(No Model.)

J. J. YOUNG.

THIMBLE AND ROPE CLAMP COMBINED.

No. 421,120. Patented Feb. 11, 1890.

Fig 1

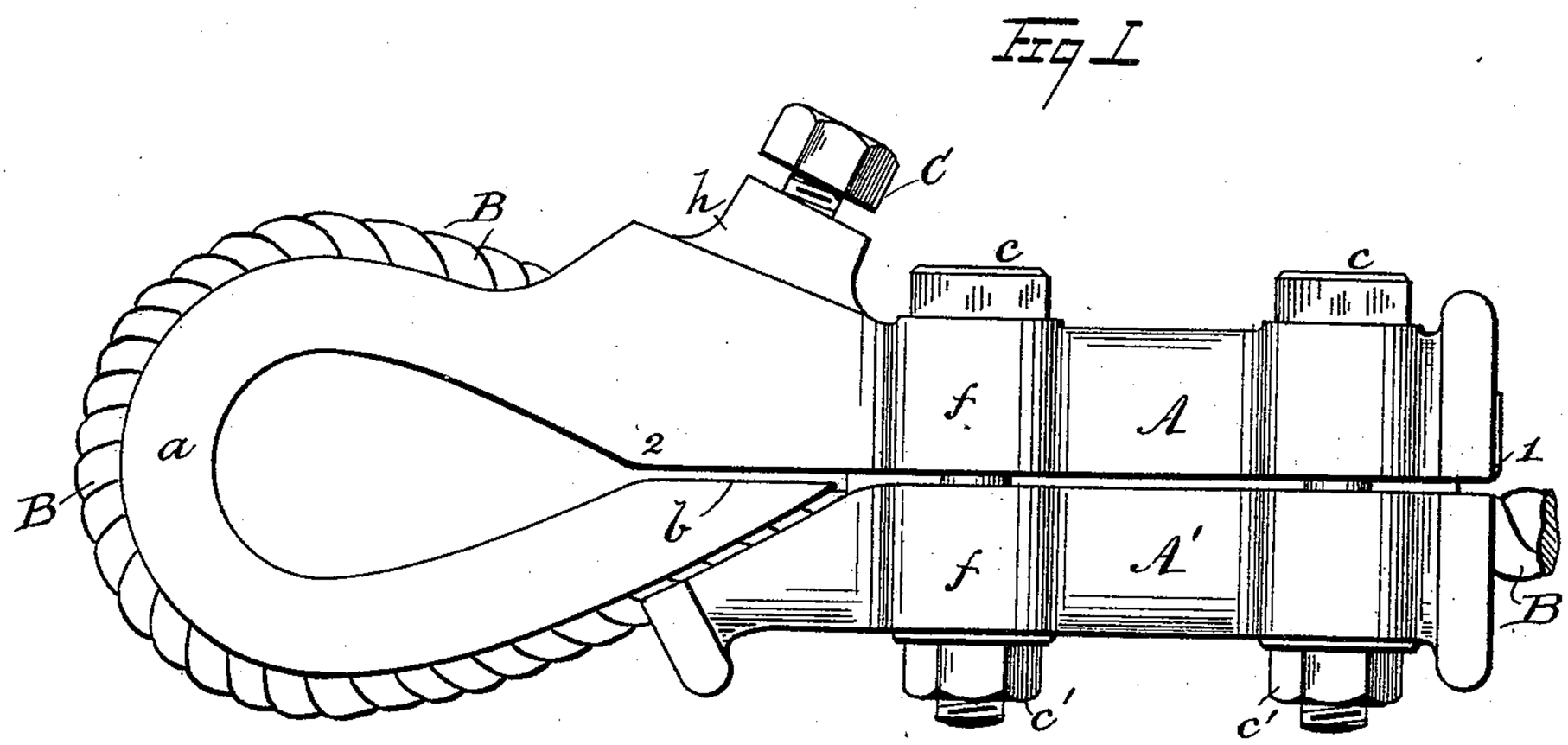

Fig 2

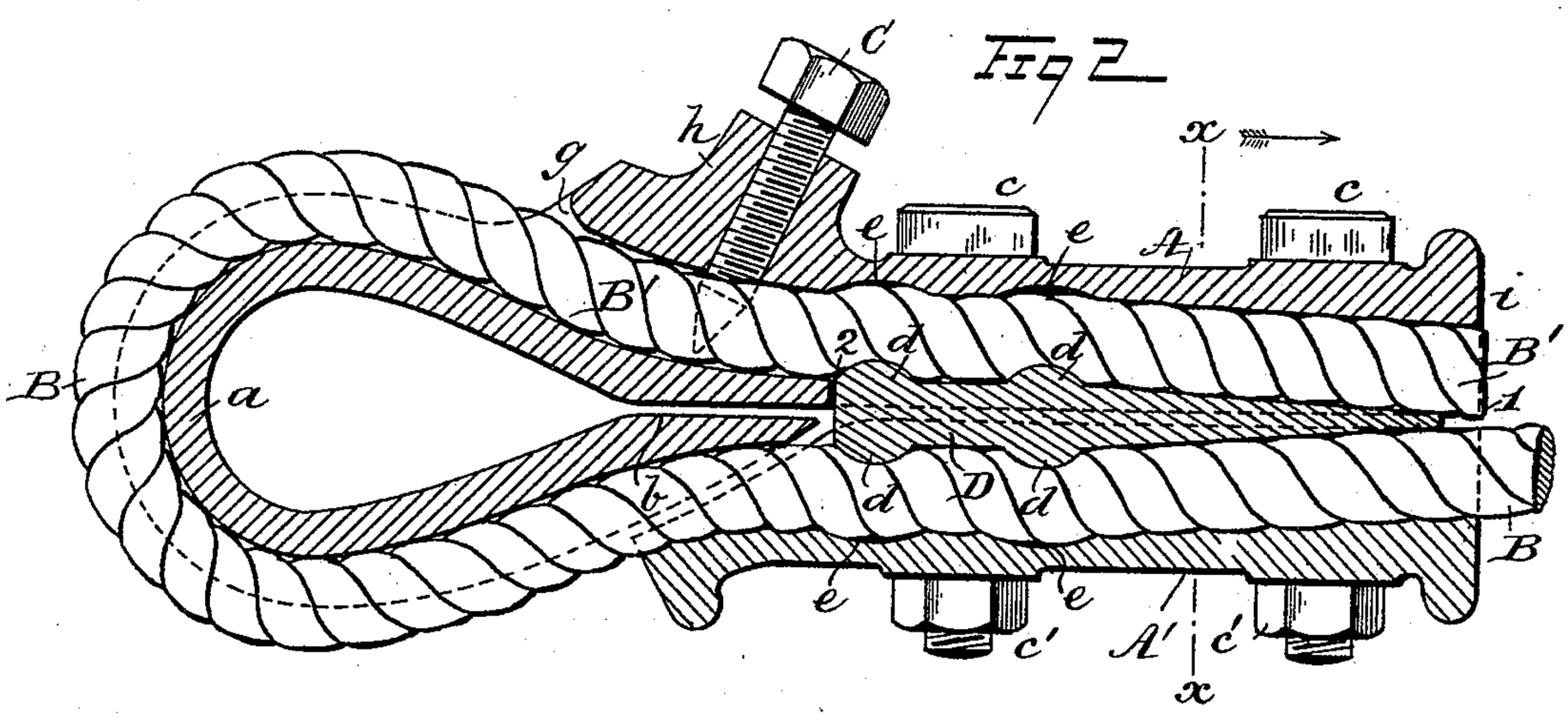

Fig 3

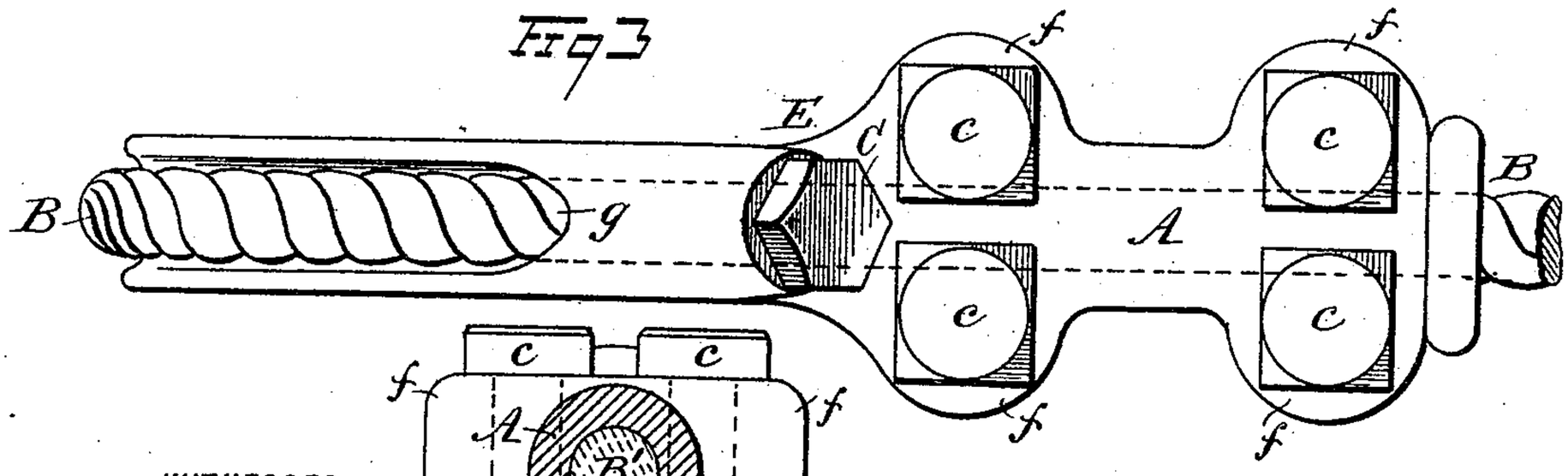

Fig 4.

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JOHN J. YOUNG, OF WILLIAMSPORT, PENNSYLVANIA.

THIMBLE AND ROPE CLAMP COMBINED.

SPECIFICATION forming part of Letters Patent No. 421,120, dated February 11, 1890.

Application filed October 7, 1889. Serial No. 326,269. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. YOUNG, a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improved Thimble and Rope Clamp Combined, of which the following is a full, clear, and exact description.

My invention relates to thimbles used in the formation of loops or "eyes" on the ends of ropes or cordage of all sizes, which are usually employed in various kinds of rigging for vessels, hoisting-machines, and other purposes where an eye has to be formed on the end of a rope for the reception of a coupling-ring, a hook, or another rope.

Heretofore it has been customary to secure the metal "thimble" to a rope's end by bending the strand around the channel formed on the outside of the thimble and splicing the end into the body of the rope close to the thimble, so as to closely embrace the latter