

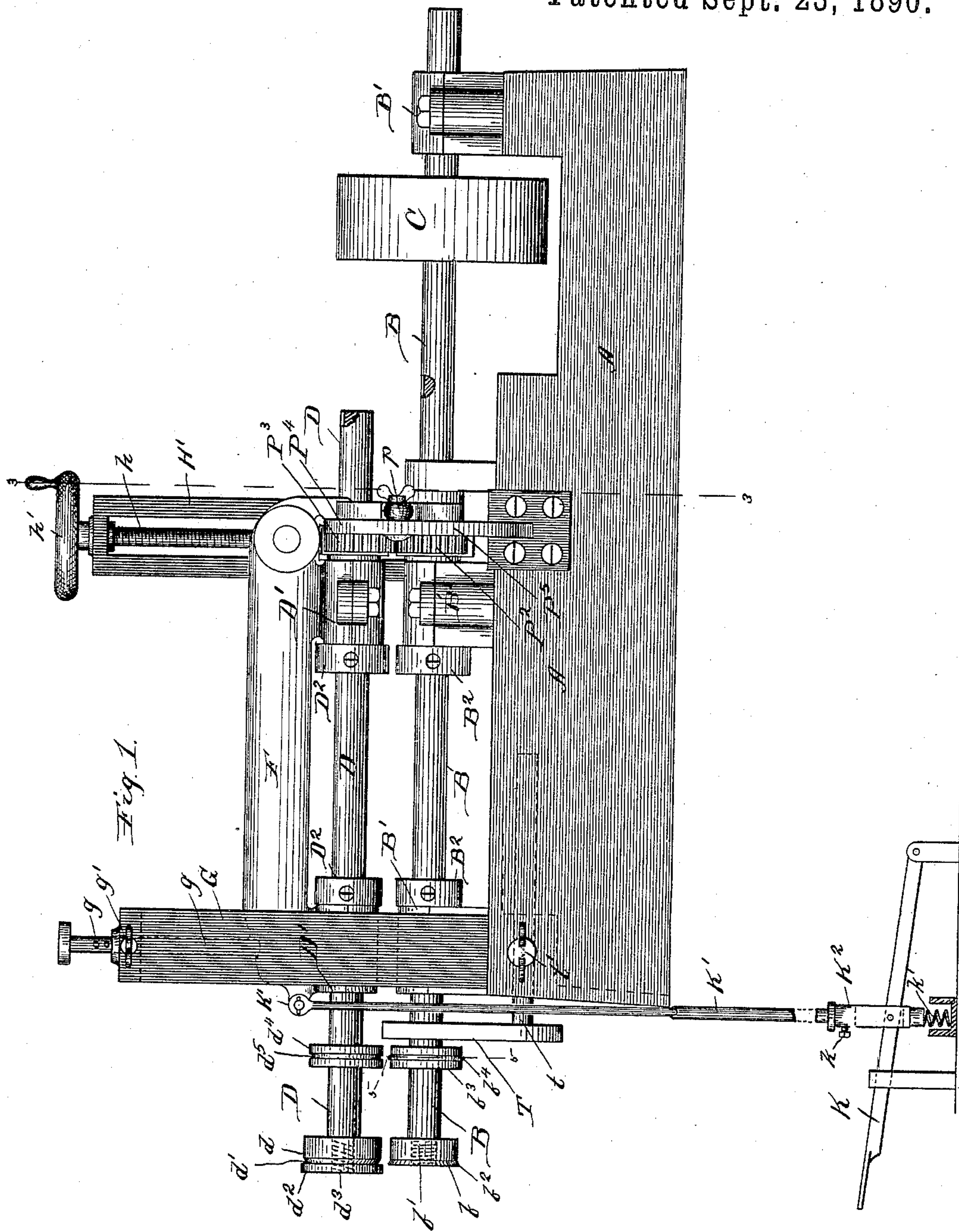
(No Model.)

2 Sheets—Sheet 1.

J. G. HODGSON.
CRIMPING MACHINE.

No. 436,784.

Patented Sept. 23, 1890.



Witnesses:
Law. C. Curtis.
H. M. Munday.

Inventor:
John G. Hodgson
By Munday, Evans & Adeock
His Attorneys.

