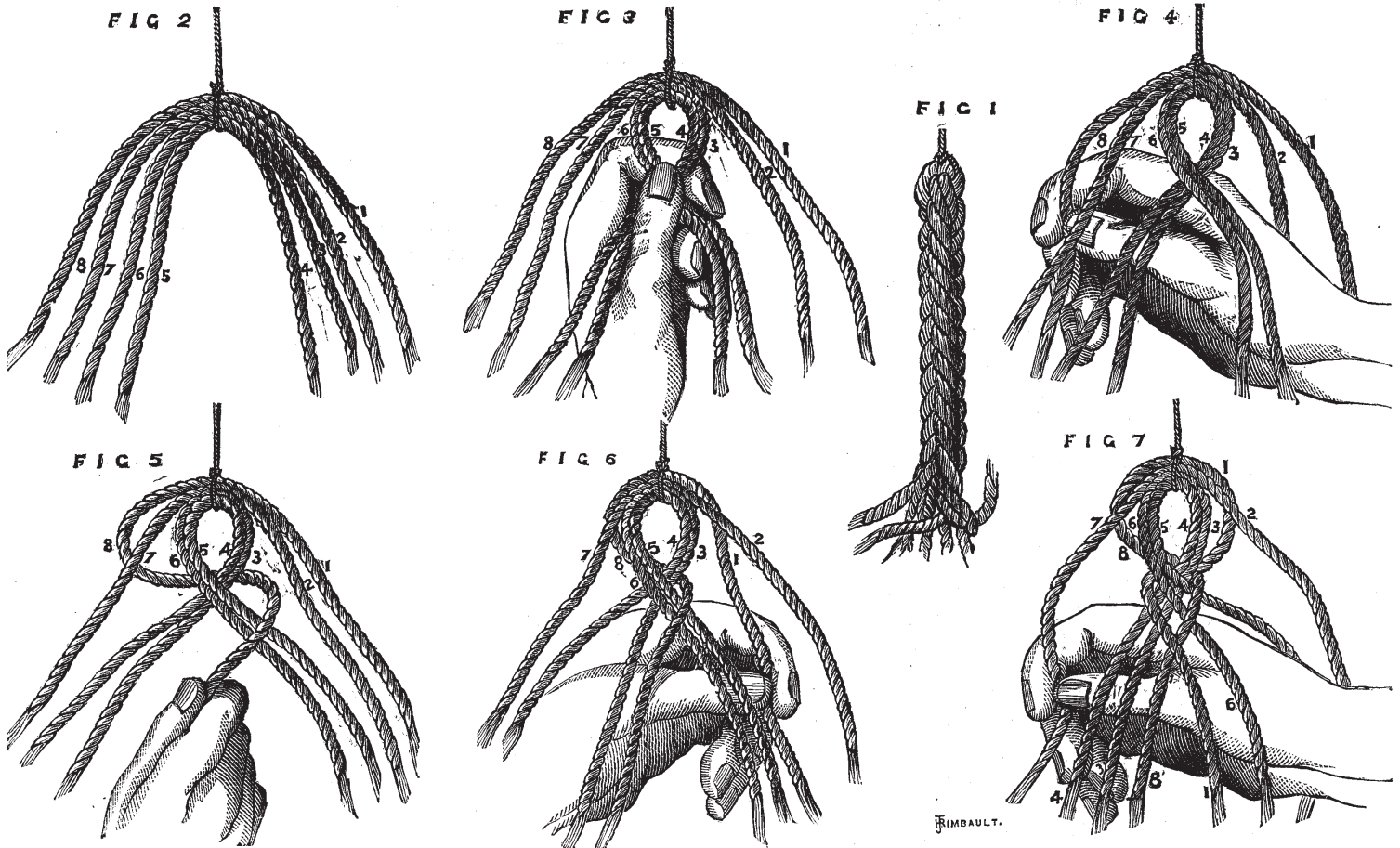


PLAITING EIGHT-STRAND GASKET.



We extract from a handy little work, entitled *The Modern Practice of American Machinists and Engineers*,\* by Mr. Egbert P. Watson, the following description of the method of plaiting eight-strand gasket, which will be read with interest by many of our readers :

Many an engineer who makes his own packing is contented to use a simple three strand loosely-plaited gasket, for all purposes whatever, from packing a simple governor valve stem, up to the piston rod, or air-pump bucket. Believing as we do that an eight-strand gasket is much superior to the ordinary kind, that it will wear longer, is a better shape to conform to its situation, and that it requires less compression from the gland to bring it up against the rod, we have here illustrated the gasket itself, and also the principle of laying it up. We have endeavoured to make both the article and engravings simple and clear, and hope that the practical engineer will derive some benefit from our exposition.

Fig. 1 is the gasket as it appears finished, and in Fig. 2, is given the first step toward forming it.

The operator takes eight strands, as shown. These are tied in the centre, and numbered, for the convenience of the reader, from 1 to 8.

In Fig. 3 we have the two strands, 3 and 4, crossed under 5 and 6, and the thumb and forefinger of the left hand represented as closing upon these strands to retain them in place. In Fig. 4 we have the real commencement of plaiting the gasket, and here is the point where the principle is first employed. This principle is that the strand, whatever one it may be the operator has hold of, *must pass under all the strands, and over two strands*. This is the key to the whole matter. It must also be borne in mind that *the top strand of all on each side, is the one to be taken hold of alternately*. In Fig. 4 the finger and thumb of the right hand are shown grasping the strand No. 8; the left hand being supposed to hold the crossed strands. Now look at the hand that grasps strand No. 8; it is inserted between strands 2 and 5, and is *behind* all the strands except

1 and 2; therefore when strand No. 8 is brought under all the strands except 1 and 2, and over strands 5 and 6, it will appear as in Fig. 5, where strand No. 8 is shown drawn around, but not up to its place; the fingers of the right hand grasp it, and the left hand keeps the crossed ones, 3, 4, 5, 6, together.

In the next figure, which is 6, the strand No. 8 is shown loosely drawn up to its place; the operator's hand going under all the strands for No. 1. This strand is to be brought *under* and behind all the other strands, and in between strands 3 and 4 where the hand enters, and thence over 3 and 8 as shown in Fig. 7. Thus the principle of this gasket is illustrated, for it is only necessary to go between each alternate set of strands on either side—to take the topmost strand alternately, and to lay it over two strands, to make a hard, firm, and even piece of packing.

Some engineers prefer to use a central core of india-rubber, plaiting the strands over and about it, so that the rubber exerts its elastic force, but is not injured by the heat and grease of the machinery. This can be done very easily with the eight-strand gasket by merely allowing the rubber to occupy a central position between the strands, four on one side and four upon the other; the rubber must be cut square and to the proper size, and when it is overlaid with the strands it should be larger than the recess in the stuffing-box, so that it will have to be compressed in order to get it in; it will then tend to cling about the rod and wear a long time with good usage.

Let the beginner not be discouraged at the first trial if he does not succeed, for the process is, in reality, a simple one, and inexperienced persons have made gaskets from these drawings at the first trial. The gasket should be laid up while reading this description, and we hope all points are made clear and simple, so that a little practice will, as in all other cases, render the braiding of a square gasket as easy as one of three strands.

\* Philadelphia: Henry Carey Baird.