

Fig. 11 -- Wrought rod (a-c) and machine cut steel (d-k) nail varieties:
 a), Variety #1060 (L = 7.2 cm.); b), Variety #1071 (L = 4.8 cm.);
 c), Variety #1103 (L = 25.6 cm.); d), Variety #2001 (L = 7.0 cm.);
 e), Variety #2002 (L = 7.8 cm.); f), Variety #2003 (L = 8.6 cm.);
 g), Variety #2004 (L = 8.0 cm.); h), Variety #2005 (L = 5.5 cm.);
 i), Variety #2017 (L = 8.7 cm.); j), Variety #2019 (L = 11.8 cm.);
 k), Variety #2020 (L = 8.0 cm.);

**Fort Vancouver National Historic Site
 Mini Nail Guide
 Compiled by Heidi Pierson
 1/2006**

Synopsis of Nail Info from “The Tome”

(Not quoted directly, but close – this information should be attributed to Ross 1976: 886-923)

The most common type of fastener used during the mid-19th century for wooden construction was the nail. Manufactured from either iron or yellow metal, nails came in a wide variety of styles and sizes. The HBC was known to have acquired nails from **Moreton & Foster**. Nail shape and size is determined by function; historically, only a few of these functions can be gleaned from the corresponding terminology (i.e. boat, chair, shingling, and sheathing nails). Archaeologically, building events (such as dated shingling activities) and nail sizes can be used to identify nail functions as well as country-specific sizing systems. Nail sizes during the 19th century were well established, and the system with the widest acceptance was similar to the modern American penny-sizing system.

There are numerous historical problems with directly associating penny sizes with nail lengths:

- (Hypothetical) Adequate definitions of British systems include:
 - A “middle age” system which defined a nail size as that price charged for 100 nails of an equal length.
 - An 18th & 19th century system which (ideally) defined nail size as that weight of 1000 nails of an equal length. If 1000 nails of an approximately equal length weighed four lbs, they were 4d nails – actual numbers could vary between 750 and 1200 nails.
 - Mid-19th century system in which nails were listed by length in inches.
- Adequate definitions of American systems include:
 - An unknown pre-19th century system which recognized “penny” sizes presumably based on lengths which were sold by the hundred.
 - An unknown pre-19th century system which recognized “penny” sizes were presumably based on length, and were sold by the price per pound.
 - 19th-20th century penny sizing which defined nail sizes by standard lengths in inches. It remains unclear whether this system was based on shank length or length of the entire nail.

These problems are compounded by the fact that previous researchers have had difficulty defining size populations for their archaeological collections (see Ross 1976: 889 for a number of examples).

Why Use Penny Sizes at All?

- Modern penny sizes are useful for intra- and inter- site description and comparison.
- Modern penny sizes are useful for comparison with historical systems of sizing and terminology.
- Modern penny sizes are useful for building specific functional interpretation.

One must not assume a one-to-one correlation between modern and historic penny sizes.

At Fort Vancouver, all complete nails were measured for total nail length rounded to the nearest mm. For defining nail size populations of stylistic nail varieties, nail lengths were plotted against shank thickness taken at the base of the head. Resultant populations were compared to modern American penny sizes; and for comparative purposes, size populations were referenced by their equivalent modern penny sizes.

Historically, it has been thought that at least two sizing systems were in use at Fort Vancouver during the period 1844-5:

- The British weight system which defined a “pound size” on the basis of the weight of 1000 nails of an equal length.
- The British length system which listed actual nail lengths in inches.

Archaeologically, it is hypothesized that in the late 1840s the HBC began importing American manufactured nails to Fort Vancouver; thus, a third sizing system was introduced — an American penny sizing system based on length and identical to the modern American penny sizing system.

Nail Manufacture

Three 19th century nail manufacture types are recognized at Fort Vancouver; wrought, sheet cut, and cast. Only wrought and sheet cut nails are discussed in terms of the penny sizing system.

Wrought Nails

Wrought rod nails were manufactured from square, rectangular or round nail rods (usually iron), and had a tapered tip produced by compressive techniques. Such nails were produced by hand and/or machine; and both types are known to occur at Fort Vancouver. The HBC both imported and produced “country made” wrought nails, and based on stylistic descriptions for British nails during the mid-to-late 19th century, two Fort Vancouver varieties are thought to be of British manufacture: the “clasp” nail (Variety

#1001) and the “rosette sharps” nail (Variety #1002). Plotting total nail lengths for these varieties showed that discrete size populations were rarely discernable, and those that were defined did not correspond to the modern penny sizing system. The tightest population was of the 3-6d “rosette sharps” nail which probably corresponded to the historic HBC 4d shingling, clenched, or sharps nail.