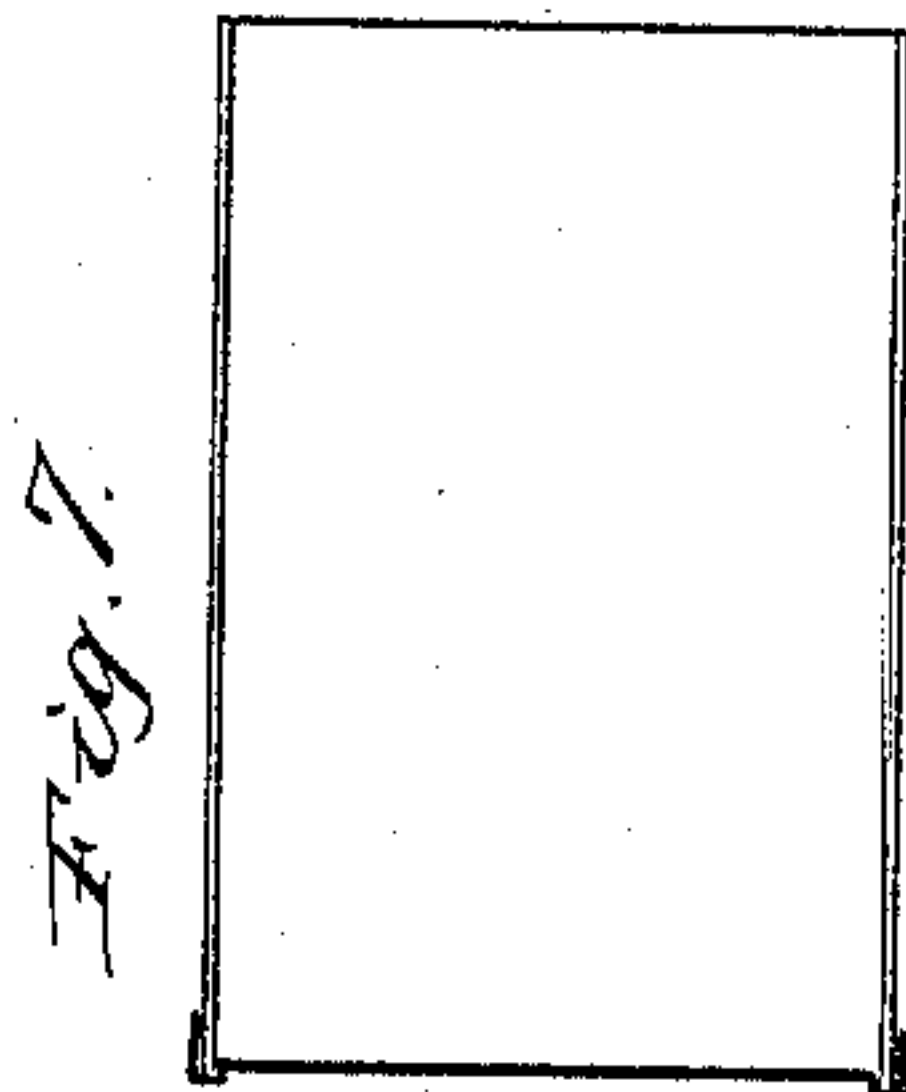
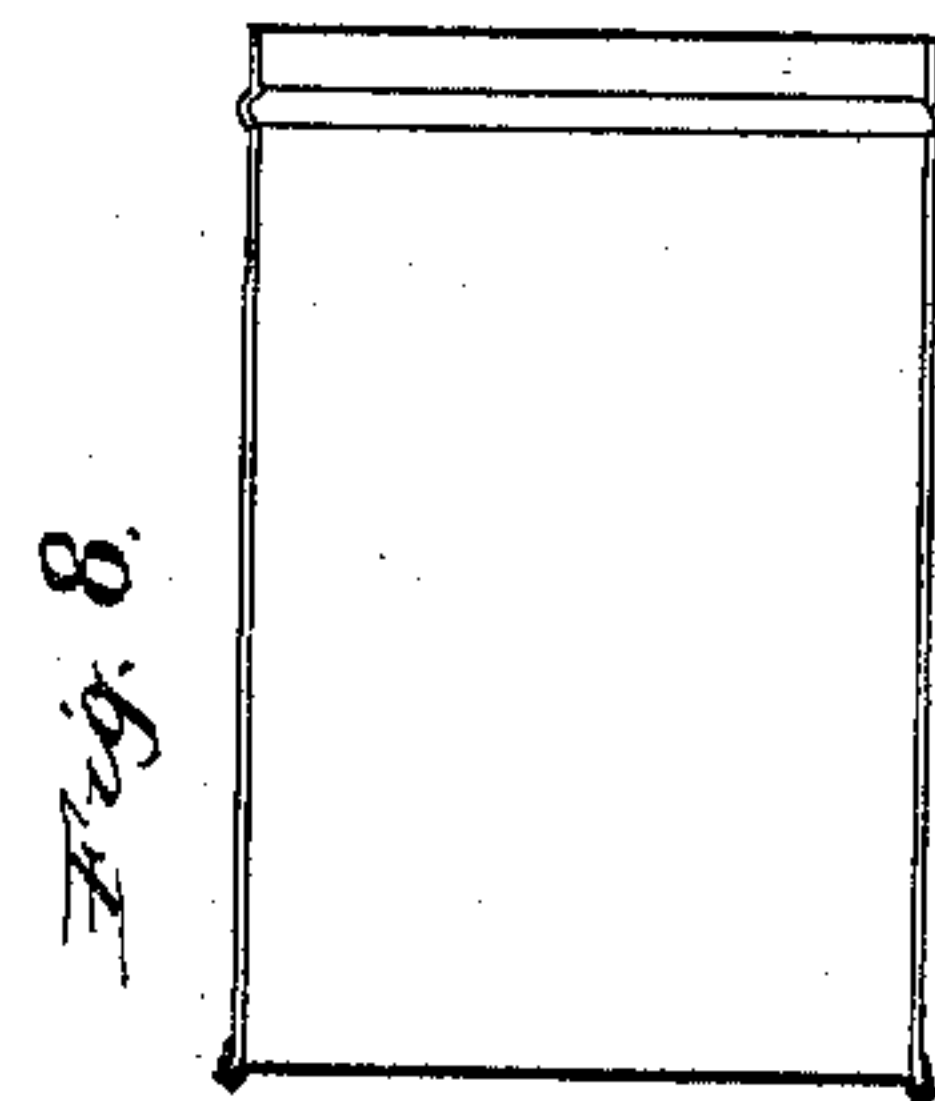
