

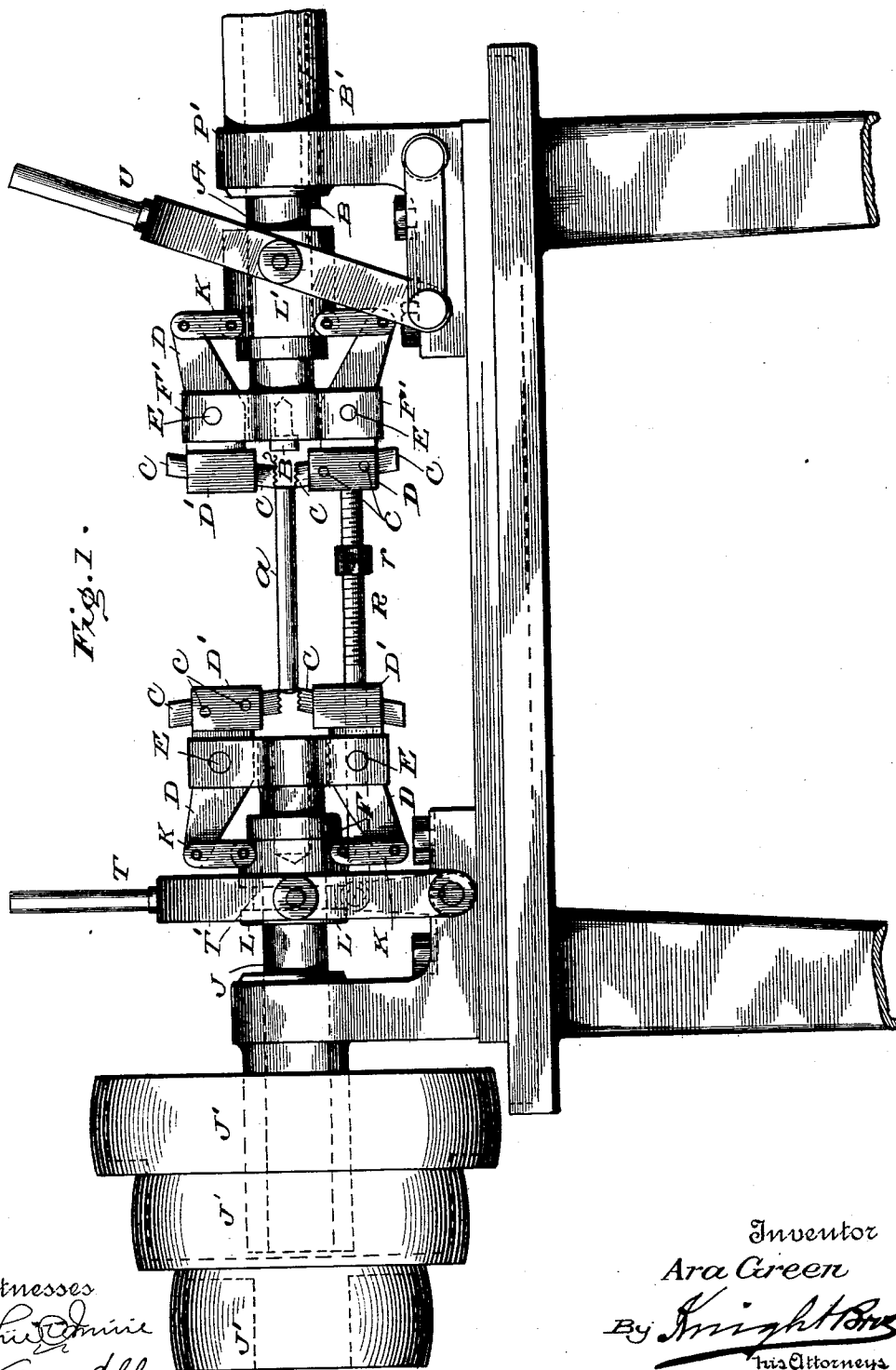
(No Model.)

2 Sheets—Sheet 1.

A. GREEN.
SCREW CUTTING MACHINE.

No. 587,727.

Patented Aug. 10, 1897.



