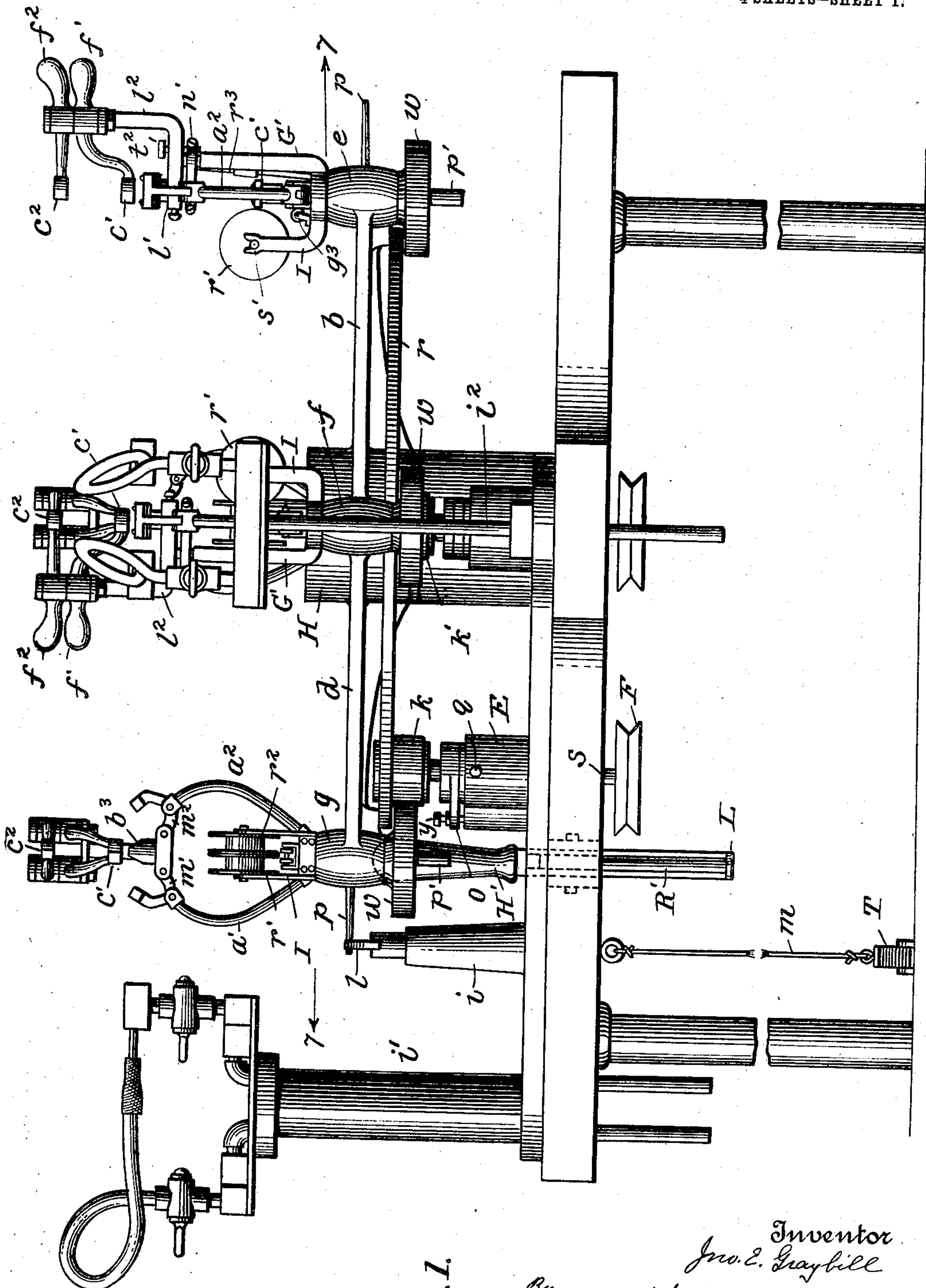


J. E. GRAYBILL.  
MACHINE FOR MAKING INCANDESCENT LAMP MOUNTS.  
APPLICATION FILED OCT. 8, 1903.

919,851.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 1.



Witnesses  
J. E. Graybill  
Thos. Howe

Fig. 1.