Reasons for this difficulty included:

- Ranges of variability for nail lengths were broad, and adjacent nail sizes had overlapping ranges. If a weight system was employed in Britain, then nail lengths would have depended on original nail rod thickness. Thus, a 10d “strong” nail would have had to be shorter than a 10d “fine drawn” nail.
- From 1844-48 at Fort Vancouver, local blacksmiths apparently manufactured nails, since 12-20 “nail moulds and borers” were inventoried with the “articles in use” in the Blacksmith Shop. Thus, within the archaeological collection of wrought rod nails, sizes may have existed which were not manufactured according to prevailing British standards. However, in the 1844 inventory of the Iron Store at Fort Vancouver, the smallest square iron stock thickness recorded was ¼ inch. Examining wrought rod nail thicknesses for nails both from the Fur Store and the Indian Trade Store areas, it can be demonstrated that smaller nails were made from 1/8 inch nail rod, larger nails were made from 3/16 inch nail rod, and spikes were made from ¼ inch nail rod. Thus it is possible that on site contamination might be limited to nails or spikes larger than 4-5 inches.
- For the archaeologist, complete wrought nails are relatively difficult to consistently observe. Unlike machine cut sheet nails, wrought nails have a variable shank taper which may or may not consistently end with a nice sharp tip.

Cut Sheet Nails

Cut sheet nails were manufactured by cutting nail blanks from flat nail sheets (usually iron). Nail blanks had two tapered edges resulting from the cutting process, and no additional tip formation was needed for the finished nail. Nail shank thickness was uniform from head to tip, except for those portions of the shank which became altered during the heading process by gripping, wedging or crimping. Cut sheet nails were imported by the HBC to Fort Vancouver from Britain and America, and for each country, there are thought to be at least two varieties. From Britain, the “clasp” nail (Variety #2001) and the “rose” nail (Variety #2005). From America, the “common cut” nail (Variety #2002) and the “reverse crimp” nail (Variety #2004).

The following can be said about both American and British nail sizing systems:

- All mid-19th century British and American nails were manufactured according to culturally recognizable sizing systems, and the resultant sizes can be observed by measuring total nail length of complete nails from archaeological collections.
- The British weight sizing system was utilized primarily with wrought nails, and this system closely approximated the later modern American penny sizing system. Both recognized nails ranging in size from 2-40d that corresponded to lengths of circa ½ to 4-5 inches. From 4-5 inches upward, both countries recognized a “spike” category – these were defined by length in inches.
- British cut sheet nail sizes greater than 6d tended to be longer than corresponding sizes in the modern American penny system, but smaller sizes tended to be identical in length. A uniform linear sizing system probably existed for British cut nails, but it did not precisely match the modern American penny system.
- The modern American penny system was in use by at least the mid-1850s, and it was probably standardized as a result of the development of the American machine cut nail industry.

At Fort Vancouver 7794 complete wrought nails were recovered (as of 1976), classified and measured; and from these nails 62 nail styles were defined. Approximately 75% of the wrought nails were British fine-drawn “rose” nails (Variety #s 1002, 1007, 1040, 1041, 1059, 1071, 1073, & 1092).

Rose nails were the common nails of the mid-19th century, and most were manufactured by nailors working at their home forges. Nail rods were purchased at an ironmongery by the nailors; and at home these rods were heated, tapered to form the desired tip, and a nail blank was then cut off the rod. The blank was then placed in the mould or borer and the desired head was hammered on the top.

Specialized nails were manufactured for a wide variety of purposes, and at Fort Vancouver a few of the more commonly known specialized nail styles were the blunted rose nails for siding, clasp nails for casement of finishing work, rose spikes for heavy construction, horseshoe nails, countersunk nails for hinges, tack nails for leather or sheathing, and brad nails for furniture.

Wrought Rod Nail Manufacturing

“Wrought rod nails are defined as those which were manufactured by hammering or compressing heated iron stock, termed nail rod, to the appropriate shape.

Essentially the method is best summarized by the following early 19th Century account:

The nailer takes (the nail rod) out of the fire, and ... brings it to a sharp square point at two or four strokes; he then applies it over the edge of a chisel, fixed on the anvil, and by striking a single blow on the nail rod, cuts off a sufficient length to make a nail, which falls into a tin pan...: now with a pair of tweezers, like sugar tongs, he takes up the nail, and introduces its point into a square tapering hole, made...through the end of an iron tool or mould; by striking a blow or two on the end of the iron, he flattens it down and forms a head, the figure/shape of which is determined by the number and direction of the blows given it (Rees 1819).