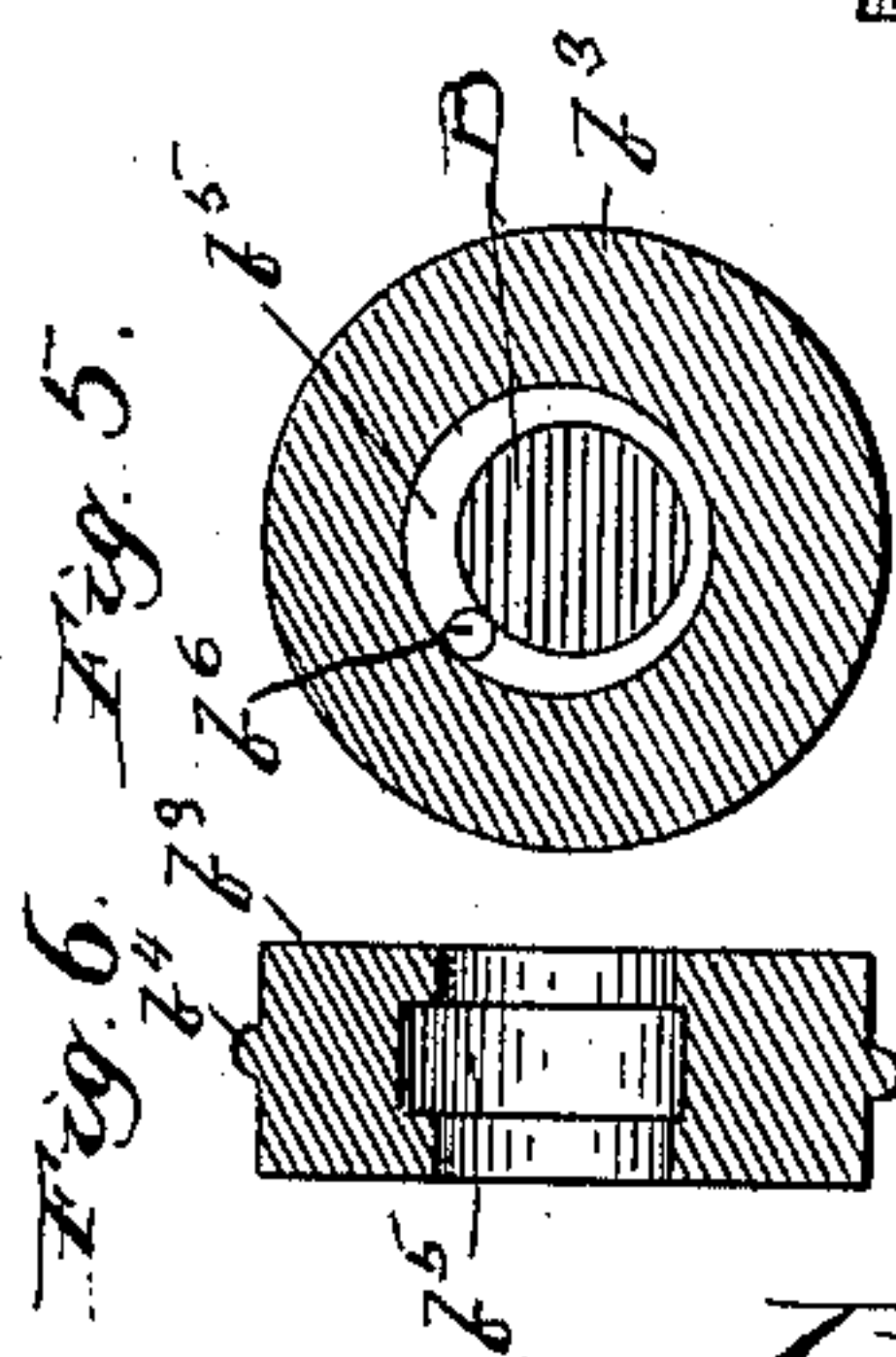