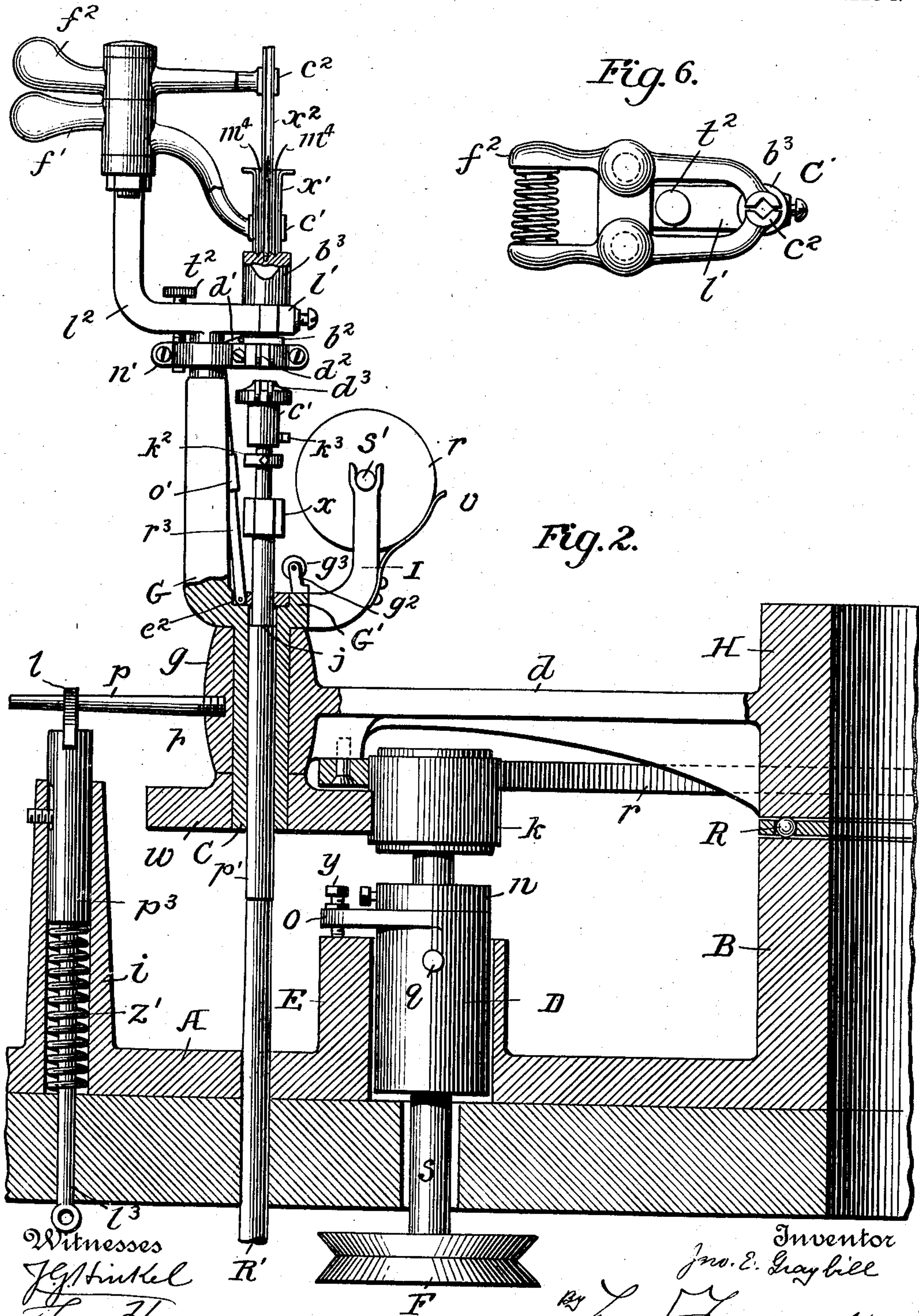
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4 SHEETS—SHEET 2.



Witnesses  
J. E. Hinkel  
Thos. Howe

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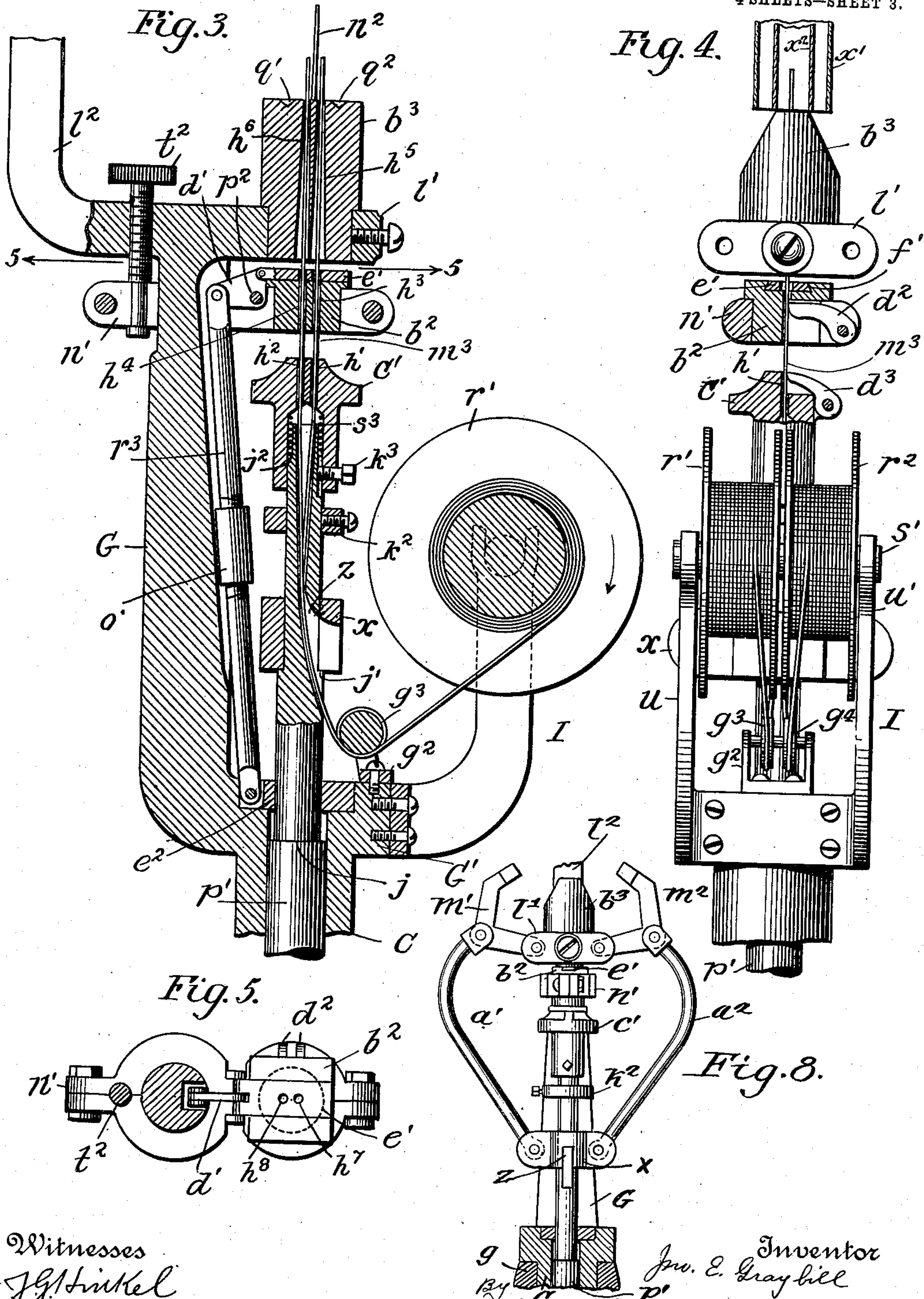
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4 SHEETS—SHEET 3.



