

No. 691,987.

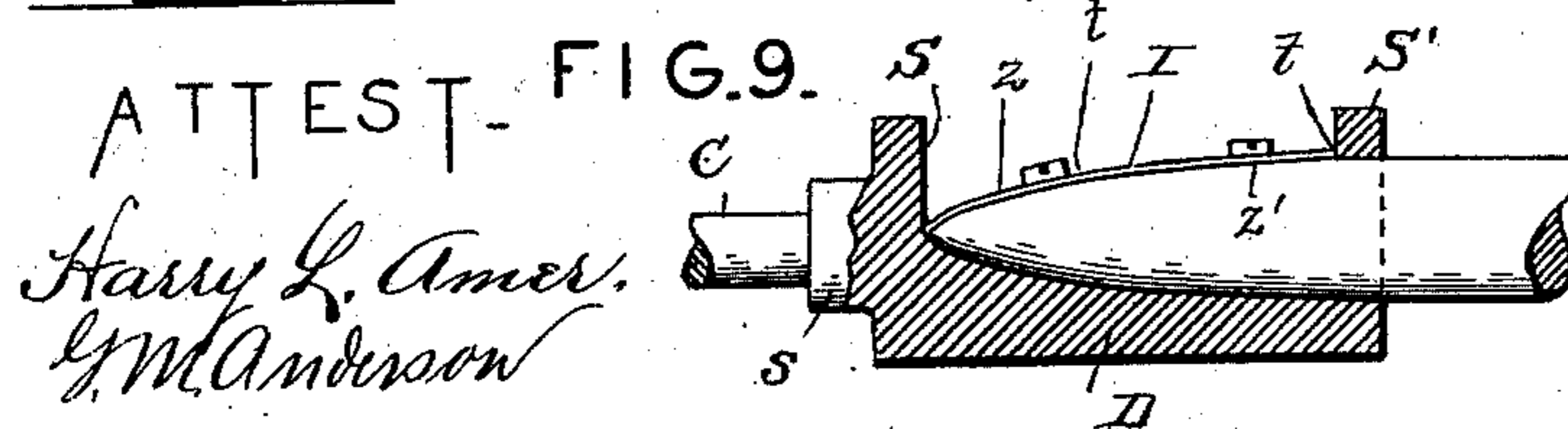
