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T. L. HARRIS.
GUARD FOR SHAPING MACHINES.

APPLICATION FILED SEPT. 23, 1904.

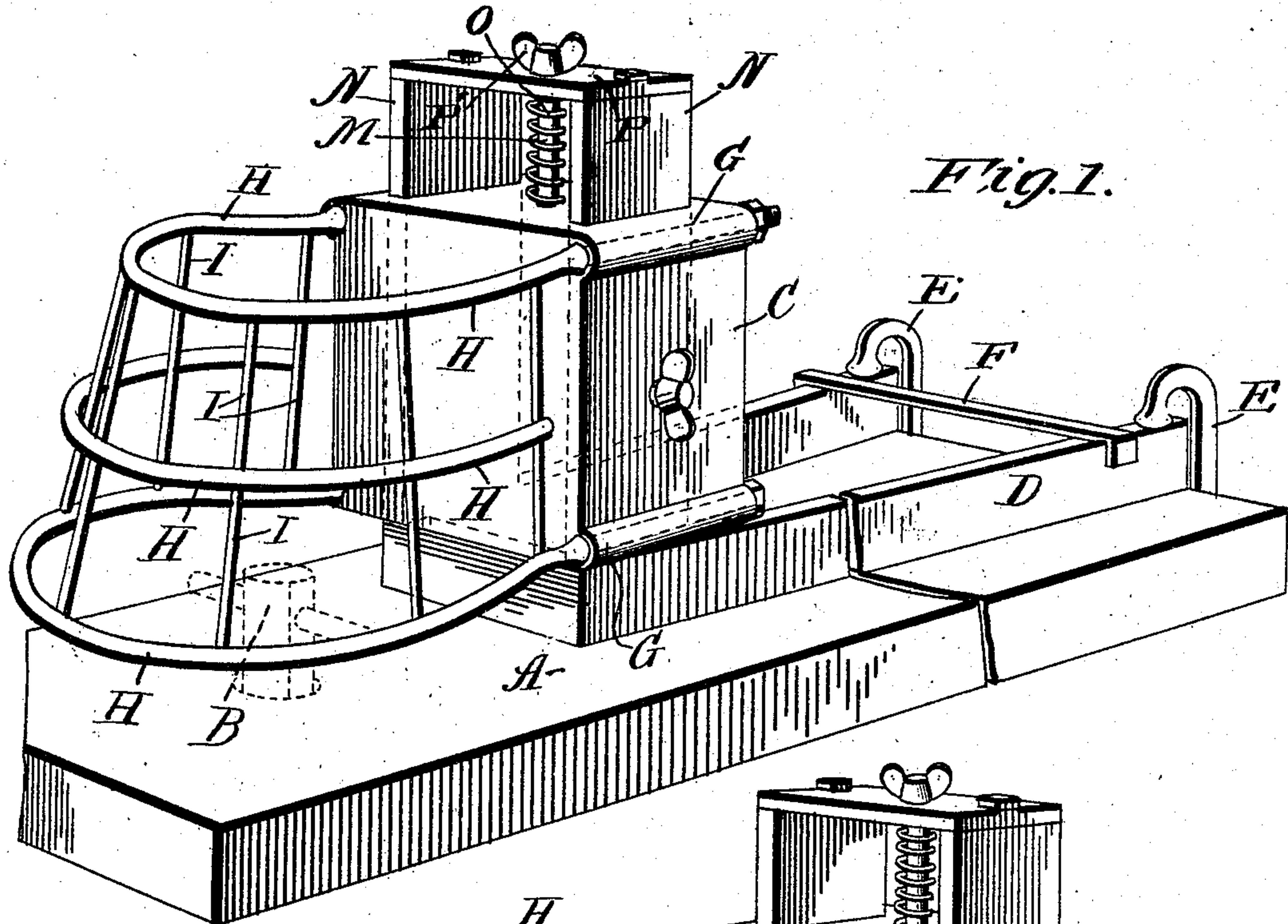


Fig. 1.

