

No. 728,421.

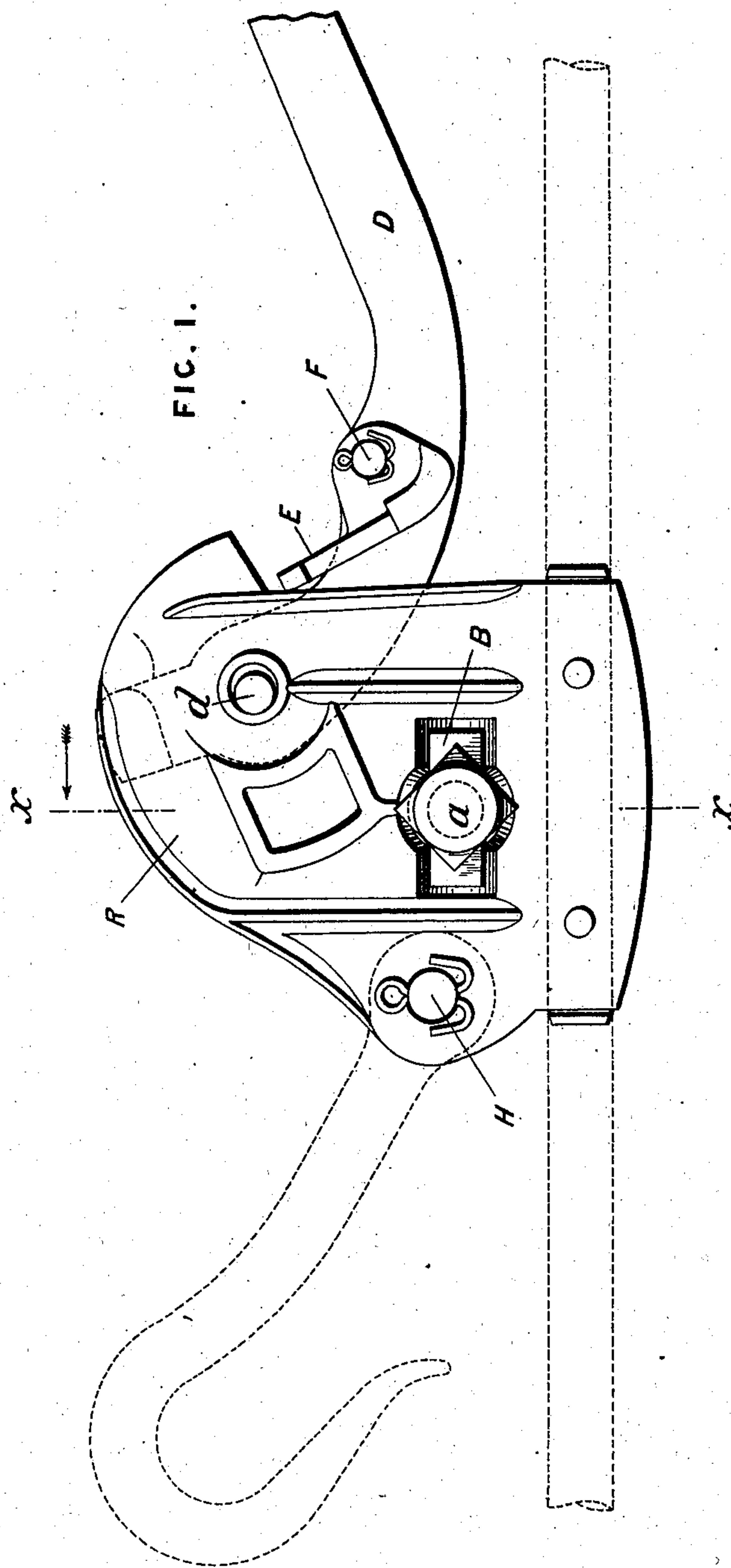
PATENTED MAY 19, 1903.

J. W. SMALLMAN.
HAULAGE CLIP.

APPLICATION FILED SEPT. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Amos C. Hudson.
John A. Gill.

INVENTOR:

James W. Smallman.

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2 SHEETS—SHEET 2.

FIG. 2.

