

No. 724,714.

PATENTED APR. 7, 1903.

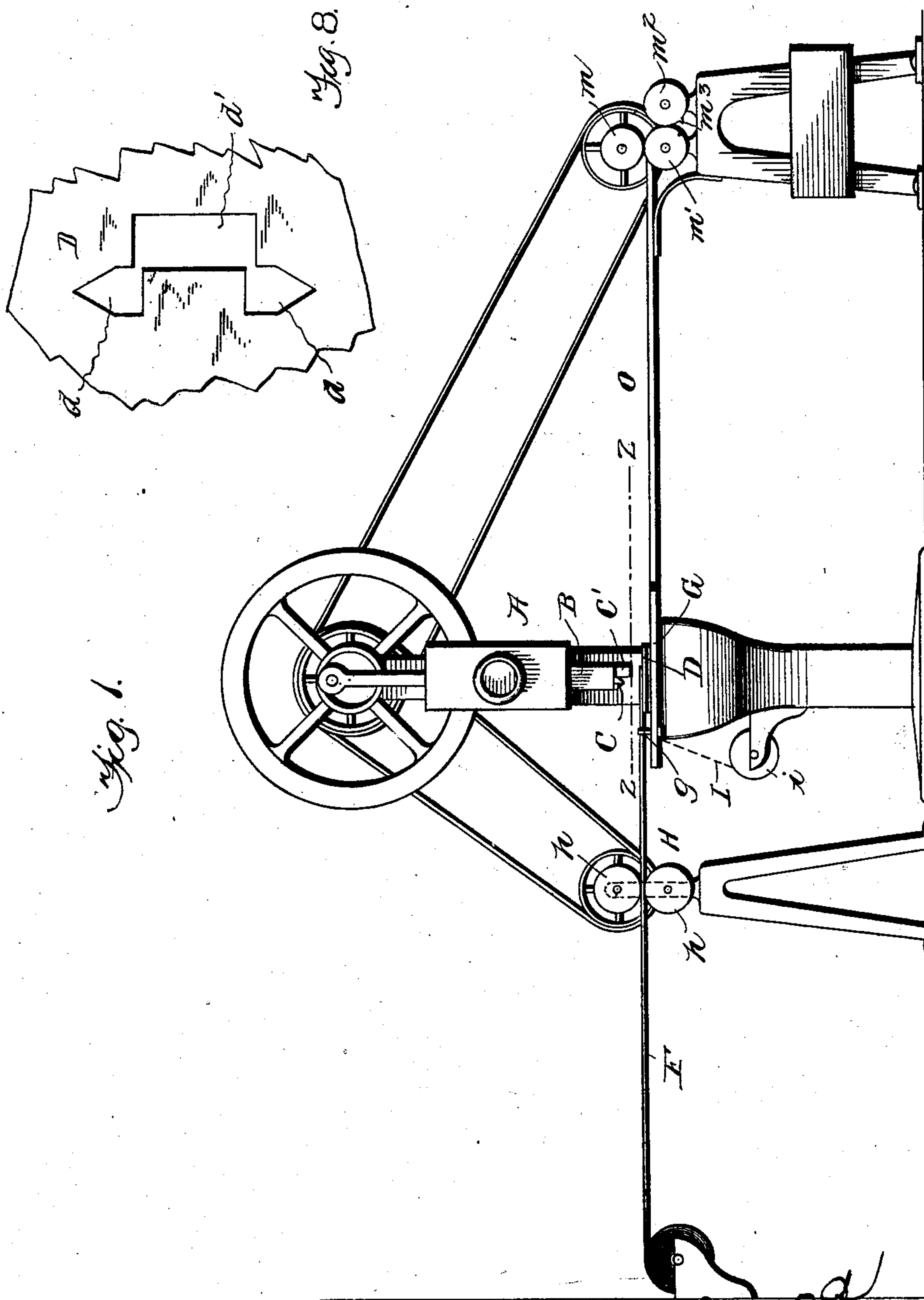
J. C. KIMSEY.

MACHINE FOR STRINGING TAGS, &c.

