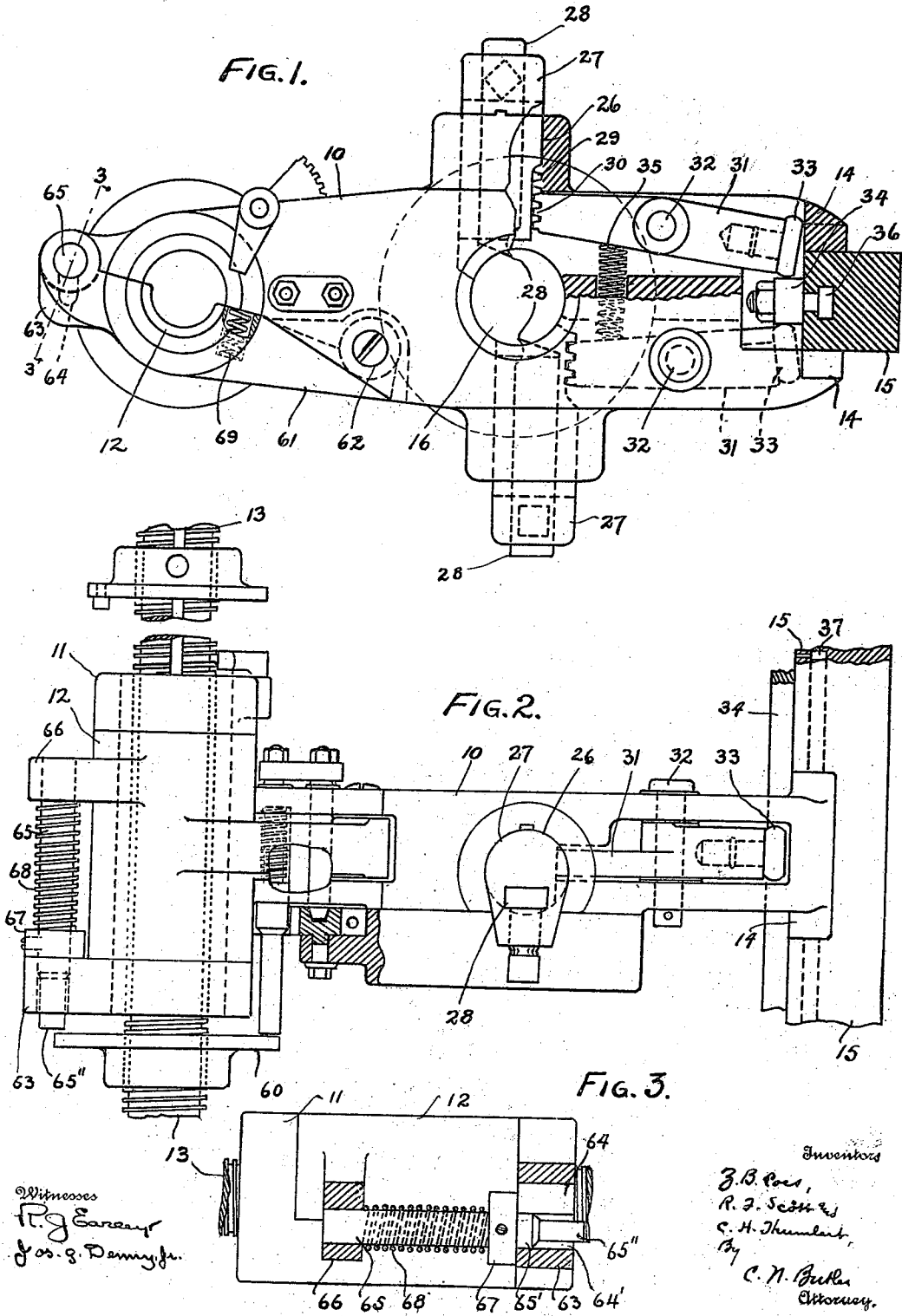


Z. B. COES, R. F. SCOTT & C. H. THUMLERT.
TURNING MECHANISM.

APPLICATION FILED OCT. 8, 1907.

962,197.

Patented June 21, 1910.



UNITED STATES PATENT OFFICE.