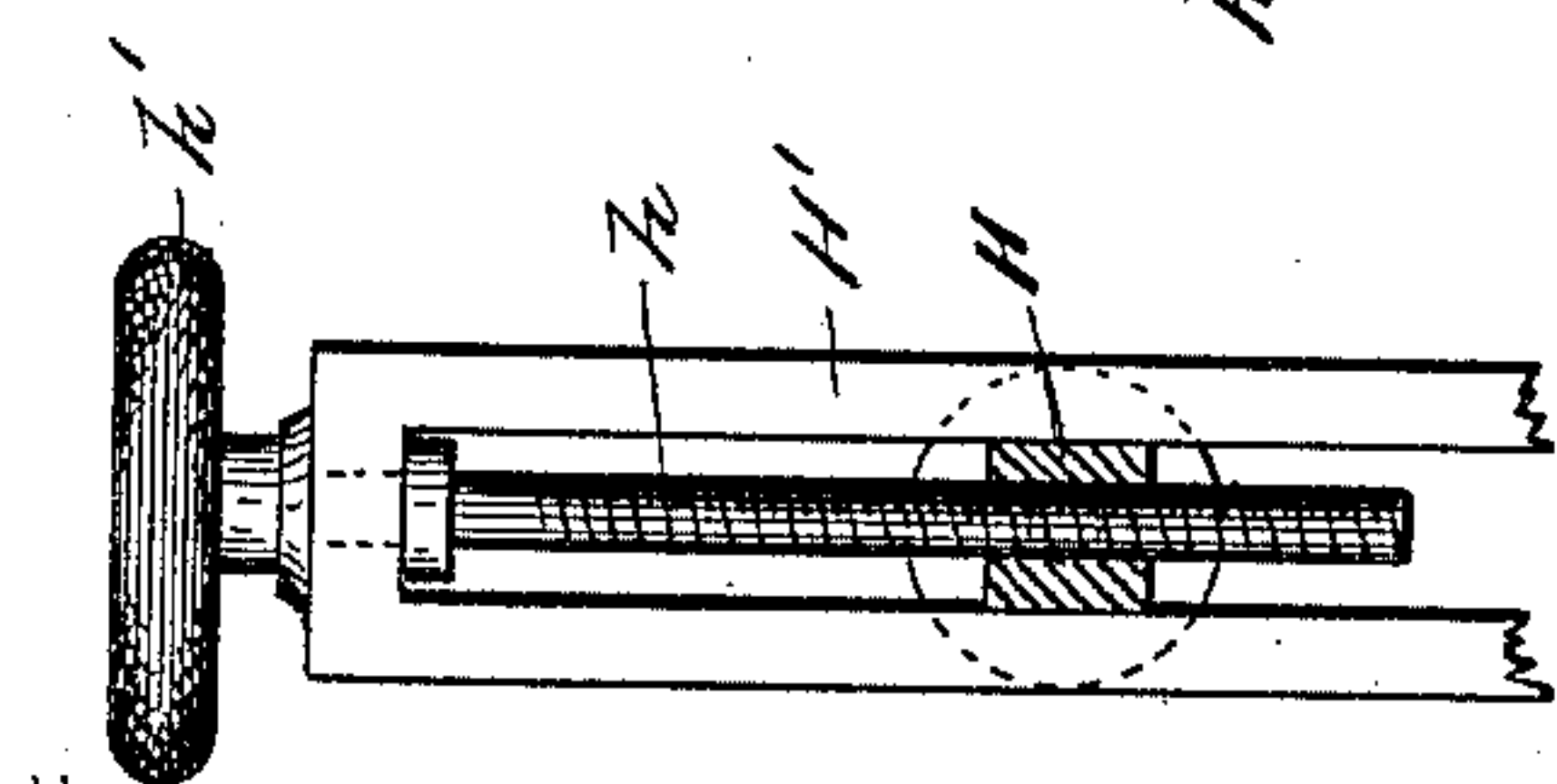
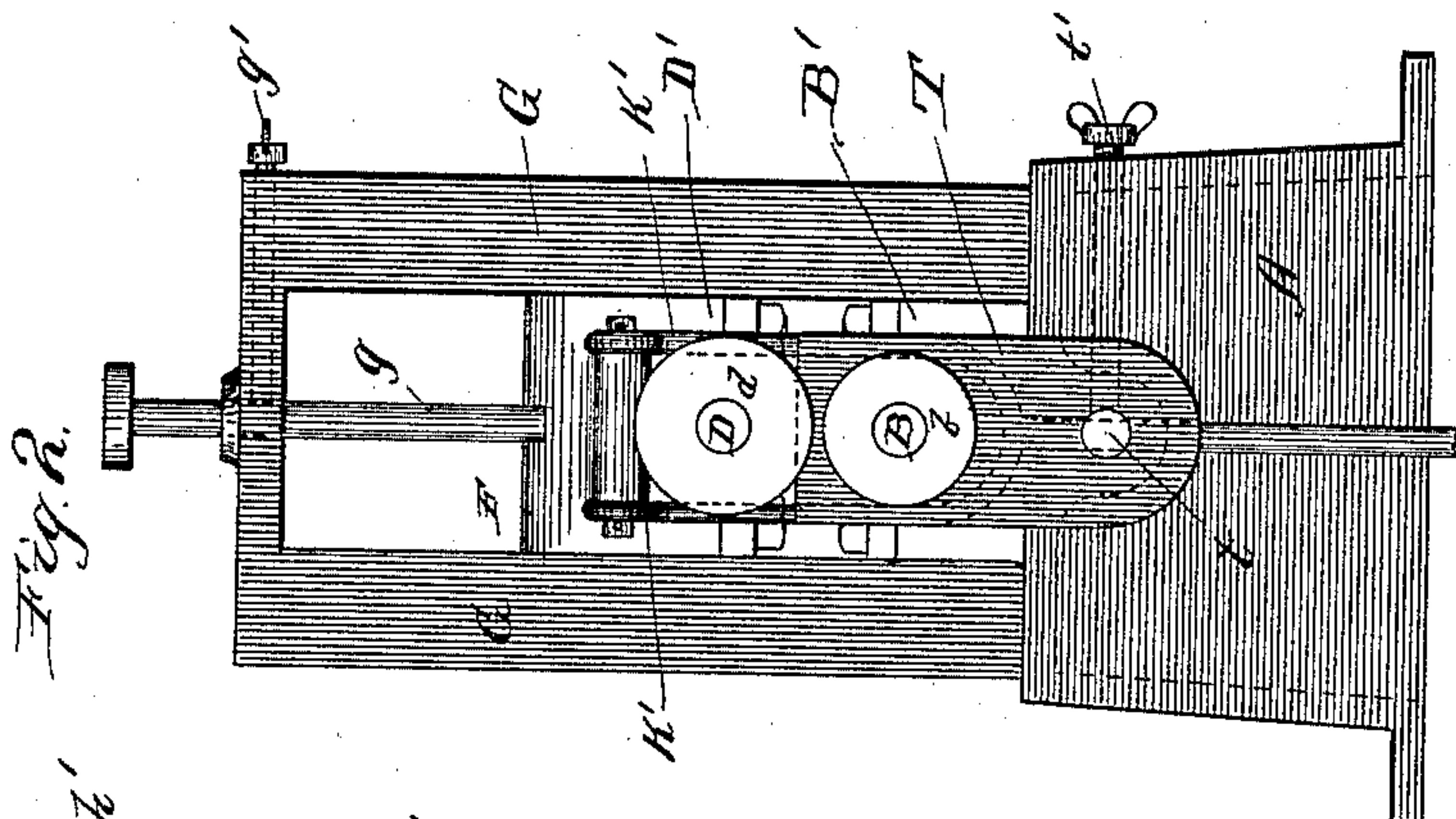
