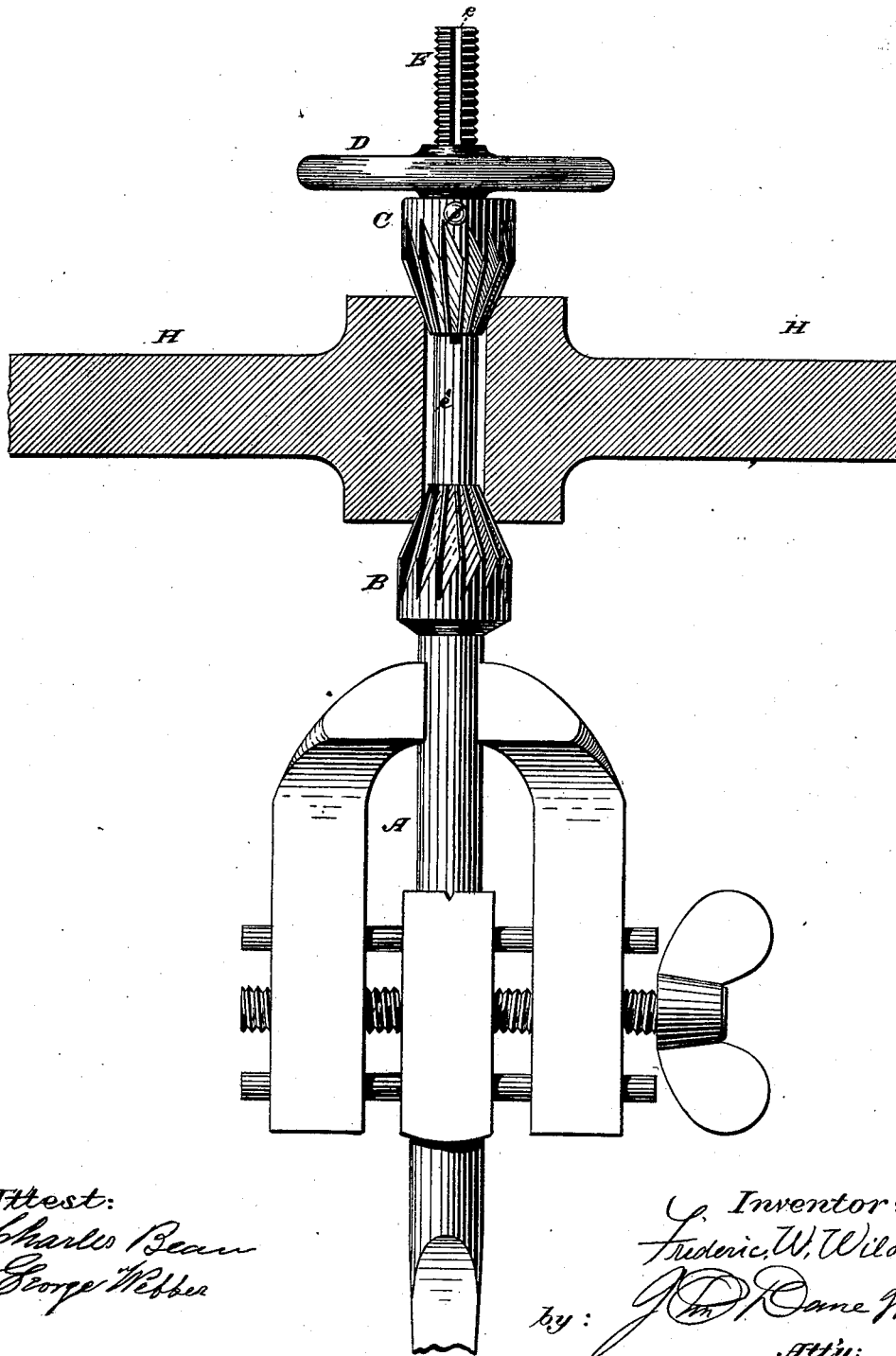


F. W. WILD.
Hand-Reamer.

No. 202,618.

Patented April 16, 1878.



