

No. 640,095.

Patented Dec. 26, 1899.

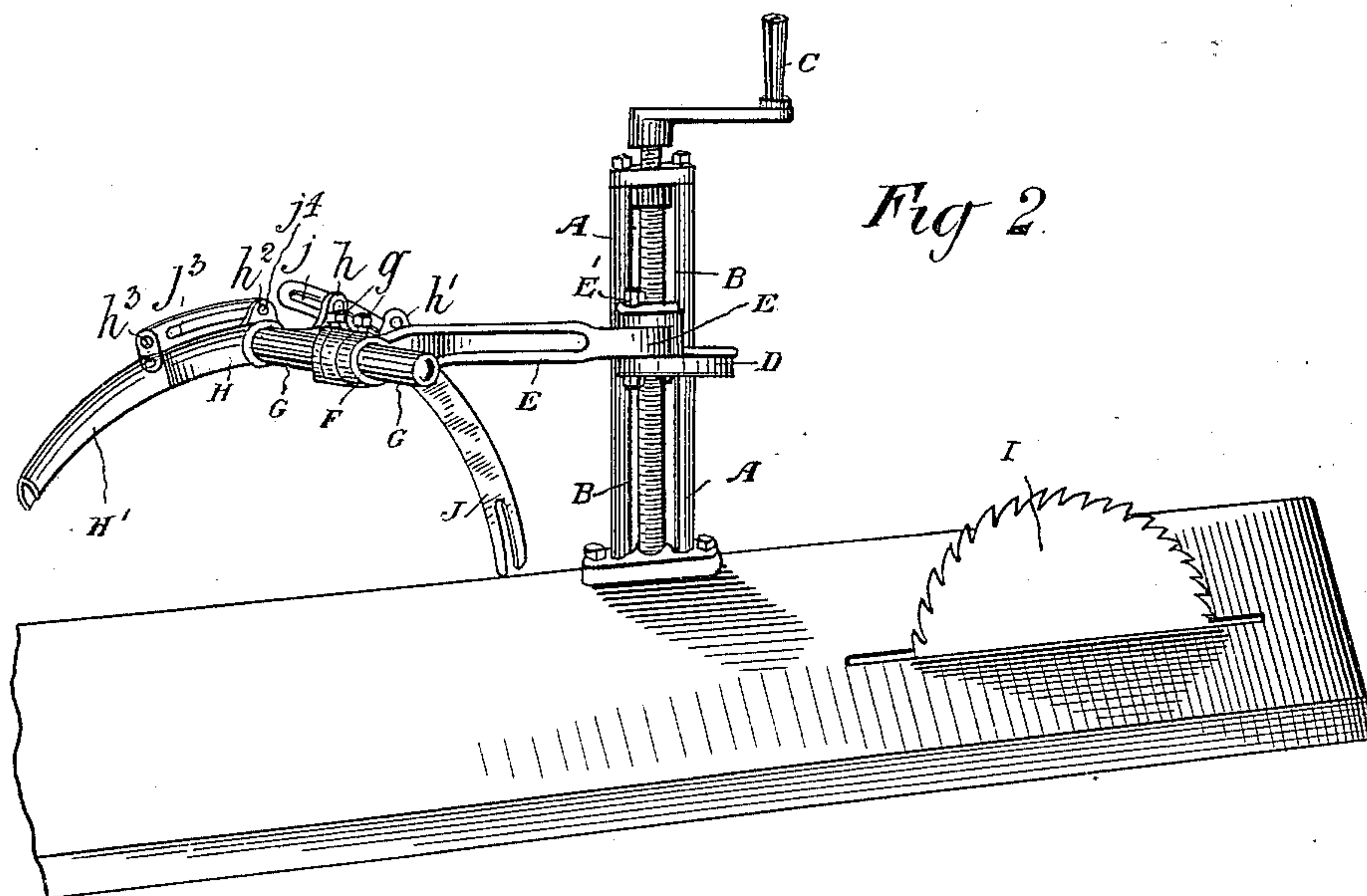
