(No Model.) 2 Sheets—Sheet 1.

J. BOYLE.

KNIFE SHARPENING MECHANISM FOR LEATHER SHAVING MACHINES.

No. 605,627. Patented June 14, 1898.

FIG. 1.

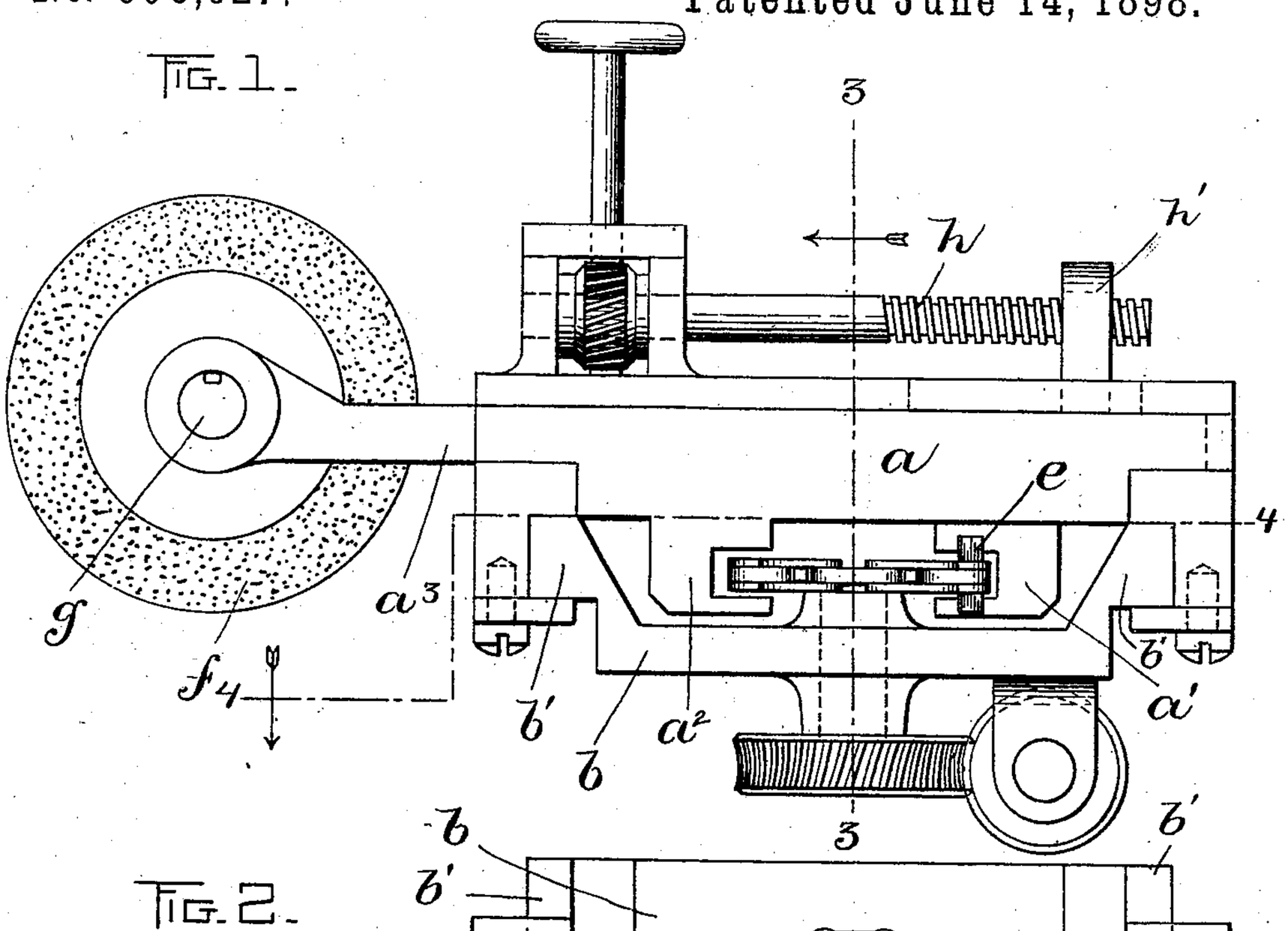
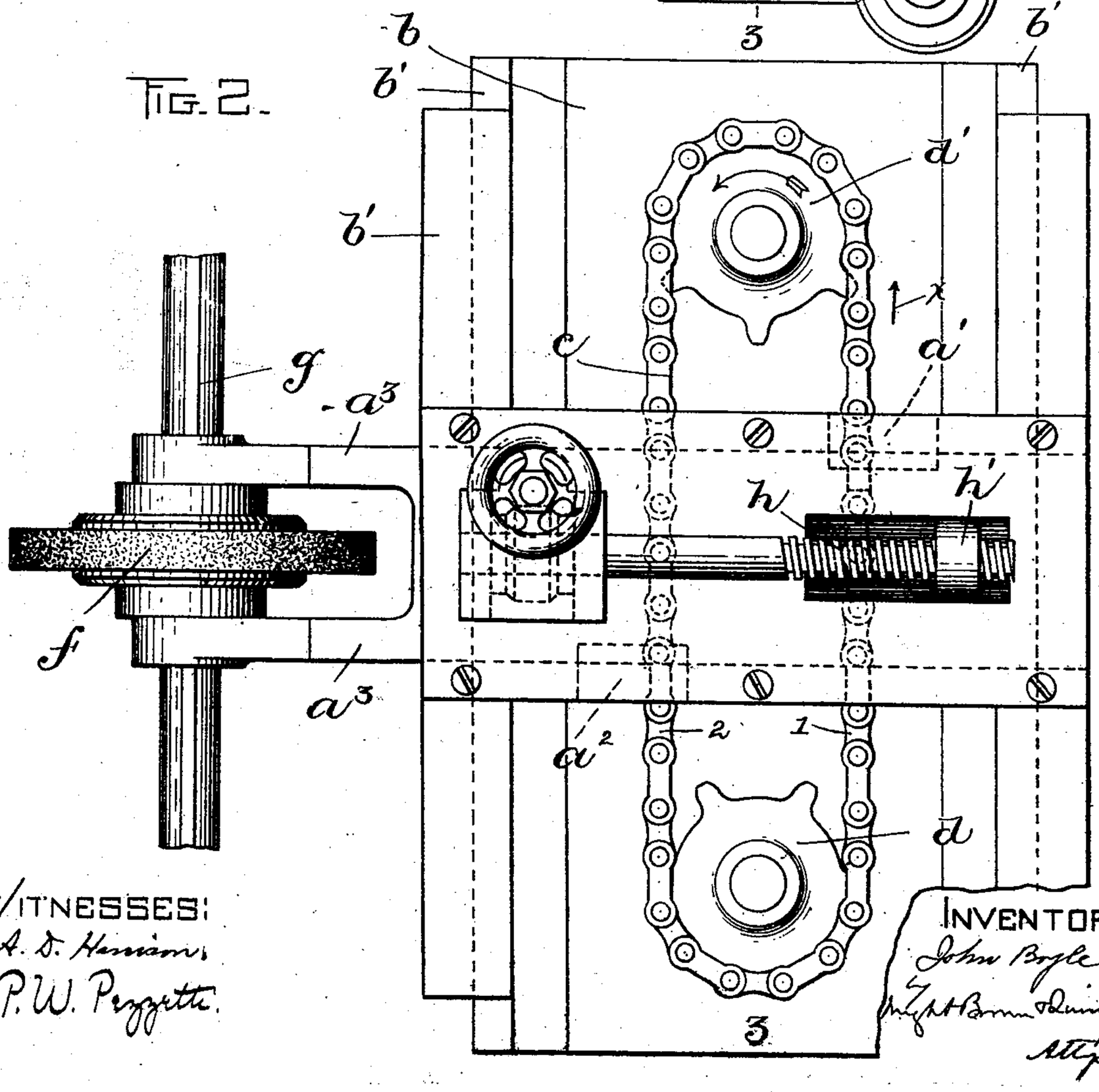


