

Comparatively few of the operating engineers, either in the stationary or railway service, have deemed it worth while to acquire even an ordinary working knowledge of this most useful art of tying knots, though perhaps there come occasions in the life of each and every one of us when the ability of being able to make a few simple scientific knots would greatly facilitate our work, and possibly avert the humiliation incident to a public exhibition of ignorance and clumsiness in the manipulation of ropes and tackle.

Doubtless many of the aforesaid engineers have had little or no opportunity to acquaint themselves with the correct methods of fastening rope ends together, or attaching them to hooks, rings, beams or other objects. Another class of engineers contemptuously aver that there is neither art or knack in the knot tying operation, and just any old knot, so long as it doesn't slip under the tension will fulfill the requirements of engineering practice. This opinion may be honestly conceived, but to the observer who has watched sailors at their work, and beheld the marvellous ease and dispatch with which they tie and untie the multitudinous knots aboard ship, and the almost magical results they accomplish in the way of rope fastening, by means of their various hitches and bends, the jeering contentions of these engineers are as absurd as their awkward and bungling attempts at knot-making are ridiculous. Clove hitches, running bow-lines, Becket bends, etc., are terms as meaningless to such men as the procession of the equinoxes is to the average Mexican Peon, or Newton's law of gravitation to the untutored Fiji Islander.

Call upon one of these scoffing engineers to fasten two rope ends together, and curiously enough, in nine cases out of ten the result will be grotesque and an utterly unreliable production shown in Fig. 8, and disdainfully designated by sailors as the "granny" knot. When the strain comes on this knot it slips, allowing the two rope ends to part, so as to expose the casting, or whatever has been entrusted to its keeping, to the danger of a more or less serious fall. Or if by chance the knots holds, the rope wedges and jams so tightly that the workman who is called upon to undo it will be pretty apt to indulge in some prodigiously wicked language ere he has succeeded in separating the two ropes.

Knot making is a hobby with many sailors, many of whom will spend hours and hours of their leisure time in fashioning knots that are wonderful in their complexity and ingenuity. These intricate affairs are, in general, more ornamental than useful. In practical nautical work, the most useful knots are those capable of being tied quickly; that do not slip under any load, and never jam or wedge so as to prevent its being undone quickly.