Make a rope from twine.
Do you have animals that eat hay? Does that hay produce twine? Is that twine in unsightly tangled piles, an animal or machine hazard, or is it just thrown away? Turn it in to something useful: ROPE!!!

TIP: WHEN COLLECTING TWINE FOR MAKING ROPE, CUT THE TWINE ON THE BALES RIGHT NEXT TO THE KNOT AND HANG WITH ALL THE KNOTS IN ONE DIRECTION WITH BOTH ENDS OFF THE GROUND.

Did you ever need a rope to tie a gate, make a halter, tie down a load, make a lead rope, and make a tow rope or to make a swing? Why not make your own? With a few simple tools and a small amount of supplies and this machine, you can make just about any size or color rope you want. Anyone with livestock usually has to feed hay and as a result will have an abundance of used twine that is usually tangled around feet, draped over a fence or simply a problem to dispose of. If used twine is not available, new twine can be purchased for a small charge and in a variety of colors.
This machine is complex yet still easy to use. It consists of:

- **Main Frame and Crank**
- **Bearing Hook**
- **Needle/Twist Follower**

This takes care of the equipment, now let’s set it up.

This machine may be mounted horizontally or vertically. You can mount it to a wall or bench. The main assembly can be screwed or clamped to a fence, pole, wall or any place that is about waist high and solid. The bearing end of the rope has to be movable due to the shortening of the rope when the strands are twisted. You can use two pulleys and a rope fastened to an adjustable weight, possibly a shop or garden cart where weight can be added. Or you can switch the two with, the movable end having the bearing end mounted firmly. This second method is the one I use.

Let’s get started. The first thing to be considered is whether you want the machine in a set location where you’ll make rope. If so, you want to be sure to have enough room to make the length of rope you want. A rope will usually shrink about 10 percent in the making, so make sure you factor that in when determining where to mount the rope machine.

The first thing you will need to do is prepare the twine. There are two basic methods that you will use, depending on how many strands you want your rope to have.
You can either:

- 1) Knot strands of twine together. You will need at least three of these long strands, of equal length to make a 3 strand rope. Add 10% to the length of the rope you want to achieve.
- 2) Knot twine together into one long continuous strand, (Which I prefer for long or large multiple strand rope.) It would be ideal to have a spool or bobbin to wrap the long strand on. It could take several hours to Knot enough twine to do a very long or thick rope, which makes it a great project for nasty snowy days or during football games.
- Do not trim tails of twine at this point.

This Machine can make between 3 to 27 strand ropes up to 300 ft long using small square bale twine.

When using larger materials start slowly so as not to stress machine. Prepare to move needle rapidly.

Smaller sized twines/materials will take a lot more time to twist up, so patience.

Tip: The Square Knot is the best knot to use to connect short pieces of twine.

There will be tails sticking off the knots; these tails should be cut off with scissors so as not to cut off the connected section. It is usually easier to do after the rope is laid out.
Once you determine how long you want your rope to be, set up the movable end that distance from the fixed end plus 10%. Start your rope by tying one end of the twine to one of the three hooks on the main assembly. Then take the twine around the bearing hook then back to one of the empty main-frame hooks. Repeat this process until you have the number of twines in each strand that you desire. After laying out the twine check the direction the machine will turn for the duration of the twist. Pinch the top strand and crank the machine. If the pinched strand gets loose, stop and crank the opposite direction.  

Insert the needle between the strands at the bearing end. Do not let the needle turn, (hold the needle firmly) or tangling will occur. The loop/hole on the needle is provided so that you can attach a weight to prevent this. Begin turning the crank and the strands will begin to twist. As tension builds, hold the needle tight to the bearing. To check tension move the needle slightly forward. If the bearing hook and strands start to twist to a tightness that satisfies, continue moving the needle forward. If there is a lack of twist in about 2 inches of movement, untwist at the bearing hook and press the needle back tight to the hook. (I usually do this by hand).
Once you start to twist the three strands together the end of the rope must be allowed to turn. As you twist the twine, the movable end will move closer to the fixed end. The larger the rope the more weight you will need on the movable end. Experience will tell you how much. There must be enough weight to prevent the strands from kinking but not so much that will prevent the strands from twisting enough. Twist the strands until they are difficult to separate while twisting with your fingers. Again, experience will tell you how tight to twist the strands.

4) A hammer or a pair of pliers hung in the loop works well.
It’s a good idea to have an extra person for ropes longer than 8’. I prefer to use children, as the labor is cheap and they enjoy it. Have someone continue cranking the strands while you control the rate of twist with the needle keeping the twist in the individual strands constant. This will become easier with practice. When all three strands have been completely twisted together, wrap the ends of the rope with twine, wire or tape, before cutting it free of the machine. Inexpensive electrical tape works great for this.

Now burn the end of your rope with a small propane torch or lighter and allow it to harden. Caution! Do not let the hot plastic touch your skin. It is hot and it sticks. If you used plastic twine and wrapped it with wire, melt the end and slowly twist the wire off before the plastic becomes hard.

To determine the approximate strength of your rope, multiply the number twines in your rope by the tensile strength of the twine you are using. Most bale twines for large round bales are about 100-pound tensile. A rope with 30 strands would have a tensile strength of about 3,000-pounds. Your small square bale twine is between 100 & 110lb tensile strength, where large square bales may use twine between 330 & 450lb tensile strength twine. If you
want solid numbers for your rope strengths, check at local farm supply stores or online for more twine specs.

To make your rope more useful loops can be woven into the ends, tie a single twine around the rope about 6” from the melted end. Each strand is allowed to unwind but the twines are no allowed to separate. Melting can again be used. The rope is then folded back giving the size of the loop desired. The separated strands are then worked under one strand and over the next in the opposite direction that the rope is twisted until completed. Ropes may be spliced in a similar manner. Check out paracord braiding on the web, as good way to use multiple three strand twine ropes splicing and knots.

Your new machine includes one roll of electrical tape and approximately 6 feet of twine rope which is the result of each machine’s test run. These instructions are available as a pdf file at Copper-Penny-Ranch.com

You may also find Videos of this machine in use on YouTube@ Bravo Victor7 https://www.youtube.com/channel/UCh7FsAB1XMIGZRFXQkNFzxA

➤ Nifty Twine combinations Chart

<table>
<thead>
<tr>
<th>Method</th>
<th>3x1’s</th>
<th>3x3’s</th>
<th>3x5’s</th>
<th>3x9’s*</th>
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</thead>
<tbody>
<tr>
<td>Method 1</td>
<td>1</td>
<td>15</td>
<td>27</td>
<td></td>
</tr>
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<td>*</td>
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<tr>
<td>Method 2</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>30</td>
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</tbody>
</table>

*May need larger needle. A forked stick works well.

*When using Method 1 to make the 9 and 27 strand ropes, you will need to combine multiple 3 and 9 strand ropes on the machine as a normal operation.