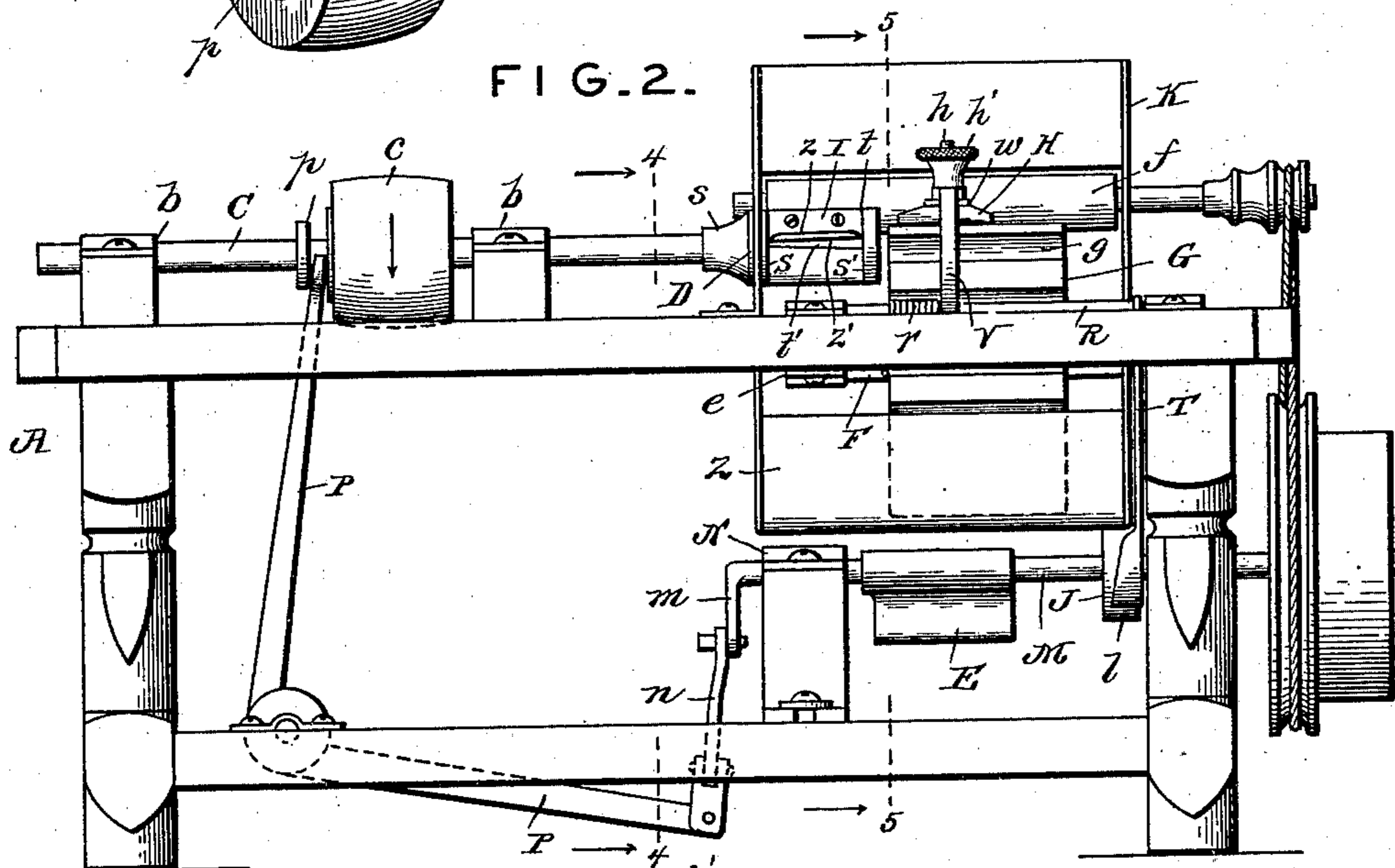
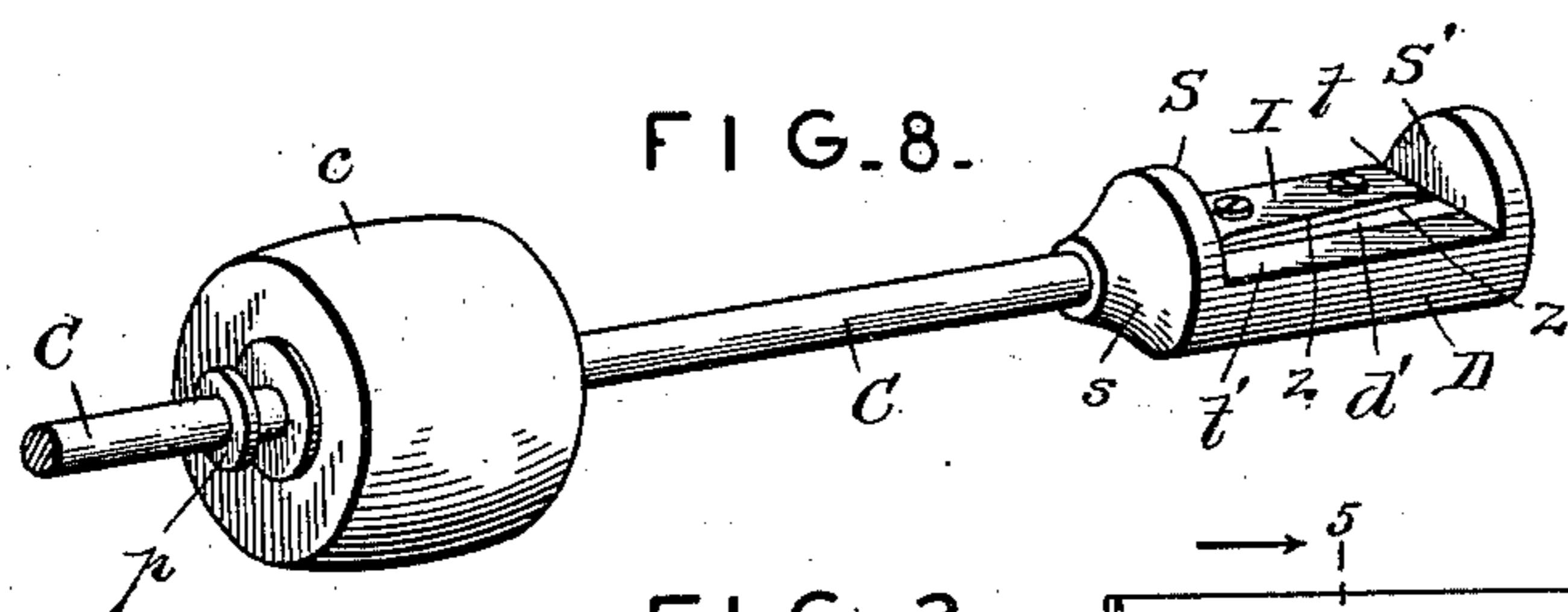
