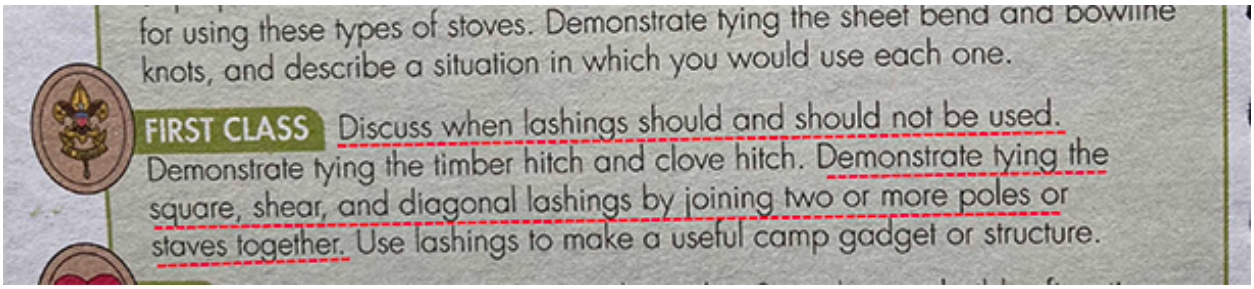

for using these types of stoves. Demonstrate tying the sheet bend and bowline knots, and describe a situation in which you would use each one.

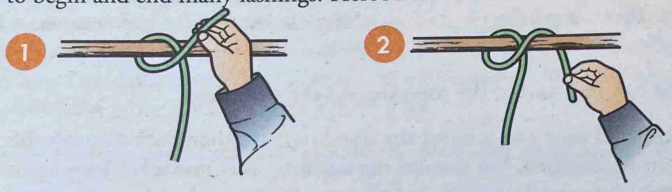
FIRST CLASS Discuss when lashings should and should not be used. Demonstrate tying the timber hitch and clove hitch. Demonstrate tying the square, shear, and diagonal lashings by joining two or more poles or staves together. Use lashings to make a useful camp gadget or structure.

Page 360, FIRST CLASS section, first sentence: "Discuss when lashings should and should not be used." For clarification and accuracy, the wording of the fist sentence in this section should be changed. When and when not to use lashings is not the issue. The issue is when and when not to build pioneering structures, due to their possible impact on the environment. Lashings can be used in a variety of settings that have nothing to do with the environment, e.g. lashing a ladder to a vehicle's roof rack, or lashing together a bamboo framework to support netting to keep birds away from blueberries in a home garden, or during the whole gamut of lashing skill challenges during Scouting activities. Therefore, the wording of the first sentence in this section should be changed to: *"Discuss when it is OK, and when it is is not OK to build pioneering structures."*

Page 360, FIRST CLASS section, third sentence: "Demonstrate tying the square, shear, and diagonal lashings by joining two or more poles or staves together." This sentence needs to be adjusted. Two of the most basic and useful lashings that Scouts use are absent—the round lashing and tripod lashing! Both come into play frequently when Scouts build the most simple camp gadgets. (The shear lashing can be omitted because it is formed exactly like the tripod lashing, with two poles instead of three.) Also, the wording "joining two or more poles or staves together" is confusing. Saying "poles or staves" is like saying "vehicles or cars." A stave *is* a pole. Therefore, the wording of the third sentence in this section should read: *"Demonstrate how to correctly tie a square, tripod, round, and diagonal lashing by joining two or more poles together."*

CLOVE HITCH

Clove comes from the word cleave, meaning "to hold fast." The clove hitch is used to begin and end many lashings. Here's how to tie it:



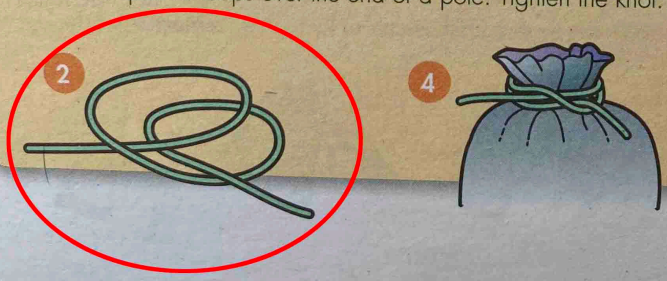
1. Bring the running end of the rope over and under a pole.
2. Take the end around a second time, crossing over the first wrap to form the shape of an X.

