

(No Model.)

G. F. POTTLE.
PIPE CUTTER.

No. 465,415.

Patented Dec. 15, 1891.

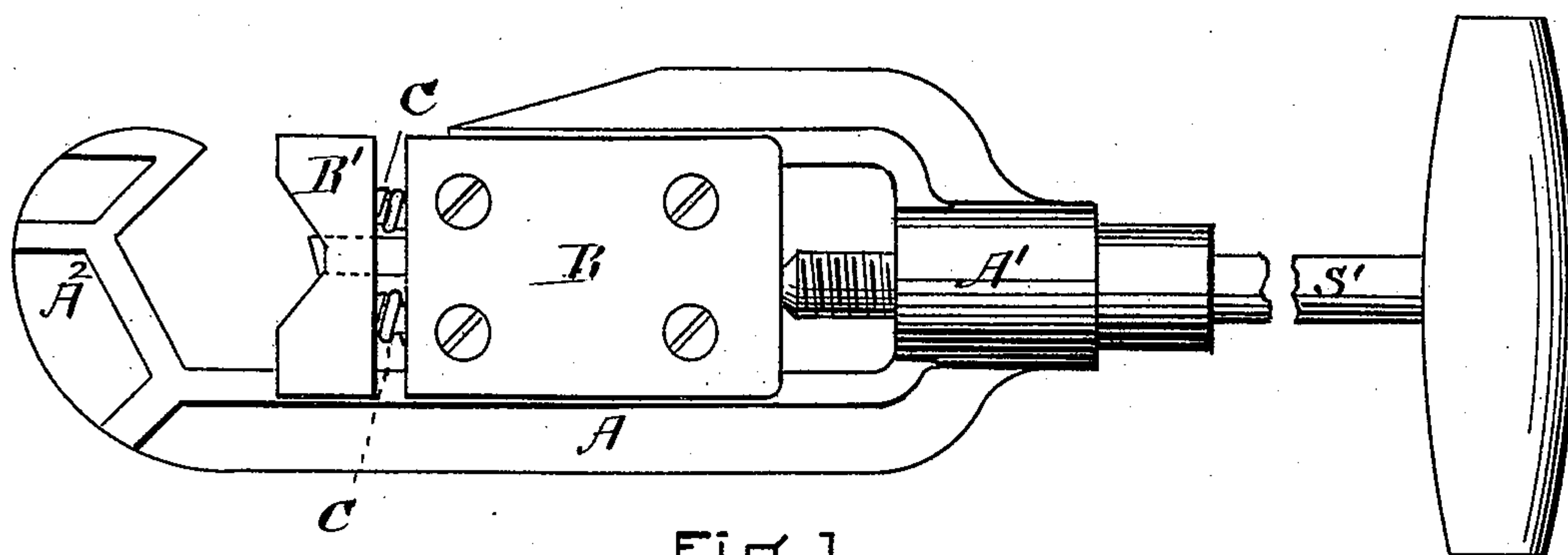


Fig. 1.