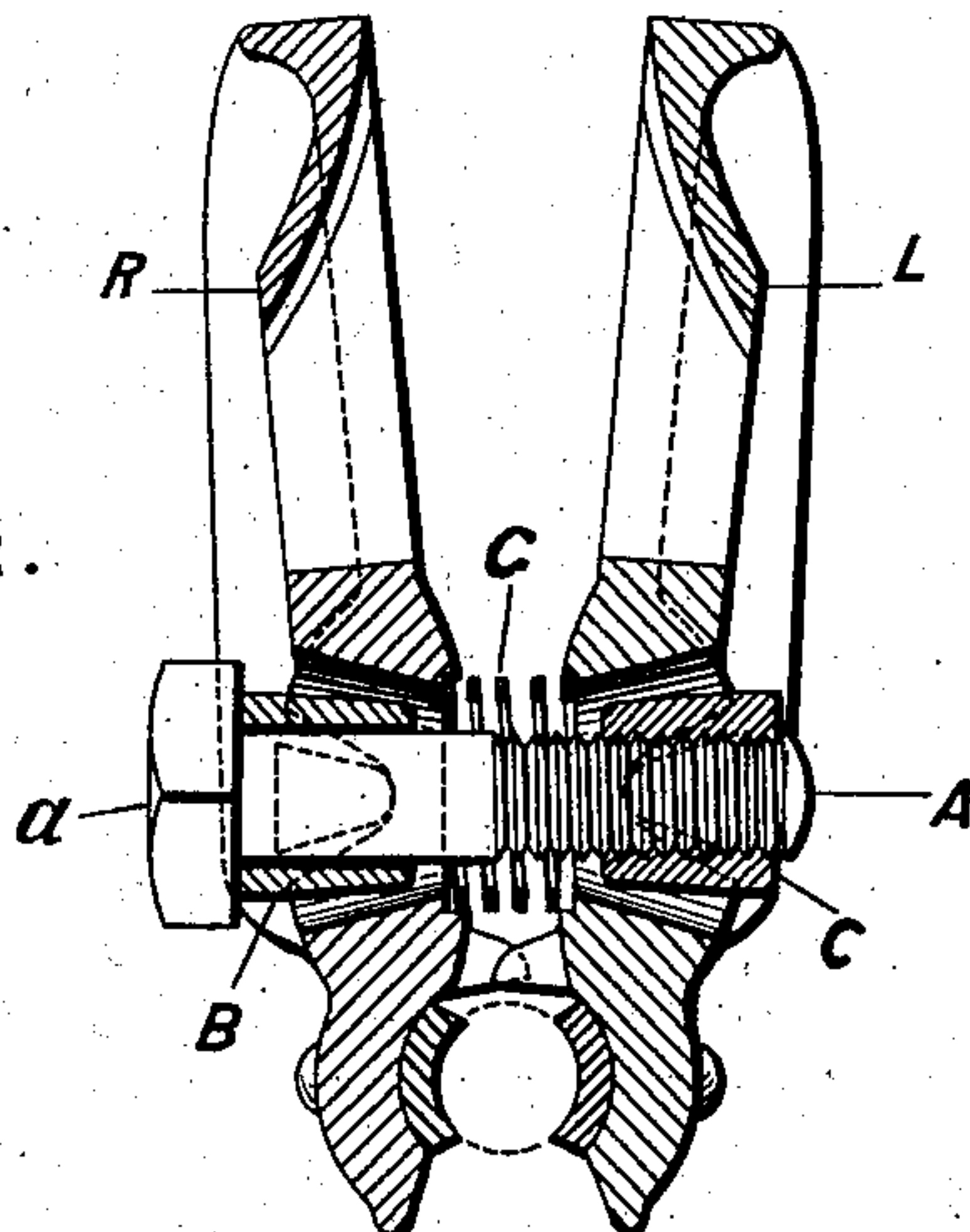


FIG. 3.