and hold it in place. If the thimble was to be fastened to a wire rope, the regular style of splicing hempen ropes was not available, owing to the unyielding nature of the rope material; hence it was usual to lap or lay the terminal end of the wire rope against the body of the same after the thimble was in place, and then wrap the lapped end and adjacent body of the wire rope with a wire strand or other suitable material. It requires skill and consumes considerable time to attach a thimble in place upon a rope's end neatly and securely, either by splicing the strands into the body or wrapping the same, as stated, and in the latter method of attachment there is liability of the parts becoming disconnected after hard service.

The objects of my invention are to provide a light, strong, shapely, and cheap device which may be quickly connected to the end of a rope, either of hempen or wire strands, and that when in place will afford a thimble or lining-ring for the looped end of a rope, and also a convenient and reliable means for attachment of the rope thereto.

With these ends in view my invention consists in certain features of construction and combination of parts, which will be hereinafter described, and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the device in perspective with a rope in position. Fig. 2 is a longitudinal section of the same, exposing the rope. Fig. 3 is a longitudinal view, in perspective, of the device taken at a right angle to the side view shown in Fig. 1; and Fig. 4 is a cross-section taken on the line $x\ x$ of Fig. 2.

A represents the principal portion or main section of the device. It is made of metal cast into form, and consists of an elongated shell having a rounded channel extending from the end 1 to the point 2, where an ovate thimble *a* is formed as an integral extension of the main section. The thimble portion is grooved, as is usual, for the reception of a rope or cord. It may be made continuous as a solid ring joined to the section A, but, as shown, it is slightly parted therefrom by a slit *b*, which divides the apex of the ovate thimble and affords slight elasticity to the same. Said slit *b* also affords means for the insertion of a ring, if such an addition to the thimble should be desired, as the end can be spread and again closed after a ring has been introduced. Opposite the slit *b* an elongated aperture is formed in the main section A, which extends from a point *g* inwardly, and is longitudinally curved to substantially conform to the shape of the thimble *a* at this point. Said aperture is of circular form in cross-section, and thus adapted to permit the insertion of a hempen or wire rope through it.