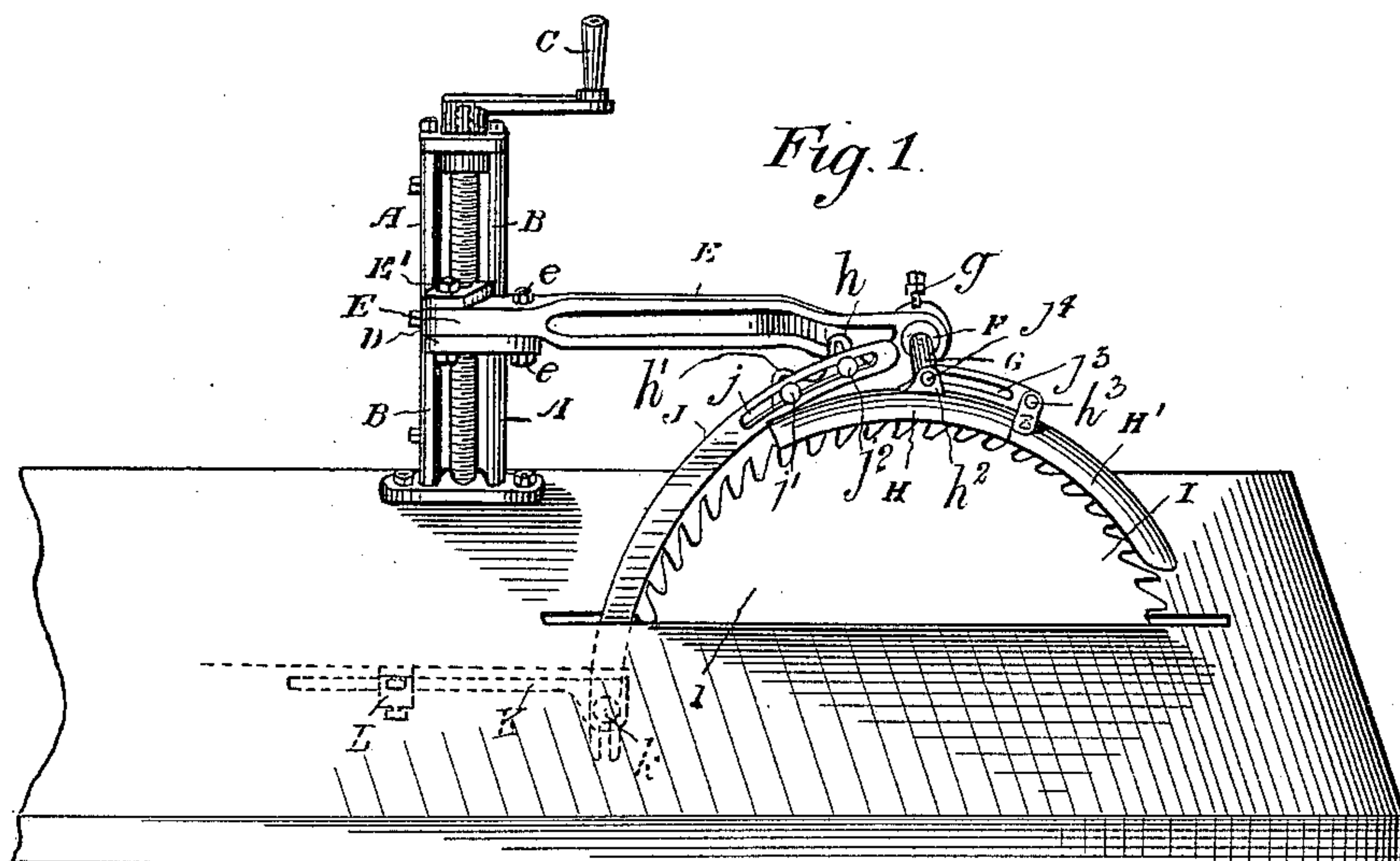
A. COOK.