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4 SHEETS--SHEET 4.

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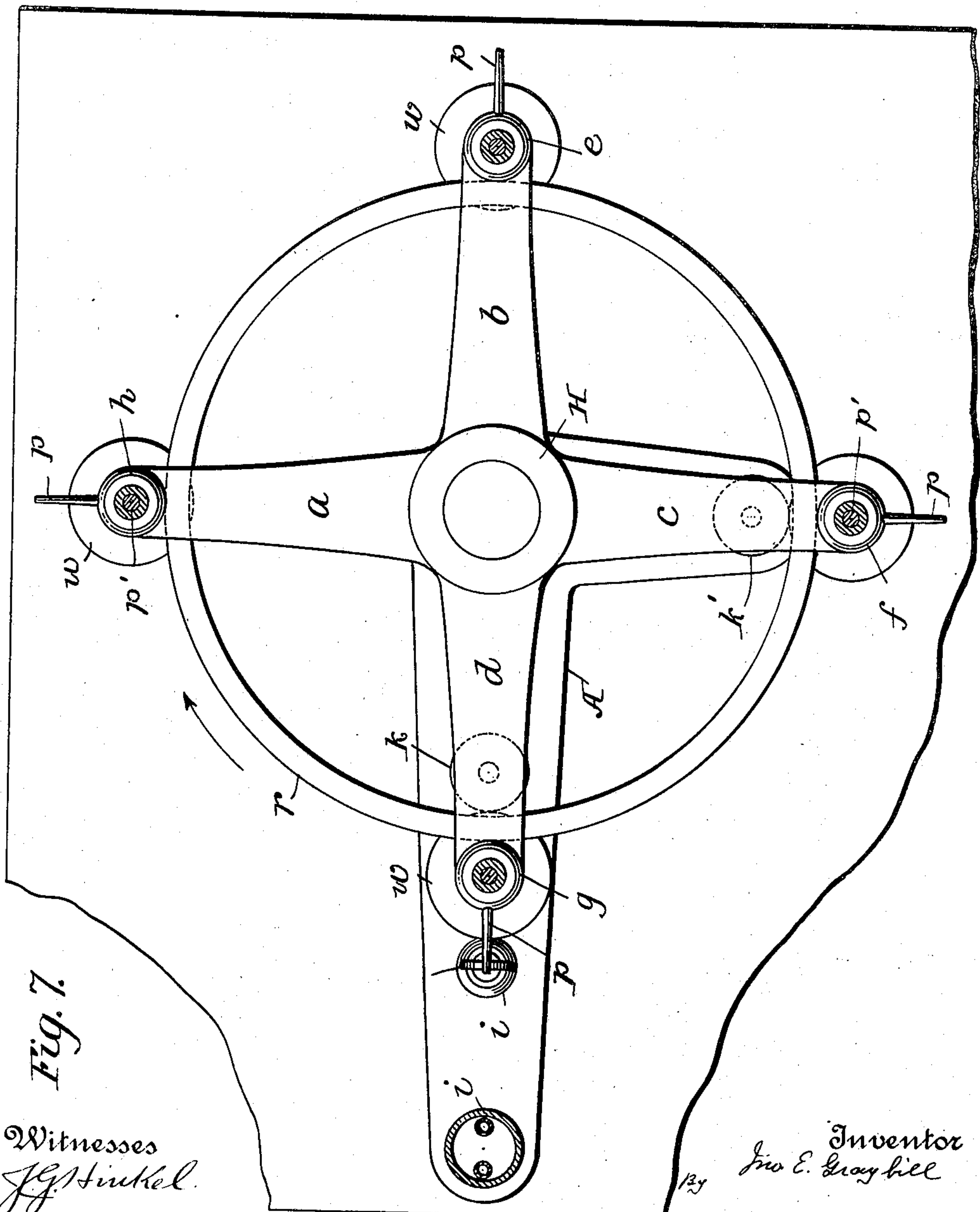


Fig. 7.

Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN E. GRAYBILL, OF YORK, PENNSYLVANIA, ASSIGNOR TO GENERAL ELECTRIC COMPANY,  
A CORPORATION OF NEW YORK.

## MACHINE FOR MAKING INCANDESCENT-LAMP MOUNTS.

No. 919,851.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed October 8, 1903. Serial No. 176,265.

*To all whom it may concern:*

Be it known that I, JOHN E. GRAYBILL, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Making Incandescent-Lamp Mounts, of which the following is a specification.

My invention relates to machines for manufacturing incandescent lamps and has for its object the provision of a machine whereby the production of the "mounts," that is those portions of the lamps which support the "lead" and "anchor" wires, is greatly facilitated.

My invention can be best explained in connection with the accompanying drawings in which;

Figure 1 is an elevation of a machine embodying my invention; Fig. 2 is an enlarged elevation partly in section of a portion of the apparatus; Fig. 3 is an enlarged view in vertical section of the upper portion of the apparatus shown in Fig. 2; Fig. 4 is an elevation partially in section of the apparatus of Fig. 3 looking from the right of that figure; Fig. 5 is a plan view of the apparatus of Figs. 3 and 4 looking from line 5—5 in Fig. 3; Fig. 6 is a plan view of a supporting clamp; Fig. 7 is a plan view of the machine looking from line 7—7 of Fig. 1; Fig. 8 is a side elevation of a portion of the machine showing the manner of mounting the mount forming clamps.

Referring to the drawings, A indicates a base upon which is mounted a post B which post rotatably supports the hub H by means of a roller bearing R. Extending radially from the hub is a plurality of arms *a*, *b*, *c*, and *d*, which are rigidly secured to hub H and at their outer ends carry the hubs *e*, *f*, *g*, and *h*. Fixed to arms *a*, *b*, *c*, and *d*, is the ring *r* and at each of two points, corresponding to successive arms, rollers *k* and *k'* are adapted to engage with it. The means for operating and supporting the two rollers is the same in both cases and therefore a description of one of them is sufficient. The roller *k* is fixed to shaft *s* which is journaled in the bearing D which bearing is pivotally supported by pins as *q* in the boss E raised upon the base A. To the lower end of the shaft *s* is fixed a pulley F by means of which rotation of the shaft *s* is produced. Bearing upon the up-

per end of bearing D is a collar *n* secured to shaft *s* to prevent it from sliding downwardly through bearing D. The tension of the belt upon pulleys F if directed toward the center of the machine will be sufficient to throw rollers *k* and *k'* outward but if not so arranged this may be effected by springs or other means. There is an extension *o* at one side of bearing D which carries at its end the adjusting screw *y*. This adjusting screw bears upon boss E and regulates the extent of movement of bearing D upon pins *q*. Similar apparatus is carried upon each of the hubs at the extremities of arms *a*, *b*, *c*, and *d* and therefore a description of one will be a description of each.

In hub *g* is mounted the hollow shaft C which at its lower end has secured to it the wheel *w* and at its upper end is shouldered against the upper end of hub *g* so that endwise movement of the shaft is prevented. The wheel *w* is of such a size that its inner edge is somewhat nearer the center of the machine than the inner side of ring *r*. Where the shaft C emerges from the hub *g* the arms G and G' branch off from it. To arm G' is secured the bracket I having the two arms *u* and *u'* in which the ends of the shaft *s'* are rotatably supported. Shaft *s'* carries a plurality of reels as *r'* and *r''*. *v* is a spring for frictionally braking the reels. The arm G divides at its top into the limbs *l'* and *l''*. The arm *l''* carries the two supporting clamps *c'* and *c''* which are normally held closed by means of springs but which may be opened by pressure upon the finger pieces *f'* and *f''*. The centers of the clamp grips lie in the axial line of the hollow in shaft C. Slidably mounted in the hollow of shaft C is the plunger rod *p'* which extends below the lower end of shaft C. The rod *p'* has one shoulder at *j*, another at *j'* and another at *j''*. Between the shoulders *j'* and *j''* the collar *k''* is fixed to the rod. Slidably mounted upon rod *p'* between shoulder *j'* and collar *k''* is sleeve *x* which carries the forming clamp arms *a'* and *a''* which are pivoted to it and to links *m'* and *m''* which in turn are pivoted to limb *l'* of arm G and carry the mount forming faces at their upper ends. Covering the upper end of rod *p'* is the cap C' having longitudinally extending holes *h'* and *h''* and between the shoulder *j''* and cap C' is the compression spring *s''*. The screw *k''*, carried



by cap  $C'$ , extends into a longitudinal slot in rod  $p'$  and restrains said cap from rotating while permitting its longitudinal movement. The slot is closed at its ends and therefore  
 5 limits the longitudinal movement also.