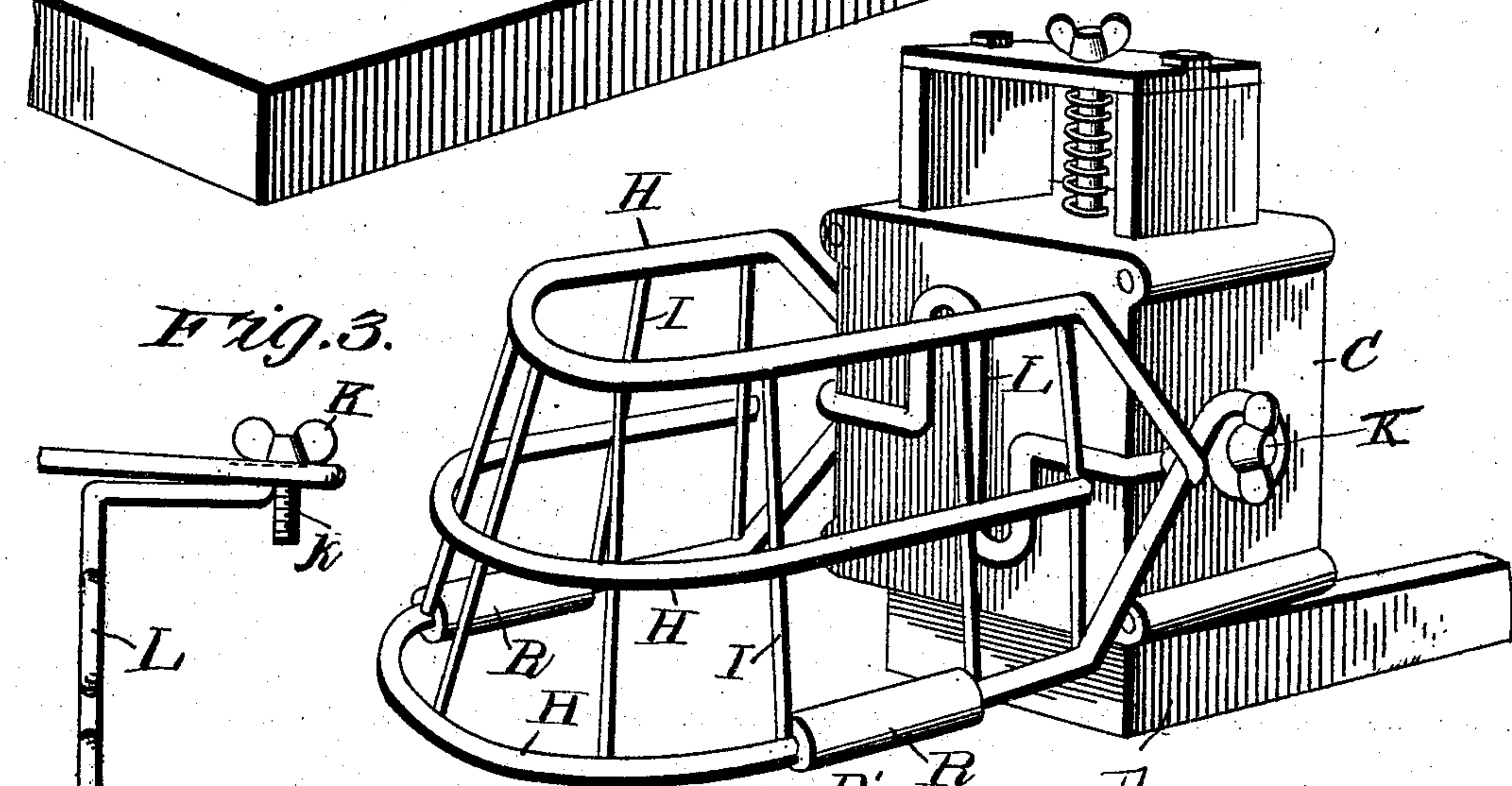


Fig. 2.