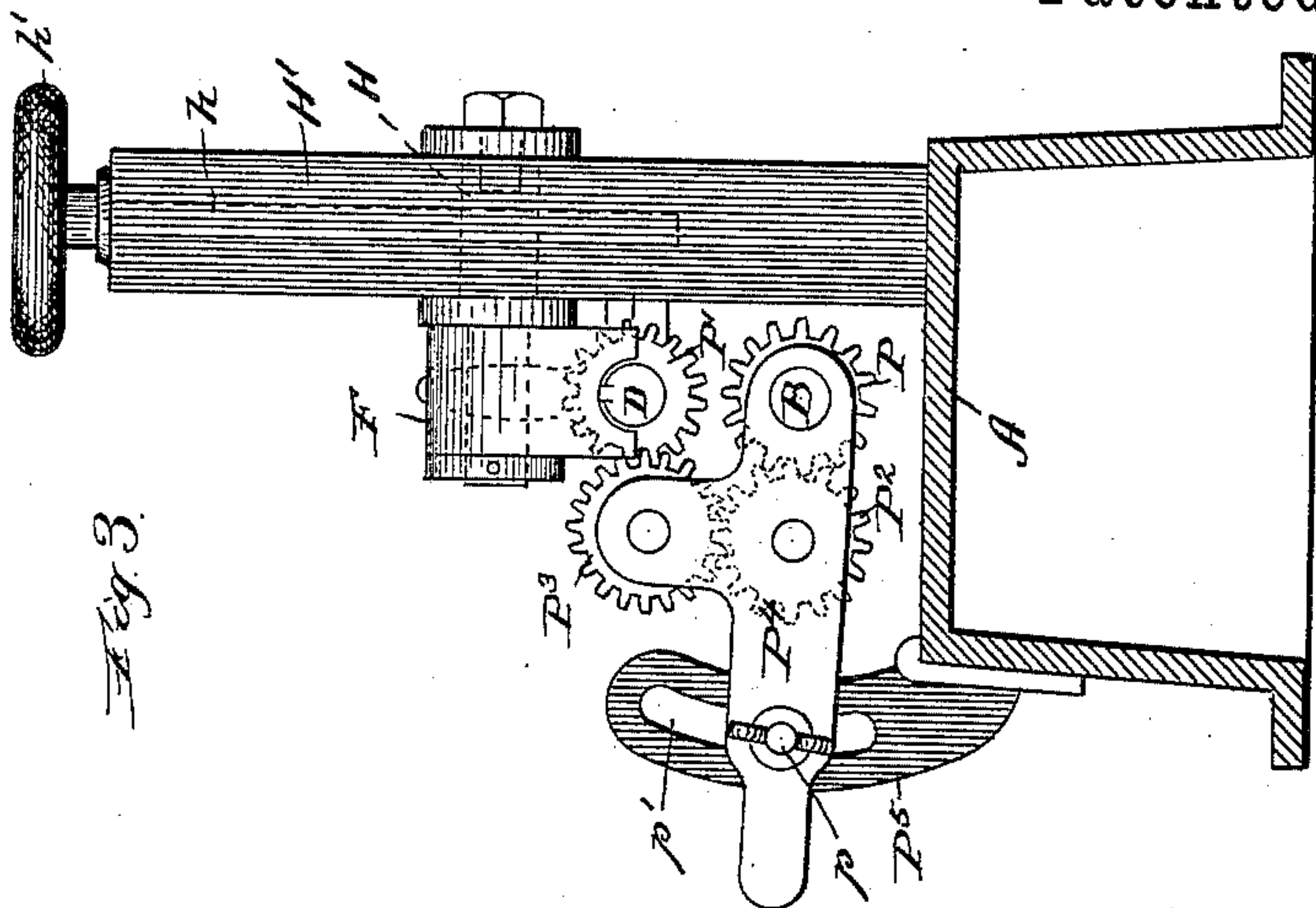
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2 Sheets—Sheet 2.