GUARD OR SHIELD FOR CIRCULAR SAWS.

(Application filed July 31, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

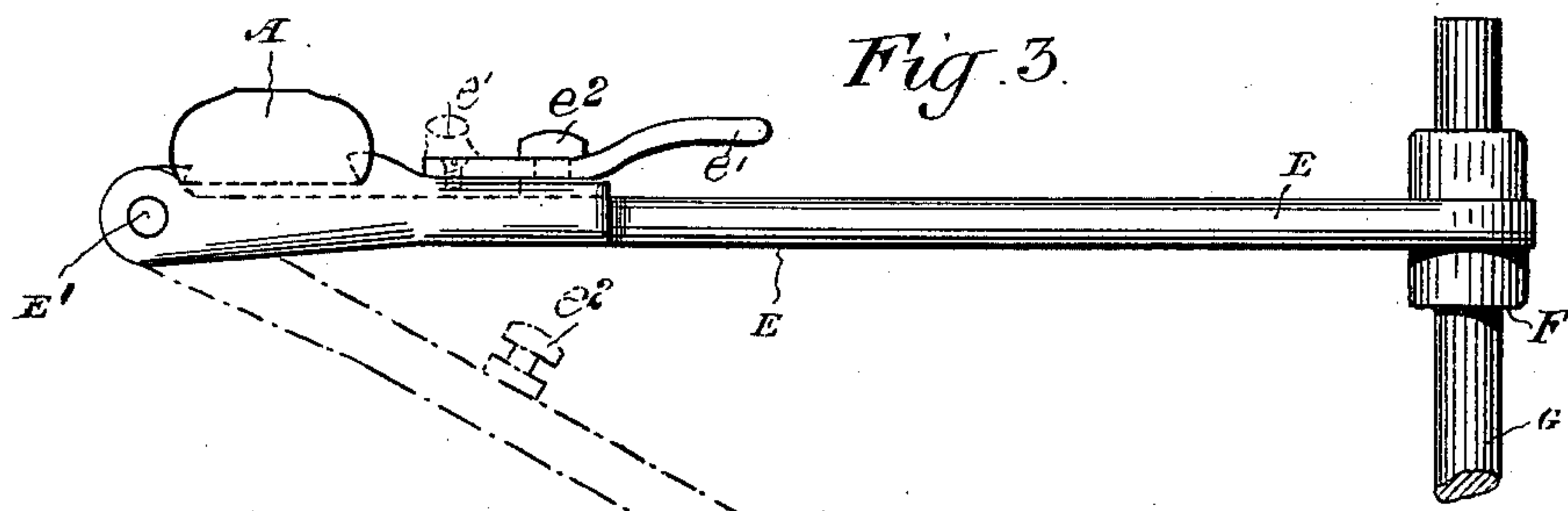


Fig. 3.