FIG. 2.



WITNESSES:
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P. W. Pezzetti.

INVENTOR:
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(No Model.) 2 Sheets—Sheet 2.

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FIG. 3.

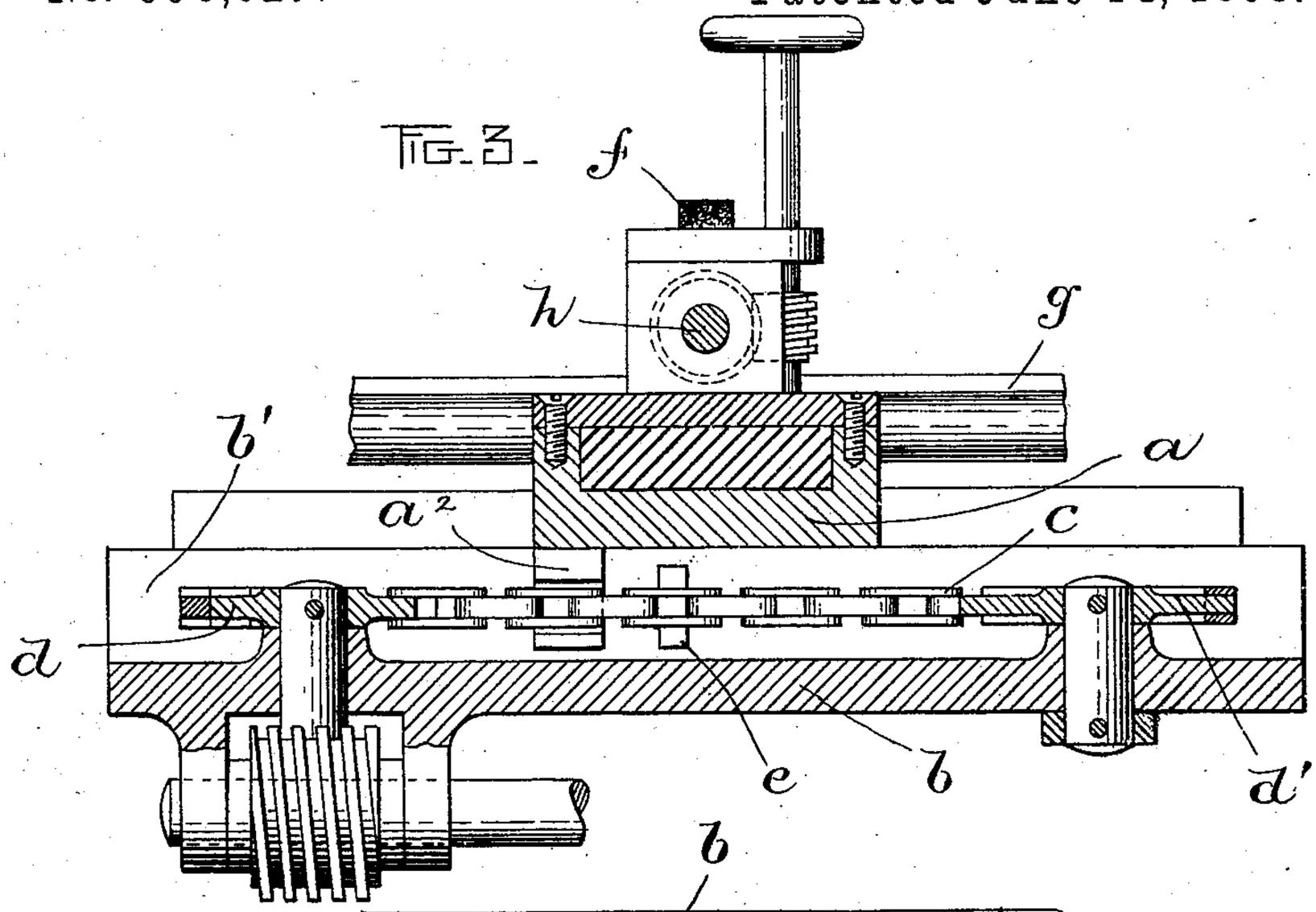


FIG. 4.