Nails manufactured by hand forging are generally recognizable by having a tip that is square to rectangular in cross section, and tapers on all four sides. The heads are generally not uniform, and, although some flat-head varieties occur, are more often conical with 2 or more facets created by the hammer blows. Wrought nails were manufactured from both square and round iron rods and the unmodified stock is generally observable at the upper end of the shank.

Machine Cut Sheet Nail Manufacturing

In this manufacturing method, the nail shank was cut from metal sheets of uniform thickness, the shank taper being controlled by the angle at which the sheet was cut. Following the cutting of the sheets, the nail blank was gripped just below the end to be headed, and a hammer or die impelled against the end. Nails manufactured by this method can be identified by having (1) a square-rectangular shank cross section; (2) a shank of uniform thickness, tapering only in width; (3) a modified cross section, usually rounding in the neck region created by the gripping jaws during the heading process; and (4) a symmetrical flat or faceted (when heading dies are used) head of generally square to rectangular shape.”

(Steele, Ross and Hibbs 1975: 94)

American Penny Nail Sizes					
Penny Size	Inches	mm	Penny Size	Inches	mm
2d	1”	25	10d	3”	76
3d	1 ¼”	32	12d	3 ¼”	82-83
4d	1 ½”	38	16d	3 ½”	88-89
5d	1 ¾”	44-45	20d	4”	101-102
6d	2”	50-51	30d	4 ½”	114
7d	2 ¼”	57	40d	5”	127
8d	2 ½”	63-64	50d	5 ½”	140
9d	2 ¾”	69-70	60d	6”	153

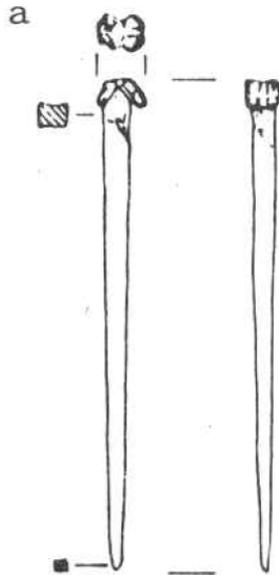
These are the standard penny sizes we use as a tool for describing nails and are not meant to be definitive. The inch and mm measurements are really a guide, as the actual measurements vary. We recommend you use the penny size closest to your complete nail length measurement.

British Wrought Nails

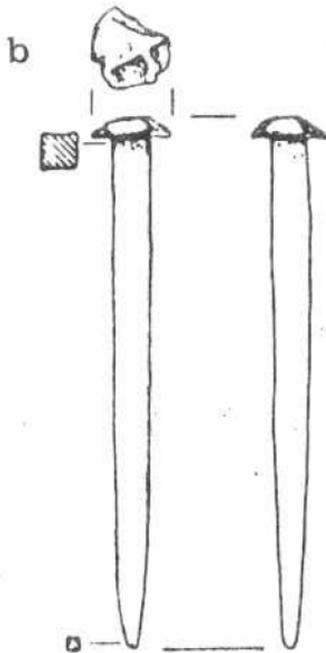
“Clasp” Nail

Variety #1001

“This nail was probably hand wrought and was manufactured from square rod, tapered to a sharp point, with a faceted “bonnet” head. ... The term “clasp nail ” historically was used by the British to designate nails of a particular head design that had the characteristics of “projecting downwards, stick into the wood and clasp (i.e. hold) it together, and when driven below the surface allow a plane to pass over them” (Tomlinson 1854:308). It was comparable in function to the American finishing nail and could be utilized in flooring, molding and deal work. In the Sale Shop it was probably utilized to fasten the molding around doors and windows. Forty-one of the 53 measurable nails were within 3.7 cm to 8.8 cm. in length (ca. 1 ½ -3 ½ ”), equivalent to the modern penny sizes of from 6d-16d. Clasp nails do not appear on the 1844-1846 Sale Shop inventories (Hussey 1972: 218-230) and may not have been retailed to the area settlers, but rather utilized solely for HBC construction. The wrought clasp nails were probably imported to the Fort until at least 1845 whereupon they were replaced by British machine cut clasp nails.” [Steele, Ross and Hibbs 1975:98]



Length 7.1 cm



Length 6.9 cm

“Rosette Sharps” Nail

Variety #1002

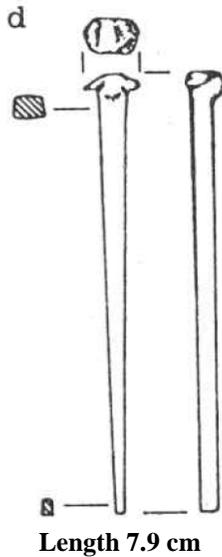
“These nails characteristically were manufactured from square iron nail rod and pointed with a “sharps” tip ... The “rosette” head was produced by 3 or more (usually 4) blows to form a circular faceted head. This category probably includes nails inventoried by HBC as “rose”, “fine-drawn rose” and “sharps” nails (see Hussey 1972: 270). Historically, the nail was utilized for general construction purposes and appears to have been imported to Fort Vancouver from England until the late 1840's.”