Upon the arm  $G$  just below the junction of limbs  $l'$  and  $l^2$  is sleeved the bracket  $n'$  which is adjustable to and from limb  $l'$  by means of the thumb screw  $t^2$  which is threaded in limb  $l^2$ . The bracket  $n'$  carries a block  
 10  $b^2$  having the longitudinally extending holes  $h^3$  and  $h^4$  in line with the holes  $h'$  and  $h^2$  respectively and in one side of said block is formed a recess for the reception of dog  $d^2$   
 15 which dog is pivoted in bracket  $n'$  and is of such length that it is restrained from assuming a horizontal position by coming into contact with the bottom of the recess or some interposed object. A similar dog  $d^3$  is  
 20 placed in a recess in cap  $C'$ .

Slidably mounted upon the top of block  $b^2$  is the shearing piece  $e'$  which is guided in its movement and secured to said block by the dove tail  $f'$  as shown in Fig. 4. The piece  $e'$   
 25 is perforated as shown at  $h^7$  and  $h^8$  and pivotally secured to piece  $e'$  is the bell crank  $d'$  which is pivoted to bracket  $n'$  at  $p^2$  and has pivotally joined to it the rod  $r^3$  which in turn is pivoted to the collar  $e^2$  sleeved on rod  $p'$   
 30 which collar has a countersunk seat on the shaft  $C$  and is adapted to be engaged by shoulder  $j$ , and sleeve  $x$ . The rod  $r^3$  is made in two sections which are joined by the reversely threaded sleeve  $o'$  whereby the length  
 35 of rod  $r^3$  may be adjusted. The arm  $G$  is cut away to receive the rod  $r^3$  as shown.

Upon the outer end of limb  $l'$  and secured thereto in a suitable manner is the die block  $b^3$  having the tapered axially extending holes  
 40  $h^5$  and  $h^6$  in line with holes  $h^3$  and  $h^4$  respectively. Extending from the top of the die block and located centrally with relation to the holes  $h^3$  and  $h^4$  is the needle  $n^2$ ; in the top of the die block also are formed the recesses  
 45  $q'$  and  $q^2$ .

Mounted upon the shaft  $C$  is the bracket  $g^2$  for supporting guide pulleys as  $g^3$  and  $g^4$  for guiding the wires as they are drawn from the reels. In the rod  $p'$  is the recess  $z$  opening at  
 50 one side of the rod to receive the wires and extending axially to a point beneath the cap  $C'$ . Extending from each of the hubs  $e, f, g$ , and  $h$  are the pins as  $p$ .

Mounted upon the base  $A$  is the pedestal  $i$   
 55 in which the plunger  $p^3$  is mounted to have longitudinal but not rotative movement. The plunger is spring pressed to its upper limit of travel by means of a spring  $z'$  which at its lower end bears against the base  $A$  and  
 60 at its upper end against the plunger. Secured to the top of the plunger is a latch  $l$  which when the plunger is in its uppermost position lies in the path of pins  $p$  but is moved out of the path of the pins when the  
 65 plunger is moved downward against spring

$z'$  by means of a connecting link  $l^3$  secured to its lower end. Link  $l^3$  may be operated by means of a treadle  $T$  to which it may be secured by a cord as  $m$ . The rod  $R'$  is adapted to reciprocate in a hole in base  $A$  so as to be brought into and out of contact with the end  
 70 of rod  $p'$  and at its lower end rests upon a lever  $L$ . This lever is fulcrumed on the base  $A$  or its support and has the operating handle  $H'$  which when pulled outward forces  
 75  $R'$  upward to operate rod  $p'$ .

A pedestal  $i'$  supports a gas burner in such position that the flame will be directed to a point just above and to the center of the die block  $b^3$  on one of the arms when it is held  
 80 stationary by the engagement of latch  $l$  and a pin  $p$  and a support  $i^2$  supports a burner in similar relation to an adjacent arm.