J. G. HODGSON.
CRIMPING MACHINE.

No. 436,784.

Patented Sept. 23, 1890.



Witnesses:
Geo. C. Curtis.
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Inventor:
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UNITED STATES PATENT OFFICE.

JOHN G. HODGSON, OF MAYWOOD, ILLINOIS, ASSIGNOR TO EDWIN NORTON,
OF SAME PLACE, AND OLIVER W. NORTON, OF CHICAGO, ILLINOIS.

CRIMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 436,784, dated September 23, 1890.

Application filed March 15, 1890. Serial No. 344,017. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. HODGSON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Crimping-Machines for Sheet-Metal Cans, of which the following is a specification.

My invention relates to machines for crimping sheet-metal cans or other vessels.

The object of my invention is to provide what I term a "universal crimping-machine," or a machine which may be readily adapted to crimp cans of different sizes or shapes.

My invention consists in the novel devices and novel combinations of parts and devices herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a front end view. Fig. 3 is a rear end view or sectional elevation looking from the line 3 3 of Fig. 1. Fig. 4 is a detail sectional view showing the vertically-adjustable slide to which the roller-frame is pivoted. Fig. 5 is a section on line 5 5 of Fig. 1. Fig. 6 is a section on line 6 6 of Fig. 5. Figs. 7 and 8 are sectional views showing a can before and after the crimping operation.

In the drawings, A represents the frame of the machine.

B is the lower crimping-roller shaft journaled in fixed bearings B' B' on the frame of the machine.

C is the driving-wheel. The revolving shaft B is furnished with a crimping-roller *b*, adapted to be inserted within the can. The roller *b* is detachably secured upon the end of the shaft B, preferably by means of screw-threads *b'*, so that this crimping-roller may be removed and replaced by others of a different diameter or shape, according to the particular size of the can and shape of crimp designed to be operated upon or produced. The crimping-roller *b* is or may be furnished with a beveled flange *b²*. The form of this flange will of course vary, according to the particular shape of seam desired to be crimped

or produced. The shaft B is also, preferably, or may be provided with a beading-roller *b³*, having a beading-flange *b⁴*. The roller *b³* is likewise removably secured to the shaft B, so that it may readily be removed and replaced by other beading-rollers of a different diameter or shape. The roller *b³* is preferably thus removably secured to the shaft B by means of an eccentric groove *b⁵*, cut upon the interior of the roller *b³*, in which groove is placed a short pin or wedge *b⁶*, which operates to tighten the roller *b³* upon the shaft B when the shaft B is revolved.

D is the shaft of the upper or movable crimping-roller. The shaft D is journaled in suitable bearings D' D' on a pivotal and vertically sliding or adjustable bar or frame F. The shaft D is furnished with a removable crimping-roller *d*, having a groove *d'* and a flange *d²*, adapted to fit over and form a support for the end of the can during the crimping operation. The roller *d* is secured to the shaft D removably, and preferably by means of screw-threads *d³*, the same as the roller *b* to its shaft, the threads being right and left hand, as shown, to prevent unscrewing. The shaft D is likewise provided with a beading-roller *d⁴*, having a beading-groove *d⁵*, corresponding to the beading-flange *b⁴* on the roller *b³*. The roller *d⁴* is removably secured to its shaft D, and preferably by the same means as above described for securing the roller *b³* to its shaft B. The sliding and pivotal bar or frame is pivoted or journaled upon a sliding or adjustable block H, which is adjusted up and down in the guide or slotted standard H' by means of the adjusting-screw *h*, which is furnished with a hand-wheel *h'*. The front end of the bar or frame F moves up and down in the guide or slotted standard G. The upward movement of the bar or frame F is limited by an adjustable stop *g*, secured in the standard G by a set-screw *g'*, which enters depressions or recesses in the stop-bar *g*. The front or free end of the pivotal and sliding or adjustable crimper-roll-carrying bar F is operated so as to force the crimping-roller *d* against the crimping-roller *b* by means of a treadle or lever K, which is connected to the bar F by a link K'. The link K' is made in two parts adjustably connected together by