[Steele, Ross and Hibbs 1975:98]

British Machine Cut Sheet Nails

“Clasp” Nail

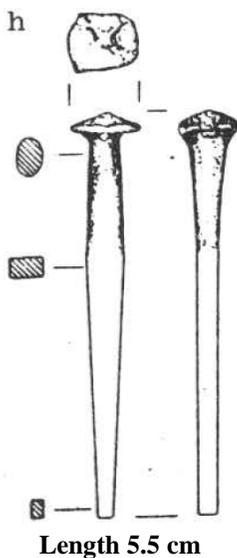
Variety #2001



“The machine cut "clasp" nail was utilized at Fort Vancouver as early as 1846 and nails of 4d size have been correlated with the shingling of the Chief Factor's residence in that year (Hoffman & Ross 1973b:107). The nail was manufactured from iron sheet stock and headed with a two-faceted die to create a bonnet-shaped, or "clasp", head. The gripping of the shank during the heading process removed the upper tapering of the shank to create parallel sides at the base of the head. Unlike the wrought rod counterpart, used chiefly as a finishing or flooring nail, a machine cut clasp nail was probably utilized as a common construction nail and historically was manufactured in a variety of sizes up to and including spikes (Aitken 1878). Measurements of the lengths of 51 complete specimens indicate that two sizes were predominately utilized in the Sale Shop area: nails of 8d size (about 2½" length) and nails of 16-18d size, or approximately 3-3¾" in length ... The 8d size may have served to repair the siding of the Sale Shop, while larger sizes may have been utilized for repairing flooring or other structural members of 1½ to 2½" thickness.” [Steele, Ross and Hibbs 1975: 105, 107]

“Rose” Nail

Variety #2005

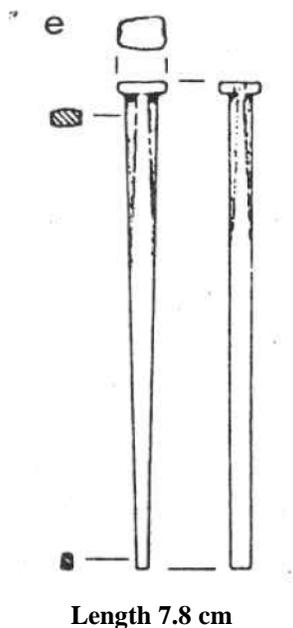


“Forty-two complete specimens were recovered from the OAS Sale Shop excavations, and two sizes were identified, a 4d size, and a 6-7d size ... This constitutes the largest sample yet recovered from any area of the Fort and suggests that the "rose" nail was distinctively associated with Sale Shop activities. The nail is characterized by the presence of a head having 4 symmetrical facets created by a heading die and a circular-oval shank neck similar to Variety #2004 created by the crimping of the shank by circular grippers during the heading process.

Machine cut rose nails were historically manufactured in England during the late 19th Century and it is probable that they were being produced as early as 1840 (Aitken 1878). At Fort Vancouver, they may have been imported as early as ca. 1845. Depot inventories of 1844 list "cut nails of sizes"

(Hussey 1972: 270)... [there was a] limited size range of rose nails found at the Fort (none larger than 8d) ... Since American cut nails probably replaced all other machine cut nail types after 1849 ..., it is hypothesized that they were in use, and perhaps retailed from the Sale Shop, between 1845 and ca. 1850.” [Steele, Ross and Hibbs 1975: 108]

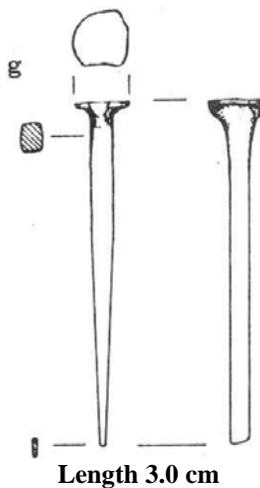
American Machine Cut Sheet Nails



“Common” Nail

Variety #2002

“This variety... was the most frequent machine cut sheet nail recovered from the Sale Shop area. A total of 263 specimens were identified and on the basis of nail length measurements, 3 sizes were defined.... The variety is characterized by the presence of a uniform flat head of rectangular shape with beveled shank corners in the neck region resulting from circular gripping of the shank during the heading process. These "common" nails recovered from Fort Vancouver are virtually indistinguishable from nails still being produced today. They probably initially entered the Fort sometime around 1845; the predominate nail variety used in constructing the Northwest Bastion (built in 1845) was machine cut common nail, and by 1852 almost certainly had replaced other existing light-medium construction nails. In the Sale Shop area they were probably utilized for both repair and retail trade during the 1850's.”
[Steele, Ross and Hibbs 1975: 107]



