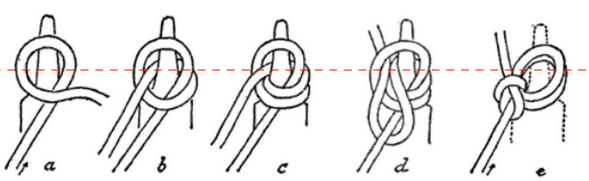
278 OLD SEA WINGS, WAYS, AND WORDS,

hence the term "on a bow-line" for the position of a ship sailing as near the wind as possible. The bowline-knot is the same as that used for the loose end of a bowstring. Leslie (1890)


Bowline-knot.



Larousse (1897)
nœud de chaise simple (8),
nœud d'agui (12)



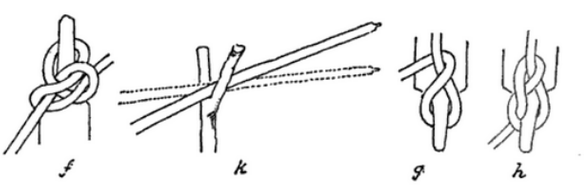


FIGURE 6.—Fixation of string onto bow, etc. (Sec. 127.) Attached to upper end with a double loop (*a–e*), or with a single loop, a bowline (*f*); attached to lower end with a simpler form of bowline (*g*, *h*). Restoring a bent bow to its normal shape (*k*)

Primitive bowstring knots from Roth (1929): *a-d* show making of a double-eye bowline, *e* is a variant (*ABOK* #1072, which the English call the French or Portuguese bowline, but the French call *nœud de chaise de calfat*); *f* is a single-eye bowline (*ABOK* #1034½). *g-h* is a Fig.8.

Comment [RGB33]:
Bowling T (1866) *The Book of Knots.* Robert Hardwicke, London. http://www.bodleian.ox.ac.uk/dbooks
Émy AR (1842) *Traité de l'art de la Charpenterie.* Dominique Avanzo et Co, Liége. https://archive.org/details/traitdelartdela00mygoog
See Chapter XLVII (Nœuds) pp. 534-548.
See also plates (125), 151, 152, 155 at: Traité de l'art de la Charpenterie Atlas (Paris, 1841): https://gallica.bnf.fr/ark:/12148/bpt6k3140210/f3.item.r=151

Comment [RGB34]: As an aside, 'bowsprit' is certainly associated with the bow of a ship. The spar was called the 'bouspret(e)' in Middle English, likely borrowed from Middle Lower German *bōchspret* (bow pole). Later it was written as 'bolt sprit' (Manwayring, 1623), 'bolt spret', 'bowle spret' or 'boulspret' (Smith, 1627). The French equivalent *beaupré* was also used by English seamen: "*PASSER fous le beaupré*: to paſs under the bowſprit. This phraſe, which is uſual amongſt Engliſh as well as French ſeamen, implies to go ahead of, or before a ſhip, and croſs her courſe". In French, which developed in the Latin-Romance rather than the Germanic branch of Indo-European languages, the bows of a ship were called *avant* (head), *epaules* (shoulders), *jottes* (cheeks) or *proue* (prow) (Falconer, 1769; Lescallier, 1777).

At least one expert has correlated the use of a bowsprit with the use of bowlines, but this correlation is probably unsafe (see Friel 1983, Tinniswood 1949). It is true that a bowsprit could allow a better lead for bowlines from foresails. However, bowlines were long used without a bowsprit (eg by Vikings), and bowsprits have many uses unrelated to bowlines (eg attachment of: standing rigging to the foremast, jibs or earlier square-rigged spritsails, and anchors).

bowsprit:
https://archive.org/details/anewenglishdictionaryonhistoricalprinciples/page/n1058

Friel I (1983) Documentary sources and the medieval ship: some aspects of the evidence. *International Journal of Nautical Archaeology* 12, 41-62. See https://books.google.com/books?id=eAskDwAAQBAJ&dq
Tinniswood JT (1949) English galleys, 1272-1377. *The Mariner's Mirror* 35, 276-315. https://dokumen.tips/documents/english-galleys-12721377.html