a set-screw k , which passes through the sleeve part K^2 of the link and engages the other part K' thereof. The pivotal and vertically-moving crimping-roller shaft D is driven from the shaft B by means of the gears P P' on the shafts B and D , respectively, and the intermediate gears P^2 P^3 , which are journaled on an arm or lever P^4 pivoted to the shaft B , the free end of which is adjusted in proper position in relation to the distance between the shafts B D by means of a slotted standard P^5 and a set-screw p , which passes through the slot p' of the standard P^5 .

T is a gage secured to the rod t , which is adjustably fixed in the frame A by the set-screw t' . The purpose of this gage is to afford a stop for the end of the can to abut against during the crimping operation.

In operation a can—such as is represented, for example, in Fig. 7—is placed over the roller b , with its open end abutting against the gage T . The operator then, with his foot upon the treadle K , depresses the roller-carrying bar F and forces the crimping-roller d against its mate b . At the same time and by the same operation the beading-rollers d^4 and b^3 will form a bead in the can, if it is desired to bead the can also. If not, the beading-rollers will of course be removed from the shafts B and D . To operate upon cans of larger diameters, the rollers b d and b^3 b^4 will be replaced by other or similar rollers of a larger diameter. The pivot-block H is adjusted to the proper height by means of a screw h to keep the shafts B D parallel when in operation, the stop g and the link K being also adjustable to suit the diameter of the can operated upon. The gage T may also be adjusted in and out for operation upon cans of different lengths. By means of the eccentric groove and the fastening pin or wedge for securing the beading-rollers in place on their shafts these beading-rollers may be secured at any position longitudinally on their shafts, so that the bead may be produced at any point desired in the can. By moving or adjusting the lever P^5 the gearing $P' P^2 P^3 P^4$ will properly mesh together whatever may be the relative position to which the shaft D is adjusted by its sliding pivot-block. For very small cans the gears P and P' may mesh directly together, the gear P^3 being thrown out of mesh by the lever P^4 . The pivotal frame or bar F is retracted

by a spring k' . The shafts B and D are provided with adjustable collars B^2 and D^2 , fixed in place by set-screws, so that the shafts B and D may be slipped longitudinally when necessary to accommodate cans of greater length. The shafts B and D are splined, so that they may slide through the gears P and P' .

I claim—

1. The combination of frame A , shaft B , journaled thereon, furnished with a crimping-roller b , sliding bar F , its guides G H' , sliding pivot-block H , adjusting-screw h , crimping-roller shaft B , journaled on said bar F and furnished with crimping-roller b , operating-lever K , adjustable connecting-link K' , and an adjustable stop g , said shafts B and D being furnished with driving-gears, intermediate gears, and a lever upon which said intermediate gears are journaled for adjusting their position, substantially as specified.
2. The combination, with a crimping-roller and its shaft journaled in fixed bearings, of a pivotal and vertically sliding or adjustable crimping-roller and its shaft, driving-gears on each of said crimping-roller shafts, and a lever carrying intermediate gears for communicating motion from one of said shafts to the other in its different positions or adjustments, substantially as specified.
3. The combination, with a crimping-roller shaft B , journaled in fixed bearings, of crimping-roller shaft D , journaled on vertically-sliding and pivotal bar F , sliding pivot-block H , means for adjusting said block, an operating-lever having an adjustable connection with said pivoted bar F , driving-gears on said shafts B D , and an adjustable lever carrying intermediate gears, substantially as specified.
4. The combination, with a crimping-roller shaft B , journaled in fixed bearings, of crimping-roller shaft D , journaled on vertically-sliding and pivotal bar F , sliding pivot-block H , means for adjusting said block, an operating-lever having an adjustable connection with said pivotal bar F , driving-gears on said shafts B D , an adjustable lever carrying intermediate gears, and a gage for the end of the can to abut against, substantially as specified.

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Witnesses:

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