“Reverse Crimp” Nail

Variety #2004

“These “reverse crimp, flathead” nails have been ... defined as being a shingling and light construction nail, of U.S. derivation, probably arriving at Fort Vancouver between 1850-1860.”
[Hoffman and Ross 1975: 105]

“The nail has been recovered in quantity from Fort structures known to have been utilized by the U.S. Army and was the predominate shingle nail recovered from the post-1845 U.S. Quartermasters office in the Fur Store (Hoffman & Ross 1974b:142). Recent investigations indicate that the nail may have entered the Fort prior to 1844 (Ross et. al. 1975). In the Sale Shop area, they were probably used to repair the shingles during the 1850's and may have been retailed to the settlers.”
[Steele, Ross and Hibbs 1975: 107]

Machine Cut Nail

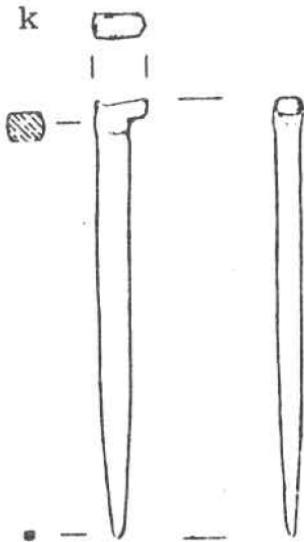


Machine Cut Brad

Variety # 2006

“This variety was commonly referred to as brads or sprigs and was distinguished by an L-shaped head. The entire nail, including the head, was cut from iron sheets to produce a semi-convergent tip and an L-shaped head with equal thicknesses. The cutting of brads was one of the earliest innovations in machine cutting techniques in America and England (ca. 1800, Rees 1819), and it has been impossible to state at what point in time the nail variety was introduced at Fort Vancouver. ...They may have been utilized in limited quantity [at the ITS] for flooring construction or finish work requiring a relatively large size nail. They may also have been a trade item...” [Hoffman and Ross 1975:109]

Wrought Nail



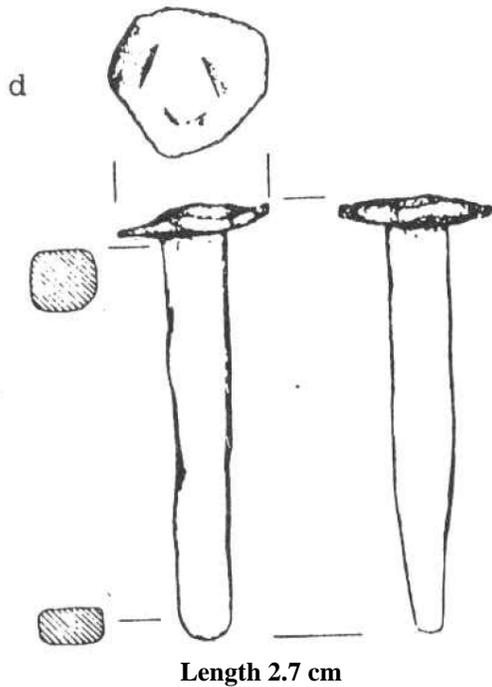
Wrought Brad

Variety # 1048

This variety is quite similar to the one above—a finishing or furniture nail. It is the wrought version of the “sprig” or “brad” nail. This nails were often used for trim and flooring.

Length 5.2 cm

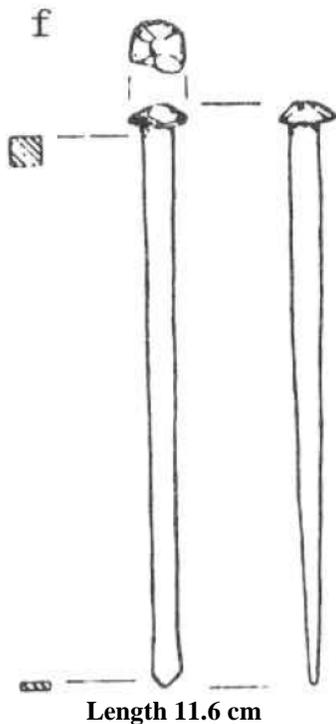
More Wrought Nails



Wrought Rod Clout Nails

Variety #1005

“Clout nails generally resemble the modern flat circular head roofing nails. In England the term referred to both the implied function and the head shape. Originally, the flat circular head design probably functioned to fasten fabric or leather and the nail specifically was used to fasten the leather clouts to axle trees (Rees 1819). However, by mid-18th Century it may have been principally used to secure iron work, such as sheet metal, to wood (Tomlinson 1854:308). The nail was manufactured from round iron stock and had a flat circular head, a round shank and a sharp point.” [Steele, Ross and Hibbs 1975: 103]