Pirrie, 1895

English - French (pp 84-85)			**French – English** (p 293)	
... Knot	***Nœud de ...***		***Nœud de ...***	**... Knot**
bowline	*d'agui*		*chaise simple*	bowline hitch
bowline on the bight	*chaise double*		*chaise double*	bowline on the bight
running bowline	*coulant laguis*		*laguis*	running bowline
clinch	*bouline*		*étalinguere intérieure*	inside clinch
sheet bend	*vache, tisserand*		*d'écoute*	sheet bend
blackwall hitch	*croc de palan*		*guile de loup simple*	blackwall hitch
clove hitch	*batelier*		*deux demi-clefs*	clove hitch
figure of eight	*à plein poing*		*en forme d'un huit*	figure of eight
timber hitch	*anguille, bois et barbouquet*		*bois*	timber hitch, knot in wood
carick (sic) bend	*vache*		*vache*	carrick bend
diamond	*tire-veille*		*simple tire-veille*	single diamond
reef	*droit*		*droit*	reef
Mathew Walker	*ride*		*ride*	Mathew Walker
single wall	*cul de porc simple*		*cul de porc simple*	single wall
turk's head	*tête de maure*		*tête de maure*	turk's head

Many others are given, equivalent in E-F and F-E.

Lescallier, 1791 (plates on following pages)

TRAITÉ PRATIQUE
DU GRÉEMENT
DES VAISSEAUX
ET
AUTRES BATIMENS DE MER:

Ouvrage publié, par ordre du ROI, pour l'inſtruction des Elèves de la Marine, ſous le Miniſtère de M. de Fleurieu;

Par M. LESCALLIER, Commiſſaire-Général des Colonies, ci-devant Ordonnateur dans la Guiane Hollandoiſe, & enſuite dans la Guiane Françoiſe, Correſpondant de la Société Royale d'Agriculture de Paris.

Avec Planches & Figures.

TOME SECOND.

Contenant les Planches, & diverſes Tables.

A PARIS,

Chez { Clousier, Imprimeur du ROI, rue de Sorbonne.
Firmin Didot, Libraire, rue Dauphine.
A Londres, chez P. Elmsly, Libraire, in the Strand.
Et à Amſterdam, chez Gabriel Dufour, Libraire.

M. D C C. X C I.

Nares, 1862

Deloncle, 1891

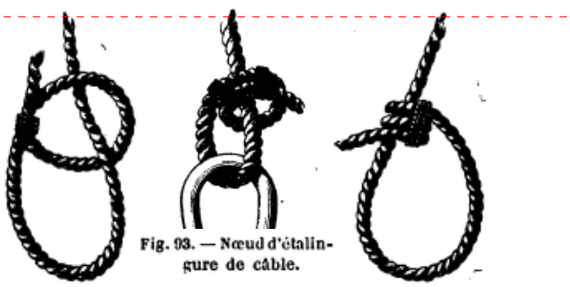


Fig. 59. — Nœud de bouline simple.

Fig. 60. — Nœud de bouline double.

Fig. 93. — Nœud d'étalingure de câble.

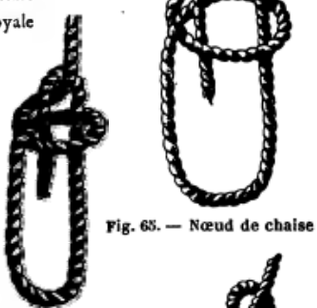


Fig. 65. — Nœud de chaise simple.

Fig. 67. — Nœud de chaise double.

Fig. 69. — Nœud d'agui.

Fig. 70. — Laguis.