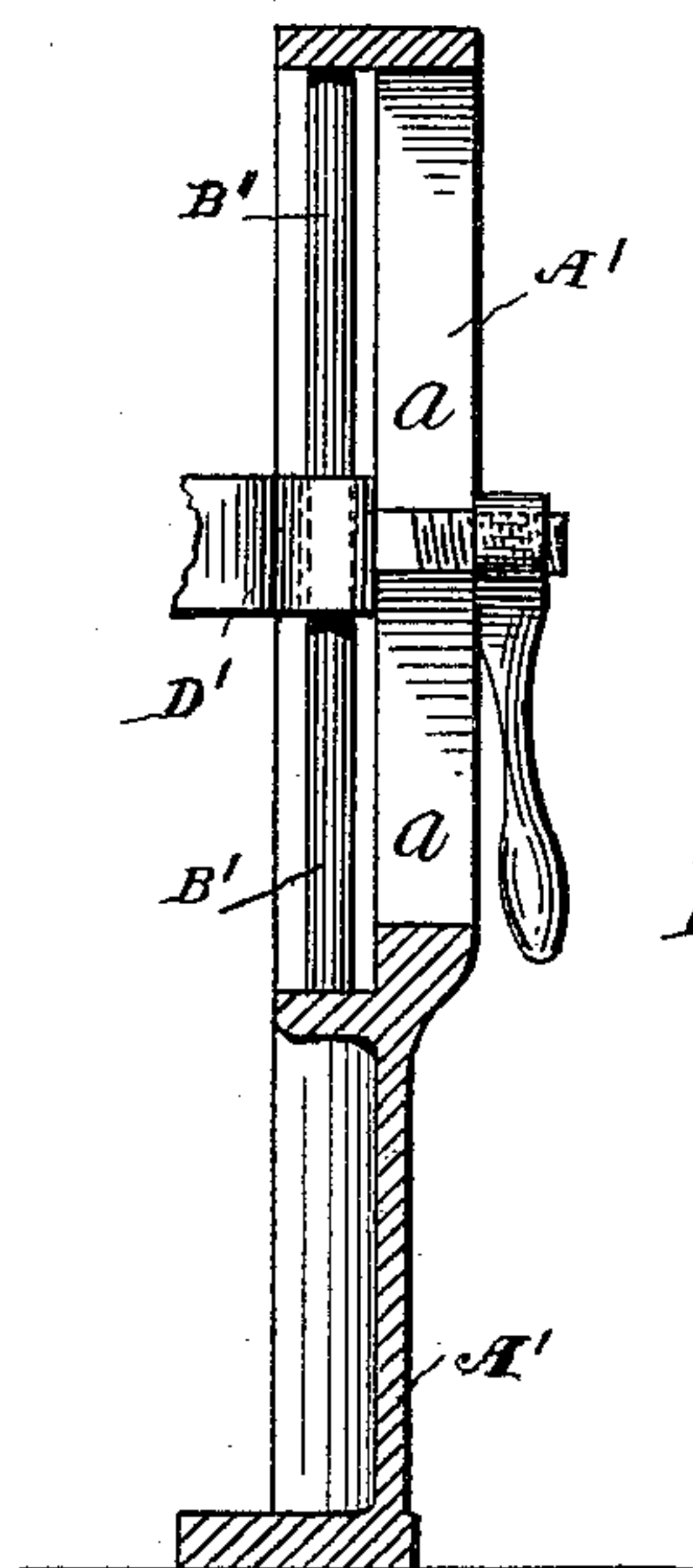


Fig. 4.

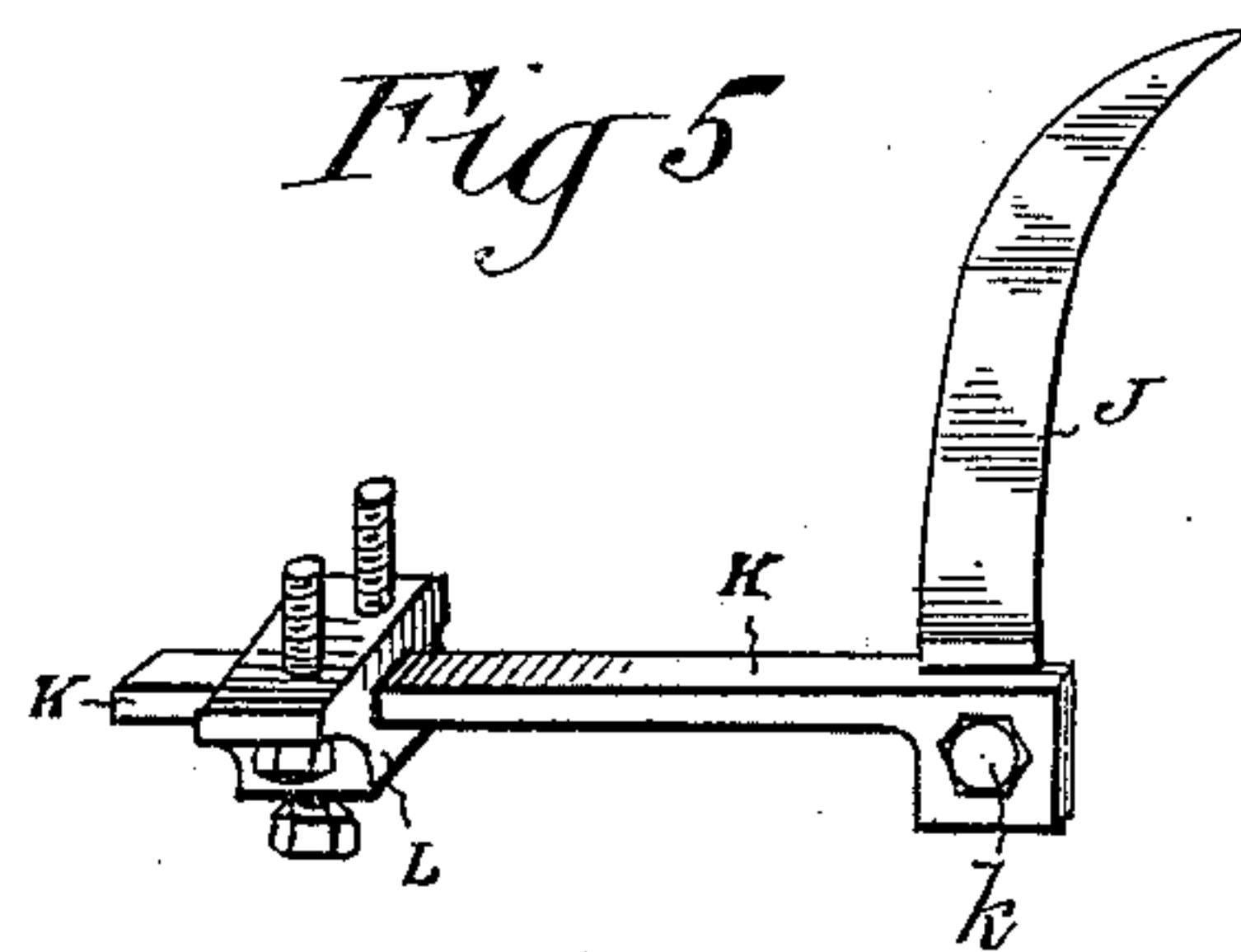


Fig. 5.