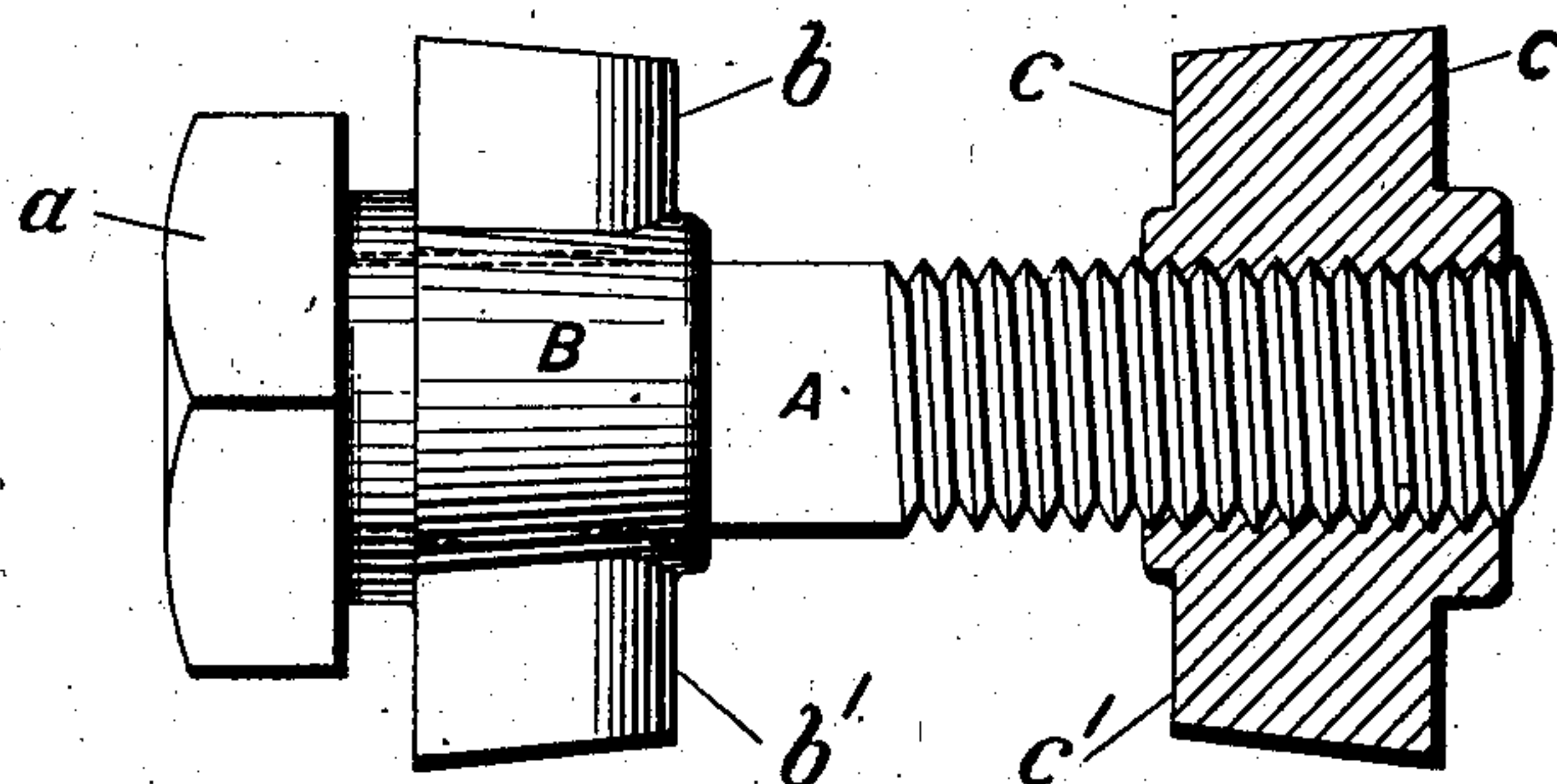


FIG. 4.