3. Bring the rope end around a third time and tuck it under the X. The ends of the rope should come out between the legs of the X. If they come out to either side of the X, you don't have a clove hitch.
4. Pull the ends of the rope to tighten the hitch.

Alternate Clove Hitch

Another way of tying a clove hitch makes it easy to lay the knot over the end of a pole. This method is especially useful for tying a clove hitch along the middle of a line.

1. Make an underhand loop near where you want the clove hitch to be.
2. Form another underhand loop next to the first loop a little farther away from the rope end.
3. Lay the second loop on top of the first.
4. Place the pair of loops over the end of a pole. Tighten the knot.



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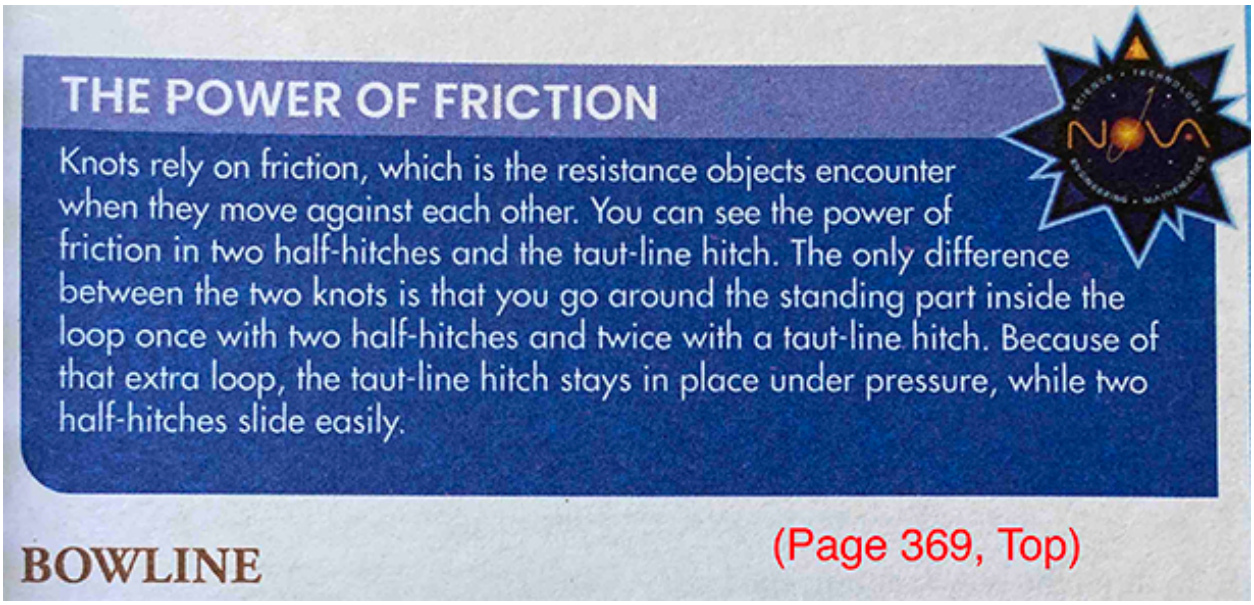
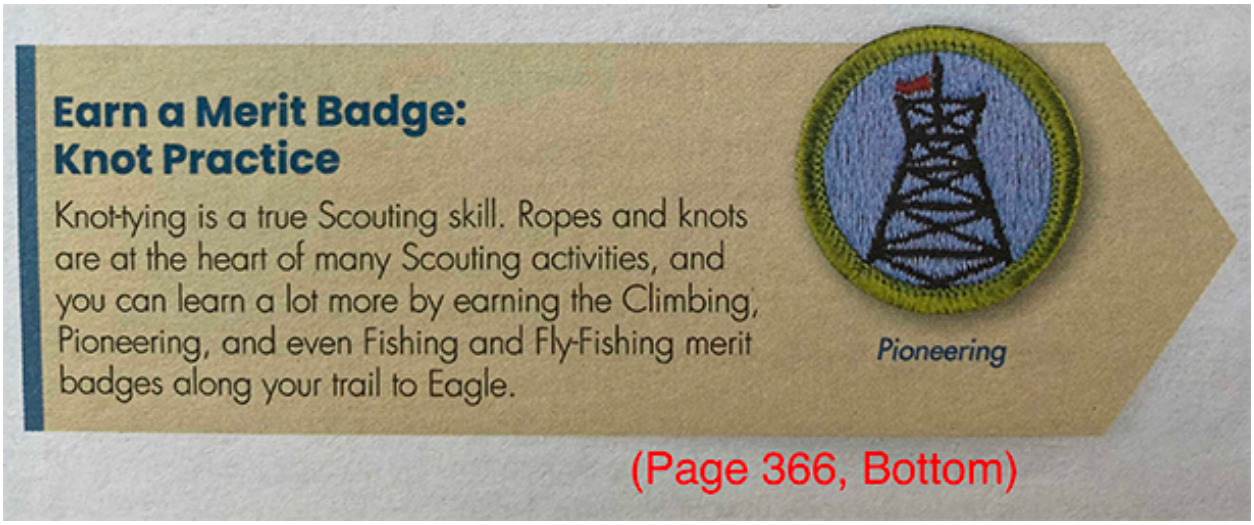
Page 368, CLOVE HITCH: 3. “Bring the rope end around a third time and tuck it under the X. The ends of the rope should come out between the legs of the X. If they come out to either side of the X, you don’t have a clove hitch.” The text in 3 should be changed. Though this approach to tying a clove hitch has been presented in the handbooks for many decades, bringing the running end under the “X” during the formation of the first half hitch is a departure from the simple process of just tucking the running end under itself, (forming a second, identical half hitch). *That’s* the process presented in other BSA publications, and universally espoused throughout the world. It’s easier to understand, quicker to tie, and more importantly, it makes forming a clove hitch to finish many lashings more efficient and less cumbersome. (I find it amusing that the drawings for the past several editions actually illustrate the preferred process, though the text describes something else.) The new wording of the text should comprehensibly read: 3. *“Now, simply tuck the running end under itself and snug everything together.”*