Having described the various parts of a machine embodying my invention, I will  
 85 now outline its operation. An operator seated between the arms  $a$  and  $b$ , when in the position shown in Fig. 7, places in the clamp  $c'$  of the arm  $b$  a glass mount tube as shown at  $x'$  in Fig. 2 so that there is a short distance  
 90 between its base and the top of die block  $b^3$ . Within the tube  $x'$  is placed a smaller and longer tubulating tube  $x^2$  which is held by clamp  $c^2$  and which may rest upon the top of the die block  $b^3$ . Tubing  $x^2$  is placed over the needle  
 95  $n^2$ . Between the tubes  $x'$  and  $x^2$  are inserted lead wires  $m^4$ , the ends of which project within the recesses  $q'$  and  $q^2$ . The anchor wires  $m^3$  for the filament are in this case shown as two, although they may be of any  
 100 desired number and are wound upon reels  $r'$   $r^2$ , whence they pass over the guide pulleys  $g^3$   $g^4$  then through the recess  $z$  in rod  $p'$  and emerging from the end of the rod beneath the cap  $C'$ , enter the holes  $h'$  and  $h^2$  in said  
 105 cap, thence pass through the holes  $h^3$  and  $h^4$  of block  $b^2$  and previous to the operation of rod  $p'$ , wires  $m^3$  having been sheared by the piece  $e'$  against the block  $b^2$  in the manufacture of the previous lamp, they terminate  
 110 near the top of block  $b^2$  and below the shearing piece  $e'$ . In the position as shown, the pin  $p$  on hub  $g$  is in engagement with the latch  $l$  and the rollers  $k$  and  $k'$  bear upon the wheels  $w$  upon the arms  $c$  and  $d$  which by  
 115 their engagement therewith hold the rollers  $k$  and  $k'$  out of engagement with the ring  $r$  and secure the rotation of the shafts  $C$ . A downward pull upon the rod  $l^3$  releases the pin  $p$  from latch  $l$  when the thrust upon the  
 120 bearing of shaft  $C$  causes the arms  $a, b, c$ , and  $d$  and hub  $H$  to which they are secured to turn upon bearing  $R$  in this case in the direction of the arrow, in Fig. 7 and after the wheels  $w$  upon arms  $c$  and  $d$  have been  
 125 carried out of engagement with rollers  $k$  and  $k'$ , said rollers will engage with ring  $r$  to continue the movement of the arms and hub  $H$  until the wheels  $w$  upon arms  $b$  and  $c$  have come into engagement with the rollers  
 130



$k'$  and  $k$  respectively when the latch  $l$  having been returned to its upper position by the spring  $z'$  it will engage with pin  $p$  upon hub  $f$  and stop the further rotation of hub  $H$  and its connected arms. The flame proceeding from the gas burner upon the standard  $i^2$  will now play upon the lower portion of the tubes  $x'$  and  $x^2$ , these tubes being maintained in rotation, so that all sides are heated, by means of the engagement of the roller  $k'$  and wheel  $w$  upon arm  $b$ . The hub and arms are maintained in this position while the operation of forming the mount upon the arm  $c$  is being completed and during this operation the tubes of which the mount is formed, upon the arm  $b$  will receive a preliminary heating.

Upon the completion of the mount upon arm  $c$  the latch  $l$  is again depressed permitting the hub  $H$  and its arms to be moved in a manner as before described, until the wheel  $w$  upon arm  $b$  comes into engagement with roller  $k$  and the pin  $p$  upon the hub  $e$  is stopped against latch  $l$ . The rotation of shaft  $C$  and the apparatus carried by it, in order that the tubes may be heated evenly as in the preceding position of arm  $b$ , is produced in precisely the same manner and when the tubes  $x'$  and  $x^2$  have been sufficiently softened by the flame playing upon their lower ends the plunger rod  $p'$  is pressed upwardly by the operator. The first operation of thus actuating the rod is to cause the shoulder  $j'$  to come into engagement with the sleeve  $x$  and a further movement of the rod actuates the arms  $a'$  and  $a^2$  to move the upper ends of the form clamps toward the bases of the tubes  $x'$  and  $x^2$  at a point just above the die block  $b^3$ . This movement being continued, the top of the cap  $C'$  will come against the base of the block  $b^2$  and at the same time the shoulder  $j$  will come against the bottom of collar  $e^2$ . Throughout this movement of the rod the anchor wires have been clutched between dog  $d^3$  and the bottom of the recess in cap  $C'$ , and hence said wires are unwound from the reels and carried upward by said cap, their upper ends passing successively through holes  $h^7$ ,  $h^8$  and  $h^5$ ,  $h^6$  until when cap  $C'$  rests against the base of  $b^2$  the said anchor wires will project a short distance above the top of block  $b^3$ . Further upward movement of rod  $p'$  causes the collar  $e^2$  to be lifted and through the agency of rod  $r^3$  the bell crank is turned about the pivot  $p^2$  so that the shearing piece  $e'$  moves across the block  $b^2$  and thereby shears off the anchor wires. During the movement of the shearing piece, the cap  $C'$  remains stationary having reached the upward limit of its movement and therefore the wires are stationary during the operation of cutting. The upward movement of the shaft necessary to actuate the shearing piece is permitted by the compression of spring  $s^3$ . During the operation of shearing off the anchor wires the

forming clamps upon the extremities of links  $m'$  and  $m^2$  are brought against the bases of the tubes  $x'$  and  $x^2$  causing them to be tightly compressed about both the leading in and anchor wires, the clamps being prevented from coming too closely together by projections as screws, upon the faces of the clamps between which screws the mount is formed. This operation having been completed the plunger rod  $p'$  is permitted to fall, in so doing it carries with it the cap  $C'$  and after an interval of movement the collar  $k^2$  abuts against the sleeve  $x$ . Continued downward movement of the rod carries the sleeve  $x$  with it and thereby opens up the mount-forming clamps. At a certain point in its movement the sleeve  $x$  engages with the collar  $e^2$  and carrying it back into its seat, resets the shearing piece  $e'$  so that its holes  $h^7$  and  $h^8$  are again in alinement with holes  $h^3$  and  $h^4$  in block  $b^2$ . In its downward movement, however, the cap  $C'$  does not carry with it the anchor wires which are permitted to slip in an upward direction by the dog  $d^3$  and are held against slipping in a downward direction by the dog  $d^2$ . The process of manufacturing the mount upon arm  $b$  is now completed and the parts are in position for receiving materials for forming a new mount when the old one is removed. The latch  $l$  is now depressed thus permitting the arm  $b$  to move into the position occupied by arm  $a$  in the drawing and the arm  $a$  takes its place and the apparatus upon it is operated in the same manner as that outlined in connection with arm  $b$ . In the last position of the arm  $b$  the completed mount is removed from it. The process observed in connection with the manufacture of a mount upon arm  $b$  is followed in connection with each of the arms as they succeed each other.