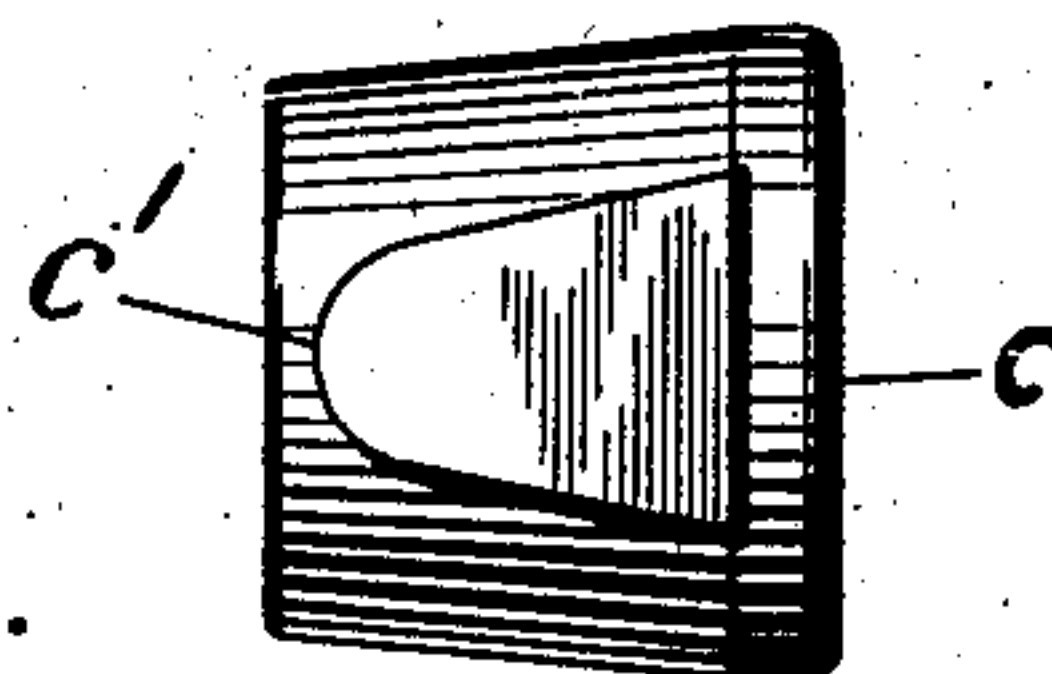
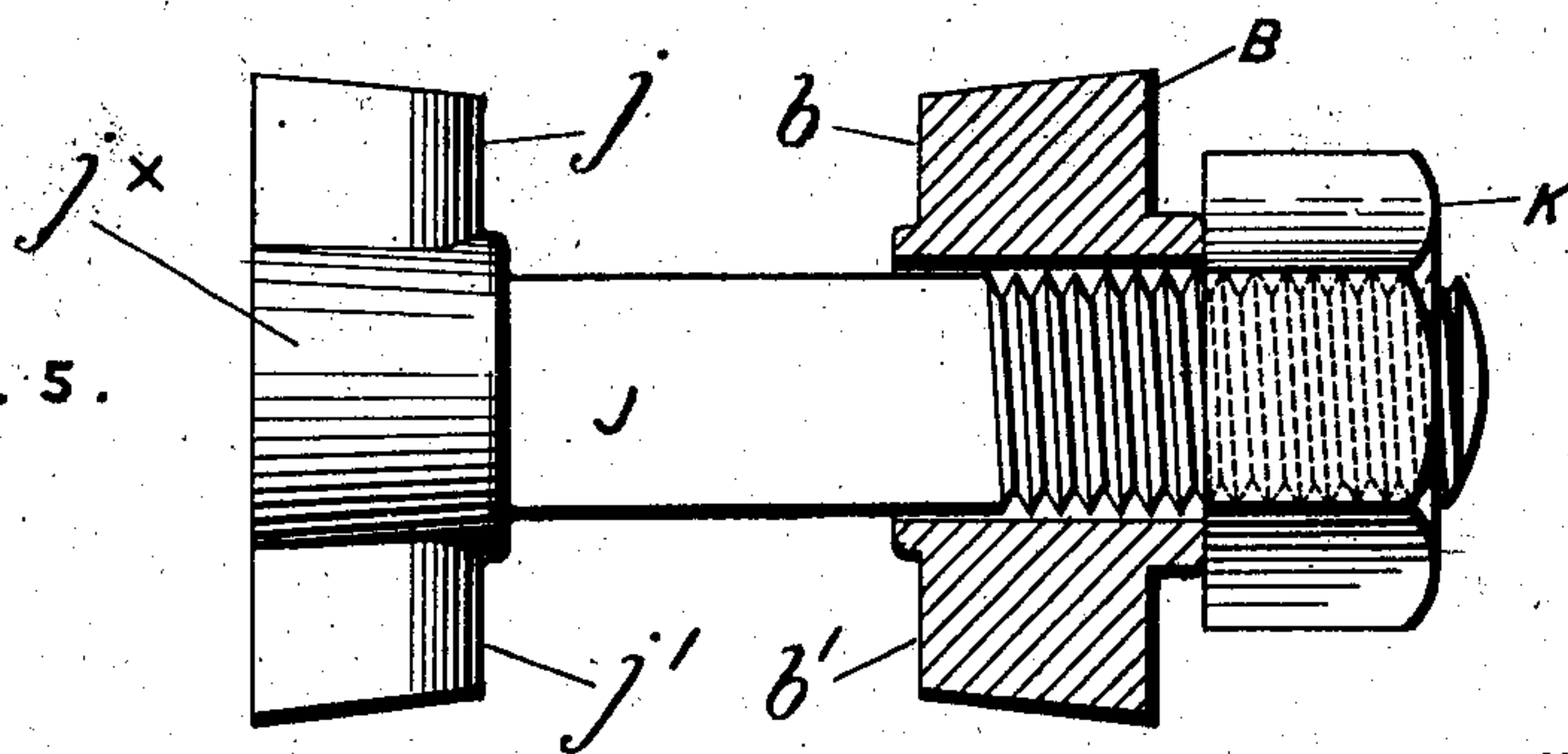


FIG. 5.



