(No Model.)

H. W. STRUSS.

TUBULAR BRAIDING MACHINE.

No. 450,684. Patented Apr. 21, 1891.

Fig. 1.

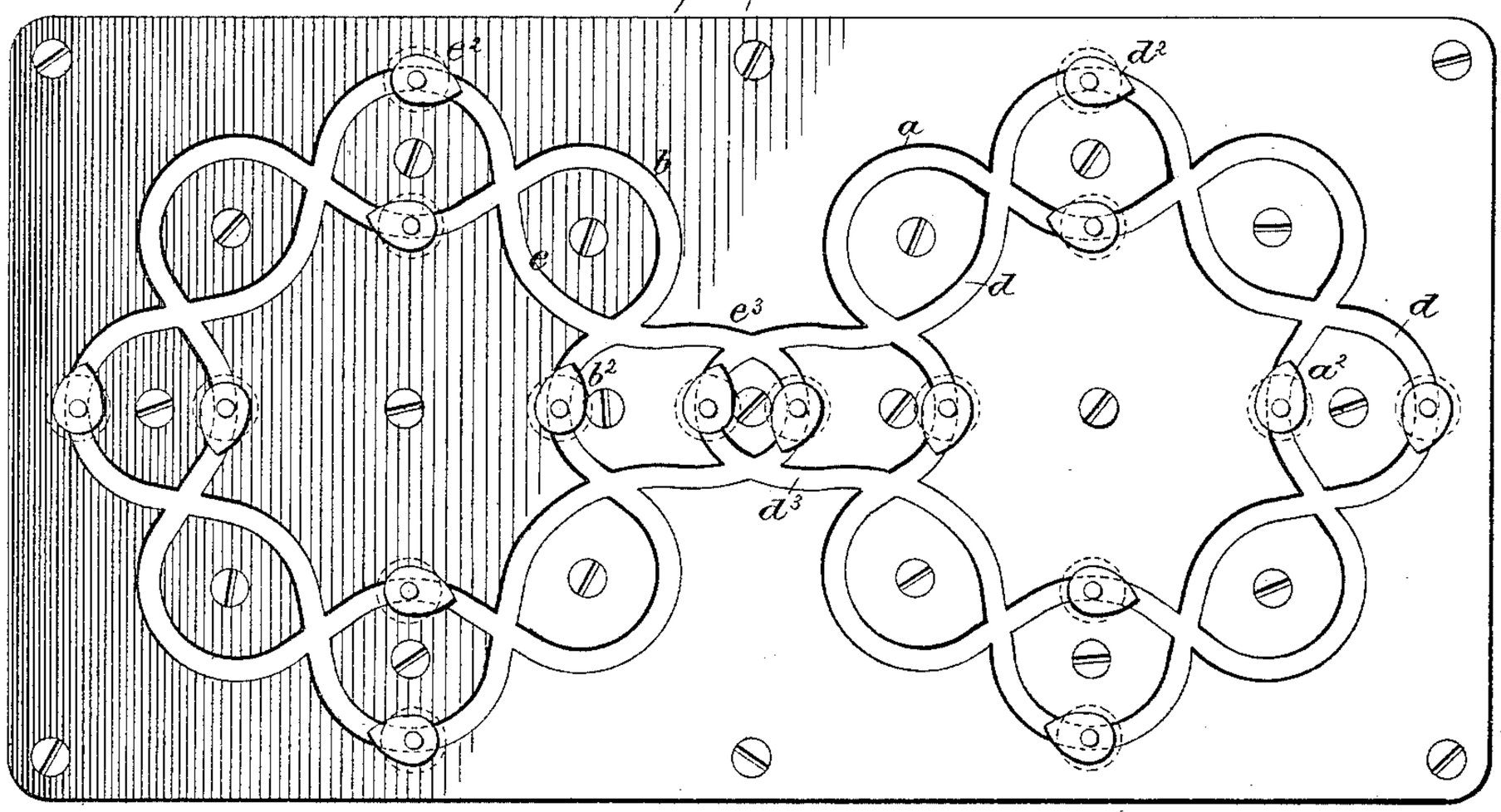


Fig. 2.