Witnesses
John & Annie
Walter & Allen

Inventor
Ara Green

By Knight Bros
his Attorneys

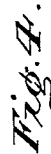
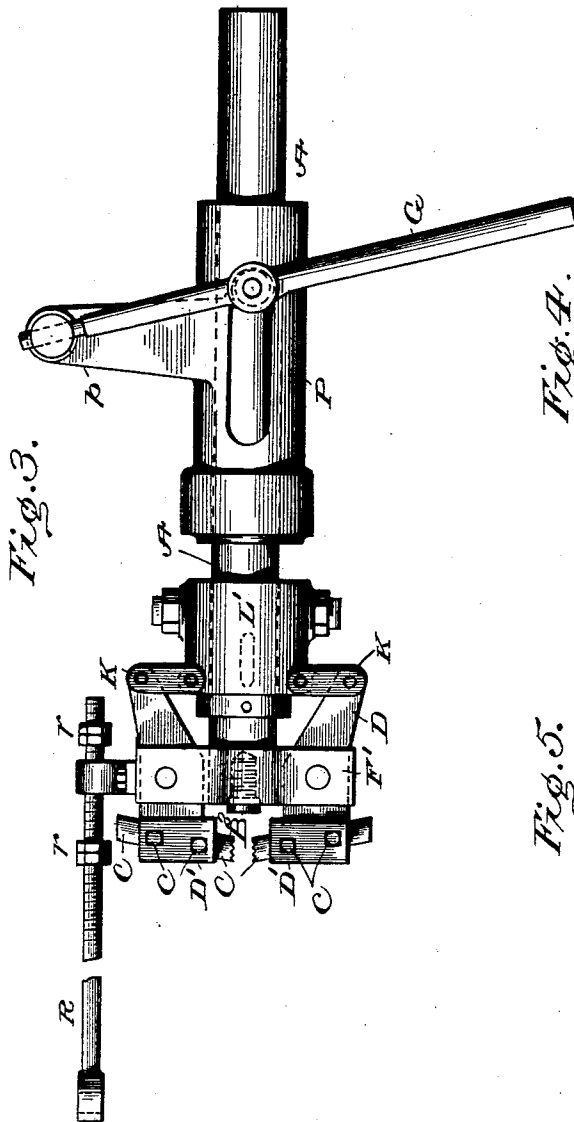
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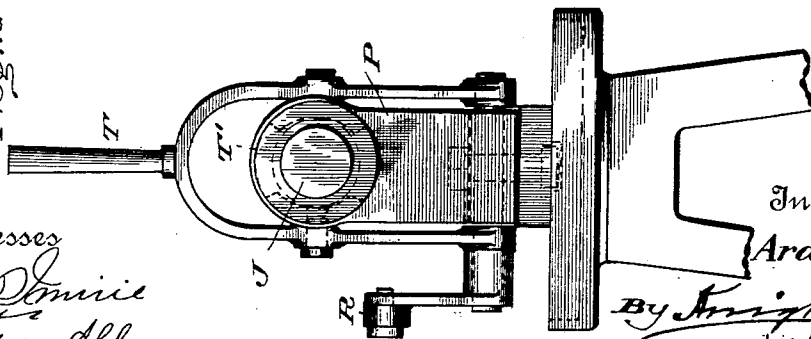
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Witnesses

Mrs. Emily
 Walter Allen



Inventor

Ara Green

By Knights
his Attorneys

UNITED STATES PATENT OFFICE.

ARA GREEN, OF GLASGOW, SCOTLAND, ASSIGNOR TO RITCHIE, GREEN & CO.,
OF SAME PLACE.

SCREW-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 587,727, dated August 10, 1897.

Application filed July 13, 1896. Serial No. 599,021. (No model.) Patented in England March 6, 1894, No. 4,683.

To all whom it may concern:

Be it known that I, ARA GREEN, screw-tool maker, a subject of the Queen of Great Britain and Ireland, and a resident of No. 455 Paisley Road, in the city of Glasgow, Scotland, have invented certain new and useful Improvements in Screw-Cutting Machines, (for which I have obtained Letters Patent in Great Britain, No. 4,683, dated March 6, 1894,) of which the following is a specification.

