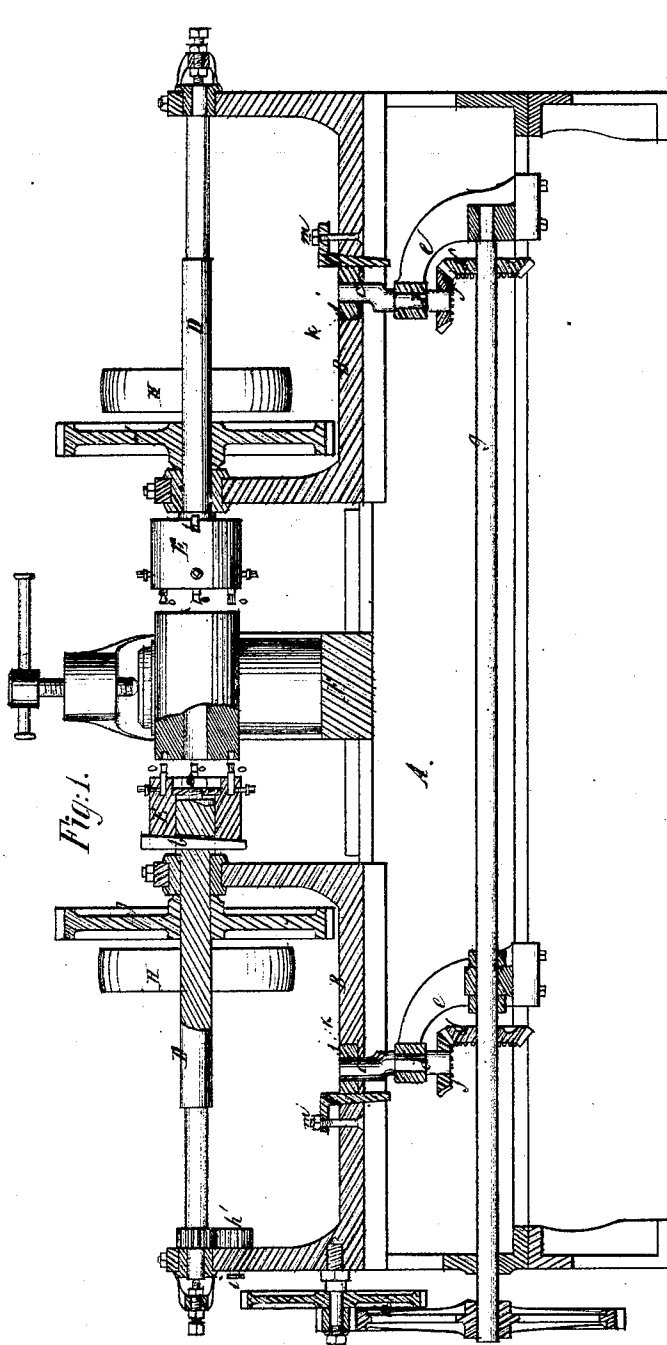


Griffith & Waudraon,

Facing T Heads.

No. 113053.

Patented Apr. 11. 1871.



Witnesses.
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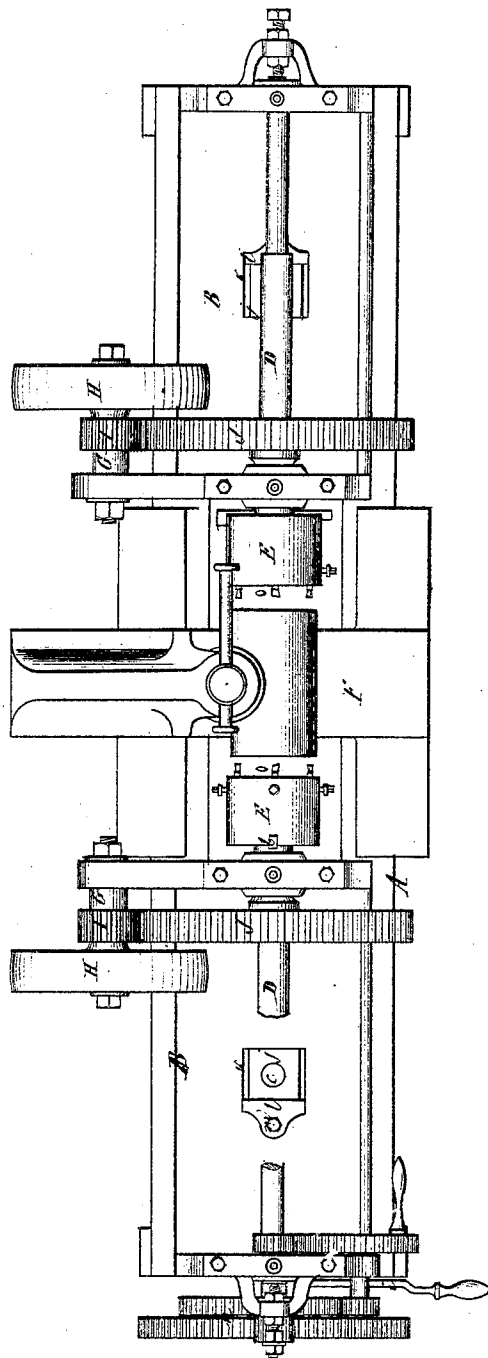
Griffith & Wundram, *2. Sheets, Sheet 2*

Tacing T Heads.

