(No Model.) 3 Sheets—Sheet 1.

S. MOORE.

MACHINE FOR STRAIGHTENING AND SIZING TWIST DRILLS.

No. 432,636. Patented July 22, 1890.

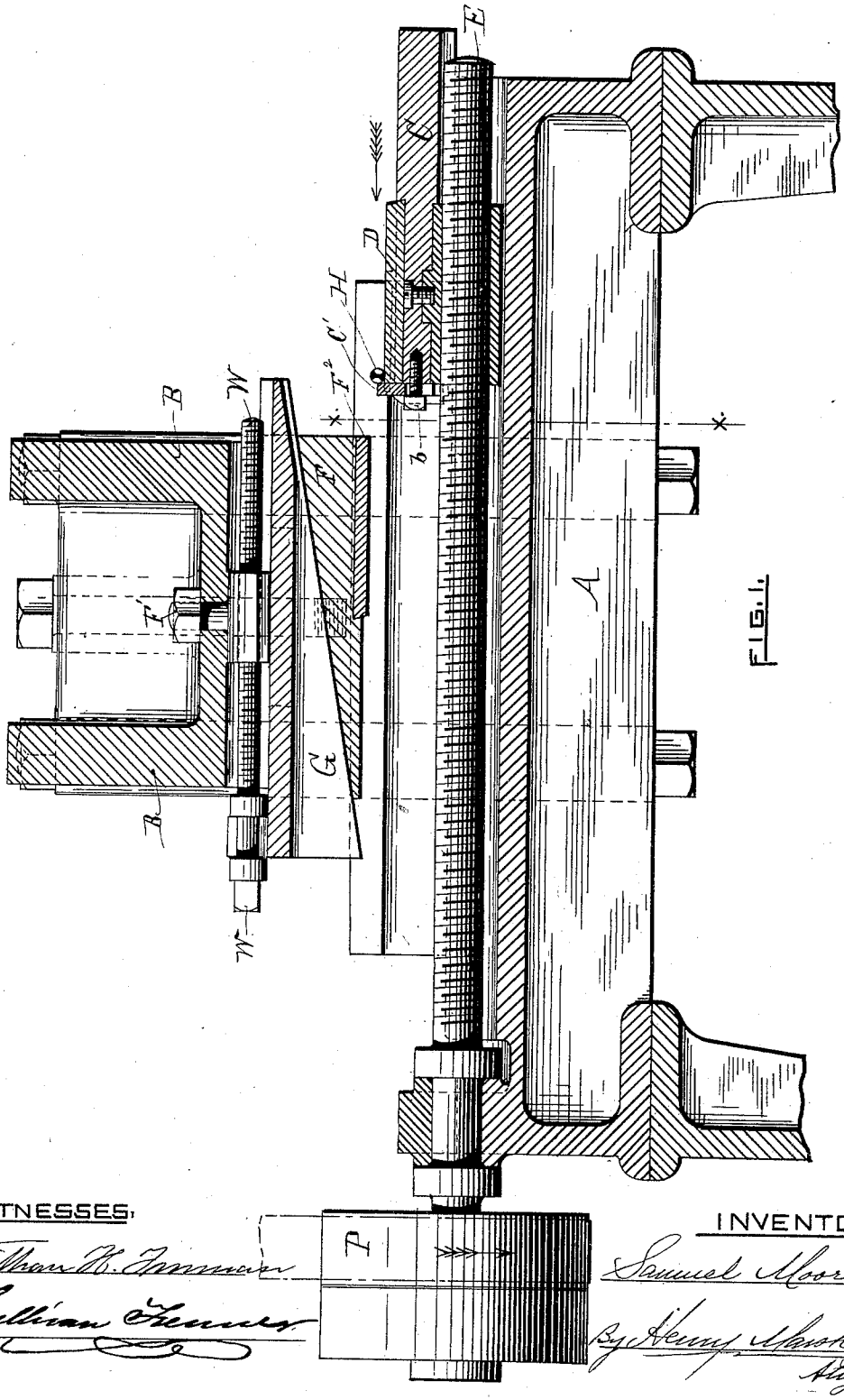


FIG. 1.