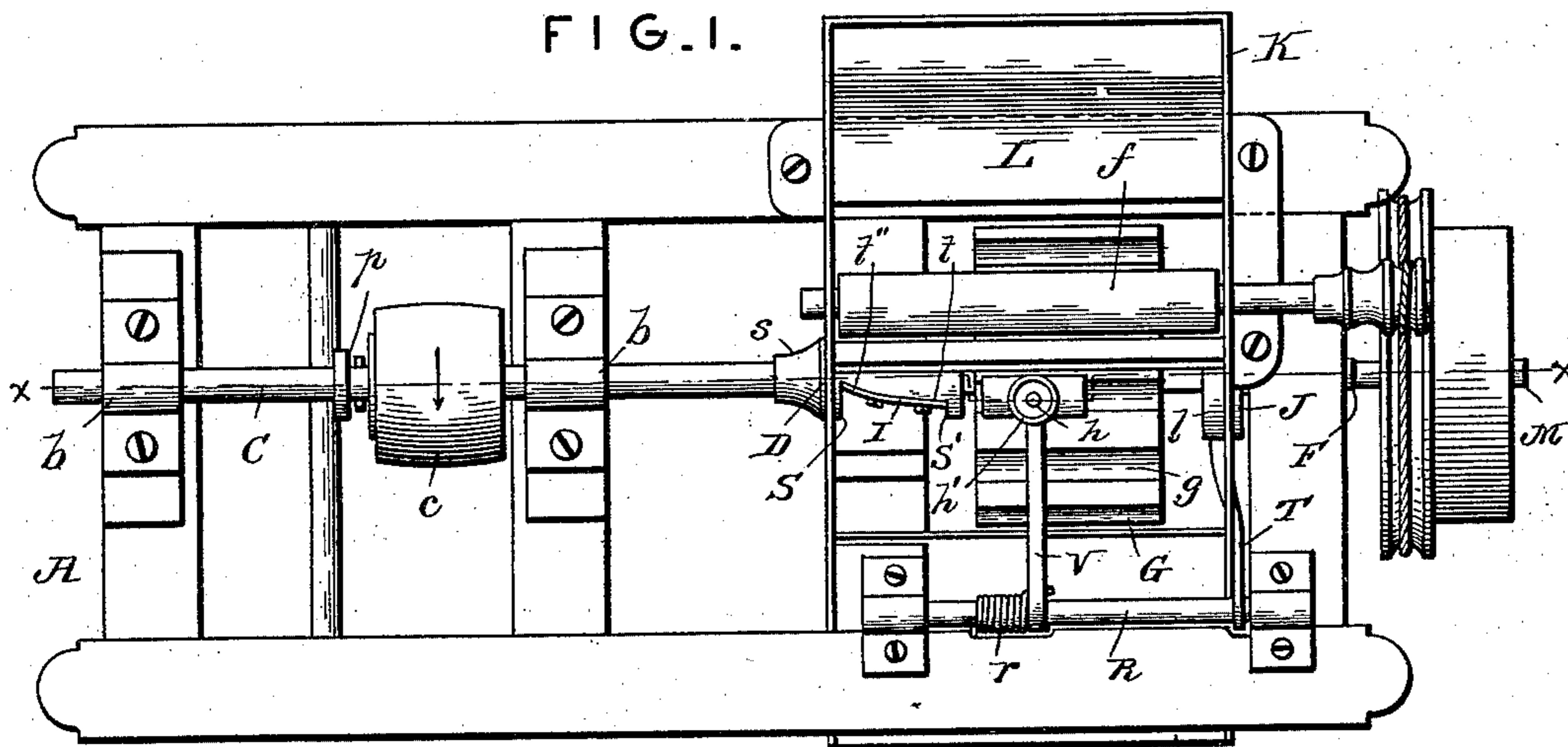
Patented Jan. 28, 1902.