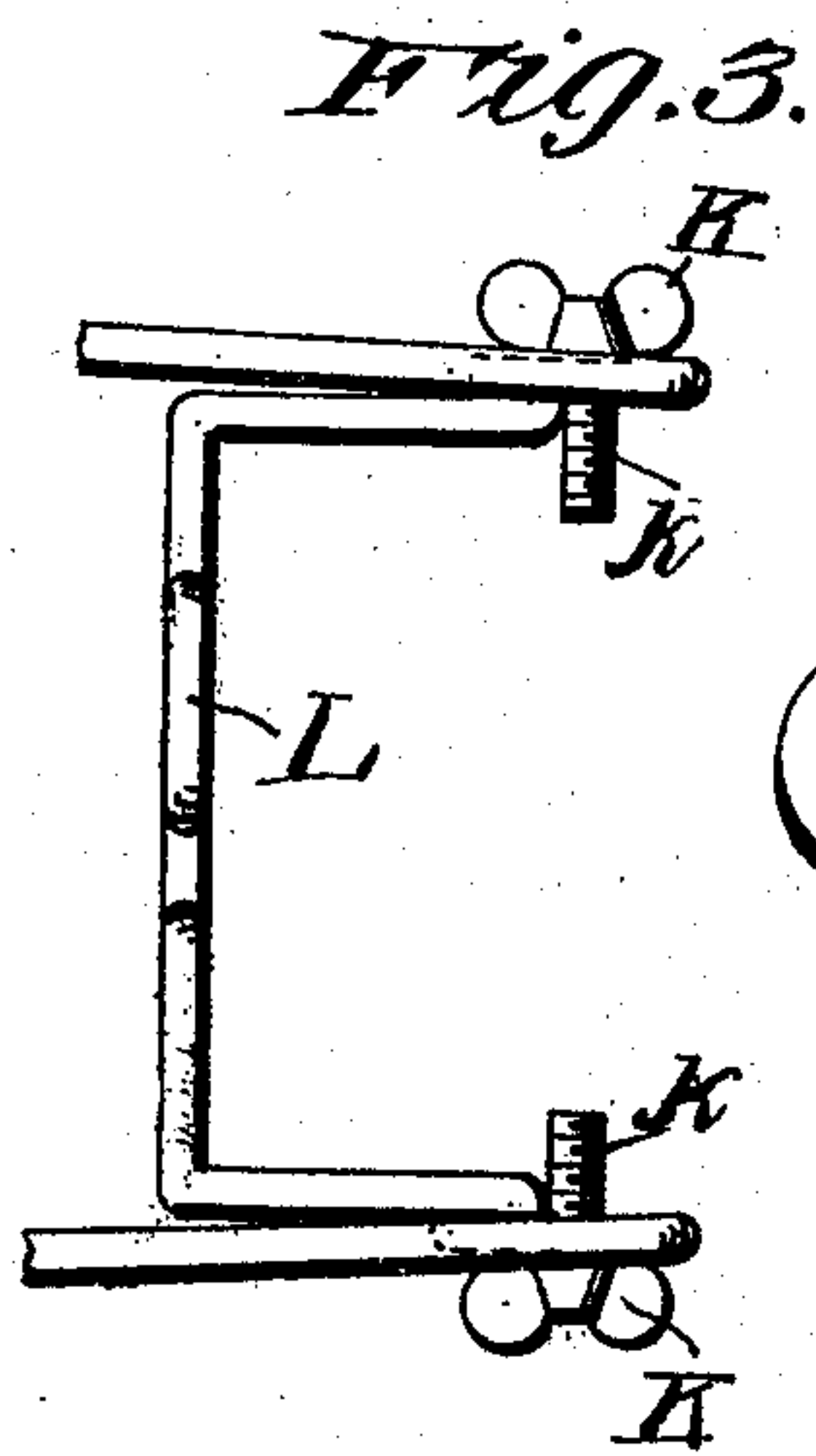


Fig. 3.