WITNESSES,

Nathan A. Tennison

Sullivan Tennison

INVENTOR,

Samuel Moore

By Henry Church Jr.

Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

S. MOORE.

MACHINE FOR STRAIGHTENING AND SIZING TWIST DRILLS.

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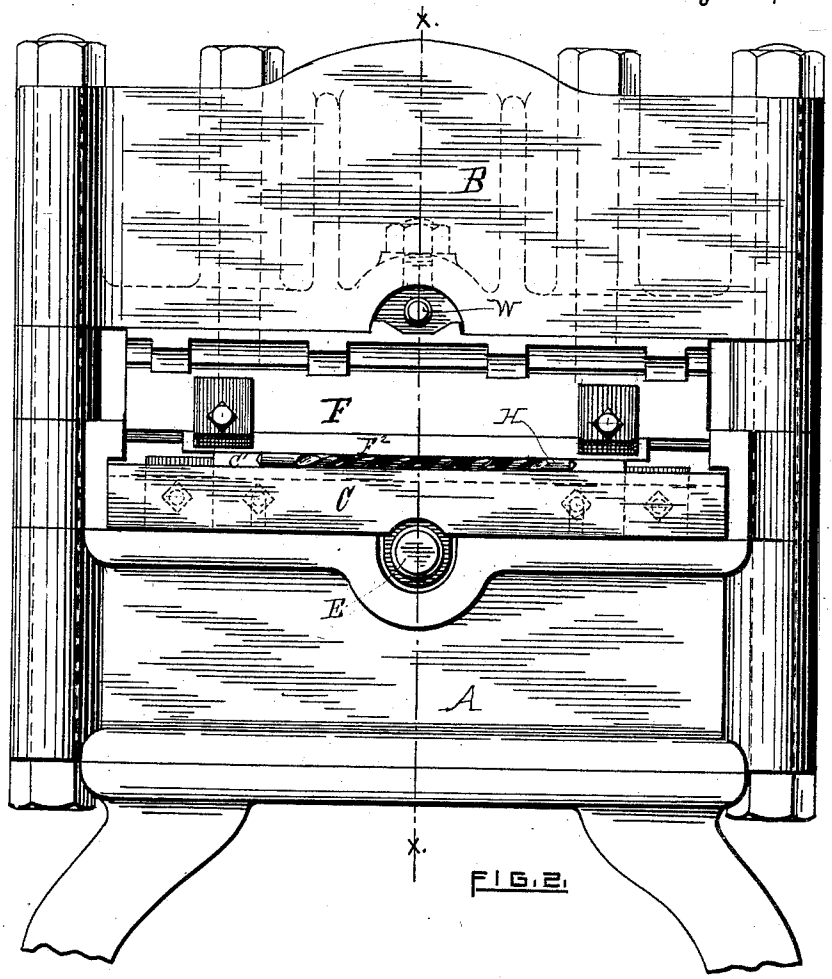


FIG. 2.

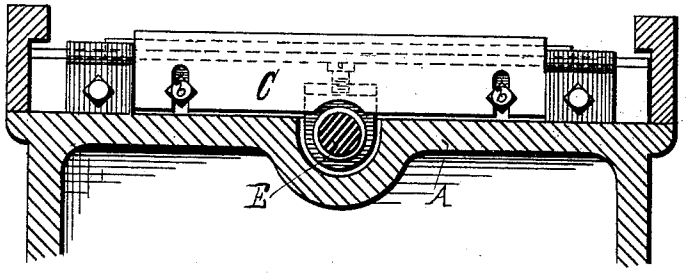


FIG. 3.

WITNESSES.

Nathan A. Freeman

Sullivan Stevens

INVENTOR.

Samuel Moore

By Henry Marsh Jr.
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 3.

S. MOORE.

MACHINE FOR STRAIGHTENING AND SIZING TWIST DRILLS.