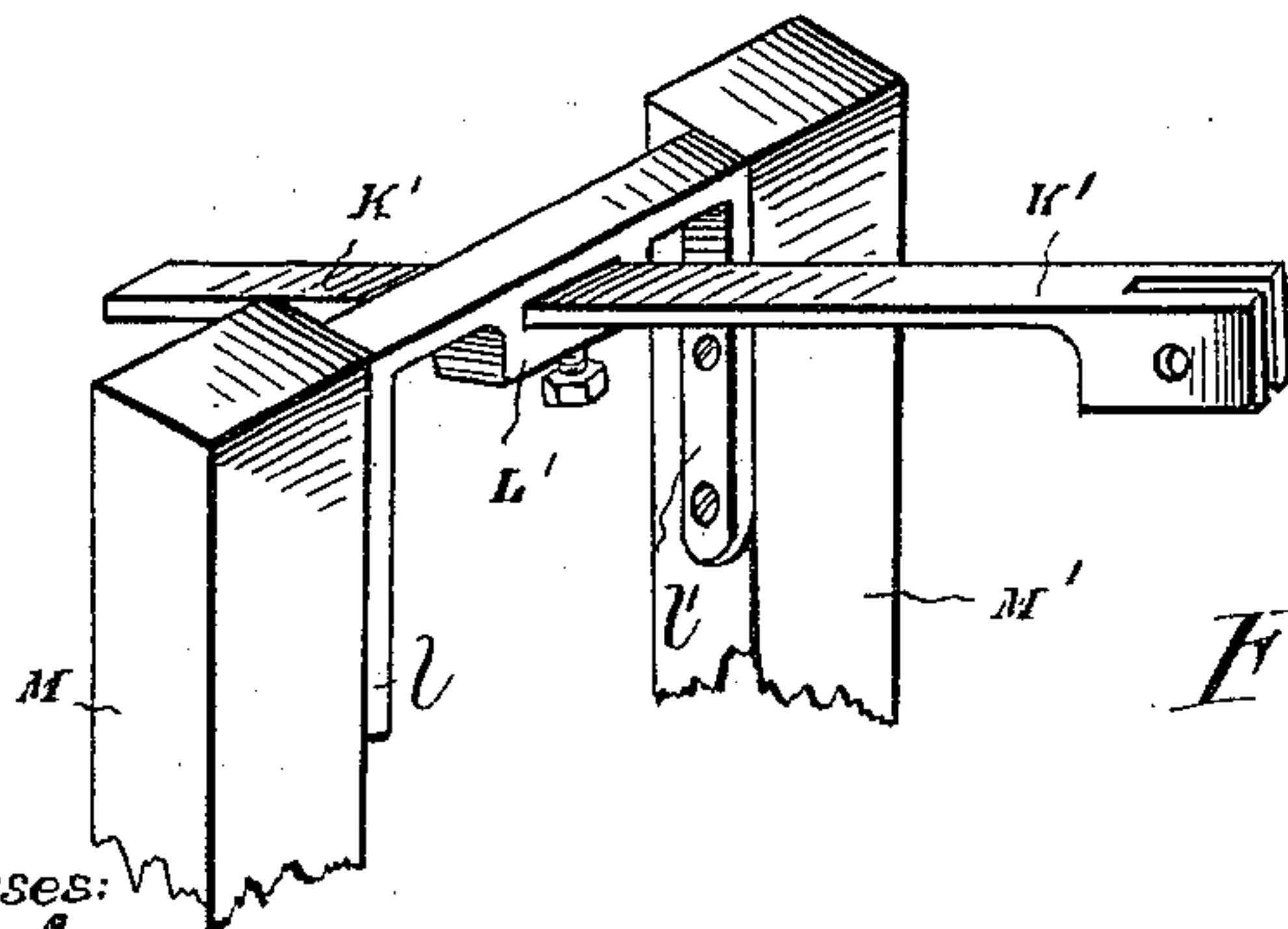


Fig. 6.