Upon the outer surface of the main section A, above the curved aperture mentioned, an integral inclined projecting boss *h* is formed, which is perforated axially and screw-tapped to receive the threaded set-screw bolt C, that from its position will securely retain a rope's end B′ when its conical point is embedded therein.

The longitudinal channel formed in the lower surface of the main section A is curved to fit the rope-body neatly, and at proper points spaced apart there are formed the transverse grooves *e e*, these being designed to receive kinked portions of the rope's end when the material is compressed laterally, as will be explained.

Another section A′ is provided, which in

general shape conforms to that of the main section A, and is also furnished with grooves *e e*. The section A′ is designed to act as a clamp, and when secured upon the main section compresses the lapped portions of the rope securely.

There are swells *f* formed integral with the walls of the two sections A A′ oppositely, which are perforated to receive clamping-bolts *c*, and nuts *c′* are provided to compress the parts together. Any suitable number of pairs of bolts may be provided for and utilized, depending upon the size of the rope and service it performs.

It is preferred to construct the device as shown in Fig. 2, having a wedge-shaped loose spreading-block D inserted between the lapped portions of the rope, said spreading-block being grooved on opposite faces, as shown in Fig. 4, to adapt it to fit between the rope and its end. On the block D, opposite the grooves *e e* of the sections A A′, corresponding protuberances *d* are formed, which, when the sections are clamped together, force the rope-body into the grooves *e e* and securely lock the same fast to the thimble-clamp.

The block D, which is preferably employed in connection with the clamping-sections A A′, will occupy a certain amount of space, and to afford room for the rope between it and the sections A A′ the channeled surface of the latter should be curved outwardly considered lengthwise, as shown in Fig. 2.

Nuts for the clamping-bolts *c* may be dispensed with by forming aligning tapped holes in the section A′, or the other section, if preferred, so that the threaded bolt ends may engage these tapped perforations and clamp the two sections together. Ears may also be substituted for the swells *f* and will be of same service. Other slight changes might be made in the shape of the parts without departure from the spirit or exceeding the scope of my invention; hence I do not desire to restrict the construction to the precise shapes shown.

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

1. A combined thimble and rope clamp comprised of an elongated section longitudinally channeled on one side and provided with a thimble at one end, and a channeled clamping-section which mates and is secured to the other channeled section, substantially as set forth.

2. In a combined thimble and rope clamp, the combination, with an elongated main section which is longitudinally channeled on one side and provided with an integral ovate thimble, the channeled portion being intersected by cross-grooves, of a longitudinally-channeled clamping-section having intersecting cross-grooves thereon which are adapted to mate the grooves in the main section, and means to hold the main and clamping sections together, substantially as set forth.

3. The combination, with a main section which is longitudinally-grooved on one side, having a thimble portion made integral with one end of the channeled portion and slitted to divide the ring of the thimble, of a longitudinally-channeled clamping-section, and means to hold the oppositely-channeled sections together, substantially as set forth.

4. The combination, with a main section having an integral thimble portion extended from one end and provided with an aperture formed longitudinally to receive the end of a rope which is seated in the grooved thimble portion, and a set-screw bolt, of a mating clamping-section which is adapted to be clamped on the main section, and means to clamp the sections together, substantially as set forth.

5. The combination, with a longitudinally-channeled main section having an integral ovate thimble portion projected from one end and further provided with a longitudinally-curved aperture for the reception of a rope's end, and a set-screw bolt which is inserted diagonally through the wall of the main section, of a longitudinally-channeled clamping-section which mates the main section, and bolts to clamp the sections together, substantially as set forth.

6. The combination, with a main section, an integral thimble portion formed on the main section, a set-screw bolt, and clamping-bolts, of a mating clamping-section and a spreading-block located between the sections, substantially as set forth.

7. The combination, with a main section, an integral thimble portion projected from the main section at one end, a set-screw bolt, and a rope end bent around the thimble portion and located in a channel longitudinally formed in the main section, of a set-screw bolt, a wedge-shaped spreading-block, and a clamping-section secured to the main section by bolts, substantially as set forth.

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Witnesses:
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JAMES N. KLINE.