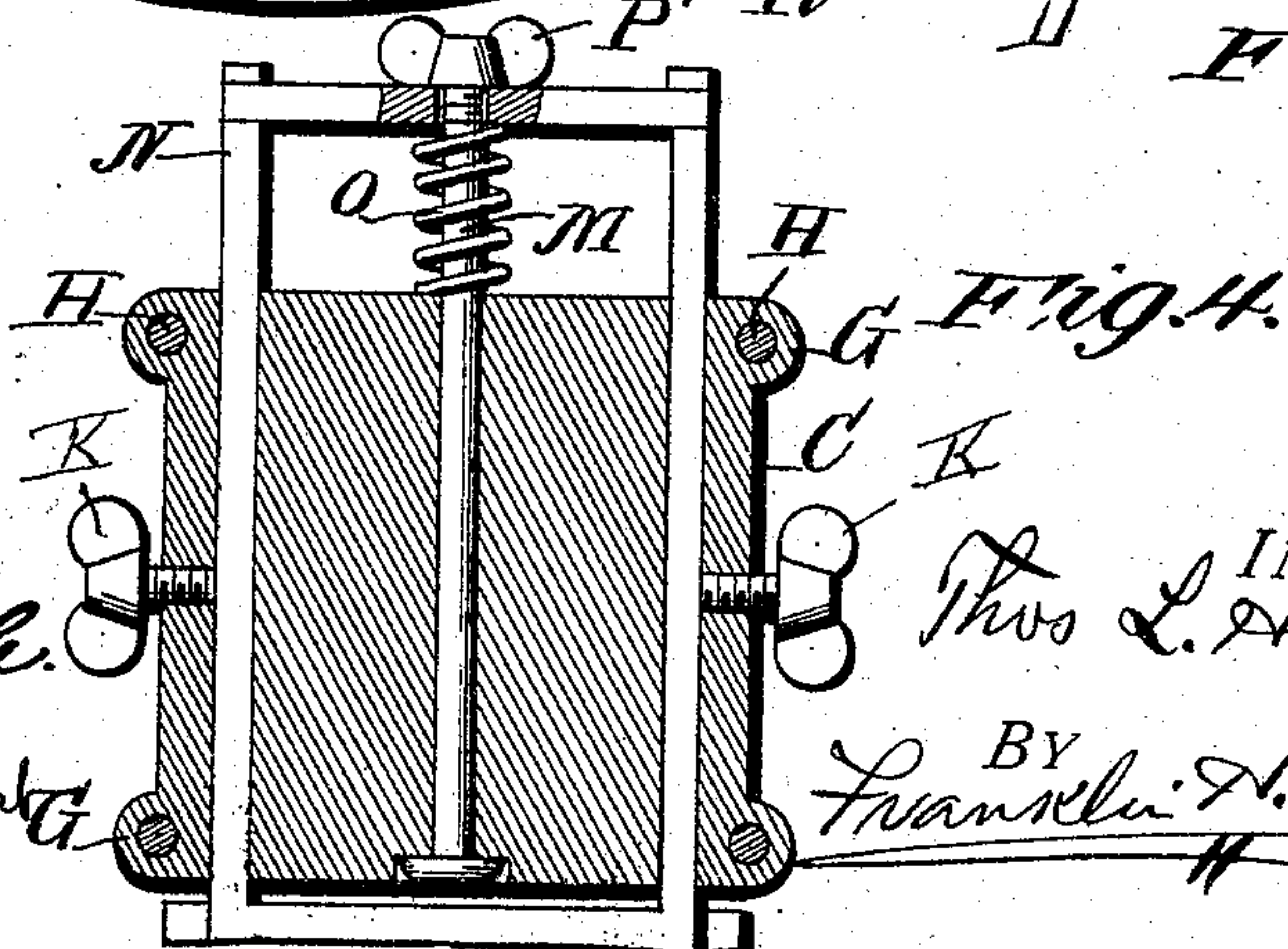


Fig. 4.

WITNESSES:

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GUARD FOR SHAPING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 782,392, dated February 14, 1905.

Application filed September 23, 1904. Serial No. 225,641.

To all whom it may concern:

Be it known that I, THOMAS LAMAR HARRIS, a citizen of the United States, residing at Wrightsville, in the county of Johnson and State of Georgia, have invented certain new and useful Improvements in Guards or Fenders for Shaping-Machines, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in guard or fender attachments for shapers and other like wood-working-machines; and it has for its object the provision of a simple and inexpensive attachment of this character and which, while in no way interfering with the use or operation of the machine, will serve to effectually protect the operator from injury arising from accidental contact with the rapidly-rotating cutter-head, as well as from splinters which are at times thrown outward from the cutter-head. The device also serves to prevent lumber or other substances being accidentally brought into contact with the cutter-head.

To these ends and to such others as the invention may pertain the same consists in the peculiar form of the fender attachment and in the manner in which it is attached to the shaping or other machine upon which it is used, all as will be hereinafter more fully described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of a portion of a shaper-machine with my fender attachment shown as applied thereto. Fig. 2 is a like view of a slightly-modified form of the attachment. Fig. 3 is a top plan view of the clamping mechanism for securing the fender in place, and Fig. 4 is a central vertical transverse section of Fig. 1.

Reference now being had to the details of the drawings by letter, A designates the table or bed portion of a shaping-machine, which may be of any of the various forms of construction in common use in woodworking establishments, being provided with the usual cutter-head or rotary wood-cutting tool B, which when in use is rotated at a high rate of speed.