Page 368, Alternate Clove Hitch: The drawing on the left illustrates two *overhand* loops, which would work, except the text correctly describes using two *underhand* loops. (I can provide photo illustrations for free.)

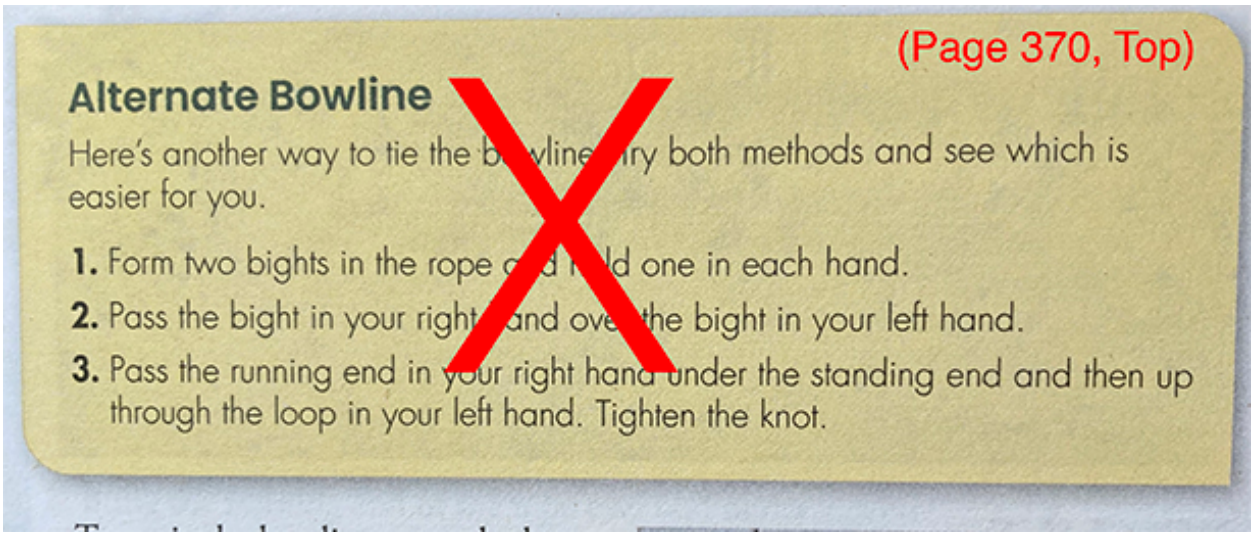


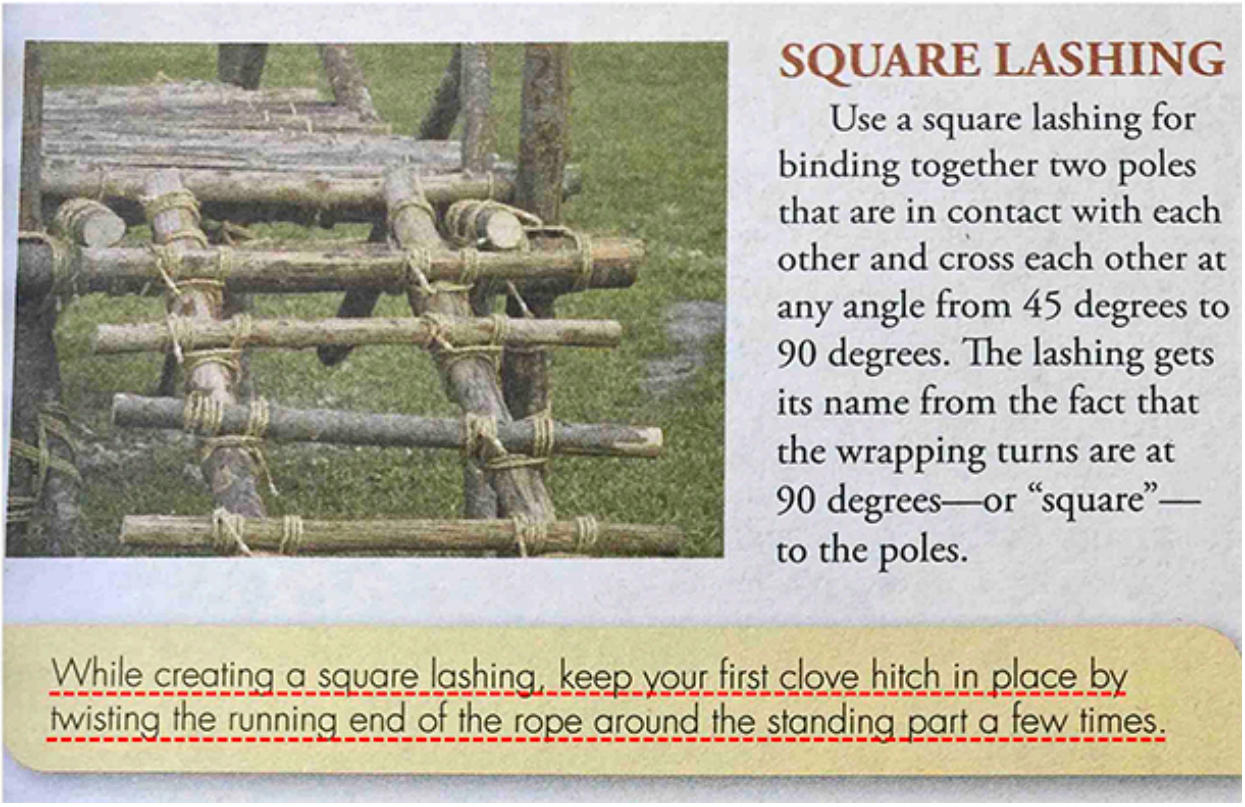
Page 369, “THE POWER OF FRICTION” graphic should be moved to, and replace the “Earn a Merit Badge: Knot Practice” graphic on **Page 366**, where it will be completely consistent with, and relevant to, the content of that page.