Comment [RGB35]: Other texts mentioned in comments:
Anonymous (ca 1625) *A Treatise on Rigging*. Soc Naut Rsh, London (ed RC Anderson 1958). https://books.google.com/books?id=YfpFGQAACAAJ
Blanckley TR (1750) *A Naval Expositer*. E. Owen, London. https://catalog.hathitrust.org/Record/101759324
Brady WN (1841) *The Naval Apprentice's Kedge Anchor*. Taylor, NY. https://catalog.hathitrust.org/Record/100128186
Bushell C (1857) *The Rigger's Guide & Seaman's Assistant* 3rd Edn. Lewis, Portsmouth. https://books.google.com/books?id=cW6IxAEACAAJ
Carver MOH (2014) Travels on the sea.... *In:* SS Klein et al (eds.) *The Maritime World of the Anglo-Saxons* ACMRS, Tempe. http://eprints.whiterose.ac.uk/102091/1/2014_Carver_Travels_on_the_sea_.pdf
Dana RH (1841) *The Seaman's Manual*. Edward Moxon, London. https://archive.org/details/seamansmanualcon00danarich
Deloncle ACL (1891) *Manuel du Manoeuvrier*. 1st Edn. Challamel, Paris. https://gallica.bnf.fr/ark:/12148/bpt6k6544765h 2nd Edn (1896) https://archiv.org/details/manueldumanuvri02lajagoog
Faulkes A (ed.) (1998) *Edda Glossary*. VSNR, London. http://www.vsnrweb-publications.org.uk/Edda-2b.pdf
Gower RH (1808) *Treatise on ... Seamanship*. 3rd Edn. Wilkie, London. (1st Edn, 1793) https://books.google.com/books?id=e2VGAAAAYAAJ
Harriot T (1560-1621) Shipbuilding. Ms 6788. https://echo.mpiwg-berlin.mpg.de/ECHOdocuView?url=/permanent/library/AYB35Z4D/
Hartley AH (2008) Rigging Terms in Michael of Rhodes (15th Century). https://sites.google.com/site/logotheras/home/rigging-terms-in-michael-of-rhodes
McGrail S (1987) *Ancient Boats in North-West Europe ... to AD 1500*. Longmans, London. https://books.google.com/books?id=nmLJAwAAQBAJ
Moore JJ (1801) *The British Mariner's Vocabulary*. Hurst, London. https://catalog.hathitrust.org/Record/008600145
Expanded in 1805 to "*The Midshipman's or British Mariner's ...*" https://catalog.hathitrust.org/Record/009709014
Nares GS (1862) *Seamanship*. Griffin and Co., Portsmouth. https://archive.org/details/seamanship00acadgoog
Roberts G (1726) *The Four Years Voyages of Capt. George Roberts*. Bettesworth, London. https://books.google.com/books?id=OWsBAAAAQAAJ