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UNITED STATES PATENT OFFICE.

JAMES W. SMALLMAN, OF NUNEATON, ENGLAND.

HAULAGE-CLIP.

SPECIFICATION forming part of Letters Patent No. 728,421, dated May 19, 1903.

Application filed September 12, 1902. Serial No. 123,176. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. SMALLMAN, a subject of the King of Great Britain and Ireland, residing at Nuneaton, in the county of Warwick, England, have invented certain new and useful Improvements in Haulage-Clips, of which the following is a specification.

This invention relates to clips principally employed in connecting tubs or wagons to endless-wire ropes for mineral haulage.

The accompanying drawings will now be described.

Figure 1 is an elevation showing the right-hand side of the clip, the coupling-hook and the rope being indicated by dotted lines. Fig. 2 is a vertical section on the line xx in Fig. 1 looking in the direction of the arrow with the hook and the coupling-pin omitted. Fig. 3 is a plan, on a larger scale, illustrating the square-headed bolt with its separate bearing-collar, the bearing-nut being in section. Fig. 4 is an end elevation of the bearing-nut. Fig. 5 represents a bolt having a special head and provided with the bearing-collar and an ordinary hexagonal nut.

The bolt A has a square head a . The bearing-collar B is formed with horizontal rounded edges b and b' and fits easily on the neck of the bolt A. The bearing-nut C, formed with horizontal rounded edges c and c' , is an easy fit for the threaded part of the bolt A. The bolt A, the bearing-collar B, and the bearing-nut C loosely connect the two shells R and L. These shells are caused to grip or permitted to release the rope by the lever D, which is furnished with a trunnion-peg d , working in a hole in the upper part of the shell R and in a corresponding hole in the upper part of the shell L. The shells R and L in rocking on the bearing-collar B and bearing-nut C can exert no pressure above or below the bolt A, and consequently that bolt is not subjected to a bending strain, nor can the shell L bruise the thread and so prevent the turning of the said bolt with the fingers for the adjustment of the clip. E is the safety-catch that locks the lever. F is the joint-pin, which secures the safety-catch to the lever. This joint-pin should be an easy fit in the hole drilled through the lever for its reception. The safety-catch is so balanced

that it will remain in either of two positions. In one position (into which it is turned by hand) it lies away from the projections on the shells and permits the handle of the lever to be raised; but in the other or working position (into which it falls automatically while the handle of the lever is being depressed) it rests against the shells beneath the said projections and locks the lever. The spiral spring G, which encircles the bolt A, maintains the shells R and L in their extreme positions, thus facilitating the attachment of the clip to the rope, and after the clip is detached that spring by keeping the adjustable members under pressure guards against the accidental alteration of the adjustment. The coupling (which may be of any suitable kind) is connected to the lower parts of the shells by the coupling-pin H.

The bolt A has a T-shaped head j^x , that corresponds in form and size with the bearing-nut C, which is dispensed with, the rounded edges j and j' taking the places of the rounded edges c and c' . The threaded part of the bolt goes through the bearing-collar B (which protects the thread required for adjustment) and extends far enough to receive an ordinary hexagonal nut K, whereby adjustment is effected.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a haulage-clip, the combination, with two shells, and a lever working between them, of a bolt that connects the shells, and horizontal bearing edges carried by the bolt, substantially as set forth.

2. In a haulage-clip, the combination, with two shells, and a lever working between them, of a bolt that connects the shells, horizontal bearing edges carried by the bolt, and means for adjusting the distance between the horizontal bearing edges, substantially as set forth.

3. In a haulage-clip, the combination, with two shells, and a lever working between them, of a bolt that connects the shells, and a spring on the bolt for maintaining the shells in their extreme positions, substantially as set forth.

4. In a haulage-clip, the combination, with two shells, and a lever working between them, of a bolt that connects the shells, horizontal bearing edges carried by the bolt, and a spring

on the bolt for maintaining the shells in their extreme positions, substantially as set forth.

5 5. In a haulage-clip, the combination, with two shells, and a lever working between them, of a bolt that connects the shells, horizontal bearing edges carried by the bolt, means for adjusting the distance between the horizontal bearing edges, and a spring on the bolt for
10 tions, substantially as set forth.

6. In a haulage-clip, the combination, with two shells, a lever working between them, and a safety-catch mounted upon and serving to lock the lever, of a bolt that connects the shells, and horizontal bearing edges carried 15 by the bolt, substantially as set forth.

JAMES W. SMALLMAN.

Witnesses:

ANNIE C. HUDSON,
JOHN A. GILL.