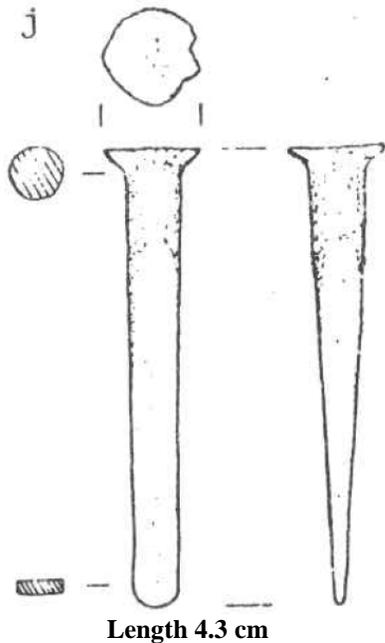
Wrought Rod Rosette, Flat Tip, Spikes

Variety #1009

“This variety... is the most common spike size nail recovered at Fort Vancouver. It is similar in style to Variety #1002 (rosette-sharps) nails with the exception that the tip was flattened to a spade or spatulate shape. The flat tip was necessary where there was danger of the wood being split; whereas sharp pointed tips tended to wedge the grain apart, the flat tip spike could be driven with edge across the grain (Tomlinson 1854:308). The variety was probably manufactured in England until ca. 1870 and was imported to Fort Vancouver ca. 1850 (Hoffman & Ross 1974b:130).”

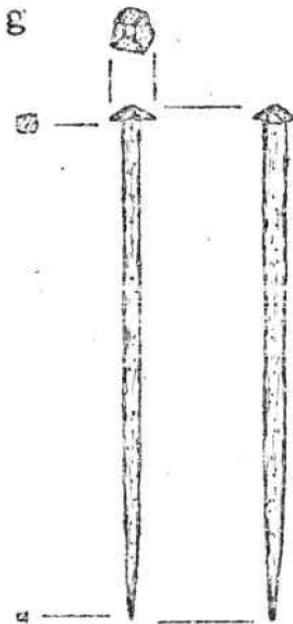
“Variety #1009 nails probably correspond to the 1844-1846 HBC "spike nails" and, if so, were both utilized by HBC for construction purposes and retailed to the area settlers. At Fort Vancouver it was probably used in medium to heavy construction, such as anchoring joists and rafters (Hoffman & Ross, various reports) and has been found *in situ* in sills, suggesting their use in securing upright posts to sills (Hoffman & Ross 1974b:130).” [Steele, Ross and Hibbs 1975: 103-104]

More Wrought Nails



Wrought Rod Countersunk Hinge Nails Variety #1038

“Eight specimens were recovered from the OAS Sale Shop excavations... This nail appears to have been used exclusively in the fastening of butt hinges, such as the specimens recovered from the Sale Shop... Hinge nails recovered at Fort Vancouver have proven, therefore, to be useful markers for the possible location of doors and shutters for the various buildings (Hoffman & Ross, various reports). The nail was manufactured from circular stock, the tip being hammered to a flat, spade point while the shank was left circular and the head was formed to a circular countersunk shape with a flat head to fit the countersunk circular opening of the butt hinge.”
[Steele, Ross and Hibbs 1975: 104]



Fine-Drawn “Rose” Nail Variety #1066

This variety has a “rosette” head and a “sharps” tip. It differs from Variety #1002 in that it lacks distal shank peening or thinning, and is of a larger size. Rose nails were the common nails of the mid-19th century, and most were manufactured by nailors working at their home forges. (Ross 1976: 902)
This variety is associated with construction of plank roads and porches at Fort Vancouver – these tend to be larger sized nails and spikes. (Hoffman and Ross 1975: 103)

More Wrought Nails

Wrought Rod Rosette, Clipped Tip," Clench" Nails Variety #1060

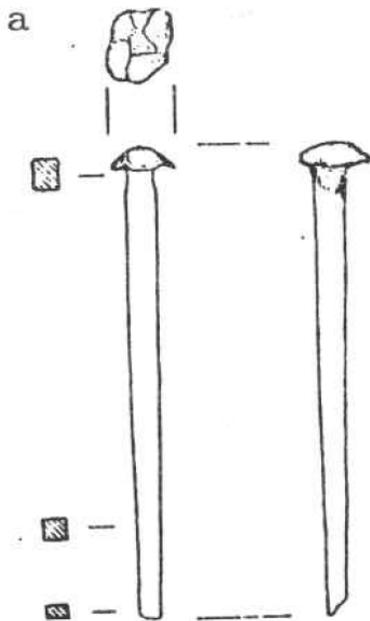
"Next to rosette-sharps (Variety #1002) ...the most frequent wrought rod nails recovered from the Sale Shop area were "clench" nails. The variety has been hypothesized as being utilized to fasten 1" thickness siding, or sheathing, to the Sale Shop exterior (Hoffman & Ross 1974a). Although primarily used in the Sale Shop area, it has also been recovered in slightly larger sizes (i.e. lengths) in the Fur Store area.

