

No. 746,193.

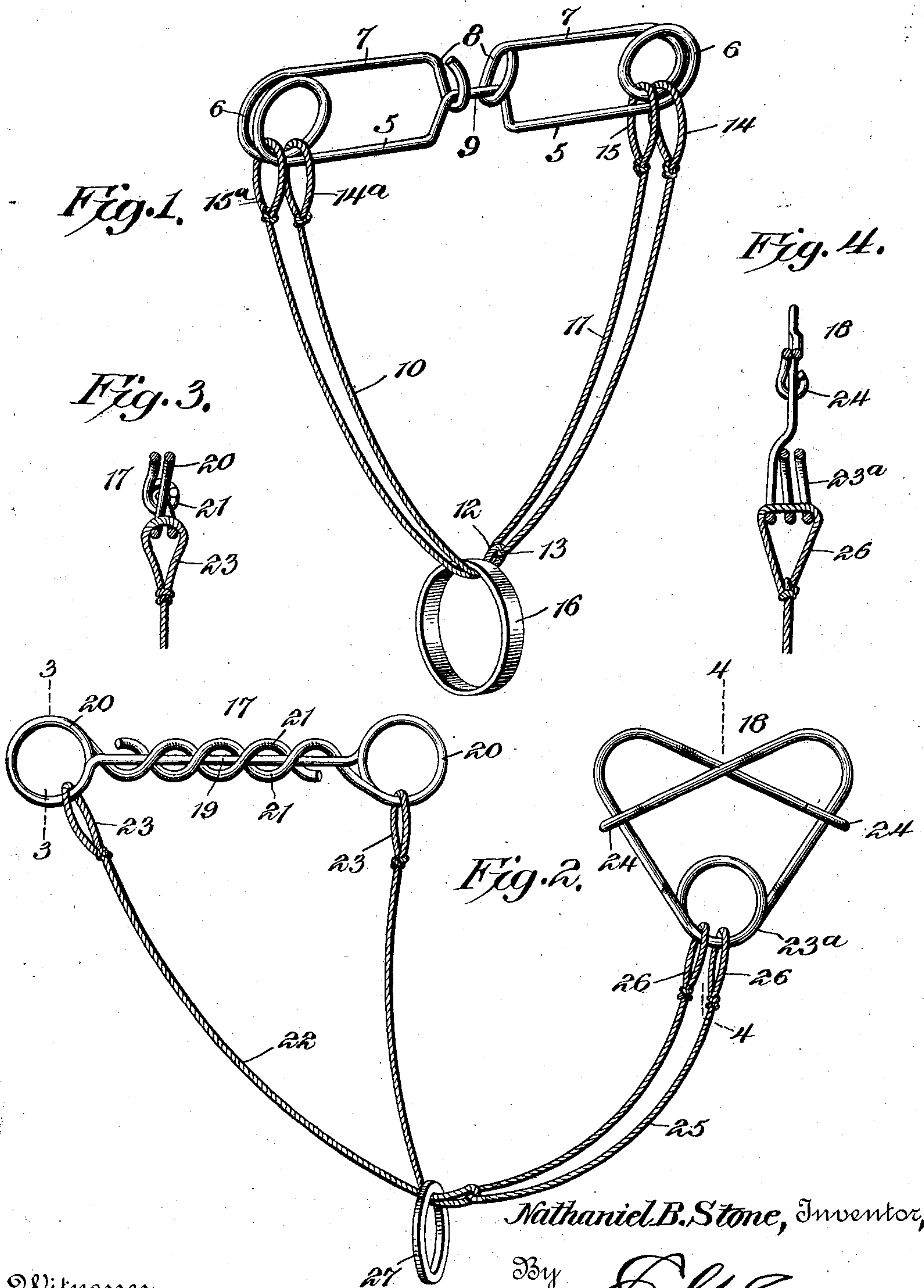
PATENTED DEC. 8, 1903.

N. B. STONE.

PUZZLE.

APPLICATION FILED AUG. 12, 1903.

NO MODEL.



Witnesses
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PUZZLE.

SPECIFICATION forming part of Letters Patent No. 746,193, dated December 8, 1903.

Application filed August 12, 1903. Serial No. 169,285. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL B. STONE, a citizen of the United States, residing at Outlook, in the county of Yakima and State of Washington, have invented a new and useful Puzzle, of which the following is a specification.

The present invention relates to improvements in puzzles of that class wherein the parts or elements are to be separated.

The object, as in all devices of this character, is to provide a puzzle that is attractive in the difficulties to be overcome in solving the same.

Further than this it is the object to provide a structure which can be readily modified within the scope of the invention to obtain puzzles more or less difficult of solution, as desired.

Two embodiments of the invention are illustrated in the accompanying drawings, and when the nature of said invention is thoroughly understood it will be seen that modifications of the structures can be readily made without departing from the spirit of the invention.

In the drawings, Figure 1 is a perspective view of a comparatively simple form of puzzle. Fig. 2 is a side elevation of another form. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 2. Fig. 4 is a similar view on the line 4 4 of Fig. 2.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

Referring first to the embodiment illustrated in Fig. 1, a holding-bar is employed, which is preferably formed of a single wire. This bar comprises a main body portion 5, having coils 6 at its ends that constitute eyes. The terminal portions of the wire are bent backwardly, as shown at 7, in spaced relation to the main body portion 5 and are provided at their free ends with hooks 8, that embrace an intermediate offset portion 9 of the wire, said hooks having a space between their opposite walls that is greater than the diameter of the wire in order to permit the passage of a cord, as is hereinafter more fully described. In connection with this holding-bar there are employed looped cord elements 10 and 11, the doubled ends 12 and 13 of

which are interlocked. The ends of these cord elements are formed into flexible eyes 14 15 and 14^a 15^a, which are interlocked, respectively, with the eyes 6 of the holding-bar and embrace all the coils thereof. A ring 16 is placed upon the interlocked loops, as shown, so as to be freely movable thereon from end to end.