No. 113,653.

Patented Apr. 11. 1891.

Fig. 2.



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JOHN GRIFFITH AND GEORGE W. WUNDRAM, OF NEW YORK, N. Y.

Letters Patent No. 113,653, dated April 11, 1871.

IMPROVEMENT IN MACHINES FOR FACING T-HEADS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN GRIFFITH and GEORGE W. WUNDRAM, of the city, county, and State of New York, have invented a new and improved Machine for Facing T-Heads; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of this invention.

Figure 2 is a plan or top view thereof.

Similar letters indicate corresponding parts.

This invention relates to a machine composed of two head-blocks, each of which forms the bearings for a spindle carrying a cutter-head or chuck, so that both ends or faces of a T-head or other similar article can be acted on simultaneously.

The head-blocks slide on a suitable bed or on shears, and they are subjected to the action of eccentrics or cams in such a manner that the cutters secured in the chucks are simultaneously driven in toward the article to be faced and then drawn back, and the work is accomplished with the least possible hand labor.

The bearings of the eccentrics are subjected to the action of adjustable wedges, whereby said bearings can always be kept in close contact with the eccentrics and all loss of motion at that spot can be avoided.

The chucks or cutter-heads are also subjected to the action of wedges and nuts, so that the points of the cutters can always be brought in the required position without trouble or much loss of time.

In the drawing—

The letter A designates the bed or shears, on which are fitted two head-blocks B.

Each of these blocks forms the bearings for a spindle, D, on the inner edge of which is mounted a chuck or cutter-head, E.

In these chucks are secured the cutters *o*, which are used for facing off T-heads or other articles, and the shape of which is changed according to the work to be accomplished.

The article to be faced is fastened in a rest, F, between the chucks E, and in such a position that the faces to be acted on are equidistant from the points of the cutters in the two chucks, said rest being provided with a simple hand-screw for the purpose of quickly securing the article to be faced.

The chucks E are fitted on the ends of the spindles D so that they can be removed in or out, and they are held in position by nuts *a* on one and keys or wedges *b* on the other end.

By releasing the nuts and driving the wedges in the chucks are set toward each other, and by releasing the wedges and screwing up the nuts the chucks

are set apart so that the points of the cutters in the chucks can be readily adjusted in the correct position toward the face of the article to be acted upon.

Each of the spindles D derives its motion from short counter-shafts G, which carry a pulley, H, and pinions I gearing in cog-wheels J, mounted on the appropriate spindles.

The head-blocks B receive a reciprocating motion toward and from each other by means of eccentrics *c*, which are mounted on the ends of vertical arbors *d*, having their bearings in brackets *e*, secured to the bed and connected by bevel-wheels *f f* with a horizontal shaft, *g*, which extends throughout the entire length of the bed.

This horizontal shaft connects, by a train of cog-wheels, *h*, with one of the spindles D, one of the cog-wheels, *k*, in the train being mounted on a lever, *i*, so that it can be thrown in and out of gear with the spindle, so that the shaft *g* can be started or stopped at pleasure without interfering with the motion of the spindles D.

The eccentrics *c* work in slides *j*, which are fitted into cavities *k* in the head-blocks B, and confined therein by wedges *l*, which are adjustable by screws and nuts *m*, so that the slides are free to move in a transverse direction independently of the head-blocks, but their motion in the direction of the shears is communicated to the head-blocks.

If the slides wear out in their cavities the wedges *l* are set up and all loss of motion is thereby avoided.

By the action of the eccentrics *c*, therefore, the chucks carrying the cutters are caused to move toward and from each other, the throw of the eccentrics being made to conform to the nature of the article to be faced, so that the operation of facing T-heads or other articles of a similar nature can be effected with perfect accuracy and with the least possible hand labor or loss of time.

The motion of the shaft *g* and of the eccentrics *c* is so timed that the cutters are caused to move in toward the article to be faced with the required speed, and by throwing said shaft out of gear with the spindle, and turning it back by hand, the head-blocks can be moved back.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the rotary shaft D, chuck E, provided with the cutters *o*, wedge *b*, and nut *a*, operating substantially as described, for the purpose specified.

2. The wedges *l*, in combination with the slides *j*, cavities *k*, eccentrics *c*, and head-blocks B, substantially as set forth.

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Witnesses:

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