Page 369, “Tying a Clove Hitch to Finish Many Lashings” new graphic (above) should fill the space vacated by “THE POWER OF FRICTION” graphic. The information therein is educative, helpful, and very relevant to the content of the preceding page.



Page 366, the innocuous “Earn a Merit Badge: Knot Practice” graphic should be moved to the top of **Page 370**, in order to replace the incredibly confusing “Alternate Bowline” graphic, which is impossible to follow, impossible to execute, and has no place in the handbook.





SQUARE LASHING

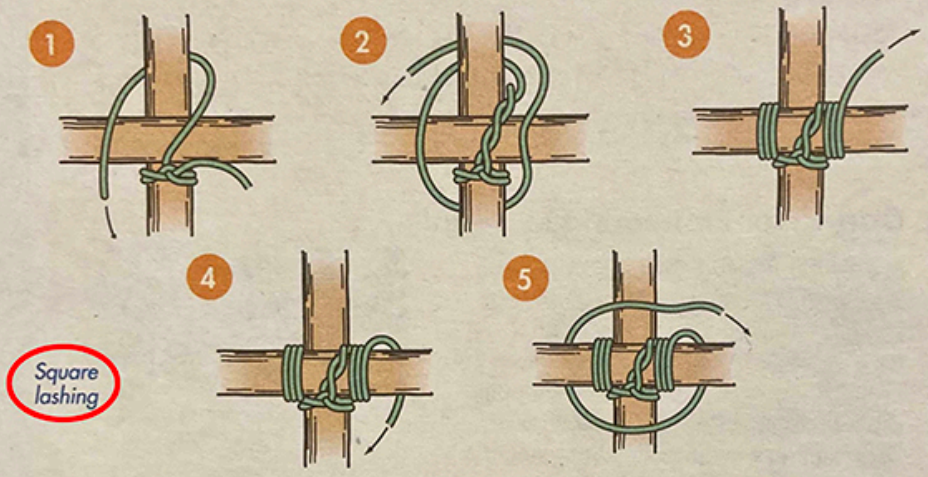
Use a square lashing for binding together two poles that are in contact with each other and cross each other at any angle from 45 degrees to 90 degrees. The lashing gets its name from the fact that the wrapping turns are at 90 degrees—or "square"—to the poles.

While creating a square lashing, keep your first clove hitch in place by twisting the running end of the rope around the standing part a few times.

Page 373, in the text box beneath the top photo, "While creating a square lashing, keep your first clove hitch in place by twisting the running end of the rope around the standing part a few times." should be changed to read, *"When starting a square lashing with a clove hitch, twist the running end of the rope around the standing part a few times to secure the hitch."*

The rationale for this stems from the contention that it's misleading to generalize that starting with a clove hitch is the go-to method for tying a square lashing. On the contrary, by far, the overwhelming majority of Scouts prefer the "Square Knot (Mark II) Square Lashing," which is faster and more easy to tie.

1. Place the poles in position.
2. Tie a clove hitch around the bottom pole just below the crosspiece.
3. Make three tight wraps around both poles, going over one pole, under the other, etc. As you form the wraps, lay the rope on the outside of each previous turn around the top pole, and on the inside of each previous turn around the bottom pole.
4. Wind two fraps around the wraps, pulling the rope very tight. You may even want to put your foot on the lashing to gain more leverage as you pull.
5. Finish with a clove hitch around the top pole, snug against the lashing. Add a half-hitch or two next to it for extra security.