Attest:
Charles Bean
George Webber

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by: J. D. Ramey Jr
Atty:

UNITED STATES PATENT OFFICE.

FREDERIC W. WILD, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE
DOMESTIC SEWING MACHINE COMPANY.

IMPROVEMENT IN HAND-REAMERS.

Specification forming part of Letters Patent No. **202,618**, dated April 16, 1878; application filed
September 15, 1877.

To all whom it may concern:

Be it known that I, FREDERIC W. WILD, of Baltimore, Maryland, have invented certain new and useful Improvements in Hand-reamers; and I do hereby declare that the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention consists of a hand reaming device, adapted for forming recesses in the hubs of wheels and other articles into which conical journals are to be inserted without the aid of a wrench or machinery, thereby securing more perfect results than are usually obtained otherwise; and it consists of a stem by which the device is held, and two conical-shaped cutters, (or one cutter and one blank cone,) one of which is adapted to be fed up, as desired in practice, by means of a hand-wheel with which said device is provided.

The object of said device is to enable any person, even the unskilled in such matters, to successfully use the reamer, and by it produce the desired result in providing wheels and other bodies with conical-shaped recesses for the reception of conical-shaped journals.

In the employment of the ordinary reamer provided with a single cutting-burr a wrench is generally used for operating the reamer, while the body is held in a vise. The stem of the reamer which precedes the burr, being without an accurate guide, is allowed to sway more or less in all directions at will, consequently resulting in an imperfect and very defective recess; and as it becomes necessary to insert the same into the opposite side, in case two recesses are required, the same objections are multiplied, so as to cause the body, if a wheel, to wobble and run very irregularly in practice, materially interfering with the proper running of the machine to which it is applied.

Referring to the drawings, Figure 1 represents my improved hand-reamer held in a vise, with a wheel in position for treatment for the formation of the desired conical recesses.

The construction of my reamer is set forth as follows: It is provided with a stem of suit-

able length, represented at A, to be grasped in the jaws of a vise, it being provided with a conical cutter or burr, B, near said stem. A removable adjustable cutter, C, is located upon the threaded stem, which is represented in the drawing at c. This cutter is held from turning upon the stem by means of a key or pin engaging a slot in the threaded stem, and is advanced for cutting by means of a threaded nut or hand-wheel, D, working upon the threaded stem.

Both wheel and cutter may be removed, as desired, by the operator.

A blank cone without cutting-edges is employed in lieu of the adjustable conical cutter at times, for purposes which will be hereinafter explained.

The cutters are made by any of the well-known methods.

The several parts are so fully illustrated that further details setting forth their construction would seem superfluous.

The operation of the device may be explained. Remove the adjustable feed-wheel and cutter, insert the threaded part of the device into the hole through the hub of the pulley which is to be operated upon, replace the cutter and feed-wheel, grasp the stem of the tool within the jaws of a vise, or other means for holding the same, which leaves the movable cutter and feed-wheel uppermost and in a suitable position to be readily operated by the hand. Thus prepared, the pulley or balance wheel may be rotated by the hands, and the cutters made to perform their functions by the turning of the feed-wheel.

In the event that a recess is required to be deeper on the one side than the other, the blank cone is substituted in lieu of the cutter on the side opposite to the desired increased depth. The small ends of the cones entering, as they do, into the opening previously formed in the body to be operated upon, center the parts, and thereby form a guide for the proper action of the cutters, and by which the recesses are made in perfect line with each other, which is a very difficult matter to secure by other means not similar.

Having thus set forth my invention, I do not wish to be understood as claiming hand-

reamers broadly, for such I know to be old; but,

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. As an improved article of manufacture, the herein-described hand-reamer, provided with a stem by which it may be held in a fixed conical cutter, an adjustable conical-shaped device or cutter, and a threaded feed-wheel, substantially as and for the purposes set forth.

2. In a reamer adapted to be used without the aid of machinery, the combination of a stem for holding said reamer, a fixed cutter, an adjustable cutter or cone, a threaded stem, and a feed-wheel, substantially as set forth.

FRED. W. WILD.

Witnesses:

JOHN DANE, Jr.,
GEORGE LESSPERMAN.