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TURNING MECHANISM.

962,197.

Specification of Letters Patent. Patented June 21, 1910.

Original application filed January 16, 1907, Serial No. 352,499. Divided and this application filed October 8, 1907. Serial No. 396,367.

To all whom it may concern:

Be it known that we, ZORESTER B. COES, ROBERT F. SCOTT, and CHARLES H. THUMLERT, residents of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have jointly invented an Improved Turning Mechanism, of which the following is a specification.

This invention is a division of our application filed January 16, 1907, Serial Number 352,499, and relates to turning mechanism for reducing the intermediate portions of locomotive stay bolts so as to provide flexibility, though it will be understood that it is equally adapted for shaping other products.

In the drawings, Figure 1 is a sectional plan view of mechanism embodying the invention; Fig. 2 is a sectional side elevation thereof; and Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

As shown in the drawings, the invention comprises the head 10, which has at one end the hub 11 with the half nut 12 for engaging the lead screw 13 and at the other end the jaws 14 for engaging the guide post 15; the head being fed by the screw along its length and along the post, which latter prevents the rotation thereof. A hole 16 extends through the middle of the head in the direction of its movement for the reception of the bolt blank. Guide ways 26 extend transversely to the hole 16, and contain the holders 27 for the tools 28 for reducing the middle portion of the bolt or otherwise turning the form desired. These holders have thereon the teeth 29 which are engaged by the teeth 30 on the inner ends of the levers 31. The levers are fulcrumed on the pins 32, carried by the head, and have thereon the rollers 33. These rollers are held in contact with the former 34 by the spring 35 disposed between the levers. The former, lying within the head between the jaws, is secured adjustably by the T-bolts 36 passing therethrough and engaging the T-slots 37 in the guide post. The half nut 12 has an arm 61 pivoted by a pin 62 to the head. The hub 11 has the lug 63 containing the slot 64, terminating in the enlarged hole 64', for engaging a bolt 65. This bolt is adapted to reciprocate in the bearing 66 of the half

nut and has a collar 67 fixed thereon which limits its downward movement by striking the lug 63, a spring 68 being disposed between the bearing 66 and the collar 67 to press the bolt down. When the nut is closed to engage the screw, it may be locked by the engagement of the body of the bolt with the hole 64'. But when the head has been carried along the screw until the collar 60, fixed adjustably thereon in the path of the bolt 65, strikes the bolt end 65'', the bolt is moved out of the hole and the half nut is opened to disengage the screw by a spring 69 which is disposed between the head and the arm.

In operation, the blank to be acted upon is held and revolved in the hole 16 by well known mechanism. The half nut 12 is disengaged from the lead screw 13 to lift the head to the upper or initial position. At the initial position the half nut is closed and locked on the screw by the bolt 65. The screw, revolving, now translates the head, which is guided thereby and by the post 15, and the rollers 33, being thus carried along the former 34, act through the levers 31 and the holders 27 to adjust the position of the tools 28, by which the desired shape is given to the product. When the turning operation is completed, the end of the bolt 65 strikes the collar 60, upon which the half nut 12 is disengaged, and the head again brought to the initial position for a second operation, the turning tools following the former in the retractile movement.

Having described our invention, we claim:—

1. A machine comprising a head having jaws and an aperture for a blank, a cutting tool reciprocating in said head transversely to the direction of and into said aperture, an oscillating lever fulcrumed on said head and connected with said tool, a guiding device engaged by said jaws, and a former directly connected with said guiding device between said jaws and acting through said lever on said tool.

2. A machine comprising a head having an aperture for a blank, tool holders movable in said head transversely to the direction of said aperture, said holders having teeth thereon, levers fulcrumed on said head,

said levers having teeth thereon engaging the respective teeth on said holders, a spring disposed between said levers to cause them to retract said holders, and a former connected with said levers to cause them to move
5 said holders inwardly.

In testimony whereof we have hereunto set our names this second day of October,

A. D. 1907, in the presence of the subscribing witnesses.

ZORESTER B. COES.
ROBT. F. SCOTT.
CHAS. H. THUMLERT.

Witnesses:

ROBERT JAMES EARLE,
JOS. A. DENNY, Jr.