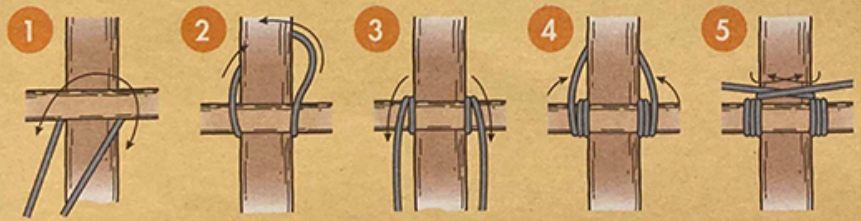


Square lashing

Mark II Square Lashing

Here are the steps for an alternative to the square lashing.

1. Place the poles in position.
2. Fold the rope in half. Place the midpoint of the rope around the vertical pole and just under the horizontal pole.
3. Work both ends of the rope at the same time to make three wraps around the pole.
4. Cross the rope ends between the poles in opposite directions to make two fraps around the wraps.
5. Pull the fraps tight and tie the two rope ends in a square knot.



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Page 374, This square lashing diagram page can use an overhauling to benefit our Scouts. In the 13th edition, the Mark II Square Lashing (Japanese Mark II Square Lashing) was added because it is the favorite of Scout pioneering enthusiasts, both young and old. However, it was presented as an alternative to *the* square lashing, giving it a secondary appearance, and the impression to many adults, that Scouts should learn the time consuming, more difficult approach.

At the top of **page 374**, steps 1 and 2 can be combined, making room for the name *“Clove Hitch Square Lashing.”* The small text, “Square Lashing” to the left of step 4 should subsequently be removed.

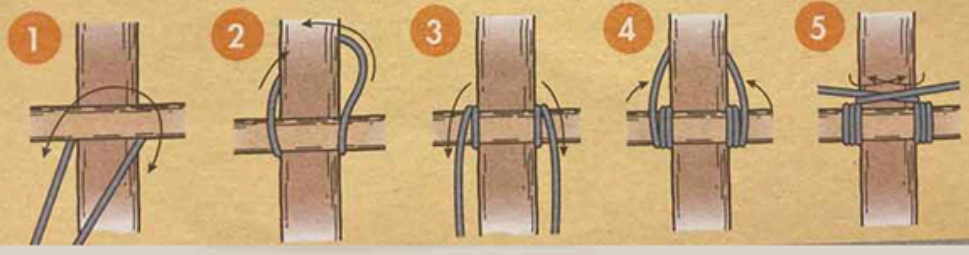
In the bottom box on **page 374**, “Mark II Square Lashing, Here are the steps for an alternate to the square lashing.” should be changed to read: *“Square Knot (Mark II) Square Lashing, This is a straightforward approach to joining two poles together.”*

(See the representation on the following page.)

Square Knot (Mark II) Square Lashing

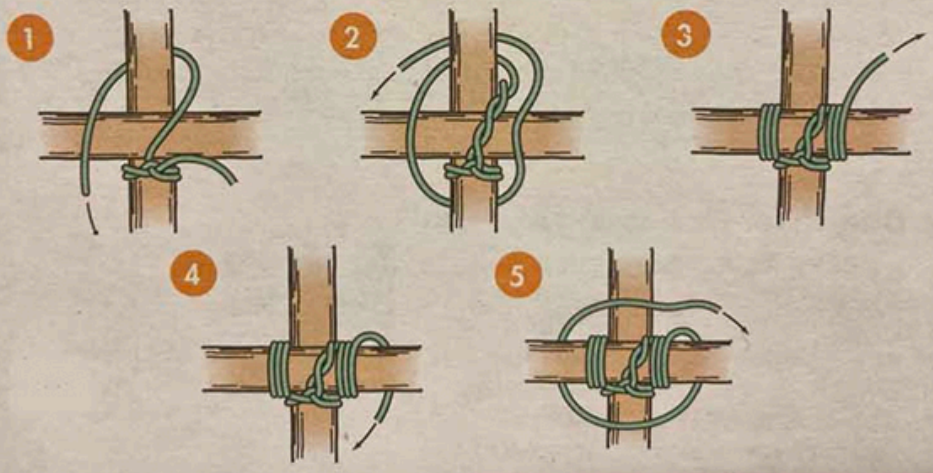
This is a straightforward approach to joining two poles together.

