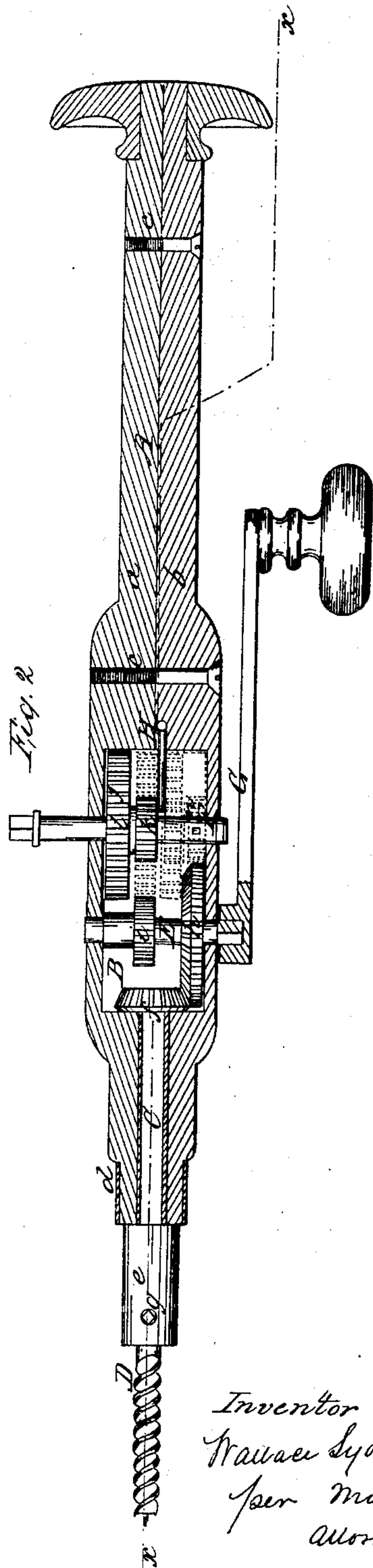
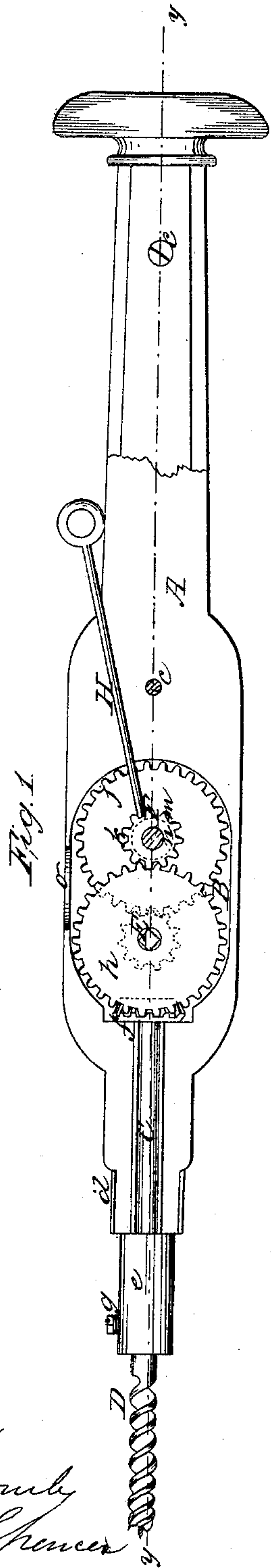


W. Lyon,
Bit Stock,

No 30,487.

Patented Oct. 23, 1860.



Witnesses
J. W. Coomb
A. S. Spencer

Inventor
W. Lyon
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

WALLACE LYON, OF DEEP RIVER, CONNECTICUT.

IMPROVED BIT-STOCK.

Specification forming part of Letters Patent No. 30,487, dated October 23, 1860.

To all whom it may concern:

Be it known that I, WALLACE LYON, of Deep River, in the county of Middlesex and State of Connecticut, have invented a new and Improved Bit-Stock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a longitudinal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improved bit-stock of that class in which the bit is rotated through the medium of the gearing.

The object of the invention is to obtain a bit-stock which will admit of the bit being rotated with varying degrees of speed under the same speed of the crank or driving-shaft, thereby enabling the implement to be adapted to different kinds of work and rendering one and the same implement capable of a more general adaptation than usual.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the stock or body of the implement, which may be of metal or wood and formed of two equal longitudinal parts *a b*, connected together by screws *c* and a ferrule *d*.

Within the stock or body A there is a recess or chamber B, which contains the gearing by which the bit is rotated.

C is a shaft which is fitted longitudinally in the stock or body A, and has a socket *e* attached to its outer end and a bevel-wheel *f* at its inner end. The socket *e* receives the shank of the bit D, and is secured therein by a set-screw *g*. The wheel *f* is within the recess or chamber B, and through said recess or chamber there passes transversely two shafts E F, on one end of each of which a square is formed to receive a crank G. (See Fig. 2.)

On the shaft E there is placed a bevel-

wheel *h*, which gears into the wheel *f*, and there is also placed on said shaft E permanently a small wheel *i*. On the other shaft F there are placed loosely two wheels *j k*. These wheels are on a common sleeve or hub *l*, which has an internal longitudinal groove *m* to receive pins *n* on the shaft. These pins and groove admit of the sleeve *l* sliding on the shaft, and at the same time cause the sleeve and its wheels to rotate with it.

When it is desired to rotate the bit with a fast movement, the sleeve *l* is moved on the shaft F and the larger wheel *j* made to gear into the smaller wheel *i* on shaft E, as shown in red, Fig. 2. The crank G, of course, is placed on shaft F in this arrangement. When a slow movement of the bit is required, the sleeve *l* is moved on shaft F until the small wheel *k* gears into the wheel *h*, as shown in blue, Fig. 2, the crank G being still applied to shaft F. When a medium speed is required, the crank is simply applied to shaft E, as shown in Fig. 2.

The sleeve *l* is prevented from casually moving on the shaft F by means of a rod H, which passes obliquely into the stock, and the sleeve *l* is adjusted, when necessary, by moving it with the fingers through an opening *o* in the side of the stock. Other means, however, may be devised for this purpose.

This invention, it will be seen, is quite simple, and it may be placed quite close to a wall or any object and be used without difficulty, a result which is not attained by any other bit-stock that I have seen.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement of the permanent and shifting gearing *f h i j k*, placed, respectively, on the shafts C E F and within the stock A, substantially as and for the purpose herein set forth.

WALLACE LYON.

Witnesses:

HYMAN G. LOOMIS,

DWIGHT S. SOUTHWORTH.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 30,487
DATED : January 20, 1981
INVENTOR(S) : Jack T. Belke

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 7, after "best" insert --be--.

Signed and Sealed this

Ninth Day of June 1981

[SEAL]

Attest:

RENE D. TEGTMEYER

Attesting Officer

Acting Commissioner of Patents and Trademarks