

J. H. REECE.
 GUARD FOR WIRE BLOCKS.
 APPLICATION FILED MAR. 17, 1908.

909,117.

Patented Jan. 5, 1909

Fig. 1.

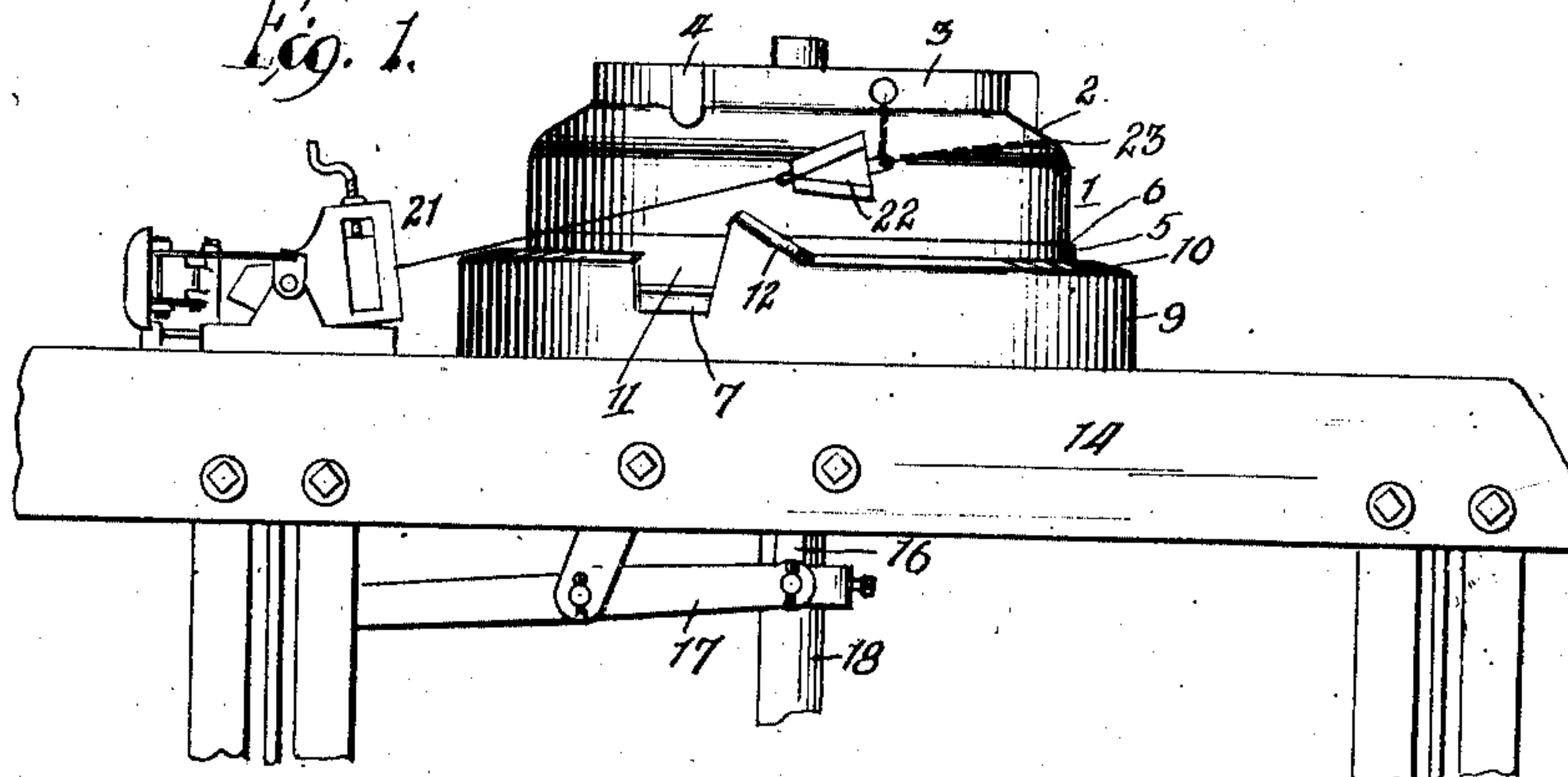


Fig. 2.