1. Place the poles in position.
2. Fold the rope in half. Place the midpoint of the rope around the vertical pole and just under the horizontal pole.
3. Work both ends of the rope at the same time to make three wraps around the pole.
4. Cross the rope ends between the poles in opposite directions to make two fraps around the wraps.
5. Pull the fraps tight and tie the two rope ends in a square knot.



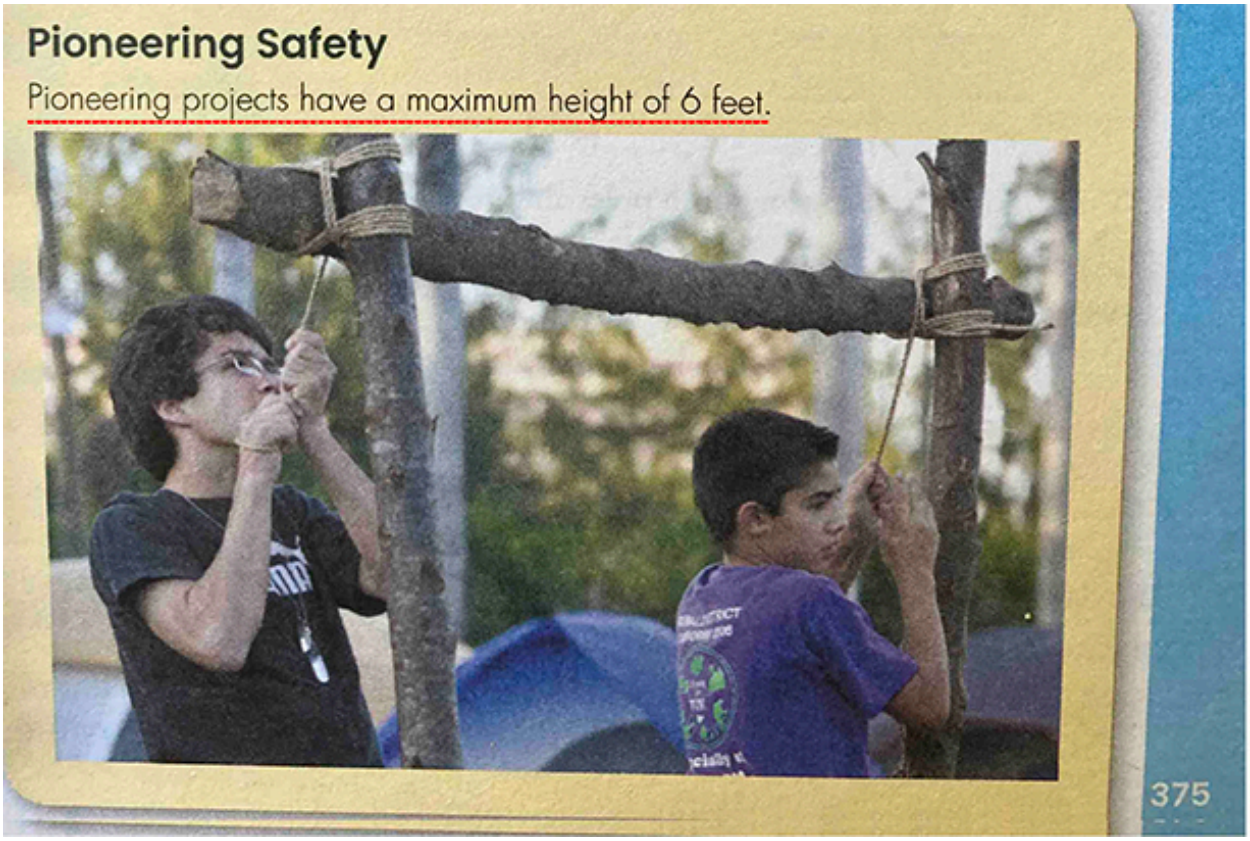
Clove Hitch Square Lashing

1. 2. Place the poles in position. Tie a clove hitch around the bottom pole just below the crosspiece.
3. Make three tight wraps around both poles, going over one pole, under the other, etc. As you form the wraps, lay the rope on the outside of each previous turn around the top pole, and on the inside of each previous turn around the bottom pole.
4. Wind two fraps around the wraps, pulling the rope very tight. You may even want to put your foot on the lashing to gain more leverage as you pull.
5. Finish with a clove hitch around the top pole, snug against the lashing. Add a half-hitch or two next to it for extra security.



Members of the jamboree pioneering area staff, queried pioneering merit badge counselors, and Scout pioneering students have concurred that it would be preferable, and provide needed clarity, to henceforth dub the Mark II Square Lashing the “Square Knot Square Lashing” and henceforth refer to the timeworn, more tedious version as the “Clove Hitch Square Lashing.” These are apt designations, because the modern names highlight one of the salient characteristics of both approaches.

As illustrated on the previous page, it would be a noteworthy improvement to reverse the two approaches so that the Square Knot Square Lashing is positioned at the top of the page, and the Clove Hitch Square Lashing is underneath.



Page 375, “Pioneering projects have a maximum height of 6 feet.” This misleading statement needs to be changed to read: *“Refer to the pioneering merit badge pamphlet for Scout pioneering safety guidelines.”* Any project where a Scout’s feet are over 6 feet above the ground, and have not been given formal permission by the council’s enterprise risk management committee, must be top-rope belayed.