APPLICATION FILED DEC. 4, 1901.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

T. L. Mockett

R. J. Beall

by

James C. Kimsey  
Inventor:  
John A. Thomas & Co.  
Attorney

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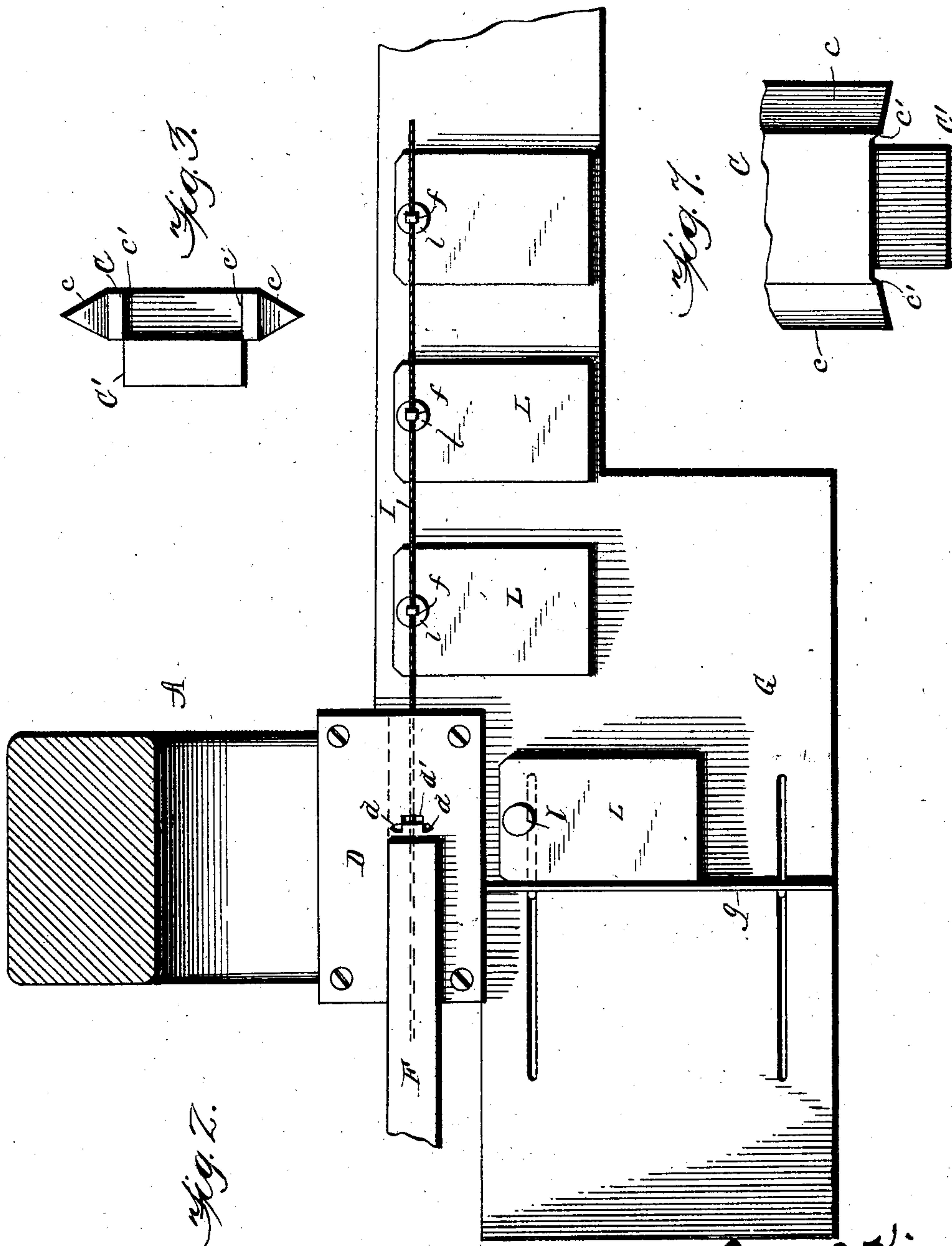
J. C. KIMSEY.

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3 SHEETS—SHEET 2.