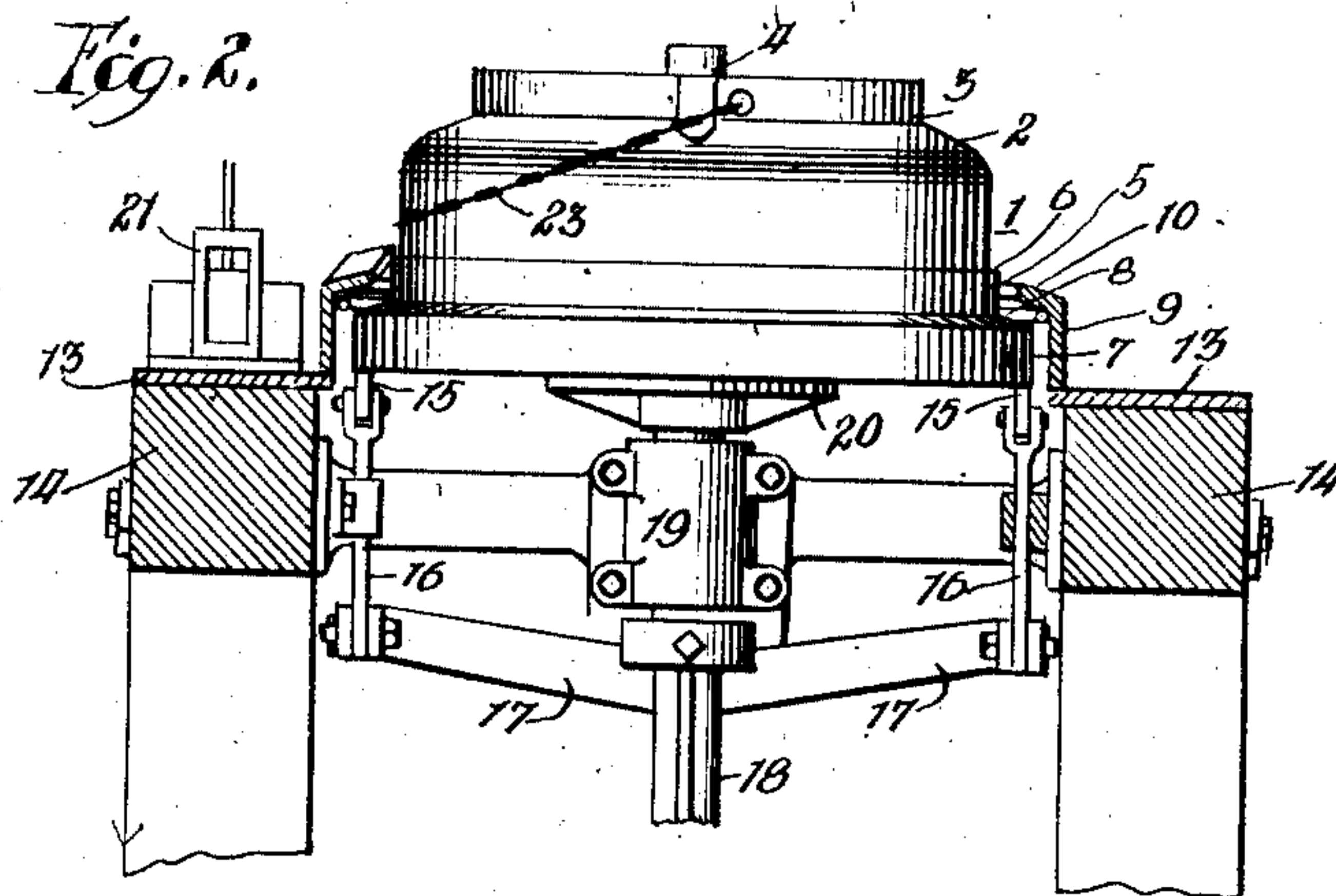


Fig. 3.