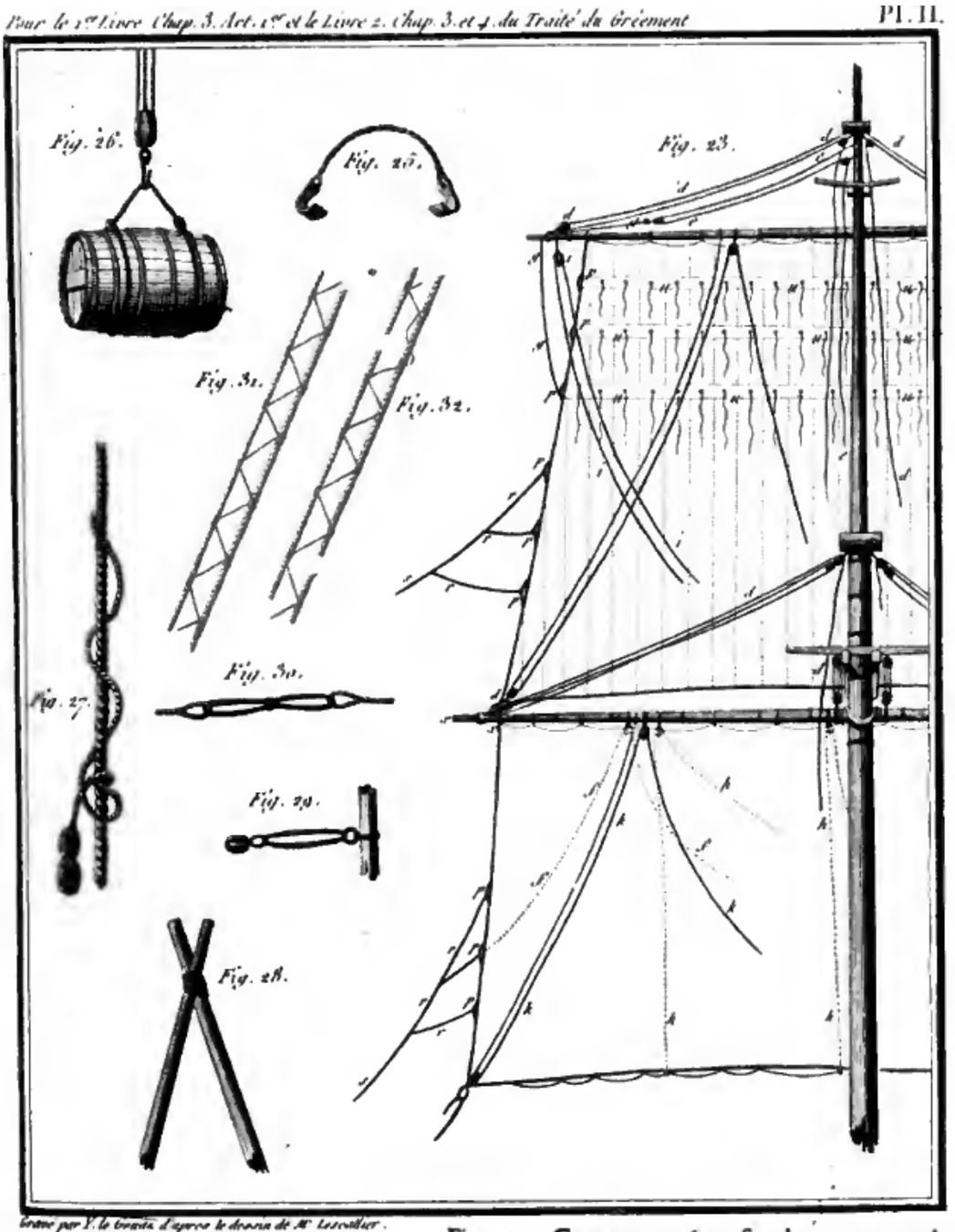


Fig. 23. Palanquins ou palans de ris...

Fig. 24. Cargues, cargue-fonds, cargue-points & cargue-boulines..... Pag.
25 & 26. Elingues, voyez la page.....
Et la deſcription de la Planche XIV, où ces Figures ſont par erreur rapportées dans le texte.

Liv. I, Chap. III, Art. I.

Fig. 27. Amarrage en fouet.....
28. Portugaiſe, ou amarrage de la tête des Bigues.....
29 & 30. Aiguillétage.....
31 & 32. Serpenter des cordages.....

Comment [RGB36]: On the mizon main yard only, the brace (i) was sometimes called a bowline, probably from the time of lateen or balanced lug mizon sails, which did not use a bowline to the leech (g-f). See Harriot ms 6788, Manwayring (1623) and Treatise on Rigging.

Early Iberian large galleons used lateen sails on the mizon mast(s) to steer closer to the wind. They sometimes carried lines and bridles to the square-sail leeches, but running aft (*chontra burina*).

The Swedish warship Mars, built before1564, had bowlines with bridles on the main and fore sails, and a lug mizon sail. How the bowlines were attached is not mentioned, but they appear no heavier to haul than those illustrated 200 years later. Perhaps the heavy hauling (warranting a short-drag shanty) was to lift a man seated in a bowline knot?

A tacking pole (Norse *beitiáss*; English *lof* or *luf*) into a cringle on the forward leech (English *loof* , later *luff*) may have been used as a 'wooden bowline' and/or placed over the side to give a better lead to the bowline, later done with a fixed bowsprit (cf Friel 1983, McGrail 1987, Carver 2014). Tinniswood (1949) argued that early English bawelynes were cables of anchors hauled over the bowsprit. Bowlines were used to clear a foul hawse (Lever 1808). Some Vikings used hooks (*pent*) on their bowlines. Single-mast boats and multi-mast tall ships posed very different challenges.

The timing of wide adoption of the *ABOK* #1010 bowline knot among English sailors is uncertain, but it may have been in the late 18th C, based on use by Emerson, absence from Falconer and fleeting mention (without uses) by Steel and Lever. Lescallier (1777) and Röding (1794) gave detailed descriptions from Europe.

Castro F (2008) In search of unique Iberian ship design concepts. *Hist Archaeol* 42, 63-87. www.jstor.org/stable/25617496
Unger G (1680) *Illustrerad Svensk Sjökrigshistoria.* Albert Bonniers Förlag, Stockholm. https://books.google.com/books?id=RchAAAAAIAAJ
Haul on the Bowline (shanty) https://www.fresnostate.edu/folklore/ballads/Doe009b.html https://mainlynorfolk.info/lloyd/songs/haulonthebowline.html
Crumlin-Pedersen O, Hirte C, Jensen K & Möller-Wiering S (1997) *Viking-age Ships and Shipbuilding.* Arch. Landesmus., Kiel. https://books.google.com/books?id=XwEhAQAAIAAJ