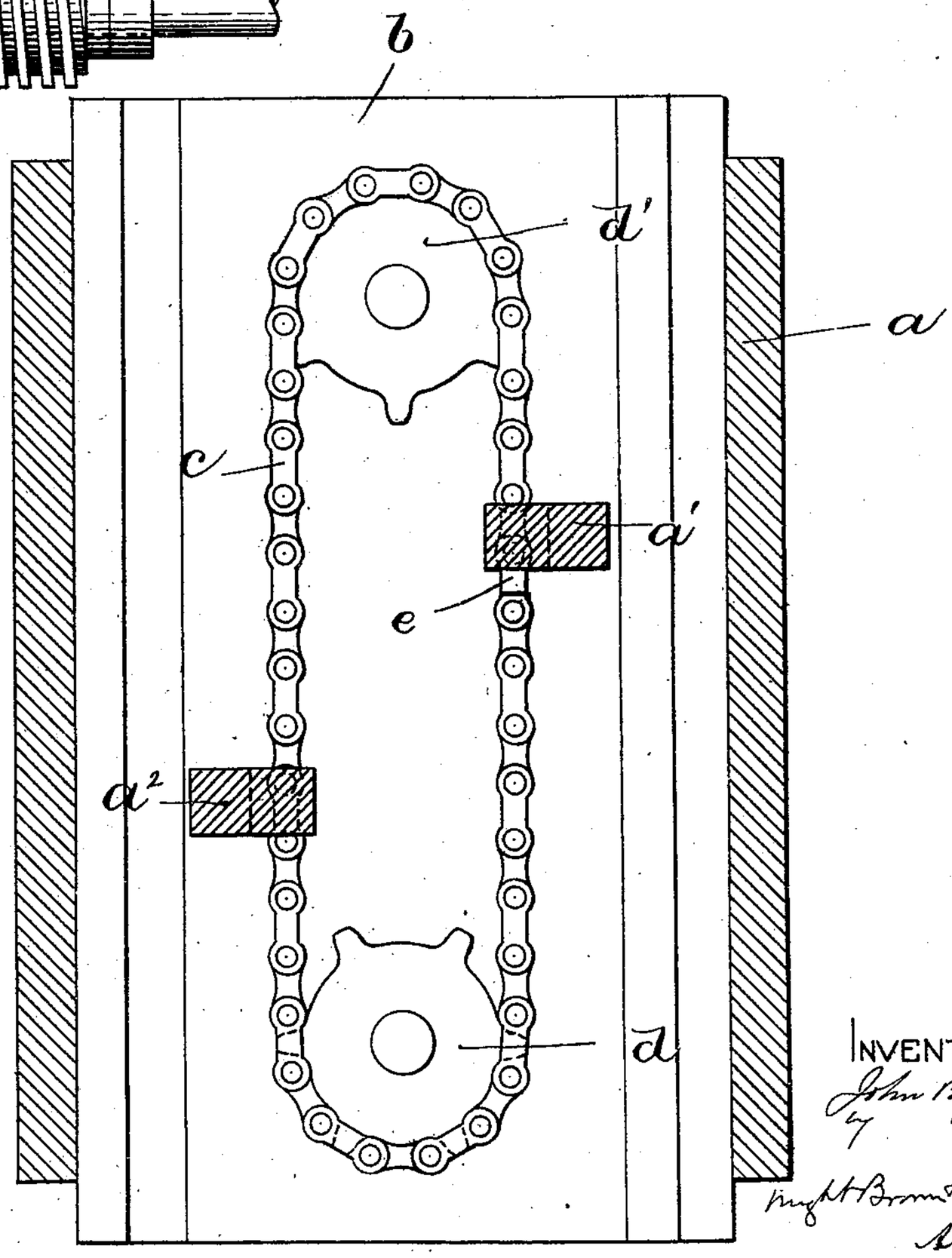
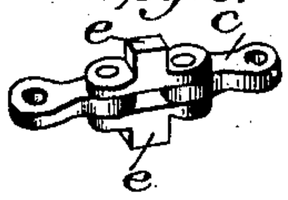


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN BOYLE, OF PEABODY, MASSACHUSETTS.

KNIFE-SHARPENING MECHANISM FOR LEATHER-SHAVING MACHINES.

SPECIFICATION forming part of Letters Patent No. 605,627, dated June 14, 1898.

Application filed March 11, 1897. Serial No. 626,994. (No model.)

To all whom it may concern:

Be it known that I, JOHN BOYLE, of Peabody, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Knife-Sharpening Mechanism for Leather-Shaving Machines, of which the following is a specification.