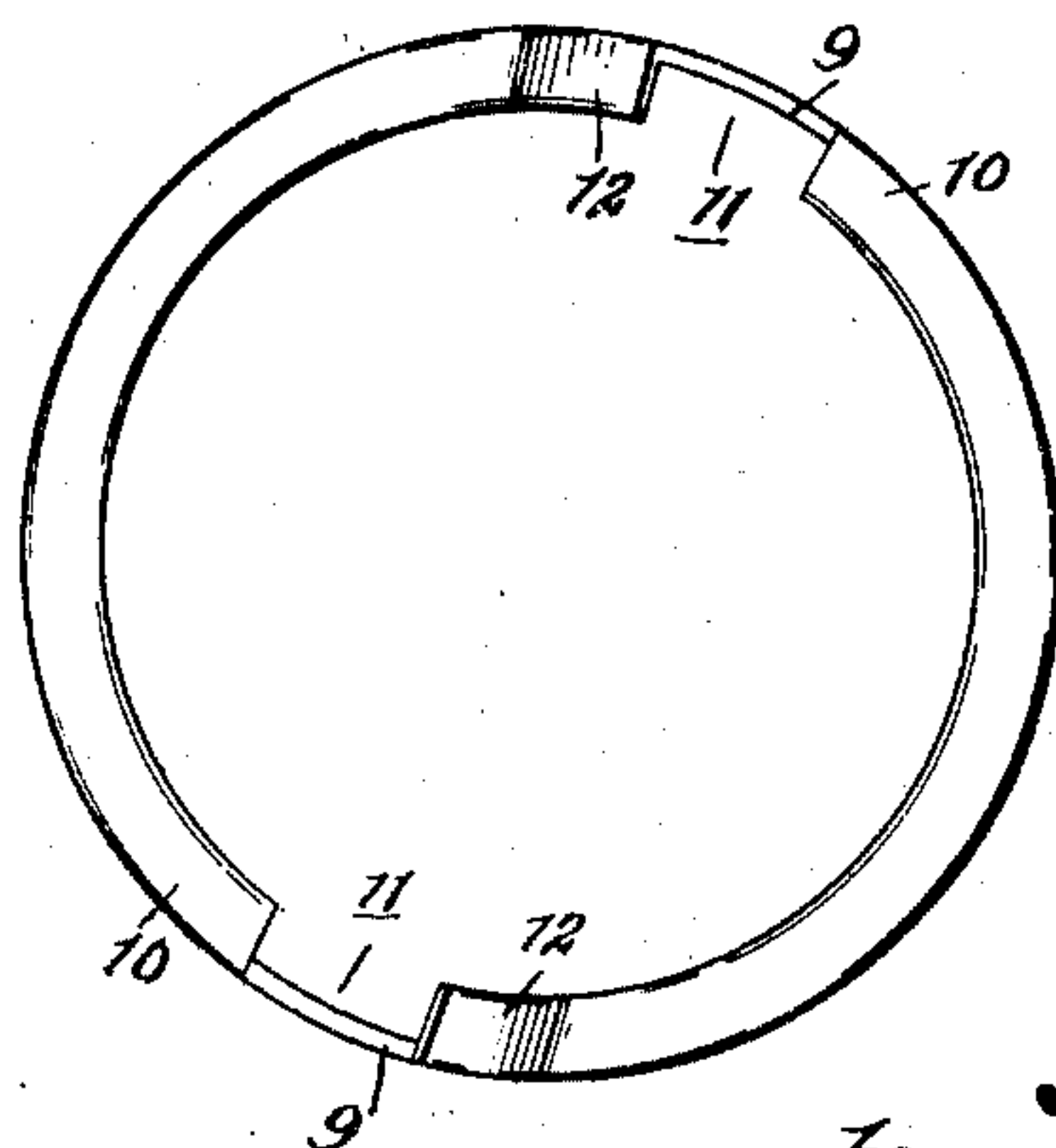