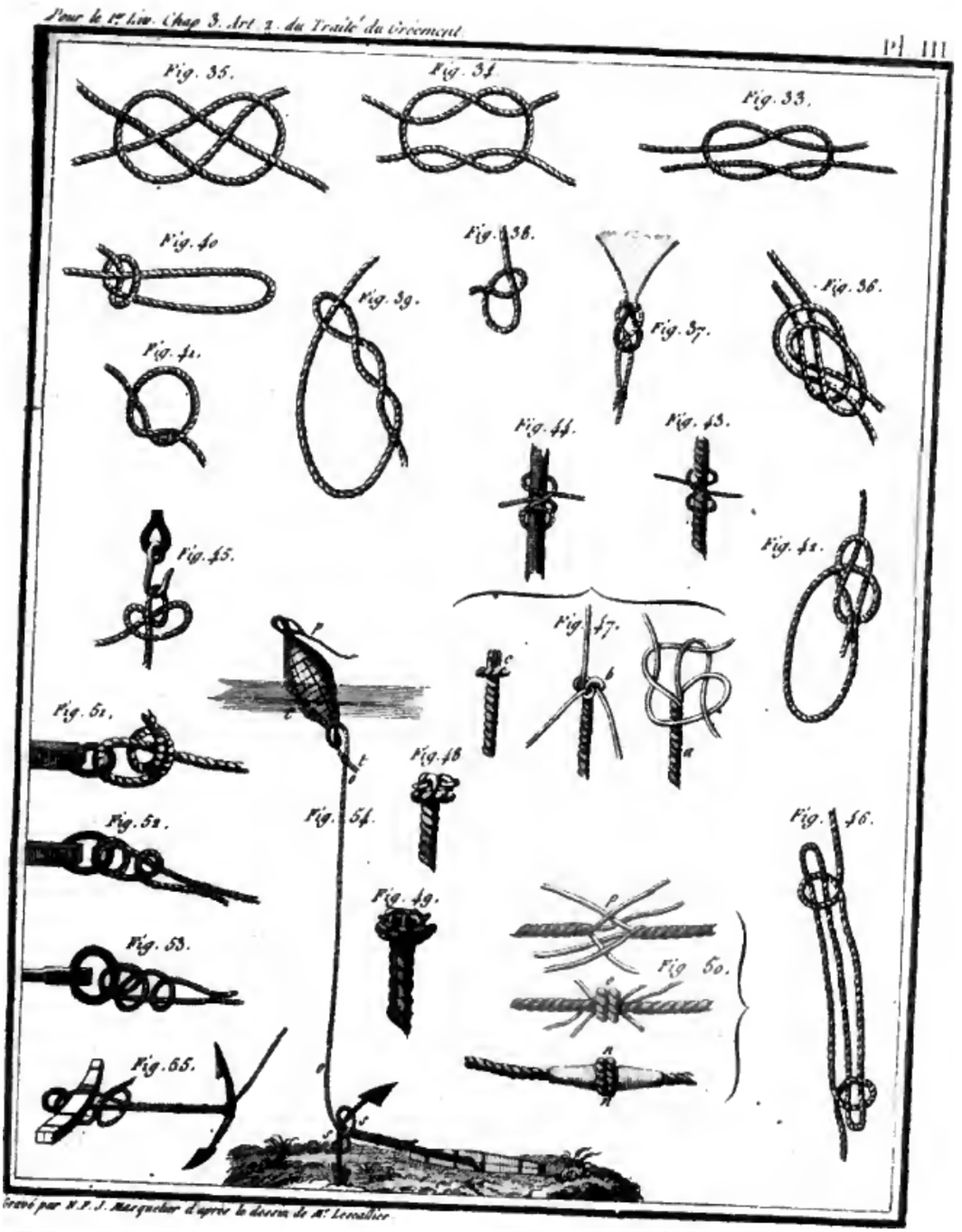


Fig. 33. Nœud plat ou nœud marin.....
35. Nœud de vache.....
36. Nœud à plein poing.....
37. Nœud d'écoute.....
38. Nœud de boüline.....
39. Nœud d'angullle.....
40. Nœud de bois .....
41. Demi-nœud .....
42. Nœud d'aguy à élingue.....
43. Demi-clef.....
44. Tour mort avec deux demi-clefs.
45. Gueule de raie.....
46. Nœud de jambe de chien.....
47. Cul-de-porc ſimple .....
48. Cul-de-porc avec tête de more.

Fig. 50. Cul-de-porc double, ou nœud de haubans .....
51. Etalingûre de cable .....
52. Etalingûre de grelin .....
53. Etalingûre de grapin .....
54. Etalingûre d'orin de grande ancre.....
id. Etalingûre de bouée.....
55. Etalingûre d'orin de petite ancre.....