This invention relates to a device for obtaining the reciprocation of a grinding-wheel for sharpening the knives of a leather-shaving machine, such as that described in Letters Patent No. 541,262, granted to me June 18, 1895.

I shall now proceed to describe and claim the various features of my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an end elevation of one embodiment of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a section on the line 4 4 of Fig. 1. Fig. 5 is a detail perspective view showing a portion of the sprocket-chain employed.

The same letters and numerals of reference indicate the same parts in all the figures.

Referring to the drawings, *a* designates a sliding carriage, fitted to slide on parallel guides *b' b'*, which form part of or are attached to a suitable fixed support or table *b*. Between the guides *b'* and underneath the said sliding carriage is arranged an endless traveling carrier, which may be a sprocket-chain, such as *c*, or may be an equivalent device, such as a belt or rope. The chain *c* passes around two horizontal sprocket-wheels *d d'*, mounted in suitable bearings at either end of the table *b*, one of the wheels, as *d*, receiving power through its shaft from the running-gear of the leather-machine, so as to cause the chain to travel continuously in one direction while the power is acting. The wheels *d d'* give to the chain the form of an elongated loop having two parallel straight reaches 1 and 2 on the same level, which pass underneath the carriage *a* and travel in opposite directions when the chain is in motion.

A lug or projection *e* is fixed to the chain *c* and travels therewith, the said lug being adapted to alternately engage each of two downwardly-projecting abutments *a' a²*, formed on or fixed to the carriage *a* and occupying positions in the path of said lug in proximity, respectively, to the two reaches 1 and 2 of the chain. The abutments are located on opposite sides of the middle line of carriage. The lug *e* being in the reach 1 in engagement with the abutment *a'* and the chain *c* being in motion in the direction of the arrow *x*, the carriage *a* is carried along on its guides by the said lug until the latter reaches the end of the loop, where the chain makes a turn around the sprocket-wheel *d'*, when the lug disengages the abutment and the carriage comes to a stop until the lug has passed around said sprocket-wheel and comes into the reach 2. The lug then engages the abutment *a²*, and the carriage is carried back to the other end of the loop. The carriage is thus given a regular reciprocating travel through any desired distance, depending upon the length of the loop, the motion of the chain being continuous and in one direction.

f represents a grinding-wheel, such as an emery-wheel, for sharpening the knives in the leather-shaving machine, the said wheel being carried between two arms *a³ a³*, fixed to the carriage *a* and being splined to a rotating shaft *g*, which receives power from a suitable source and by means of which the grinding-wheel is rotated in contact with the knife-blades, so as to sharpen the same. The grinding-wheel is caused by the arms *a³* to move along the rotating cutting-cylinder of the leather-shaving machine throughout the length of said cylinder.

A suitable adjusting device for the grinding-wheel *f* may be provided, consisting of a horizontal screw *h*, Fig. 2, screwing into a lug *h'*, formed on a slide which carries the arms *a³* and slides horizontally in guides in the carriage *a*, so as to afford adjustment for wear of the emery-wheel or the scraping-knives, and suitable means connected with said carriage for rotating the screw *h*.

I claim—

1. In a leather-shaving machine, the combination of an endless chain provided with a lug or projection, horizontal sprocket-wheels engaged with said chain and dividing the same into two parallel straight reaches, means for rotating one of said wheels to drive the chain continuously in one direction, a carriage

mounted to slide on guides and having two abutments on its under side located in the same horizontal plane, one of said abutments being arranged in operative relation to one reach of the chain, and the other being arranged in operative relation to the other reach of the chain, for the purposes specified, and a grinding-wheel mounted on said carriage and adjustable transversely thereon.

2. In a leather-shaving machine, the combination of a carriage mounted to slide on guides and having two abutments located in the same horizontal plane on its under side, an endless chain provided with a lug or projection adapted to alternately engage the said abutments to reciprocate the carriage, means for driving said chain continuously in one direction, a slide mounted transversely of the carriage in suitable guides thereon, a grinding-wheel carried by said slide, and means for adjusting said slide in its guides.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of February, A. D. 1897.

JOHN BOYLE.

Witnesses:
CHAS. G. FOLSOM,
ALFRED MCKENSIE.