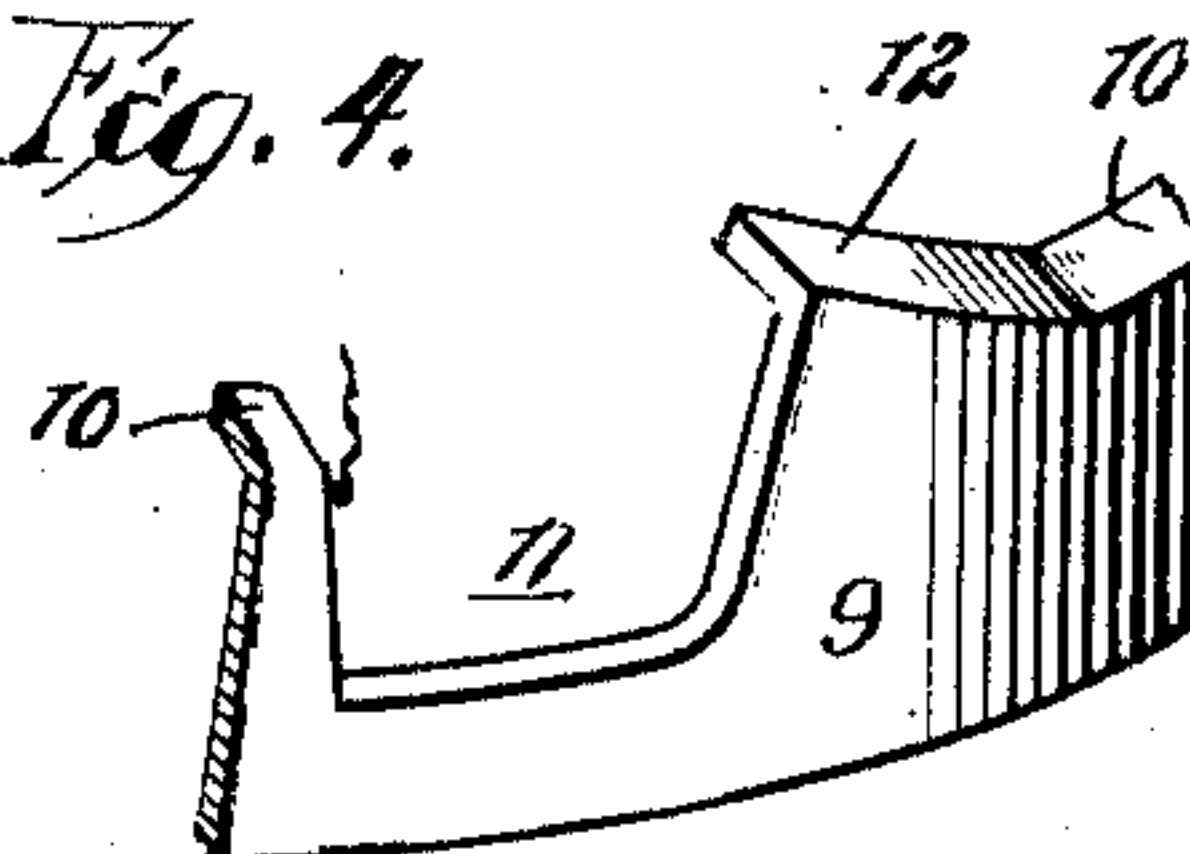


