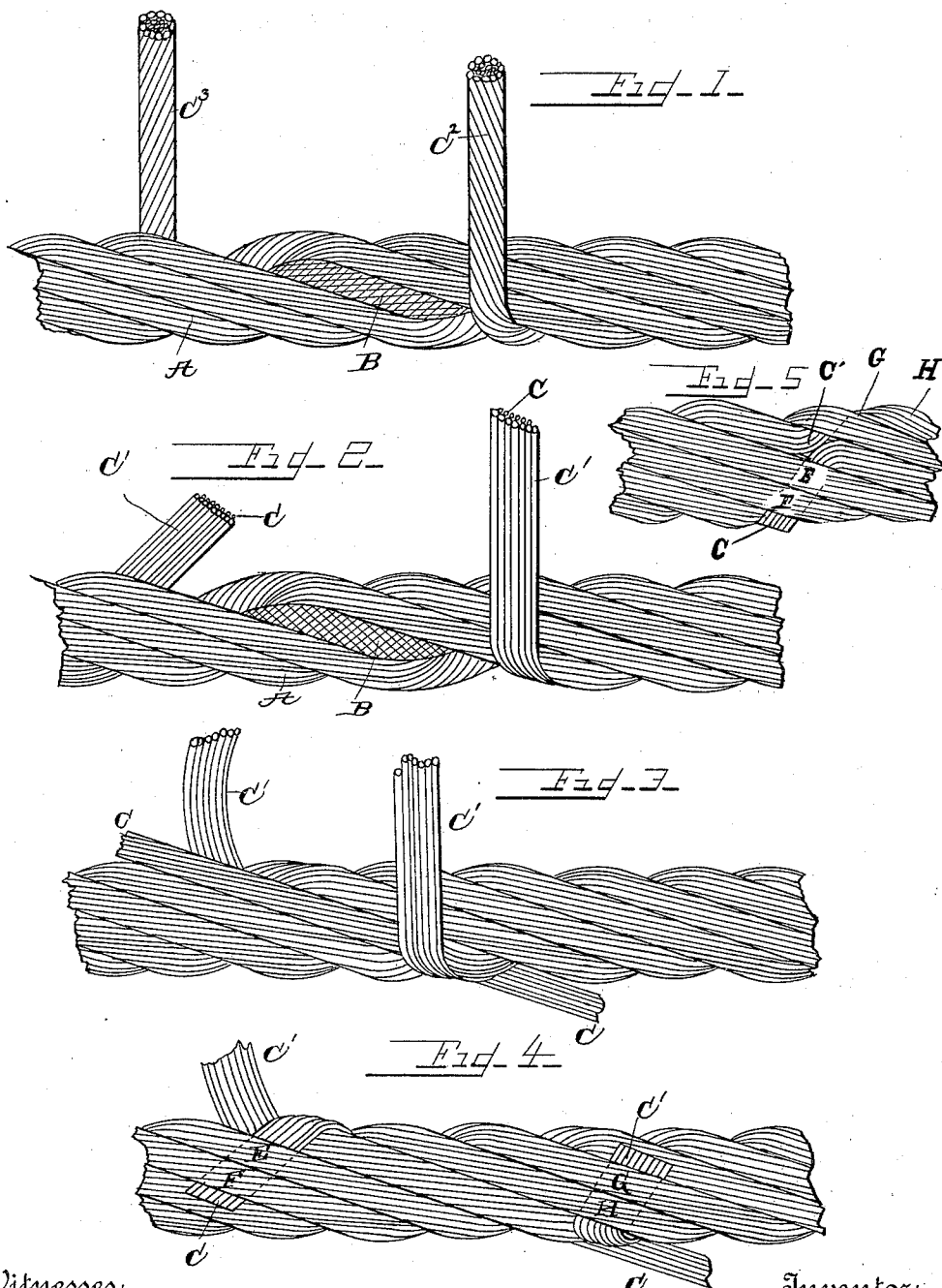


(No Model.)

J. THOMPSON.  
METHOD OF SPLICING CABLES.

No. 460,407.

Patented Sept. 29, 1891.



Witnesses;

*J. A. Taubenschmidt,*  
*A. B. Johnson*

Inventor;

*Joseph Thompson,*

By his Attorneys,

*Rigdon & Rigdon,*

# UNITED STATES PATENT OFFICE.

JOSEPH THOMPSON, OF KANSAS CITY, KANSAS.

## METHOD OF SPLICING CABLES.

SPECIFICATION forming part of Letters Patent No. 430,407, dated September 29, 1891.

Application filed April 22, 1890. Serial No. 349,016. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH THOMPSON, of Kansas City, Wyandotte county, Kansas, have invented certain new and useful Improvements in Methods of Splicing Cables, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to the art of splicing cables; and it consists in the hereinafter-described method of disposing of the strand ends.