Witnesses  
T. L. Moore  
R. G. Beall

by

James C. Kimsey  
Inventor  
John S. Thomas & Co.  
Attorneys

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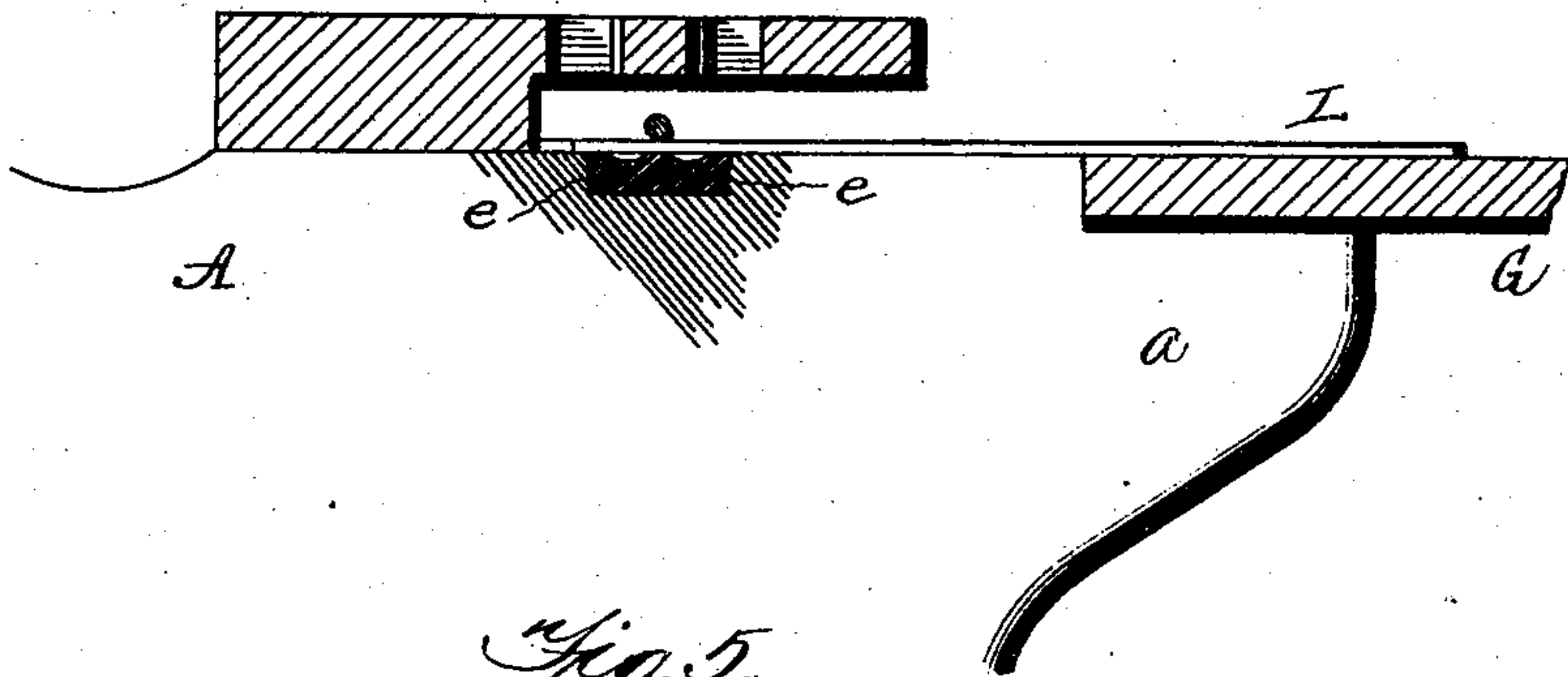