The function of the needle  $n^2$  is to prevent the closing up of the tube  $x^2$  through which the bulb is to be exhausted when the forming clamps are brought together about its base. It is evident that where the bulb is exhausted from some other point than the base that the supporting clamp  $c^2$ , tube  $x^2$  and needle  $n^2$  may be dispensed with.

While I have shown mounts in which two anchor wires are employed, it will be obvious that by increasing the number of holes through which the wires can be threaded throughout the apparatus and suitably modifying the reeling device that my invention can be extended to cover any number of anchor wires. The recesses  $q'$  and  $q^2$  permit the leading in wires to project slightly below the formed mounts so that connections of the filament may be made thereto. By increasing the number of recesses any number of "leading in wires" may be provided for.

The die block  $b^3$  has its sides cut away near the top at such an angle that the flame impinging against them is deflected upward



and the top is of less width than the diameter of the base of the mount tube so that the flame may enter the tube and thus heat its interior and also the tubulating tube mounted within it. This action is assisted if the base of the mount tube is held a short distance above the top of the die block and the even heating of the tubulating tube will be promoted if it too is held a short distance above the die block. The entrance of the flame into the interior of the mount tube is extremely important in the construction shown as otherwise there is danger that the tubulating tube will not become properly heated.

According to the patent statutes, I have described my invention in connection with an apparatus which I consider to be its best embodiment, but I desire to have it understood that it may have other embodiments and I do not desire to be limited to the construction shown in the drawings.

What I consider novel and of my invention will be pointed out in the appended claims.

1. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably mounted upon said support, and a power driven wheel adapted to rotate said support and to be automatically disengaged therefrom and successively engaged with the several mount forming apparatus as the latter are brought into operative position by the rotation of the support.

2. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably mounted upon said support, a driving wheel secured to each of said apparatus, and a power wheel adapted to rotate said support and to be automatically disengaged therefrom and engaged successively with the driving wheels of the mount forming apparatus as the latter are brought into operative position by the rotation of the support.

3. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably mounted upon said support, a driving wheel secured to each of said apparatus, a power wheel adapted to rotate said support, and means for bodily shifting said wheel to disengage it from the support and cause it to engage successively the driving wheels of the mount forming apparatus as the latter are brought into operative position by the rotation of the support.

4. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably supported thereon, a ring secured to said support, a

driving wheel secured to each of said apparatus, and a power driven wheel arranged with relation to said ring and driving wheels so that in the operative positions of said support said power driven wheel is in engagement with a driving wheel and at intermediate positions of said support said power driven wheel is in engagement with said ring.

5. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably supported thereon, a ring secured to said support, a driving wheel secured to each of said apparatus and extending beyond the inner edge of said ring, and a power driven wheel yieldingly held in engagement with the inner edge of said ring.

6. In a machine for manufacturing incandescent lamp mounts, the combination of a rotatable support, a plurality of mount forming apparatus rotatably supported thereon, a ring secured to said support, a driving wheel secured to each of said apparatus and extending beyond the inner edge of said ring, a power driven wheel adapted to engage with the aforesaid wheels and said ring, a shaft upon which said power driven wheel is fixed, and a pivotally supported bearing for said shaft.

7. In an apparatus for making incandescent lamp mounts, the combination with means for shaping a tube to form a mount, of means for automatically feeding anchor wires into said tube.

8. In an apparatus for making incandescent lamp mounts, the combination with a rotatable support, a plurality of mount forming apparatus mounted on said support, means for rotating the support to bring said apparatus successively into operative position, and means for automatically feeding anchor wires into the tube supported in said mount forming apparatus.

9. In an apparatus for forming incandescent lamp mounts, means for feeding a continuous wire from which the anchor wires are formed and means for forming a mount about said wires.

10. In an apparatus for forming incandescent lamp mounts, the combination of a device for feeding a continuous wire of which the anchor wires are formed, means for cutting said wire after it has been fed into place and means for forming a mount about said wires.

11. In an apparatus for forming incandescent lamp mounts, the combination of a device for feeding anchor wire, a device for cutting said anchor wire, common operating means for said devices and means for forming a mount about said wire.

12. In an apparatus for forming lamp mounts, the combination of a device for feed-



ing a continuous wire from which anchor wires are formed, a device for forming a mount about said wire, and a common operating means for said devices.

5 13. In an apparatus for forming incandescent lamp mounts, the combination of a device for forming the mounts about an anchor wire, a device for cutting said anchor wire, and a common operating means for said devices.

10 14. In an apparatus for forming lamp mounts, the combination of a device for feeding anchor wire, a device for forming the mount about said anchor wire, and common operating means for said devices.