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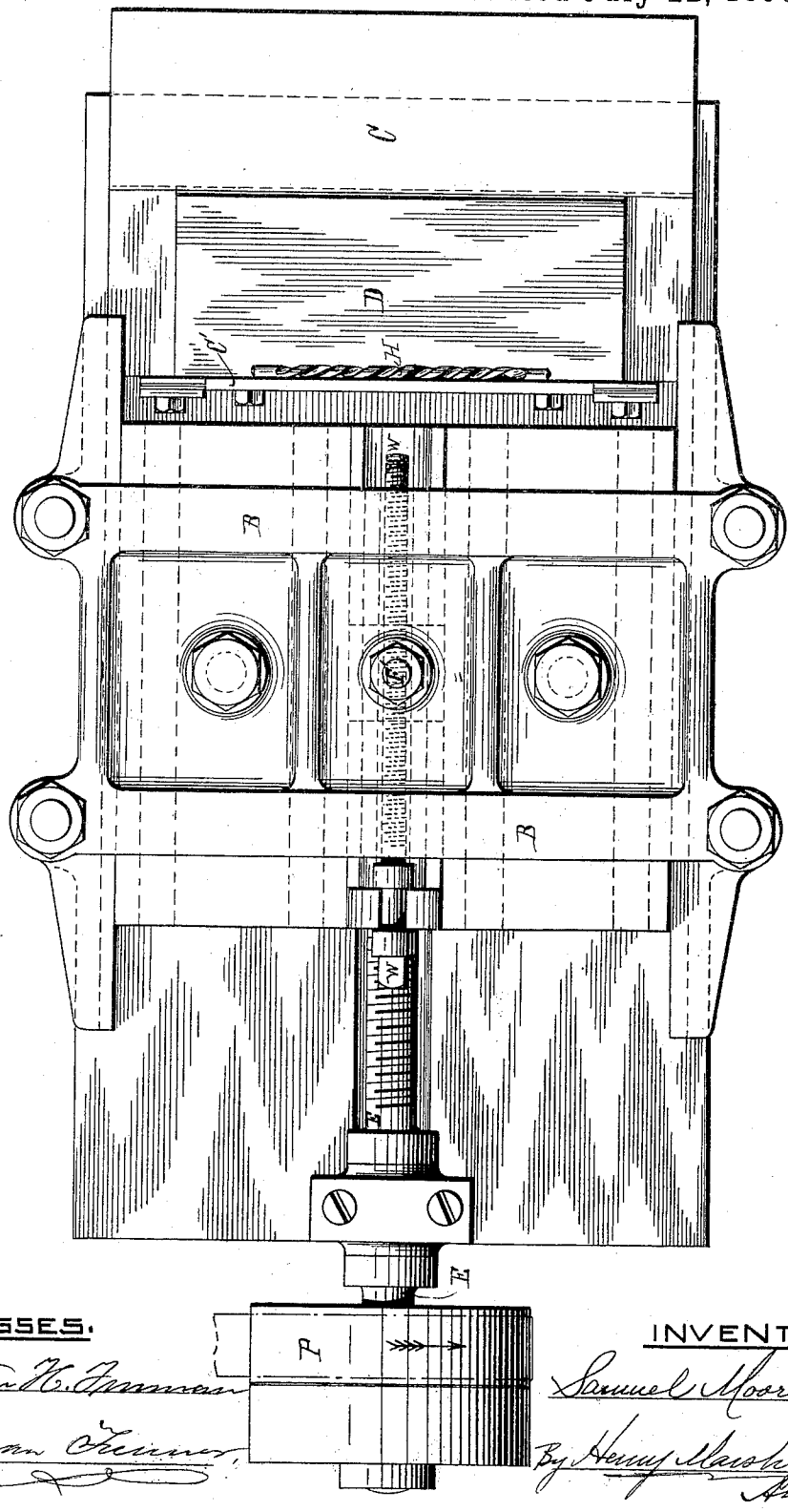


FIG. 4.

WITNESSES.

Nathan H. Freeman

Nathan Freeman

INVENTOR

Samuel Moore

By Henry Mason Jr.

Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL MOORE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE UNITED STATES TWIST DRILL COMPANY, OF SAME PLACE.