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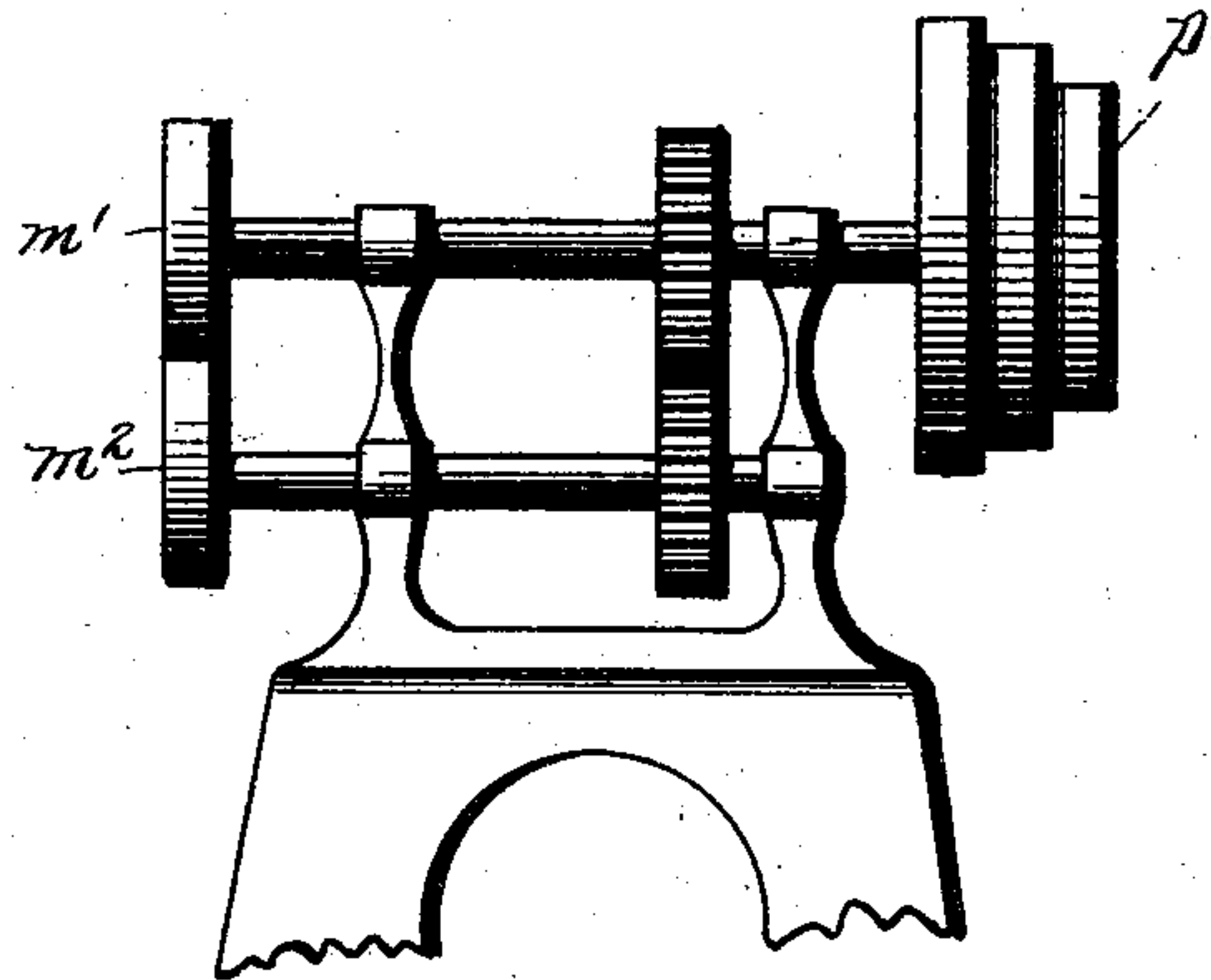
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3 SHEETS—SHEET 3,