	TOOLS		
	3a.	Discuss when you should and should not use lashings. *(See pages 371–378.)*	
	3b.	Demonstrate tying the timber hitch and clove hitch. *(See pages 367–368.)*	
	3c.	Demonstrate tying the square, shear, and diagonal lashings by joining two or more poles or staves together. *(See pages 373–376.)*	
	3d.	Use lashings to make a useful camp gadget or structure. *(See pages 371–378.)*	

Page 447, FIRST CLASS REQUIREMENTS 3a.: "Discuss when you should and should not use lashings." For clarification and accuracy, the wording of this requirement should be changed. When and when not to use lashings is not the issue. The issue is when and when not to build pioneering structures, due to their possible impact on the environment. Lashings can be used in a variety of settings that have nothing to do with the environment, e.g. lashing a ladder to a vehicle's roof rack, or lashing together a bamboo framework to support netting to keep birds away from blueberries in a home garden, or during the whole gamut of lashing skill challenges during Scouting activities. Therefore, the wording for First Class Requirement 3a should be changed to: *"Discuss when it is OK, and when it is is not OK to build pioneering structures."*

Page 447, FIRST CLASS REQUIREMENTS 3c.: "Demonstrate tying the square, shear, and diagonal lashings by joining two or more poles or staves together." This sentence needs to be adjusted. Two of the most basic and useful lashings that Scouts use are absent—the round lashing and tripod lashing! Both come into play frequently when Scouts build the most simple camp gadgets. (The shear lashing can be omitted because it is formed exactly like the tripod lashing, with two poles instead of three.) Also, the wording "joining two or more poles or staves together" is confusing. Saying "poles or staves" is like saying "vehicles or cars." A stave *is* a pole. Therefore, the wording of First Class Requirement 3c should read: *"Demonstrate how to correctly tie a square, tripod, round, and diagonal lashing by joining two or more poles together."*