For Fig 34 (the granny knot), the text (p 52) gives *nœud tors* (a *nœud défectueux* or *nœud vicieux*). It is known elsewhere in French as *nœud en queue de cochon, nœud de menagerie, nœud de soldat* or *nœud de vache* (unfortunately used also for several other knots including *nœud de Carrick*).

Comment [RGB37]: Anchor hitches (Figs 51-55) are expanded from 1777, now including an inside clinch (*etalingûre de cable*).

Chronology of terms (sometimes) related to boulines

Year	Author	Rope	Clinch	Fixed Eye	Illust.	Norse	Norman	English	French	German	Danish	Swedish	Spanish	Dutch	Italian	Portuguese
pre-1100	? Oral / Snorri *Edda* (*Sayers*)	+	-	-	-	bóglína (*a line from the forward curve of a sail*)										
1155	Wace *Roman de Brut*	+	-	-	-		boëline									
~1160	Thomas *Roman de Tristan*	+	-	-	-		boline		*boeline (Tobler)*							
~1170	de Berneville *La Vie de Saint Gilles*	+	-	-	-		boesline									
1295	? *Acc.Shipbuilding*	+	-	-	-			boweline								
1296	? *Newcastle Galley*	+	-	-	-			boulyn								
~1325	? *Patience*	+	-	-	-			bawlyne								
1330	Mannyng (Brunne) *Chronicle / Story of*	+	-	-	-			boulyne, *bowlyne (Furnivall), bouline (OED)*								
~1450	? *Pilgrim's Sea Voyage*	+	-	-	-			bowelyne								
1549	Lindsay *Complaynte of Scotland*	+	-	-	-			boulene								
1594	Greene *Looking-Glass*	+	-	-	-			bowling								
~1600	Harriot *Shipbuilding Ms 6788*	+	-	-	-			bowling								
1622	Heylin *Cosmography IV*	+	-	-	-			bolin								
1623	Manwayring	+	?	?	-			bowling (knot)								
~1625	? *Treatise on Rigging*	+	-	-	-			bowling(e)								
1627	Smith	+	?	?	-			boling (knot), bowling								
1704	Harris	+	-	-	-			bow-line, bowling								
1704	Harris	-	?	?	-			bowling knot								
1705	? *Guillet's Gentleman's Dictionary*	-	?	?	-			bow-line-knot								
1726	Roberts	-	?	?	-			running bowling knot*								
1743	Zabaglia	-	-	+	+			translation: boatman's slipknot*							nodo e cappio del	barcaiolo
1750	Blankley (paraphrasing Manwayring)	+	?	?	-			bowline (knot)								
1752	Bellin	+	-	-	-				bouline							
1754	Emerson	+			+			bowline								
1754	Emerson	-	-	+	+			bowline knot*								
1754	Berthelson	+	-	-	-			bowline			bouline					
1754	Berthelson	-	?	?	-			bowline knot‡			haard knude†					
1755	Johnson *Dictionary*	+	-	-	-			bowline, bowling *(citing Harris)*								
1757	Serenius	+	-	-	-			bowline				bog-lina				
1757	Serenius	-	?	?	-			bowling knot‡				pålståck, hård knut†				
1769	Falconer	+	-	-	-			bowline								
1777	Lescallier	+	-	-	+			bowline	bouline							
1777	Lescallier	-	+	-	+			bowline knot	noeud de bouline							
1777	Lescallier	-	-	+	+			bowling knot*	noeud d'agui à élingue							
1794	Röding	+	-	-	+			bowline	bouline	bulien, bulin	bovline, bougline	bolina	bolina	boelyn	bolina, borina	bolina
1794	Röding	-	+	-	+			bowline knot	noeud de bouline	bulien-stich	bouglin-steeg	bolinstek	buelta de bolina	boelyn-steek	volta di borina	nó de bolina
1794	Röding	-	-	+	+			bowling knot*	noeud d'agui à élingue	liebknoten, psahl-stich	livknob, pael-steeg	lifknop, pålstek	asa de guía; balzo	lyfknoop, paal-steek	volta di quarnara,	boca de lobo
	Literal English								*leader sling? (Hindi/French)*	*body, pile*	*life, pile*	*life, pile*	*guide strap/handle; belt?*	*life, pile*	*shroud-thick rope? N*	*wolf-mouth? lobe?*
1794	Steel	+	-	-	+			bowline								
1794	Steel	-	+	-	+			clinch								
1794	Steel	-	-	+	+			bowline knot*								
1806	Bay	+	-	-	-			bowline			bulinen					
1806	Bay	-	+	-	-			bowline knot			bulinestik					
1806	Bay	-	-	+	-			bowling knot*			livknop					
1808	Lever	+	-	-	+			bow-line								
1808	Lever	-	+	-	+			clinch								
1808	Lever	-	-	+	+			bow-line knot*								
1815	Burney, W	+	-	-	+			bowline								
1815	Burney, W	-	-	+	+			bowline knot	noeud de bouline, noeud d'agui à élingue							
1871	Burney, C	+			+			bowline								
1871	Burney, C	-	+	-	+			bridles spliced and toggled; clinches used to secure/jam ropes incl. standing parts of tackles*								
1871	Burney, C	-	-	+	+			bowline knot*								
1890	Leslie	+	-	-	+			bowline								
1890	Leslie	-	-	+	+			bowline knot‡								
1891	Deloncle	+	-	-	+				bouline							
1891	Deloncle	-	+	-	+				noeud de bouline							
1891	Deloncle	-	-	+	+				noeud de chaise*, noeud d'agui*, laguia*							
1944	Ashley	+	-	-	+			bowline								
1944	Ashley	-	+	-	+			clinch								
1944	Ashley	-	-	+	+			bowline knot								