A. T. TRUE.  
MACHINE FOR MAKING SKEWERS.

(Application filed Apr. 6, 1900.)

(No Model.)

2 Sheets—Sheet 1.



ATTEST—  
Harry L. Amer.  
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Amos T. True.  
By E. W. Anderson  
his Atty.

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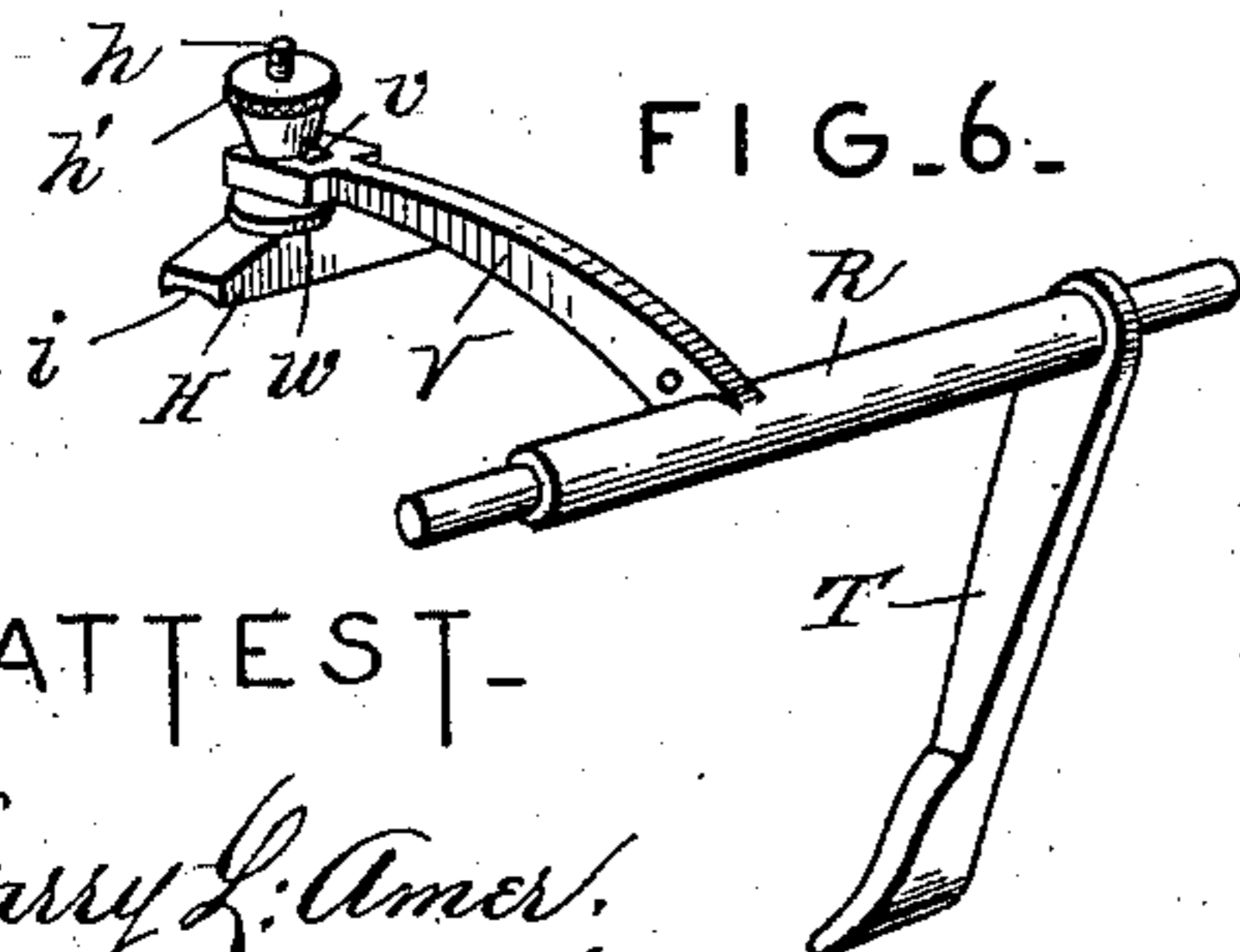