The object of my invention is to unite the ends of the pairs of opposing strands in splicing neatly and without decreasing or increasing the diameter of the same and without weakening the cable; and the invention is especially adapted for use in splicing cables having uniting-strands composed of a number of smaller internal and larger external wires.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view showing a section of the cable at the completion of the third step in the operation of forming the splice, as hereinafter described, which is the point at which my improvement begins. Fig. 2 is a view showing the wires of the strands to be united untwisted. Fig. 3 is a view showing the smaller wires of the strands to be united separated from the larger ones and placed in the vacant score of the cable. Fig. 4 is a view of the cable as it would appear after a portion of the wires of the strands to be united have been secured under the adjacent strands. Fig. 5 is a view showing the cable after the operation has been completed.

In the drawings, A represents the cable, B the core or packing inside of the same around which the strands are wound or twisted, and C<sup>2</sup> and C<sup>3</sup> the ends of given strands to be united, C being the smaller wires of such strands and C' the larger wires thereof.

My method of uniting the ends of a pair of strands is as follows: Preparatory to splicing I first untwist all of the strands for a suitable distance from the ends of the cable and then cut off the core thus laid bare. The two ends of the cable are then brought together and the free ends of the strands arranged as follows: alternate strands of each end portion are unlaid to different points, thus forming scores of different lengths, and the strands of

each end portion that are not unlaid are carried forward and laid in the scores of the opposing end portion. A section of the cable as it appears at this stage is shown in Fig. 1. I do not deem it necessary to illustrate the steps just described, as they are well known and form no part of my invention. Next I take the ends C<sup>2</sup> and C<sup>3</sup> of the strands to be united and bend them at right angles away from the cable, as seen in Fig. 1. I then untwist each end, as seen in Fig. 2, separating the larger wires C' from the smaller ones C and bend the smaller ones away from the larger ones. I then lay the smaller ones in the vacant score and intertwine them, as seen in Fig. 3, allowing the free ends to project. I next raise a slight distance the two adjacent strands on each side of the said wires thus intertwined and pass the small wires C of one end under strands E and F and the larger ones C' of the other end under strands G and H, as shown in Fig. 4. There are now still two free ends to be disposed of. The strands upon the opposite side of the score filled by the small wires intertwined, as described, corresponding to G H and E F are raised and the said free ends inserted under them, as indicated in Fig. 5, in the same manner that the other ends were secured. After all of the ends are secured the projecting portions are clipped off. It will be seen that the ends of the small wires of the united strands are inserted together under adjacent strands on opposite sides of the score filled by the said small wires, and the free ends of the larger wires of the said strands are also placed together under strands on opposite sides of the said score. It will thus be seen that four distinct groups are preserved throughout the operation and that they are finally disposed of by being tucked at four different points under the adjacent strands.

I am aware that it is old to bring the ends of the strands together, separate each strand into two groups of wire, and unite two of said groups by tying them together in the vacant score and inserting all free ends at each end of the splice under the adjacent strands at a point; but it will be understood that if in splicing a cable the strands of which are composed of wires of different sizes this method were used—that is, if the wires were disposed

of by tucking under all free ends at each end  
of the splice at one point—it would become  
necessary to place both large and small wires  
together and insert them under adjacent  
5 strands at the same point. My invention is  
designed to obviate the difficulty arising  
from this method of disposing of the strand  
ends—that is, to secure the wires more firmly—  
for it is obvious that if the small and large  
10 wires were together there would be a tendency  
for the small wires to pull out.

Another advantage is that by untwisting  
the wires before intertwining them in the vac-  
ant score they can be intertwined more  
15 evenly and in such a manner as to better fill  
the vacant score.

What I claim, and desire to secure by Let-  
ters Patent, is—

The improvement in the art of splicing ca-  
20 bles in which the strands are each composed  
of a number of smaller internal and larger  
external wires, whereby the free ends of given

strands are united and the free ends of the  
wires thereof disposed of, which consists in  
untwisting the ends of the strands to be united, 25  
separating the small wires from the large  
ones, laying the said small wires in the vacant  
score and intertwining them, inserting the  
small wires at one end of the score filled by  
the small wires twisted together under the 30  
two adjacent strands on one side of the united  
strands, inserting the large wires of the other  
end under the same strands, and then placing  
the large wires of the first-mentioned end and  
the small wires of the other end under the two 35  
adjacent strands on the opposite side of the  
united strands, substantially as described.

In testimony whereof I affix my signature in  
presence of two witnesses.

JOSEPH THOMPSON.

Witnesses:

W. E. VANDEWATER,  
F. E. PELLETE.