Clench nails were manufactured from square iron rod stock but unlike other wrought nails, the shank was tapered only slightly on 4 sides while the tip was not formed by tapering the metal, but by cutting away the excess length with a bevel cut, creating a square tipped nail. The head was faceted with 4-5 blows in the normal manner to form a rosette-type head. ...

Historically, the clench nail was utilized for a variety of purposes including the fastening of sheathing on boat and barge hulls (Rees 1819; Tomlinson 1854:308) and for making packing cases or boxes (Tomlinson 1854:308). Originally the name "clench" probably referred to the nail being used such that the tip, projecting through the material being joined, could be bent over, or clenched, or riveted back against a metal washer, called a rove (Rees 1819), the object being to bind the materials tightly together.

However, the nail could be used without clenched, for any work where soft woods were used, their principal advantage being that the blunt tip would "punch out their own bores, driving a portion of the wood before them--and render boring unnecessary (Tomlinson 1854: 308). When construction required large amounts of nails, such as in the sheathing of the Sale Shop, this attribute would be distinctly advantageous, since sharp pointed nails normally required a hole to be bored."

[Steele, Ross and Hibbs 1975: 104]



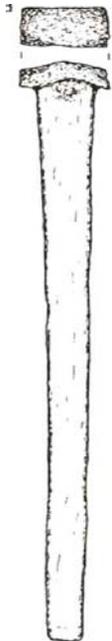
Length 7.2 cm

More Wrought Nails



Variety #1008

Post-1838 use is hypothesized for this nail variety. This nail was manufactured using square to rectangular stock with the tip having been tapered to a square “sharps” tip. The head is of the British “clasp” type and was manufactured by first distally thinning the shank with heavy peening blows on 2 shank sides to splay the distal shank end followed by corner striking the splayed portion with 2-4 blows. Measurement of nail lengths indicates that this variety was present in primarily 40d (5”) size, and was possibly utilized to fasten thick (ca. 2”) flooring. [Hoffman and Ross 1974: 97]



Variety #1014

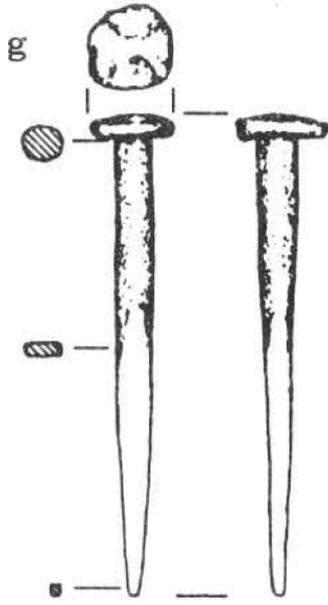
“This nail variety has been found only in spike sizes ... It has been called a ‘T - or diamond head’ spike (Tomlinson 1851; Nelson 1968). This variety of spike was manufactured from square nail rods, the tip being tapered primarily on 2 sides to a spade or “flat” tip. The characteristic head shape was accomplished in 2 stages: 1) the metal was upset by multiple hammer blows directed at the nail rod corners to form a rosette, 4-faceted head; and 2) the head was then struck on 3 or 4 sides to form a rectangular-shaped, domed head.

Following Report IV, the previously designated Varieties #1014 and #1015 were combined within Variety #1014, This variety was probably utilized in heavy construction in the Fur Store, stockade and plank roadway; and until at least ca.

1850 it was manufactured in England (Tomlinson 1851).”