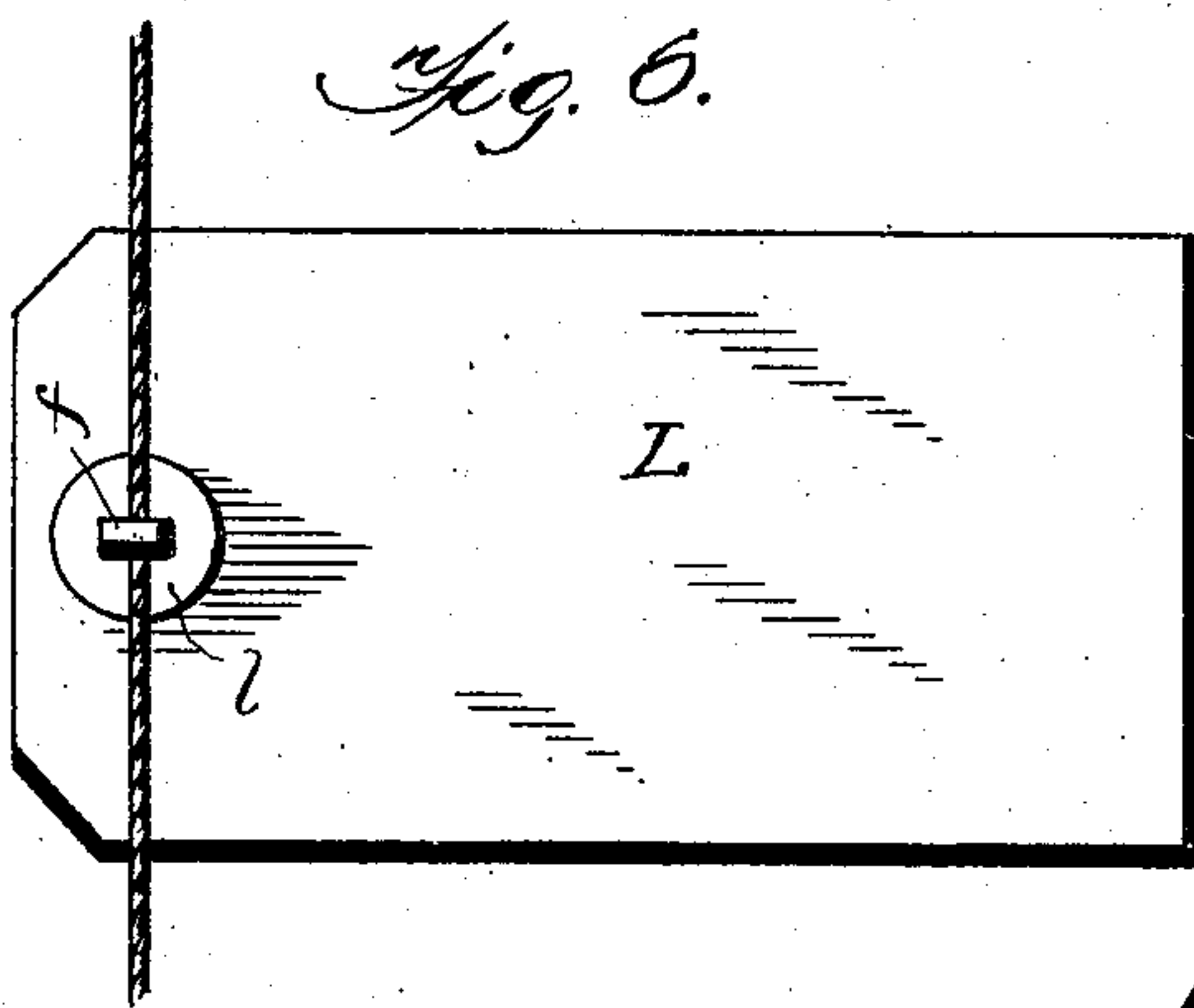
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Witnesses  
T. L. McKim  
R. G. Beall