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# UNITED STATES PATENT OFFICE.

ANDREW COOK, OF GLASGOW, SCOTLAND.

## GUARD OR SHIELD FOR CIRCULAR SAWS.

SPECIFICATION forming part of Letters Patent No. 640,095, dated December 26, 1899.

Application filed July 31, 1899. Serial No. 725,667. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW COOK, of Cranstonhill, Glasgow, Scotland, have invented certain new and useful Improvements in and  
5 Connected with Guards or Shields for Circular Saws; and I do hereby 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  
10 make and use the same.

This invention, which relates to a safety guard or shield for circular saws, has for its object the construction of a device, as hereinafter to be described, which will prevent ac-  
15 cidents to which the attendant or sawyer has hitherto been liable during sawing operations.

The invention consists of certain novel features and combination of parts which have not hitherto been known in the branch of me-  
20 chanics to which my invention belongs and which in use offer no obstruction and cause no hindrance to the sawyer while working.

In the drawings, Figure 1 is a perspective view looking at the side of the guard or shield  
25 embodying my invention shown in working position relatively with the circular saw to which it is attached. Fig. 2 is also a perspective view showing the guard or shield swung out of engagement with the circular saw. Fig.  
30 3 is a plan of the swiveling arm only, illustrating in full line one method of how it may be locked when in working position and in dotted lines its unlocked position, when it is free to be swung clear of the saw. Fig. 4 is  
35 a vertical transverse section of a pillar or standard, illustrating a method of how the swiveling arm may be raised and lowered and clamped to any elevation in which it is intended to operate and is an alternative method  
40 to the screw device shown in Figs. 1 and 2. Fig. 5 is a perspective view of a bracket intended to be fixed to the under side of the saw-bench, in which is carried a sliding bar in order to adjust the riving-knife to suit va-  
45 rious sizes of saws; and Fig. 6 is a similar view of a fixed bracket intended to be used with a bench having a traveling top and is fixed by one or two depending arms to cross-beams placed beneath or constituting the side  
50 of the bench. The four last-named figures are drawn to an enlarged scale.

A is the pillar or standard, in which is mounted the vertical screw B, which is rotatably fixed at the top and bottom thereof.

The said screw B terminates with a square 55 extension, on which is fitted the cranked handle C for operating it. A bifurcated nut D, working in suitable guide-recesses formed within the pillar A, is raised and lowered by the screw B. To this nut D is pivoted the 60 arm E, which may conveniently be bent, as in Figs. 1 and 2, or made straight, as in Fig. 3. The arm E, as shown in Fig. 1, is in its normal or working position and is locked by either the bolt  $e$  or, as in Fig. 3, by the piv- 65 otal catch or locking device  $e'$  engaging the T-shaped end of the bolt  $e^2$ , formed on the said arm E.

When it is desired to swing the guard out of position with the saw, it is unlocked by 70 either withdrawing the bolt  $e$  or by raising the handle of the locking device  $e'$ , when it is free to be turned on its pivot E in the horizontal plane.

The outer end of the arm is formed with a 75 bush or tubular hole F, in which is inserted a transverse arm G. The transverse arm G is rendered slidable or telescopic within the bush F in order to bring the guard H, which is attached to its outer end, immediately over 80 the saw I and is or may be clamped in position by the clamping-screws  $g$ . The guard H proper consists of a curved central piece of  $\Omega$  formation and is provided with suitable snugs  $h$  and  $h'$ . By means of the said snugs 85  $h$  and  $h'$  the outer end of the riving-knife J is adjustably supported. The outer end of the said riving-knife J terminates with a curved slot  $j$ , through which pass the screw studs or bolts  $j'$  and  $j^2$ , which clamp the knife 90 to the aforesaid snugs  $h$  and  $h'$ . The said snugs  $h$  and  $h'$  are provided with slots in which said bolts  $j'$  and  $j^2$  work in order to accommodate various sizes of saws.

The jointed extension or hood H' of the 95 guard is adjustably attached to and rendered detachable from the guard proper by means of a central snug  $h^2$ , a terminable curved slot  $j^3$ , and a screw stud or bolt  $j^4$ . By virtue of a pivotal pin  $h^3$  the guard extension or 100 hood H' may be turned up and thrown back to rest upon the guard proper and be out of the way when in the sawing operation the full cut of the saw is required.