[Hoffman and Ross 1974: 130, 133]

More Wrought Nails



Length 9.8 cm

Variety #1022

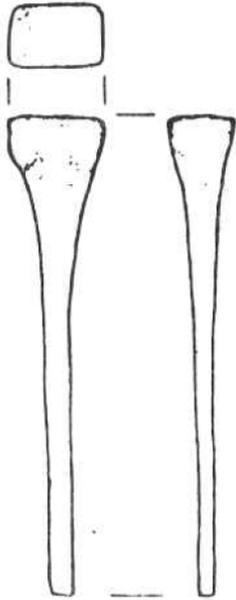
“Historically, this nail was referred to as a ‘dog’ nail and is one of several stylistically similar nail varieties recovered at FOVA. Until at least ca. 1850, ‘dog’ nails were manufactured in England by wrought processes, and primarily utilized in attaching heavy metal work to wood (Tomlinson 1851). This variety was manufactured from round stock with the tip being hammered square into a “sharps” point, and the head was upset with 4 or more blows to form a broad, flat, faceted head with a flush base. A total of 18 specimens (were) recovered from the Indian Trade Store area, and they ranged in size from 5-16d. These sizes suggest utilization with light metal fixtures such as hasps and light strap or T-hinges.” [Hoffman and Ross 1975: 102]



Length 24.8 cm

Variety #1081

“Thus far, this variety has only been recovered from the Fur Store area, and all specimens were found *in situ* in the wood block footings of the Fur Store. The variety was manufactured from square-rectangular nail rods, the shank being tapered on 4 sides to a tip which is flat and spatulate in shape. The head was struck and domed over a shank-holding device that was rigid on 2 opposing sides such that a rectangular shaped head was formed. The size range is consistent for a ca. 10 inch spike. The context and stylistic/metric regularity of the spike suggests that all were associated with timbers of a structure predating the construction of the Fur Store. These timbers containing the spikes were cut to appropriate lengths for use as footings in the Fur Store.” [Hoffman and Ross 1974: 136]

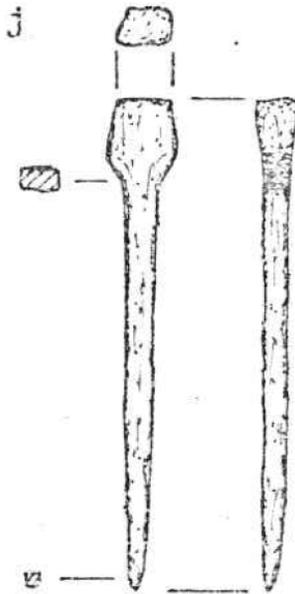


Length 5.0 cm

Variety #1032

“Commonly referred to as a horseshoe nail, this variety differs from the previously described horseshoe nail, Variety #1104 by having a countersunk head which tapers from the head top to the point, without shouldering...

Examination of both horse and muleshoes indicates that Variety #1032 horseshoe nails occur in conjunction with Variety #1104 nails. It is hypothesized that #1032 nails found in the Indian Trade Store were associated with activities in the adjacent Blacksmith Shop and represent worn specimens of Variety #1104 nails.” [Hoffman and Ross 1975: 102]



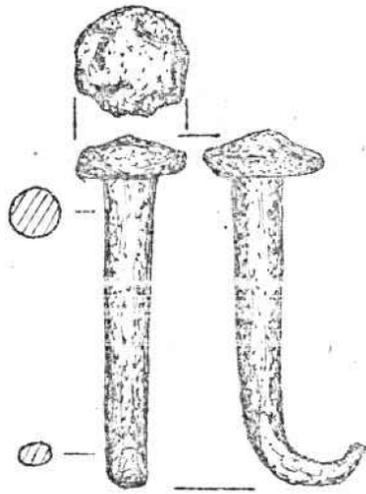
Length 6.3 cm

Variety #1104

“This variety is commonly known as a horse or horseshoe nail ... There is as yet no evidence that this nail variety was manufactured inside the stockade. The variety was manufactured from rectangular stock with the shank and tip being drawn from the distal or head end of the nail rod to a sharp lanceolate tip. The variety differs from previous horseshoe nail Variety #1032 by the addition of pronounced shouldering and heightening of the head...

(T)his variety ranged in size -from 1 ½ to 2 ½ inches... Examination of horse and muleshoes indicates that this variety was probably utilized in shoeing mules, and therefore may be associated with USA activities.”

[Hoffman and Ross 1974: 136-137]



Length 6.5 cm

Variety #1090

“This variety was manufactured from round iron nail rods with the round cross section being retained during shank tapering. The tip was forced by squaring the round stock to 4 sides and tapering to a "sharps" tip. The head was faceted with 4 blows to form a rosette head of circular form. The variety is thus far unique to the Fur Store area ... As in nail Variety #1007, this variety was almost always found clenched. Measurements of the length from head base to the point of clenching for 10 of the 13 complete specimens indicates that each nail was driven through a total thickness of 1 5/8 inches of material. Round shanked nails were usually utilized where metal work was involved, and it is suggested that Variety #1090 nails were used to fasten building hardware, probably strap hinges, to doors, shutters or walls with a total thickness of ca. 1 1/2 inches.”

[Hoffman and Ross 1974: 136]

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