My invention is an improvement on machines for cutting screw-threads on two ends of a rod or stud at one operation of the machine.

My improvement consists in features of novel construction hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a screw-cutting machine provided with my improvement. Fig. 2 is an end view of a part thereof. Fig. 3 is a plan view of the sliding die-head and fittings. Fig. 4 is a face view of the sliding die-head, partly in section. Fig. 5 is a face view of the rotating die-head, partly in section.

In Fig. 1 is represented my machine for screw-threading the ends of rods or studs and provided with a rotating die-head having three cutting-tools and with a sliding die-head having three cutting-tools and which slides with levers, links, and stops while in action.

C are cutting tools or dies mounted in the rotating die-head, having their ends tapped in the usual manner. Three of these cutting tools or dies are employed, as heretofore stated. They are carried by holders D' and secured adjustably therein by screw-bolts c. These holders D' are located on the ends of the levers D, which have gudgeons E, journaled in a rotating die-head F, screwed onto or otherwise fixed to the end of a shaft or spindle J, provided with stepped pulleys J', by which it is driven. The shaft or spindle J may be hollow, or partly so, as shown in Fig. 1 of the drawings. The longer arms of the levers D are connected by short links K

to a sliding collar L, located on the shaft or spindle J. The collar L is moved by a hand-lever T, carrying a clutch T', engaging the collar. When the collar L is moved toward the cutting-tools C, they are closed or locked by the action of the links K upon the levers D, and when the collar is moved away from the said cutting-tools the cutting-tools open by the reverse action of the links upon the levers.

F' is a sliding die-head which is bolted or otherwise fixed to a sliding shaft A, which has a feather or key B, working in a groove B', formed in the bearing P'. This sliding die-head is also provided with levers D, carrying at their outer ends the holders D' and provided with gudgeons E, by which they are journaled to the die-head. Within the holders D' are secured cutting-tools C by means of screw-bolts c. The longer arms of these levers are connected by short links K to a collar L', sliding on and with a sliding shaft and operated by a lever U. The sliding die-head F' and its shaft A are moved in the bearing P' in order to advance the rod or stud a with its end pressed against the cutting-tools C of the sliding head toward the cutting-tools C of the rotating head or to withdraw it from the cutting-tools of the rotating head by the action of a hand-lever G, (see Fig. 3,) to which the said sliding die-head F' and shaft A are connected. The end of the lever G is pivoted to a bracket p, located on one side of the bearing P'. By the advance movement of the hand-lever G (see Fig. 3) the end of the stud a is advanced to the closed cutting-tools C of the rotating head, which are arranged to grip the stud and carry it forward to the stop B² by the operation of the rotating die-head F, cutting the screw-thread by means of the sliding die-head on the right-hand end of the stud a. When this end of the stud reaches the stop B², the stud ceases to rotate, as the cutting of this end is completed. The stop B² is screw-threaded, so that it can be adjusted to permit different lengths of threads to be cut. The cutting-tools of the sliding head next grip the screwed end of the stud a, and the other cutting-tools C of the rotating head begin to cut the other end of the stud a and continue this operation until the required

length of the thread has been formed, when the cutting-tools of both heads are opened and the stud *a* released by means of the levers T and U, respectively, which are brought
5 into operation for this purpose by the rod R.

In order that I may be able to cut any length of screw-thread on the left-hand end of the stud *a*, the rod R is provided with two lock-nuts *r*, by the manipulation of which the
10 length of the screw is determined.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

A machine for cutting screw-threads comprising a rotating die-head having levers provided with holders for cutting-tools, a shaft
15 having a collar loosely mounted thereon, links

whereby the levers are connected with the loose collar, a lever for moving the collar on the shaft, the sliding die-head having levers
20 provided with holders for cutting-tools, a sliding shaft, a collar on the sliding shaft, links connecting the levers of the sliding die-head with the collar on the sliding shaft, and a lever moving the sliding shaft; substantially
25 as described.

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

ARA GREEN.

Witnesses:

JOHN LIDDLE,

JOSEPH HENRY PEARSON.