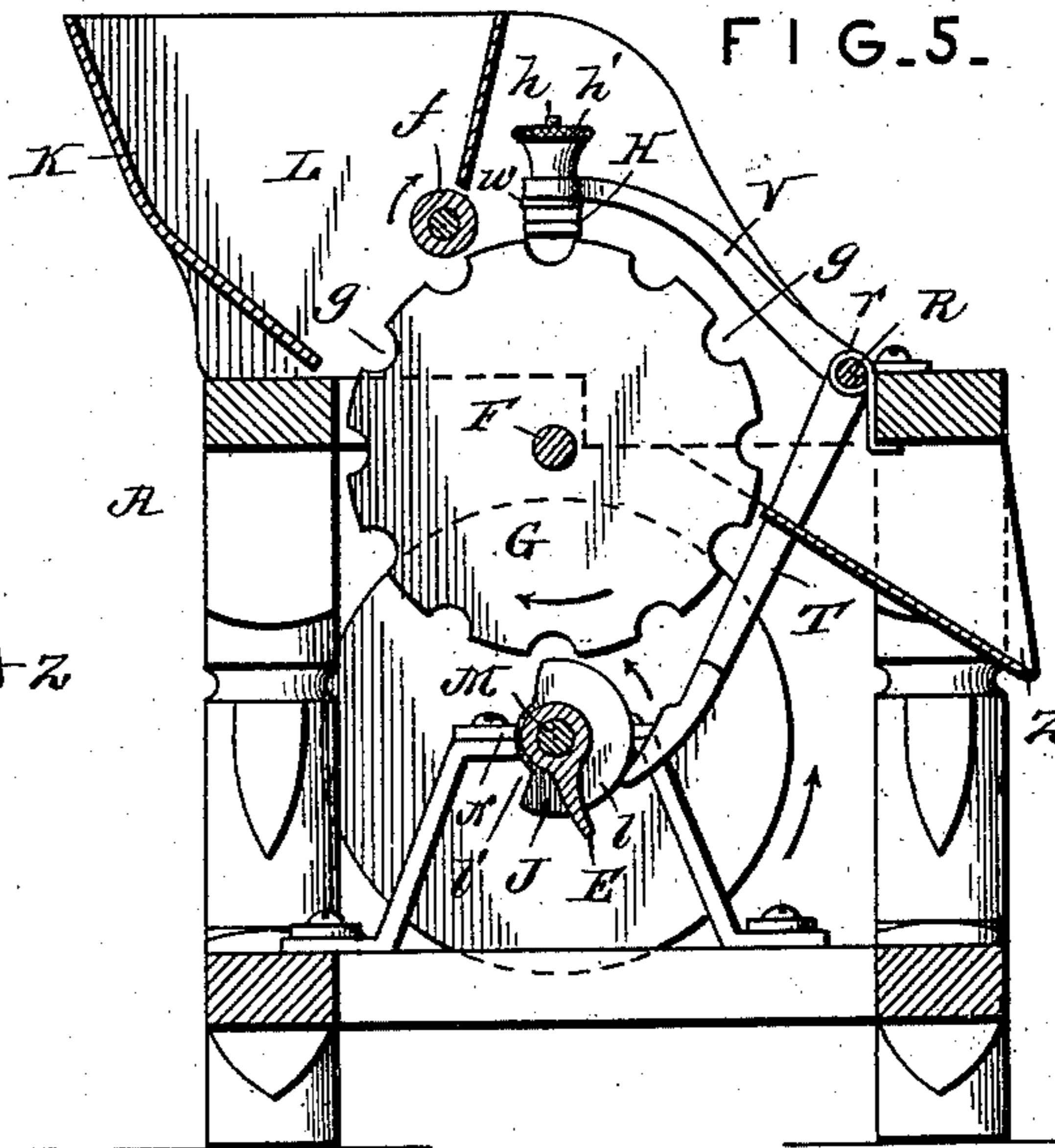
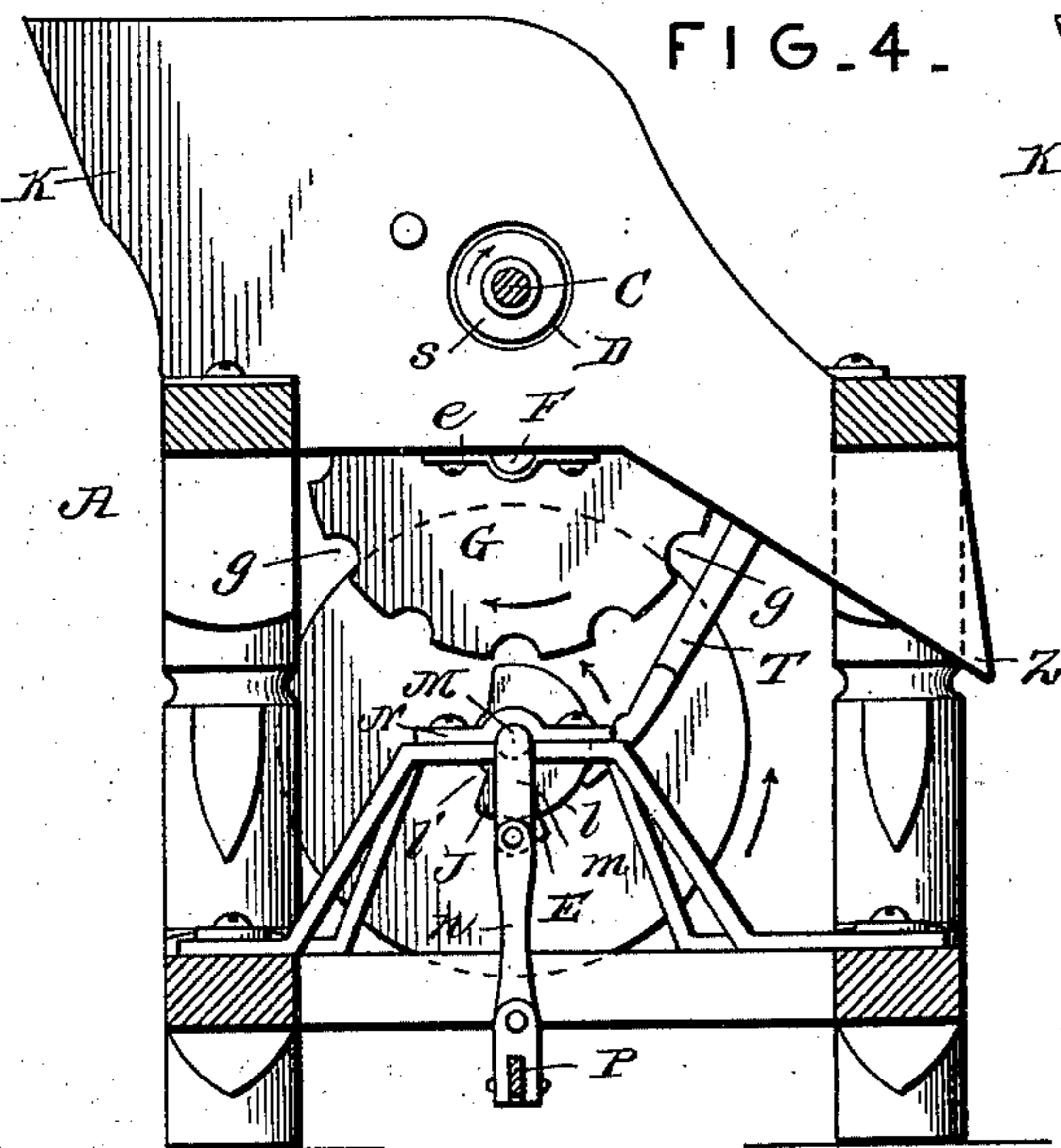
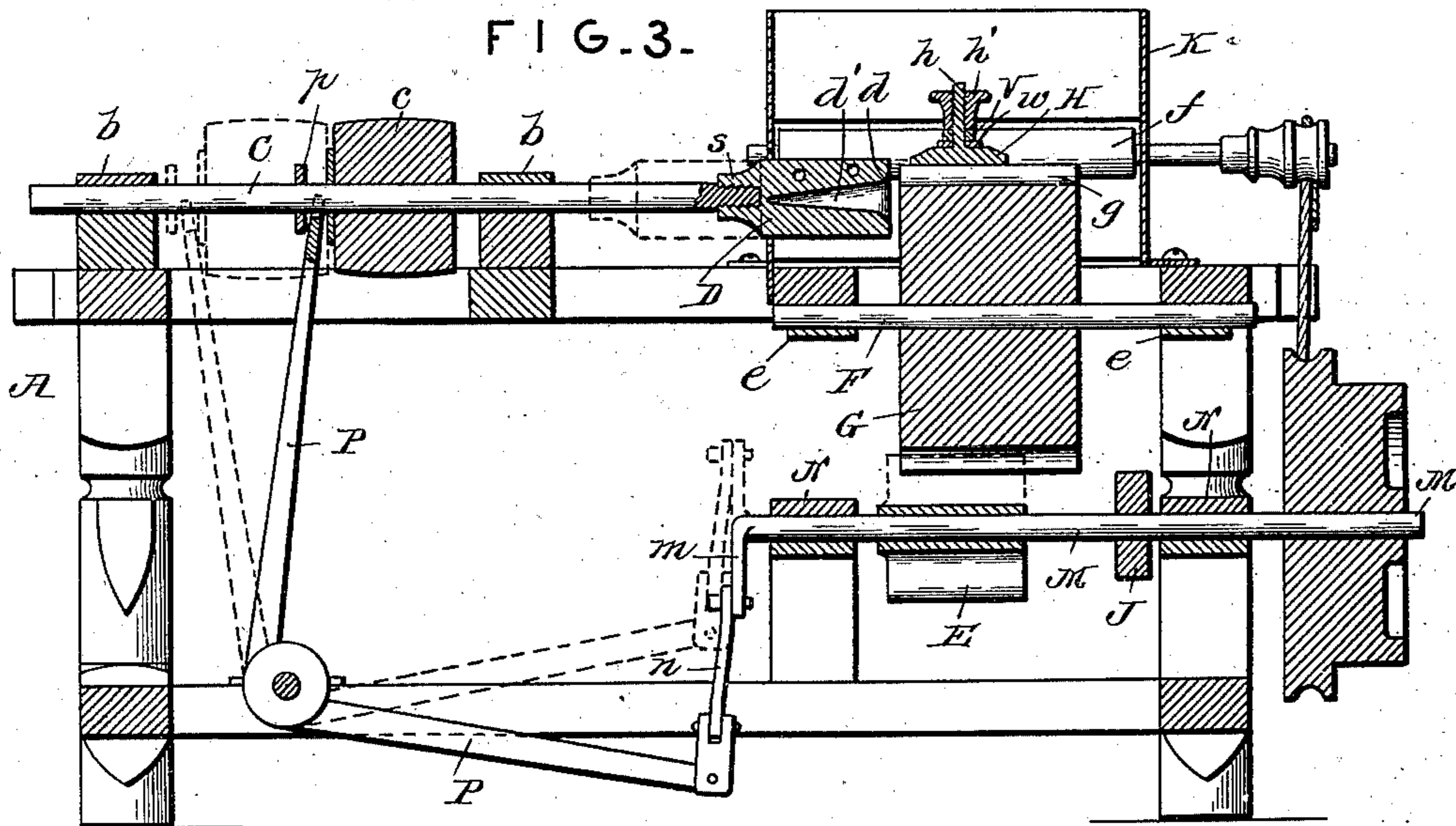
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