By

James C. Kimsey  
Inventor  
John S. Thomas & Co.  
Attorneys



# UNITED STATES PATENT OFFICE.

JAMES C. KIMSEY, OF PHILADELPHIA, PENNSYLVANIA.

## MACHINE FOR STRINGING TAGS, &c.

SPECIFICATION forming part of Letters Patent No. 724,714, dated April 7, 1903.

Application filed December 4, 1901. Serial No. 84,635. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES C. KIMSEY, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a Machine for Stringing Tags, &c., of which the following is a specification.

The object of this invention is to provide a machine by which a string or wire may be attached to a shipping-tag, calendar-card, or other article.

The invention consists in providing means for feeding a string or wire across the tag or card and means for attaching said string or wire to the tag or card.

The invention further consists in the combination, with a stapling-machine, of means for feeding a string or wire under the staple.

The invention further consists in the particular construction and combination of parts, all as will be hereinafter fully described, and specifically set forth in the appended claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a front elevation of a machine for attaching strings to tags, &c., constructed in accordance with my invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a reverse plan view of the staple-former and presser-bar. Fig. 4 is a detail sectional view through the stationary die. Fig. 5 is a detail view of the mechanism for feeding and cutting the cord or string. Fig. 6 is a view of the finished tag. Fig. 7 is a detail elevation of the staple-former and presser-bar. Fig. 8 is a detail plan view, enlarged, of the stationary die-plate.

In carrying out my invention I employ a stapling-machine comprising a power-press A and dies by which the staple is formed and forced into the tag to attach the string or wire thereto. The reciprocating plunger B of the power-press carries at its lower end the staple-former C and presser-bar C', said staple-former consisting of triangular points or dies *c c*, which form the points of the staple *f*. The dies *c c* are beveled at their lower ends to provide a shearing cut and have shoulders *c'*, which bend the points of the staple downward at the end of the stroke. The stationary die of the stapling-machine consists of a block D, having triangular openings *d d*, into which the dies *c c* of the staple-former

pass, and a communicating opening *d'*, through which the presser-bar passes to force the staple into the tag. In the bolster or bed-plate of the power-press are concave recesses *e* for turning the points of the staple and clenching them upon the under side of the tag. The staple is stamped from a continuous strip of metal F, and upon each reciprocation of the plunger a staple is partly formed and the staple previously formed is severed from the strip and attached to the tag.

The stapling-machine herein shown and described is preferred to any ordinary style of machine, as it provides for applying a wide staple that will more securely fasten the string to the tag by providing a greater bearing-surface. It is apparent, however, that an ordinary stapling-machine may be employed, and I therefore reserve the right to apply the devices hereinafter described for attaching the strings to the tags to any or all styles of stapling-machines.

The block or die D is elevated slightly above the bolster or bed-plate *a* of the power-press, as shown, so that the tag L may be slipped into position under the same and pass out at one side. In front of the die D is a table G, from which the tags are fed to the machine, said table having the usual guide *g* at one side. It is purposed, however, to feed the tags to this machine directly from the automatic feed of a printing-press instead of by hand.

The metal strip from which the staples are formed is fed from a roll suitably supported, and an automatic feed H is interposed between the roll and stapling-machine, said feeding device consisting of a pair of rolls *h*, geared to each other and turned by a belt from the power-press. These rolls engage the metal strip frictionally, so that said strip will be fed forward into the dies of the stapling-machine. As the strip is pushed forward the points of the partly-formed staple engage the rear wall of the recess or opening *d'* and hold said strip until the presser-bar severs the staple and forces it through the opening into the tag, the strip being then held by the presser-bar while the points are formed for the next staple.

I designates a cord, wire, or tape, which is fed from a spool *i* and passes under the die



or block D in position to extend across the tag between the points of the staple, so that when the staple is fastened to the tag the cord will be also fastened thereto by said staple. This cord or wire is fed or pulled through the machine by an automatic feeding device, which also serves to cut the cord or wire. This feeding and cutting device consists of the rolls  $m$ ,  $m'$ , and  $m^2$ , between which the cord and tags pass, the roll  $m^2$  having a blade  $m^3$ , which cuts the cord into suitable lengths as it passes between said roll  $m^2$  and the roll  $m'$ .

It will be noted that the tags are attached to and strung upon a continuous cord or wire and pass from the stapling-machine over a table O, which extends to the feeding and cutting devices for said cord or wire, and that said feeding and cutting device pulls the tags from the stapling-machine and feeds the cord or wire along a certain distance for attachment to the next tag; also, that the cutting device cuts the cord or wire at an equal distance between the tags, so that the ends of the cord or wire attached to the tags will be of uniform length. The length of the cords may be regulated by providing the graduated pulley  $p$ , over which the driving-belt  $s$  passes, to increase or decrease the rate of speed of the feeding mechanism. The tags are preferably provided with disks  $l$ , as shown, to increase the thickness through which the staple passes.