My attachment consists of a block or casting C, constructed of any material adapted to the purpose, but preferably of cast metal. This block or casting C is carried upon a frame D, which rests upon the top of the table or bed A of the machine, to which the said frame is clamped in any suitable manner—as, for instance, by the use of clamping-arms E E—and the rear ends of the side bars or timbers of the frame are held against displacement outwardly by a cross-bar F, the ends of which bar are bent downward to engage over the outer side edges of the said timbers. The block or casting C is provided with suitable sockets G G to receive the screw-threaded free ends of the wires or rods H, the said wires or rods being passed through sockets and are held therein by means of nuts screwed upon the extreme ends of the wires or rods at the rear face of the block. The said wires or rods H are bent to form a fender above and partly surrounding the cutter-head B, the fender thus provided being strengthened, and the wires or rods are held against displacement by vertical connecting wires or rods I I. The fender, it will be noted, is so positioned relative to the cutter-head as to effectually prevent accidental contact either of the hands of the operator or of any other object with the rapidly-rotating cutter, and at the same time the lower edge of the fender is raised a sufficient distance above the surface of the bed or table of the machine so as to permit the lumber operated upon being readily passed beneath it.

In Fig. 2 of the drawings I have shown a slightly-modified form of fender and mode of attachment to the block C. In this instance instead of passing the rods or wires H of the fender through sockets or openings in the block the upper and lower horizontal wires or

rods are united at their ends and are held to the block by thumb-bolts K passed through eyes formed in the ends of the rods or wires, and to hold the fender against displacement the wire or rod after passing around the thumb-bolts is bent to form a portion L, which extends across the front face of the block, against which it has a bearing.

Rollers R are sleeved upon the lower portions of the fender, as shown in Fig. 2, to facilitate the passing of wood beneath the fender.

A bolt M is passed vertically downward through the center of the block between the uprights N N, forming a rack, which rise from the upper sides of the block, the bolt having sleeved thereon a spiral spring O, one end of the said spring having a bearing upon the upper end of the block and its opposite or upper end bearing against the lower face of the cross-head P, the free upper end of the bolt being provided with a suitable nut P'. It will be seen that the spring O when thus arranged acts to normally hold the fender yieldingly in the position shown in the drawings. By the provision of a means for allowing the fender to be raised or lowered it is observed that boards or other articles to be operated upon by the machine may be passed beneath the fender, the latter being allowed to be raised to admit different thicknesses of boards, and, if desired, the fender may be held in a fixed position by the mere tightening of the bolts K, said bolts being caused to frictionally engage the rack to hold the fender in the position desired.

Among the advantages secured by my construction of fender may be mentioned the spring attachments, which permit of the wood being easily held by the machine. The rollers R serve to aid in passing wood to the cutter-head. The long arms employed make it convenient to readily attach the device to the table of the machine without injury thereto. The fender-basket is at all times held securely against side motion, and the construction and form of the fender-basket is such as to permit free access of the wood to the cutter-head with-

out danger of injury to the hands of the operator.

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

1. A fender for woodworking-machines comprising, in combination with a table, a block, a rack having vertical standards passing through slots in said block, a spring interposed between said block and top of the rack, a wire fender having portions thereof bent to form eyes, screws in the opposite sides of said blocks upon which said eyes are mounted, a portion of the fender bent against the face of the block intermediate the faces through which said screws pass, as set forth.

2. A fender for woodworking-machines comprising, in combination with a table, a vertically-movable yielding block, a fender made of a piece of wire having side portions thereof bent to form eyes, screws carried by said block and passing through said eyes, a portion of the fender being bent to form loops extending in opposite directions and adapted to bear against the face of the block at right angles to the faces of the block through which said screws pass, as set forth.

3. A fender for woodworking-machines comprising, in combination with a table, a vertically-movable yielding block, a fender made of a piece of wire having side portions thereof bent to form eyes, screws carried by said block and passing through said eyes, a portion of the fender being bent to form loops extending in opposite directions and adapted to bear against the face of the block at right angles to the faces of the block through which said screws pass, and rollers mounted upon the bottom wires of the fender opposite each other, as set forth.

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

THOMAS LAMAR HARRIS.

Witnesses:

E. A. W. JOHNSON,
A. D. MOYE.