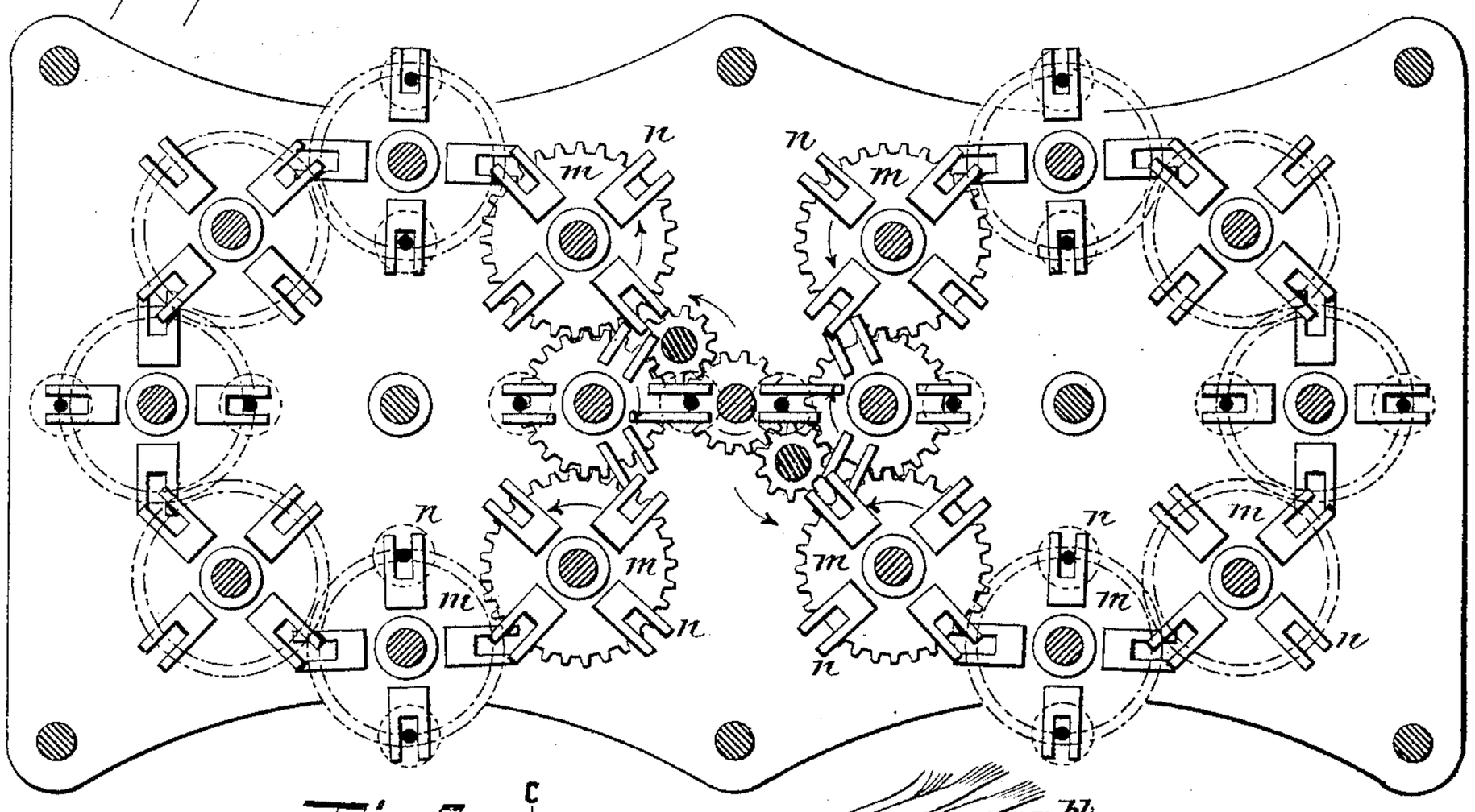


Fig. 4.