It will be understood, of course, that the shape of the staple or points of same may be changed without sacrificing any of the advantages of my invention, the essential feature of which is to provide a machine by which cords or wires may be attached to tags and such articles quickly, securely, and cheaply.

The operation of the machine will be readily understood from the foregoing in connection with the accompanying drawings, for the cord which is attached to the tags is fed continuously through the machine beneath the stationary die of the stapling-machine, and the tag is fed under said die and beneath the cord, so that upon the descent of the plunger B a staple will be stripped from the metal strip F and forced into the tag, clamping the cord securely between the tag and staple. When the plunger ascends, the tag is drawn out of the machine by the cord, and the finished tag passes to the cutting-rolls.

The machine can be run at a rapid rate of speed, and by connecting the same to the ordinary automatic feed of a printing-press the operation of said machine will be entirely automatic.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for stringing tags, the combination of a stapling-machine for attaching a staple and string to the tag, and means for feeding the string in position across the tag

and by which the tag is drawn from the stapling-machine.

2. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag, and means for feeding the string transversely across one end of the tag and by which the tag is drawn from the stapling-machine.

3. In a machine for stringing tags, the combination, of a stapling-machine adapted to attach a staple and string to the tag, means for feeding the string in position across the tag and by which the tag is drawn from the stapling-machine, and means for cutting the string.

4. In a machine for stringing tags, the combination, of a stapling-machine adapted to attach a staple and string to the tag, and a pair of rolls adapted to feed a continuous string through the stapling-machine and to draw the tags therefrom.

5. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag, a pair of rolls adapted to feed a continuous string through the stapling-machine and to draw the tags therefrom, and means for cutting the string.

6. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag, a pair of rolls adapted to feed a continuous string through the stapling-machine and by which the tags are drawn therefrom, and a roll having a knife-blade cutting against one of the aforesaid rolls and adapted to sever the string.

7. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag, and a set of rolls adapted to feed a continuous string through the stapling-machine and by which the tags are drawn therefrom strung upon said string, one of the aforesaid rolls having a blade cutting against a companion roll to sever the string between each pair of tags.

8. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag comprising a plunger having a staple-forming die and presser-bar by which a staple is cut from a metal strip and a previously-cut staple applied to the tag by a single operation of said plunger, and means for feeding a string under the metal strip and by which the tag is removed from the machine when a staple is applied.

9. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag comprising a plunger having a staple-forming die and presser-bar by which a staple is cut from a metal strip and a previously-cut staple applied to the tag by a single operation of said plunger, and means for feeding a string under the metal strip and across the tag and by which said tag is drawn from the stapling-machine when the staple is applied.



10. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag comprising a plunger having a staple-forming die and  
5 presser-bar by which a staple is cut from a metal strip and applied to the tag, a table along which the tags are led from the stapling-machine, and means at the end of the table for feeding a string through the stapling-machine and across said table and by  
10 which the tags are drawn from the stapling-machine strung upon said string, substantially as shown and described.

11. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag comprising a plunger having a staple-forming die and  
15 presser-bar by which a staple is cut from a metal strip and applied to the tag, a table along which the tags are led from the stapling-machine, and a pair of rolls at the end of the table adapted to feed a continuous

string through the stapling-machine across the tag and by which the tag is drawn from said stapling-machine. 25

12. In a machine for stringing tags, the combination, of a stapling-machine for attaching a staple and string to the tag comprising a plunger having a staple-forming die and  
20 presser-bar by which a staple is cut from a metal strip and applied to the tag, a table along which the tags are led from the stapling-machine, and a set of rolls for feeding a continuous string through the stapling-machine and by which the tags are drawn there-  
25 from, one of said rolls having a knife cutting against a companion roll to sever the cord at a point between the tags. 35

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

JAMES C. KIMSEY.

Witnesses:

GRAFTON L. MCGILL,  
HORACE S. BEALL.