15 15. In an apparatus for forming lamp mounts, the combination of a device for feeding an anchor wire, a device for forming a mount about said anchor wire, a device for cutting said anchor wire, and a common means for operating said devices in such manner that the wire is first fed into place, and then the wire is cut and the mount formed simultaneously.

20 16. In a mount forming apparatus, the combination of a wire feeding device, a cutting device, a common operating means for said devices, means whereby the wire is maintained stationary during the operation of cutting and means for forming a mount about the wire.

25 17. In an apparatus for forming incandescent lamp mounts, the combination of a device for feeding anchor wire, a device for forming a mount about said anchor wire, a device for cutting said anchor wire, a reel for said wire, means for holding the mount tube in place, means for holding the tubulating tube in place, a shaft upon which said devices and means are so mounted as to revolve therewith, and a rod extending axially through said shaft and capable of axial movement to operate said devices.

30 18. In an apparatus for forming incandescent lamp mounts, a wire feeding device comprising a longitudinally movable rod, means for securing the wire to said rod in its forward movement but releasing said wire in the return movement of said rod, a block in line with said rod having a hole for the passage of said wire, means associated with said block for restraining the backward but permitting the forward movement of said wire and means for forming a mount about the wire.

35 19. In an apparatus for forming incandescent lamp mounts, the combination of a wire feeding device comprising a longitudinally movable rod, means for securing the wire to said rod in its forward movement but releasing said wire in the return movement of said rod, a block in line with said rod having a hole for the passage of said wire, and means associated with said block for restraining the backward but permitting the forward move-

ment of said wire, a second block in line with the aforesaid block and rod having a hole for guiding the end of a wire into place to have a mount formed about it and means for forming a mount about the wire.

70 20. In an apparatus for forming mounts for incandescent lamps, the combination of a die block above which a mount is formed, a hole in said block through which a wire may be introduced into said mount, forming 75 clamps for pressing said mount into form about said wire, and means for maintaining a hole through said mount by which the bulb may be exhausted.

21. In an apparatus for forming mounts 80 for incandescent lamps, the combination of a die block above which a mount is formed, a hole in said block through which a wire may be introduced into said mount, forming clamps for pressing said mount into form, 85 and a pin projecting from said block into said mount.

22. In an apparatus for forming incandescent lamp mounts, the combination with a burner, of means for holding glass tubes 90 concentric with their corresponding ends in the same plane, and means for directing the flame of the burner into the open ends of said tubes.

23. In an apparatus for forming incandescent lamp mounts, the combination with a burner, of a rotatable holder for supporting two tubes one within the other with their corresponding ends in the same plane, and a deflector for directing the flame of the burner 100 into the open ends of said tubes.

24. In an apparatus for forming incandescent lamp mounts, the combination with a burner, of clamping means for holding one glass tube within another, and a support for 105 the ends of said tubes mounted in the path of the flame from the burner and shaped to deflect part of the flame into the ends of both of said tubes.

25. In an apparatus for forming incandescent lamp mounts, the combination with a burner, of a rotatable support for holding corresponding ends of concentric tubes in the flame of the burner and shaped to direct the flame into the ends of both tubes. 115

26. In a machine for forming lamp mounts, the combination with a burner, of means for positioning tubes one within another, and a wedge-shaped support having an edge thinner than the inner diameter of the inner 120 tube and longer than the outside diameter of the outer tube for engaging the ends of the tubes, said support being mounted to deflect the flame along its sides into the ends of said tubes. 125

27. In an apparatus for forming incandescent lamp mounts, a die block having a top of less width than the diameter of the base of the mount tube.

28. In an apparatus for forming incan- 130



descent lamp mounts, a die block having a top of less width than the diameter of the base of the mount tube, means for supporting the mount tube above said block, and means  
5 for supporting a tubulating tube within said mount tube.

29. In an apparatus for forming incandescent lamp mounts, the combination of means for feeding a wire toward the point at  
10 which the mount is formed, and a cutting device located between said means and said point.

30. In an apparatus for forming incandescent lamp mounts, means for feeding a  
15 wire toward the point at which the mount is formed, a device permitting the forward movement of said wire but preventing it from moving in the opposite direction on the return of said means, and a cutting device  
20 located between the aforesaid device and said point.

31. In an apparatus for forming incandescent lamp mounts, the combination of a longitudinally movable rod, a cap flexibly  
25 supported upon the end of said rod, wire

clutching means carried by said cap, a block against which said cap is adapted to abut, a wire cutting device adapted to be operated from a collar engaging with a shoulder upon said rod, the whole being so constructed and  
20 arranged that said cutting device is operated while said cap is in abutment with said block.

32. In an apparatus for forming incandescent lamp mounts, a longitudinally movable rod, a cap flexibly supported upon the  
35 end of said rod, wire clutching means carried by said cap, mount forming clamps, a sleeve upon said rod with which said clamps are operatively connected, a cutting device, a collar upon said rod to which said cutting  
40 device is operatively connected and shoulders upon said rod adapted to engage with said sleeve and collar respectively.

In testimony whereof I have signed my name to this specification in the presence of  
45 two subscribing witnesses.

JNO. E. GRAYBILL.

Witnesses:

I. A. FAIRGRIEVE,  
THOS. HOWE.