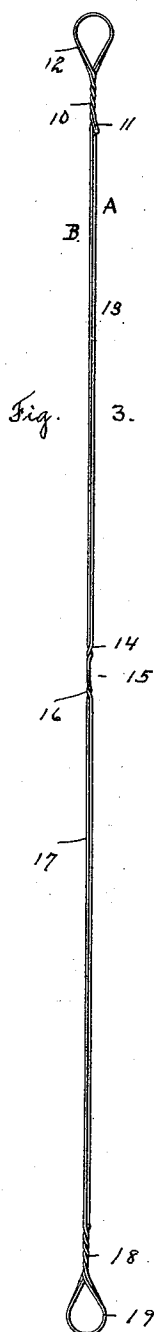
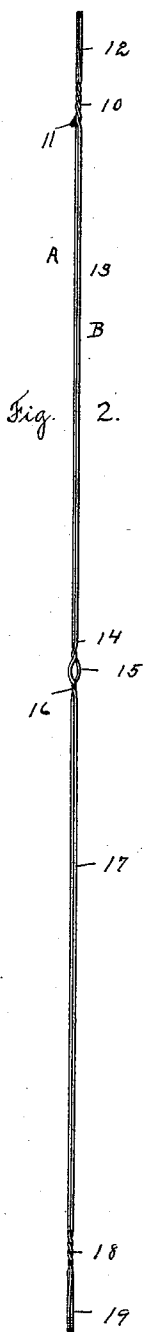
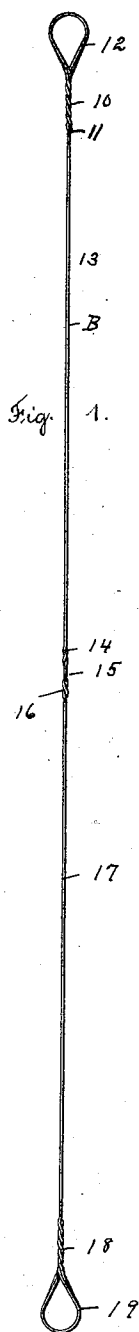


(Model.)

H. VOGELSANG.
HEDDLE FOR LOOMS.

No. 527,165.

Patented Oct. 9, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

HERMANN VOGELSANG, OF DÜLKEN, GERMANY, ASSIGNOR TO THE GIBBS
LOOM, HARNESS AND REED COMPANY, OF CLINTON, MASSACHUSETTS.

HEDDLE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 527,165, dated October 9, 1894.

Application filed February 12, 1894. Serial No. 499,874. (Model.)

To all whom it may concern:

Be it known that I, HERMANN VOGELSANG, a subject of the Emperor of Germany, residing at Dülken, Germany, have invented a new and useful Improvement in Heddles for Looms, of which the following is a specification.

The aim of this invention is to produce a new and improved heddle, which shall be light, flexible, and easy of manufacture, and to this end, the invention consists of the device described and claimed in this specification, and illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a side elevation of my improved heddle. Fig. 2 is a front elevation of the same, and Fig. 3 is a side elevation of a modification.

Heddles are now made of two pieces of wire, or a piece of wire doubled to form a double strand; and these strands are held together by twisting the wires. To make a heddle in this manner, the wires must be large and stiff so as to be kept in position by means of the twist.

By my invention, I solder the main part of the wires together, and also preferably but not necessarily the twists. This enables me to make a heddle which shall be extremely light, and which can be made out of flexible wire so as to be adapted to any location.

Referring to the drawings and in detail, A and B represent a double strand of wire, which can be made of two single wires arranged side by side, or of a single wire doubled back on itself as at 11. The two wires are bent so as to form a loop 12 at the upper end, the ends of the wires 10 being twisted around the main portion, as shown. An eye 15 is formed between the two wires in the middle, or in any convenient portion of the heddle, by twisting the two wires together as at 14

and 16 on opposite sides of the eye 15. A loop 19 is also formed on the other end of the heddle by bending the two wires around and twisting them to the main strands as at 18. The two wires are soldered together between the twists 10 and 14 and 15 and 18, and also preferably on the twists. The two strands may be arranged in the plane of the eye 15 as in Figs. 1 and 2, or in the plane of the loops 12 and 19, as in Fig. 3. This will cause the two wires to unite firmly together so as to constitute in substance a single strand. By this method of manufacture, I can produce a very light and flexible heddle; also it will be seen that the loops are formed of a double strand, hence are stronger and will last longer than the ordinary heddle, which has the loops formed generally of a single strand.

The heddle herein shown may be applied to any use to which heddles are generally put.

The details of construction, as herein shown, may be varied by a skilled mechanic without departing from the scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

A wire heddle formed of parallel strands of wire soldered together, and having a central thread-receiving eye, the heddle being formed with twisted portions at each side of said eye, and having end loops or eyes which are formed by twisting the ends of the parallel wires back and around the body portion of the heddle, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HERMANN VOGELSANG.

Witnesses:

JOS. HEMLER,
ALFRED STAHL.