The lower end of the riving-knife J may 105 be formed with an open slot, as seen more particularly in Fig. 2. The end of the knife, with its open slot aforesaid, works between



two jaws of a slidable bar K, by which it is rendered attachable and detachable by a clamping-screw *k*. The sliding bar is supported in a fixed bracket L, attached to the under side of the fixed bench, reference being had to Figs. 1 and 5, and is capable of a longitudinal movement, so as to accommodate the knife to varying diameters of saws.

The sliding bar K' (illustrated in Fig. 6) works within a slot of a fixed bracket L', fixed by its depending arms *l* and *l'* to two transverse beams M and M', formed beneath or constituting a part of the bench, and is intended to be used with traversing saw-benches having traveling tops to which it is specially applicable.

Referring to the arm E and the means of raising it by means of a screw and nut, in lieu of this in Fig. 4 I have shown a method by which the nut, collar, or sleeve can conveniently be raised by hand by moving the said collar or sleeve D' up and down the rod B'. The rear end of the collar or sleeve D' terminates with a screw extension which works in a vertical slot *a*, formed in the fixed bracket A'. The screw extension of the collar or sleeve D' is engaged by a nut formed with a handle, by which means the collar or sleeve D', and with it the arm E, can be clamped in any desired elevation.

I claim—

1. In a guard or shield for circular saws, the combination of a swiveling arm, guards adjustably supported upon one end of said arm, one of said guards comprising a kerf-spreader adjustably secured to the base of the machine, and a curved guard having a U-shaped cross-section, the two being adjustably secured together; and a support provided with a vertical slot; a cross-head sliding therein, provided with a screw extension, passing through said slot, upon which a clamping-handle is screwed, said cross-head being provided at its front with an extension upon one end of which is a hinge for swiveling said arm, the other end of said extension being provided with a pivoted lever provided with a recess adapted to engage with a projection upon the swiveling arm, substantially as described.

2. In a safety guard or shield for circular saws, the combination of a swiveling arm provided at one end with a bushing; a spindle passing through the said bushing provided with jamb-collars, one upon each side of said bushing; guards secured upon one end of said spindle, said guards comprising a kerf-spreader, means for adjustably securing it to the base of the machine, and a bent guard having a U-shaped cross-section, the two being adjustably secured together; and a support to which the other end of said swiveling arm is secured, provided with means for adjusting the position of said arm and its attachments, substantially as described.

3. In a safety guard or shield for circular saws, the combination of a swiveling arm provided at one end with a bushing; a spindle passing through the said bushing provided with jamb-collars, one upon each side of said bushing; guards secured upon one end of said spindle, said guards comprising a kerf-spreader, means for adjustably securing it to the base of the machine, and a bent guard having a U-shaped cross-section, the two being adjustably secured together; and a support provided with a vertical slot; a cross-head sliding therein, provided with a screw extension passing through the said slot upon which a clamping-handle is screwed, said cross-head being provided with means for swiveling said swiveling arm, substantially as described.

4. In a safety guard or shield for circular saws, the combination of a swiveling arm provided at one end with a bushing; a spindle passing through the said bushing provided with jamb-collars, one upon each side of said bushing; guards secured upon one end of said spindle, said guards comprising a kerf-spreader, means for adjustably securing it to the base of the machine, and a bent guard having a U-shaped cross-section, the two being adjustably secured together; and a support provided with a vertical slot; a cross-head sliding therein, provided with a screw extension, passing through said slot, upon which a clamping-handle is screwed, said cross-head being provided with means for swiveling said swiveling arm and means upon said cross-head for securing said swiveling arm in operative position, substantially as described.

5. In a safety guard or shield for circular saws, the combination of a swiveling arm provided at one end with a bushing; a spindle passing through the said bushing provided with jamb-collars, one upon each side of said bushing; guards secured upon one end of said spindle, said guards comprising a kerf-spreader, means for adjustably securing it to the base of the machine, and a curved guard having a U-shaped cross-section, the two being adjustably secured together; and a support provided with a vertical slot; a cross-head sliding therein, provided with a screw extension, passing through said slot, upon which a clamping-handle is screwed, said cross-head being provided at its front with an extension upon one end of which is a hinge for swiveling said arm, the other end of said extension being provided with a pivoted lever provided with a recess adapted to engage with a projection upon the swiveling arm, substantially as described.

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

ANDREW COOK.

Witnesses:

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JOHN MACALISTER.