* indicates not associated with bouline / bowline ropes

‡ Indicates uncertain association with bouline/ bowline ropes. † Unfortunately 'haard knude' and 'hård knut' have been applied to diverse knots.

red text indicates influential (even if sometimes erroneous) published usage

eg: Manwayring (1623) and Smith (1627) used bowling / boling knot without describing the structure. Many later authors merely paraphrased them, sometimes substituting with bow-line / bowline knot (eg 'Guillet' 1705, Blanckley 1750).

Emerson (1754) first used the form 'bowline knot' for ABOK #1010, though not associated with bowline ropes. Mist (Defoe?) wrote "haul-bowline-dog" in 1722. All of the earlier English words could sound the same.

Lescallier (1777) translated *noeud de bouline* (*ABOK* #1130) as 'bowline knot' used on bowlines; and *noeud d'agui à élingue* (*ABOK* #1010) as 'bowling knot' not used on bowlines (contradicting Manwayring, Harris, *et al.*)

Röding (1794) supported Lescallier and gave terms in nine languages.

Steel (1794) copied *noeud de bouline* from Lescallier, but re-labelled it 'clinch'. He also copied *noeud d'agui à élingue*, and re-labelled it 'bowline knot', though not associating it with bowline ropes (like Emerson).

Burney, W (1815) mistakenly equated *noed de bouline* (*ABOK* #1130) and *noeud d'agui* (*ABOK* #1010) as 'bowline knot'.

Leslie (1890) wrote (of *ABOK* #1010) that "though the knot called a bowline may have been used to connect the … bridle … with the bowline, it probably took its name from being the knot used for … a bowstring".

Ashley (1944) wrote that historical use of 'boling knot' or 'bowling knot' referred to *ABOK* #1010, and that it was named for use on bowline ropes (contradicting Lescallier, Röding, Lever, Leslie, *et al.*)

Structures interpreted as bowlines and tacking booms appear on some Gotland picture stones probably carved in the 9th C. See https://ojs.zrc-sazu.si/sms/article/download/1728/1477/ Also https://www.academia.edu/719816/Viking_Age_Iconography_and_the_Square

Sandahl (https://books.google.com/books?lr=&id=rPBaAAAAMAAJ&dq) warned that written evidence for bóglína in ON dates from 1250-1300. Also http://www.vsnrweb-publications.org.uk/Edda-2b.pdf https://www.vikingsofbjornstad.com/Old_Norse_Dictionary_E2N.shtm

Some translations of Beowulf, line 1907 (Anon. 8th C?, describing events of 6th C Scandinavia) use bowline, but a literal translation of 'segl sâle fæst' is 'sail rope fastened'. See https://www.gutenberg.org/files/9700/9700-h/9700-h.htm

People crossed mountains (with help from locals as guides) before they crossed oceans (with help from sailors), so the Spanish name *asa de guia* (guide handl?) may be a clue to origin of *noeud d'agui*.