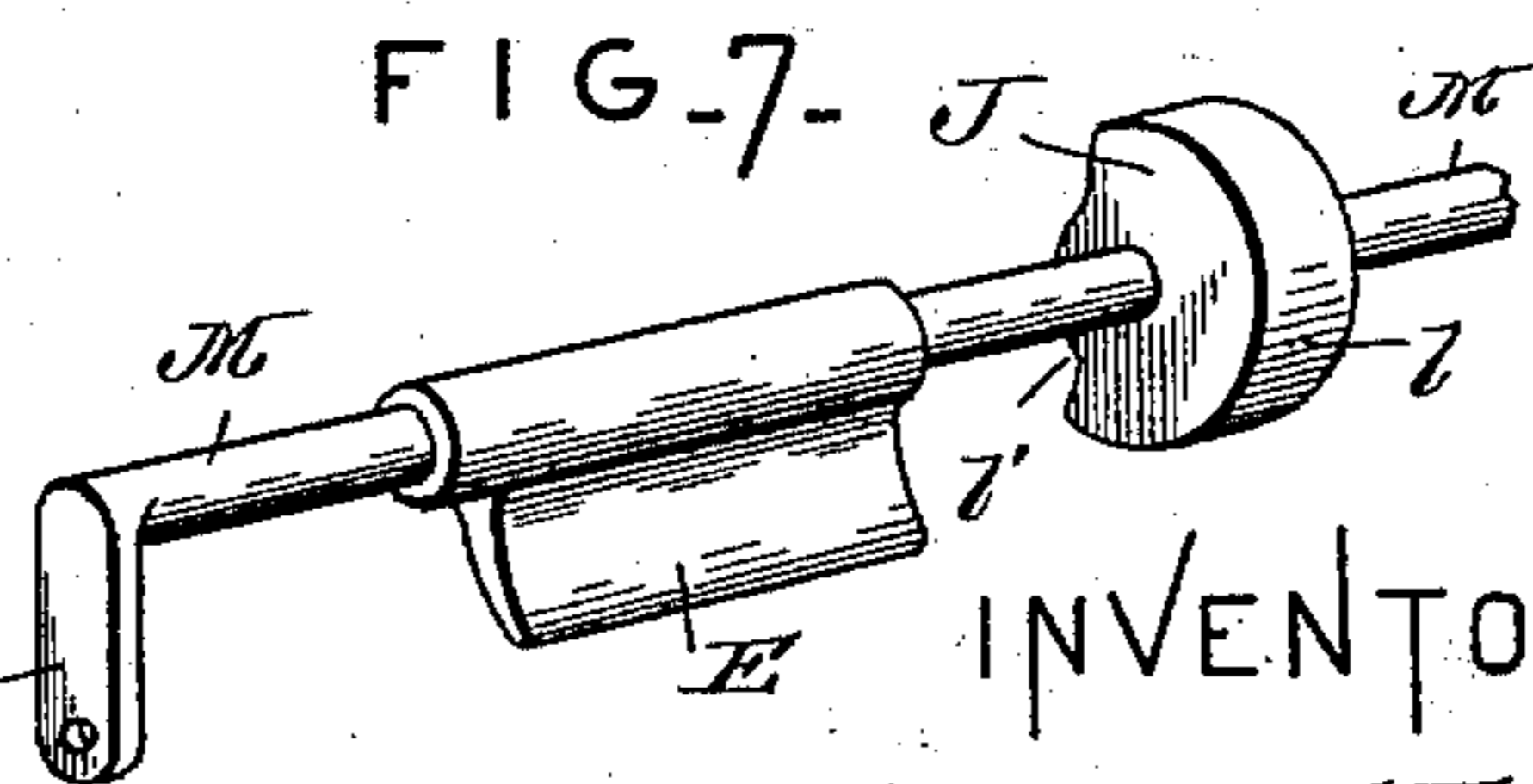
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2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