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JUAN H. REECE, OF JOLIET, ILLINOIS, ASSIGNOR TO HUMPHREY & SONS, OF JOLIET, ILLINOIS,
A COPARTNERSHIP.

GUARD FOR WIRE-BLOCKS.

No. 909,117.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed March 17, 1908. Serial No. 421,657.

To all whom it may concern:

Be it known that I, JUAN H. REECE, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Guards for Wire-Blocks, of which the following is a specification.

This invention relates to what are known or termed wire blocks, which receive the wire from the drawing die, and on which the wire is coiled.

It has been found, in practice, that, in the use of ordinary wire blocks, when the block is filled and the wire between the block and the drawing die severed or cut, or when the end of the coil is reached, the terminal end is liable to fly out and injure the workmen by striking them in the face or other part of the body, and, in fact, instances are known where the eye of a workman has been put out.

The primary object of the present invention is to furnish a guard encircling the lower end of the block, and which will hold and retain the lower coil of the wound wire on the block, so that when the wire terminates between the block and the drawing die its terminal end will be held against flying outward and causing injury to workmen; and further objects are to encircle the lower end of the wire block with a band, having a vertical body and an inturned flange at the upper end, beneath which flange the coil of wire is retained and held against outward spring; to construct a band adapted to encircle the lower end of the wire block, and having a vertical body and an inturned flange at the upper end, the body having slots or openings for admitting the wire onto the block, and the inturned flange having an upwardly inclined lip by which the wire entering onto the block will be guided and directed so as to properly wind onto the block; and to improve generally the construction and arrangement of the guard and block for preventing outspring of the terminal end of the wire, between the block and the drawing die.

The invention consists in the features of construction and combinations of parts hereinafter described and claimed.

In the drawings Figure 1 is a side elevation of the wire block, the safety guard therefor, the drawing die, and a part of the supporting frame; Fig. 2 a cross section of the parts shown in Fig. 1, with the wire block and its

operating mechanism in full elevation; Fig. 3 a top or plan view of the safety guard or band; and Fig. 4 a detail in perspective, showing the wire opening and guide lip of the safety guard or band.

The wire block, in the construction shown, has a vertical body or side wall 1, and an inwardly upwardly inclined wall 2, with an annular flange or rim 3 at the top; and the rim has sockets 4 to receive the rods to give an increased depth for the wire coil. At the lower end of the main body or wall 1 is a band 5, forming a shoulder 6, and onto which the wire first winds, so as to leave a space between the coil and the main body or wall 1 of the block, into which space the gripper enters, as the wire coils and rises on the block. The lower end of the block has a vertical wall 7, with an inclined upper face 8 on which the wire coming from the drawing die rests, so that the wire, as the block revolves, will be carried up on the block, the last coil forcing the preceding coils upward as usual.

The safety guard or band encircling the lower portion or end of the wire block, consists of a vertical wall 9 and an inwardly and upwardly inclined wall or flange 10, and this guard or band is arranged so as to leave a space between its vertical wall 9 and upper wall or flange 10 and the vertical wall 7 and inclined face 8 at the lower end of the block, as shown in Fig. 2, by which arrangement the last coil of the wire being wound onto the block will rest on the upper face 8 and in the corner between the vertical wall 9 and upper wall or flange 10 of the safety guard or band, as shown in Fig. 2.

The safety guard or band of the present invention, encircling the lower portion or end of the wire block, guides and holds the wire and prevents any outspring of the last coil, when the wire terminates between the block and drawing die, with the result that the last coil is held on the block, when the end is reached, and cannot uncoil and spring or fly outward so as to cause injury to the workmen around the block or an adjoining block.

The safety guard or band of the present invention has formed in its vertical wall 9 and through its upper wall or flange 10, an opening or passage 11 on opposite sides, as shown in Figs. 1, 3 and 4, and this opening or passage is for the purpose of allowing the wire, caught by the grippers and pulled through

the drawing die, to pass onto the inclined face 8 of the block as the block revolves, with the coil entering onto the block between the shoulder or face 8 and the upper wall or flange 10 of the safety guard or band. The safety guard or band, adjacent to each opening or passage 11, has the wall 9 and the wall or flange 10 upwardly extended so as to form an inclined lip 12, by which the wire caught by the gripper, will be guided downwardly so as to enter the space between the shoulder or face 8 and the wall or flange 10 as the wire block revolves, thereby insuring the upward movement of the various coils, as the last coil is wound around the block resting on the shoulder or face 8, thus filling the block with a coil of wire as usual.