MACHINE FOR STRAIGHTENING AND SIZING TWIST-DRILLS.

SPECIFICATION forming part of Letters Patent No. 432,636, dated July 22, 1890.

Application filed May 21, 1886. Serial No. 202,837. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MOORE, a citizen of the United States, residing in the city and county of Providence, in the State of Rhode Island, have invented a new and useful Machine for Making Twist-Drills, of which the following is a specification.

My invention applies to machines for straightening and sizing twist-drills; and it consists in the combination and arrangement of a sliding bed and a stationary plate capable of vertical adjustment in its housing or framing relatively to the sliding bed by means of a wedge acting upon the inclined upper side of the plate and operated by a screw. Power is applied in the ordinary mode to slide the bed back and forth beneath the stationary plate.

In the art of making twist-drills as practiced prior to my invention, the drill required to be straightened and then ground to size. The devices and processes for straightening were expensive and unsatisfactory, and the grinding the drills to size was found to impair their efficiency and durability and to enhance the cost of manufacture. By the use of my invention the drills are straightened and sized at a single operation, and, moreover, are not weakened by grinding.

In the accompanying drawings, Figure 1 is a longitudinal central section of the operative parts of the machine on line $x\,x$ of Fig. 2. Fig. 2 is a front elevation of the machine. Fig. 3 is a rear view of the bed and adjacent parts, partly in transverse section on line $x\,x$ of Fig. 1. Fig. 4 is a plan view of the machine.

Similar letters indicate like parts where they occur in the drawings.

A represents a table, upon which is secured the housing B B, and upon which moves the bed C as operated by the screw E by power applied in the ordinary manner through a pulley P. The bed C has a face-plate D, preferably of hardened steel, and an adjustable flange or lip C′, adjusted and secured by bolts *b*, tapped into the rear of the bed through suitable slots in the flange C′.

The part F, which for the purposes of this specification I shall call a "plate," has a plane lower face lying in a plane parallel to the plane of the upper surface of the bed C. This face is provided with a face-plate F^2, preferably of hardened steel. The plate F has vertical movement in slots in the housing B, and is confined in the housing by a bolt F′, tapped into its upper surface, as shown in Fig. 1. The upper surface of the plate F is an inclined plane. In the housing immediately above the plate F, I mount a wedge G, having an inclined lower surface which rests upon the inclined upper face of the plate F and moves thereon to force the plate F downward. The wedge G is actuated by a screw W, and it is slotted to allow the bolts F′ to pass through it into the plate F. The face-plate F^2 and the face-plate D always lie in parallel planes, and the distance between their surfaces is determined by the diameter desired in the finished drill, and the plate F is brought to and held at that exact plane by means of the wedge G and its screw W.

In practical operation of my invention the drill-blank H, just as it comes from the twisting-machine, is placed on the plate D against the lip C′ and carried with the bed beneath the stationary plate F and rolled between the two surfaces F^2 and D. On the return of the bed the drill is taken from the machine straightened and rolled to the size desired.

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

1. The combination of the sliding bed C, provided with a hardened-steel face-plate D and adjustable flange-plate C′, with the plate F, provided with a hardened-steel face-plate F^2 and inclined upper face, and the wedge G and its operating-screw W, all arranged for joint operation as shown and described, and adapted to serve as specified.

2. In a machine for straightening and sizing drills and for analogous purposes, the plate F, having an inclined upper face, the bolt F′, wedge G, and screw W, in combination with each other and with the housing B B and adapted to serve, as specified, to raise and lower the plate F in its housing for purposes of adjustment.

3. In a machine for straightening and sizing twist-drills and for analogous purposes,

the combination of a bed C, having a horizontal movement in a fixed plane and provided with a flange-plate C′ at one end, and a horizontal face-plate D, with the vertically-movable plate F, having face-plate F^2, means for operating the bed C, and means for forcing the plate F downward, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand, in presence of two witnesses, this 18th day of May, 1886.

SAMUEL MOORE.

Witnesses:
HENRY MARSH, Jr.,
NATHAN H. FURMAN.