AMOS T. TRUE, OF STRONG, MAINE.

## MACHINE FOR MAKING SKEWERS.

SPECIFICATION forming part of Letters Patent No. 691,987, dated January 28, 1902.

Application filed April 6, 1900. Serial No. 11,883. (No model.)

*To all whom it may concern:*

Be it known that I, AMOS T. TRUE, a citizen of the United States, and a resident of Strong, in the county of Franklin and State of Maine, have invented certain new and useful Improvements in Machines for Making Skewers; 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 letters of reference marked thereon, which form a part of this specification.

In the accompanying drawings, Figure 1 is a plan view of my machine. Fig. 2 is a side elevation of the same. Fig. 3 is a section on the line  $x x$ , Fig. 1. Fig. 4 is a section on the line 4 4, Fig. 2. Fig. 5 is a section on the line 5 5, Fig. 2. Fig. 6 is a detail view of the clamp H and operating mechanism thereof. Fig. 7 is a detail view of the shaft M and its cams. Fig. 8 is a detail view of the pointing-head, shaft C, and pulley  $c$ . Fig. 9 is a detail sectional view of the cutter-head with the skewer therein.

The invention relates to the manufacture of wooden skewers designed more particularly for the use of butchers; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings the letter A designates the frame of a machine, having bearings  $b b$  for a reciprocating rotary shaft C, carrying a pointing-head D, and bearings  $e e$  for a revolving shaft F, carrying a feed-wheel G, having a series of transverse grooves  $g$ . Over the grooved wheel G is provided a hopper K, having a transverse opening or slot at L, through which the grooved feeding-wheel projects into the hopper, and along the upper portion of said slot, over the grooved wheel, is provided a transverse roller  $f$ , which serves by its frictional action to cause the skewer-blanks which are placed in the hopper to fall in proper position to be engaged by the grooves of the wheel. The roller  $f$  may be turned by means of a pulley on the end of its shaft connected by a belt to a pulley on the driving-shaft M. The driving-shaft is arranged usually below the grooved wheel in suitable bearings (indicated at N) and is pro-

vided with a crank  $m$ , which is connected, by means of a pitman  $n$ , to an elbow-lever P, the upright arm of which engages a bearing at  $p$  on the reciprocating rotary shaft C, which carries the pointing-head D, above referred to. On the shaft C is carried a pulley  $c$  to engage a belt designed to rotate this shaft. On the shaft M is also carried a tongue E, which at every rotation of said shaft engages the grooved feeding-wheel, turning the same sufficiently to bring one of its grooves in line with the axis of the pointing-head. This wheel therefore has an intermittent rotary motion, depending on the rapidity of revolution of the driving-shaft.

H is an intermittently-acting clamp designed to engage the skewer when the feeding-wheel brings it to position in line with the pointing-head and to hold it in such position until the pointing-bit has by its reciprocating rotary movement formed the point on the skewer, when the clamp releases the skewer, which at the next movement or two of the feed-wheel drops from said wheel and is by means of the spout Z delivered into a basket or other receptacle. The clamp is usually formed with a groove or channel in its base  $i$ , which may be notched or otherwise roughened to assist in holding the skewer firmly. The clamp is connected by its laterally-flattened and threaded stem  $h$  and a clamp-nut  $h'$  to arm V, having a slot-bearing  $v$ , through which the stem  $h$  extends and which provides for a certain degree of adjustment of the clamp. The arm V is connected to a shaft R, which is provided with a second arm T, engaging a cam J on the driving-shaft. This cam is provided with a circular working face  $l$ , extending concentric with the shaft and connecting with an indented or recessed portion  $l'$ . A retracting-spring  $r$  is provided in connection with the shaft to release the clamp when the arm T is relieved from tension, decreasing its engagement with the recess of the cam-face. When, however, this arm is engaged by the circular portion  $l$  of the cam, the clamp is held firmly against the skewer in the groove of the feed-wheel. In this operation the arms of the shaft being rigidly connected to said shaft provide a strong but not entirely inelastic holder for the clamp. Should, however, the clamp be not sufficiently secure in

its pressure on the skewer, the tension may be increased by the introduction of a washer *w* between the slotted portions of the arm V and the body of the clamp. The adjustment provided by the slotted portion of the arm V is designed to enable the operator to adjust the clamp with relation to the slots of the feed-wheel and the axis of the pointing-head.

The pointing-head D is provided with a funnel-form mouth *d*, leading to the tapering recess *d'*, and with a hub portion *s*, whereby it is connected to the shaft C. The hub portion and mouth portion are arranged with flanges bounding the clearance and having walls S S', facing each other, between which are located the seat or bearing *t* for the bit I and the face *t'* to carry off the shavings. Said bearing and face are slightly inclined from the mouth portion toward the axis of the head or center of the hub-face and are near said hub-face curved toward and beyond the plane of said axis or center, as indicated at *t*<sup>2</sup>.

The bit I is designed to be secured to the bearing *t* by means of screws or otherwise in proper manner and is provided with a curved end portion *z*, the edge of which is a curved cutting edge in continuation of the straight cutting edge *z'* of the inclined portion of the bit. By means of this bit it is designed to give the skewers a tapering end terminating in a conoidal point having curved elements, whereby the point, while smooth and well finished, is formed with a strong point suitable for the purpose in view.

It will be observed that in this machine the reciprocating motion of the pointer-head is terminated at each end of the stroke by a short interval of comparative rest, while the rotary motion is continuous, that interval when the pointer-head is at the end of its movement of retraction serving to provide

time for shifting the grooved feed-wheel and bringing down the clamp and the interval at the end of the working stroke serving to provide for the continuous rotation of the bit to put the finishing work to the curved end of the skewer, which working is more across the grain. The mechanism whereby these movements are effected in proper time is in the machine shown connected to the driving-shaft, as hereinbefore described.

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

In a machine for making skewers, the combination with the transversely-grooved feed-wheel, the rotary reciprocating shaft carrying the cutter-head in alinement with the grooved portion of said wheel, said head having a recess therein, and a bit in said recess having a cutting edge curved from the point toward the base of the pointed portion of the skewer, means for intermittently rotating said feed-wheel, and means for clamping the skewer in position to be acted upon by said head, of means for reciprocating said cutter-shaft, consisting of the driving-shaft having a crank-arm, and a bell-crank lever connected, one arm thereof with said crank-arm, and the other arm thereof with said shaft, whereby during the latter portion of the inward movement of said shaft, when the bit is cutting more and more across the grain of the skewer to form a pointed portion having curved elements, the movement of such shaft is gradually checked, and vice versa during the first portion of the outward movement of said shaft, substantially as specified.

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

AMOS T. TRUE.

Witnesses:

GEO. M. CURRIER,  
JOS. C. HOLMAN.