The safety guard or band, in the arrangement shown, is supported and held in position on plates 13, attached to the upper face of the side beams or rails 14 of the main frame, but could be otherwise supported. The wire block, at its lower end, rests on and is supported by rollers or wheels 15, each roller or wheel journaled in a fork at the upper end of a lift rod 16, which lift rods are pivotally connected with a yoke 17, operated by a kick-off lever, not shown, in the usual manner, so that the swing of the yoke through the lift rods will raise and lower the block and disconnect and connect the same with the driving means by which the block is revolved. The block is revolved by a main driving shaft 18, mounted in a journal box or bearing 19, and having thereon a driving plate 20 and connecting mains between the driving plate and the block of any usual and well known form of construction and arrangement. The wire block is located adjacent to a drawing die 21 of any usual and well known form of construction, so that the wire can be caught by grippers 22, connected with the block by a chain 23 or otherwise. The main frame, the lifting mechanism, the driving means, the drawing die, and the gripper and its connection with the wire block can all be of any usual and well known form of construction, and are, therefore not specifically described, as the present invention relates to the safety guard or band and its relation to the wire block for holding and retaining the wire against outward spring, when terminated between the wire block and the drawing die.

The safety guard or band of the present invention, encircling the lower portion or end of the wire block, is a sure preventive against injury to the workmen and others from the outward spring of the terminal end of the wire; and at the same time this guard or band serves as a means for guiding and directing the wire from the drawing die onto the wire block in position for the last coil to rest on the shoulder or face 8 and force the preceding coils upwardly on the block as the

block revolves; and in addition the openings or passages 11 also furnish access by which the workmen can grasp the coil of wire at the bottom and remove the coil from the block.

The safety guard or band of the present invention is simple and can be applied to all the wire blocks, it only being necessary to adapt its contour to the contour of the lower portion of the block and have the two contours coincide so as to enable the guard or band to guide or direct the wire onto the block and also hold and retain the terminal end of the wire between the block and the drawing die against forcible outspring; and while the device is simple, it furnishes a perfect safeguard against injury from the free end of the wire and is of great utility in the operation of wire blocks.

What I claim as new and desire to secure by Letters Patent is:

1. The combination with a wire block, of a safety guard consisting of an annular wall concentric with the axis of and encircling the shouldered lower part of the block, the wall having an engaging upper flange inwardly deflected and extending over and encircling the lower shoulder of the block, with a space between the flange and the shoulder to receive the wire and have the flange act to retain and hold the terminal end of the wire against outward spring, substantially as described.

2. The combination with a wire block, of a safety guard encircling only the shouldered lower part of the block and having a wall concentric with the axis of the block and an engaging upper flange inwardly deflected and extending over and encircling the lower shoulder of the block, with a space between the flange and the shoulder to receive the wire and have the flange to act and retain and hold the terminal end of the wire against out spring, the wall and flange having an opening for the passage of the wire onto the block, substantially as described.

3. The combination with a wire block, of a safety guard encircling only the shouldered lower part of the block and having a wall concentric with the axis of the block and an engaging upper flange inwardly deflected and extending over and encircling the lower shoulder of the block, with a space between the flange and the shoulder to receive the wire and have the flange to act and retain and hold the terminal end of the wire against out spring, the flange having an upwardly inclined guide lip for guiding and directing the wire onto the lower shoulder of the block, substantially as described.

4. The combination with a wire block, of a safety guard encircling only the shouldered lower portion of the block and having a wall concentric with the axis of the block and an engaging upper flange inwardly deflected and extending over and encircling the lower

shoulder of the block, with a space between the flange and the shoulder to receive the wire and have the flange to act and retain and hold the terminal end of the wire against out spring, the wall and the flange having an opening for the passage of the wire onto the block, and the flange having an upwardly

inclined guide lip adjacent to the opening for guiding and directing the wire onto the block, substantially as described.

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