While there are several different methods of solving the puzzle, perhaps the most difficult one is the removal of the ring 16 by the separation of the interlocked loops. This operation may be briefly outlined as follows: It will be apparent that the eyes 6 each have what may be termed a "tortuous" channel leading therefrom to the ends of the wire, for by springing one of the hooks 8 inwardly a cord may be passed thereabout. One of the doubled ends of one of the loops—as, for instance, 12—is raised to a position between the eyes 14 and 15, and this doubled end is then passed around this tortuous channel, following closely the shape of the wire. In other words, the doubled end 12 is first passed through the loop 14, then about the first coil of the eye 6, through the two eyes, and afterward passed over the free end of the hook. From this position the doubled end is returned in exactly the same way as it was removed—back through the doubled loops to the coil and thence through the single loop. This constitutes the first step of the operation, and the result is that the doubled end will be upon the main body-wire 5 between the eyes 14 and 15 of the opposite loop. An analogous second step brings the doubled end directly into the eye 6, in which position it embraces all the coils thereof. The next step, which is also of an analogous nature, carries the doubled end out of said eye and between the body-wire 5 and the terminal portion 7. From thence it can be readily removed, as it is entirely disassociated from the other flexible loop. The loops are therefore separated, and the ring may consequently be removed. It will be apparent that in this operation the eyes of the loops are never removed, and the principle to be observed is the following of the wire by one of the doubled ends until a terminal of said wire has been reached. This may be a very involved operation, as it is necessary to keep the loops

from becoming twisted, so that in the reverse operations the passage through the eyes will not be interfered with. It will be readily seen that by providing more or less coils in the eyes the solution may be made more or less difficult.

A different form of construction, but one involving the same idea, is illustrated in Figs. 2, 3, and 4. Instead of eyes arranged upon a single holding-bar these eyes are arranged on separate devices 17 and 18. The element 17 consists of a main body portion 19, having coiled eyes 20 at its ends, the terminals 21 from said coils being twisted in reverse directions about the body-wire 19 and being spaced therefrom in order to provide the necessary tortuous channel. One of the loops 22 has its eyes 23 interlocked, respectively, with the eyes 20 of this device. The other element 18 is substantially heart-shaped and is provided with the necessary coiled eyes 23^a and the terminal hooks 24, which must be open sufficiently to permit the passage of the cord. The loop 25 has its eyes 26 interlocked in the eyes 23^a of this heart-shaped element, and said loop is also interlocked with the loop 22. A ring 27, placed upon the loops, is held against disengagement therefrom by means of the elements 17 and 18. It will be readily seen that the operation of this device is substantially similar to that already set forth, and no lengthy description thereof is believed to be necessary.

It will be apparent that a puzzle constructed in accordance with the present invention can be made very difficult of solution or modified, so as to be readily operable. Moreover, these modifications may be made with ease, as the same combination of features is always involved.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a puzzle, the combination with a holding device having an eye provided with a channel leading therefrom, of looped interlocked flexible cord elements, one end of one of the elements being provided with a flexible cord eye that is loosely interlocked in the eye of the holding device and permits the passage

therethrough of the interlocked end of the other element.

2. In a puzzle, the combination with a holding device having an eye provided with a tortuous channel leading therefrom, of looped interlocked cord elements, one end of one of the cord elements being provided with an eye that is interlocked in the eye of the holding device, the other element being movable through the eye of the first-mentioned element and the channel leading from the eye.

3. In a puzzle, the combination with a holding-bar provided with a coiled eye, of looped interlocked cord elements, one end of one of the cord elements being provided with an eye that is interlocked in the eye of the holding-bar and embraces all of the coils thereof, said eye permitting the passage therethrough of the interlocked portion of the other cord element.

4. In a puzzle, the combination with a holding-bar provided at one end with a coiled eye comprising a plurality of coils, one of the terminal portions of the bar extending from the coiled eye and being associated with a rod to form a channel from said eye, of looped interlocked cord elements, one of said cord elements being provided with an eye that is loosely interlocked in the eye of the holding-bar and embraces all the coils thereof.

5. In a puzzle, the combination with a holding-bar provided at its ends with coiled eyes, of interlocked flexible loops having eyes that interlock with the eyes of the holding-bar and embrace all the coils thereof.

6. In a puzzle, a holding-bar comprising a rod having coils forming eyes, the terminal portions of said rod being doubled backwardly and having hooks at their free ends that embrace the main portion of the rod, and looped interlocked cords having their ends formed into the flexible eyes that respectively interlock with the eyes of the holding-bar and surround all the coils of the same.

7. In a puzzle, the combination with a holding device having an eye comprising a plurality of coils, of looped interlocked elements, one of which is provided with an eye that is interlocked in the eye of the holding device and embraces all the coils thereof, said eye of the element permitting the passage therethrough of the interlocked portion of the other element.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

NATHANIEL B. STONE.

Witnesses:

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B. G. FOSTER.