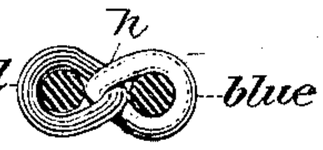
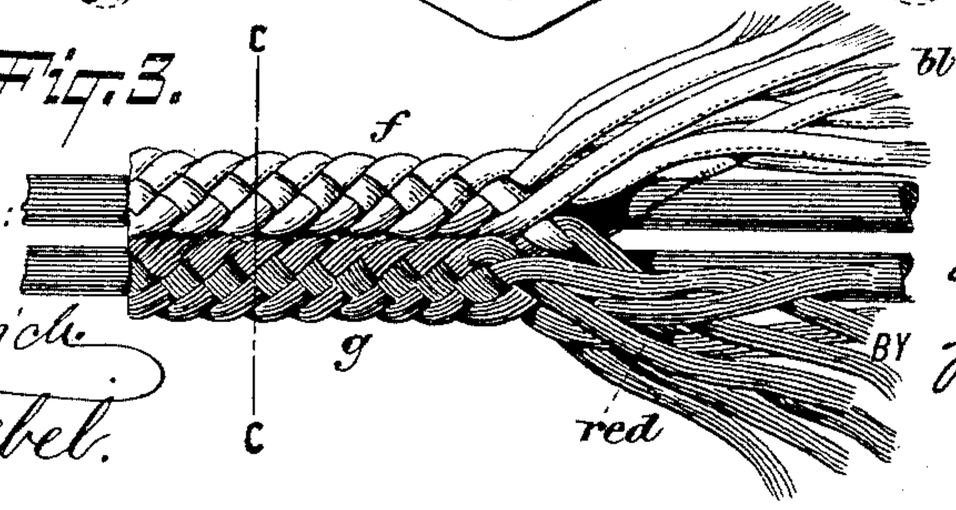


Fig. 3.



WITNESSES:

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TUBULAR BRAIDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 450,684, dated April 21, 1891.

Application filed September 19, 1890. Serial No. 365,506. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. STRUSS, a resident of the city, county, and State of New York, have invented an Improved Tubular Braiding Machine, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, wherein—

Figure 1 represents a plan view of the track portion of a braiding-machine containing my invention. Fig. 2 is a plan view, partly in section, showing the arrangement of toothed wheels and claws for moving the carriers. Fig. 3 is a side view of a double-braided tubing made by my invention; and Fig. 4, a cross-section thereof on the line *c c*, Fig. 3.

This invention relates to a machine for producing double-braided and connected tubing for the covering of telegraph-wires and analogous purposes; and it consists, mainly, in a novel arrangement of the tracks and disposition of carriers for laying the threads of the braid, said tracks being constructed of two sets, each set being a double track, and one track of each set crossing a corresponding track of the opposite set, all as hereinafter more fully described.

For a general type of machine to which my invention relates I refer to Patent No. 112,946, of March 21, 1871. The class of machine there described is by me improved so far as the arrangement of tracks and direction of motion of carriers is concerned. Thus in Fig. 1 it will be seen that I employ on my machine four separate and distinct tracks, one being an undulating track *a*, somewhat in the shape of a cross, although it may have a greater or less number of undulations, the other being a similar undulating track *b*, also shaped like the track *a*, said two tracks *a b* being placed side by side at a distance from one another. The track *a* is crossed by another track *d*, which is also undulating; but which has an extension at d^3 or loop, which projects toward the track *b*, and in like manner the track *b* is crossed by an undulating track *e*, which has an extension or loop e^3, that projects toward the track *a* and that crosses the loop d^3, as clearly shown. These tracks are used in conjunction with four sets of carriers, the track *a* having the carriers a^2 and the track *b* having the carriers b^2. These two sets of carriers run in the same direction; but in the track *d* the carriers d^2 run in the opposite direction, and likewise the carriers e^2 in the track *e* run also opposite to the carriers $a^2\,b^2$. Thus the carriers $a^2\,d^2$ form one braided tube *f*, and the carriers $b^2\,e^2$ form the other braided tube *g*, Fig. 3, the carriers d^2 and e^2, where they cross on the loops $d^3\,e^3$, forming connecting-links such as shown at *h*, in Fig. 4, whereby the two tubes *f g* are intimately connected.

The mechanism for moving the carriers is represented in Fig. 2, being composed of toothed wheels *m* carrying claws *n;* but in view of the well-known state of the art it is not deemed necessary here to further specify with reference to each of said wheels how the said carriers receive their motion.

What I claim, and desire to secure by Letters Patent, is—

In a machine for producing double-braided and connected tubing, the combination of the undulating track *a* and undulating track *b* with the undulating-track *d*, which crosses the track *a* and forms the loop d^3, and with the undulating track *e*, which crosses the track *b* and forms the loop e^3, the loops d^3 and e^3 interlocking, and with a series of carriers $a^2\,b^2\,d^2\,e^2$, and mechanism, substantially as described, for moving the same, all arranged so that the carriers $a^2\,b^2$ will travel in the tracks *a b* in one direction, while the carriers $d^2\,e^2$ travel in the tracks *d e* in the opposite direction, substantially as herein shown and described.

HENRY W. STRUSS.

Witnesses:
HARRY M. TURK,
GUSTAV SCHNEPPÉ.