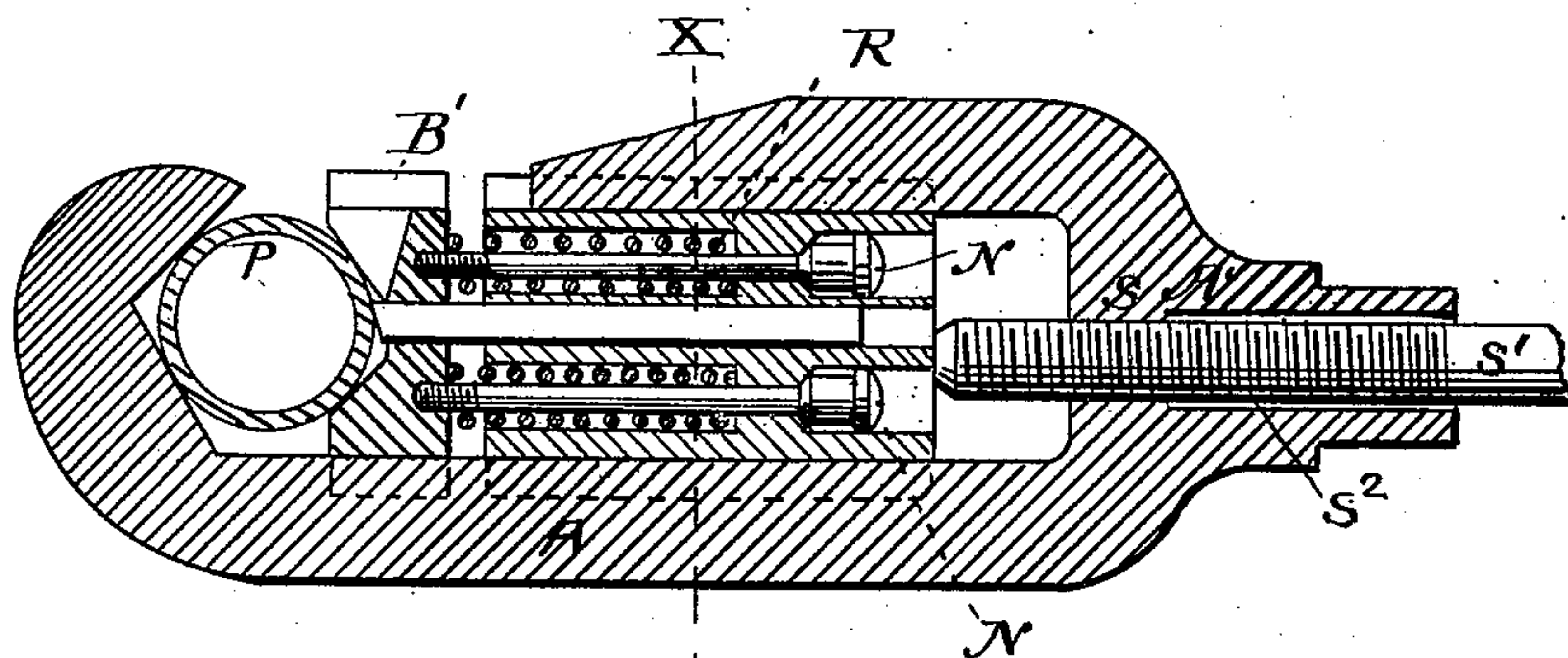


Fig. 2.

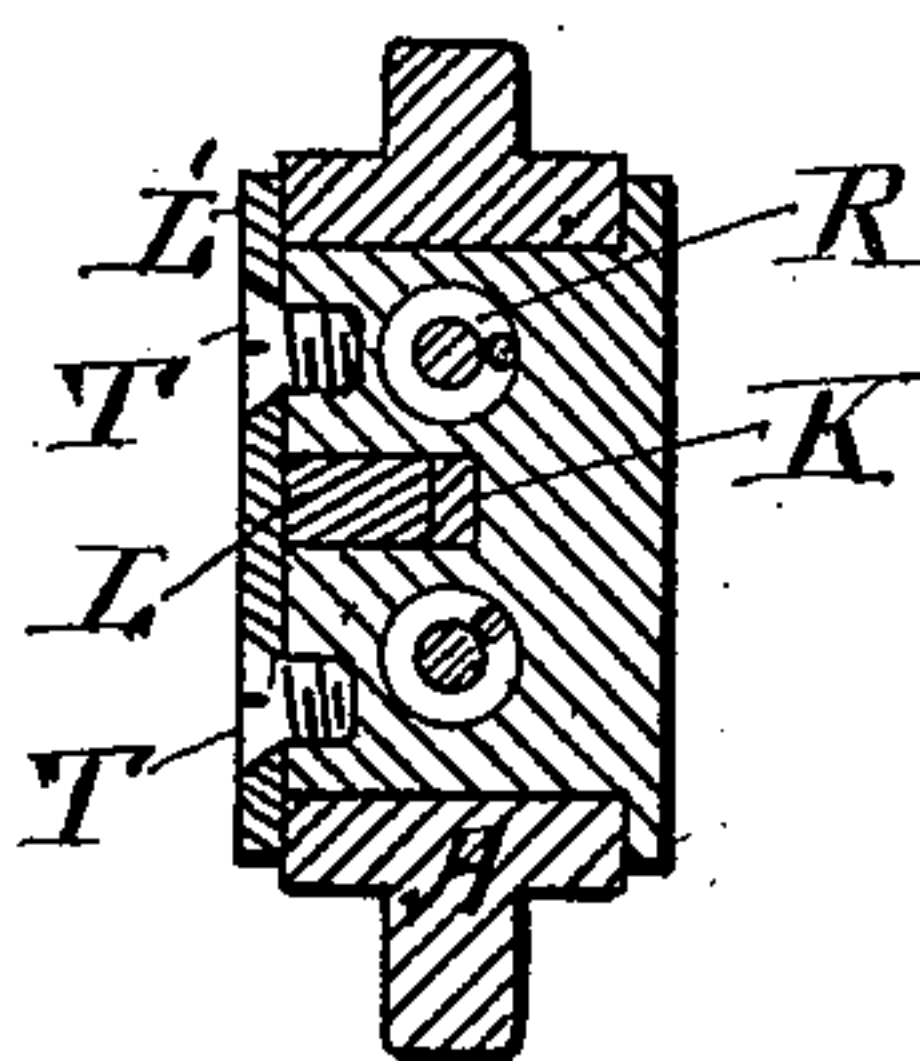


Fig. 3.

WITNESSES

William Edson

Matthew M. Blunt,

INVENTOR

George Frank Pottle

UNITED STATES PATENT OFFICE.

GEORGE FRANK POTTLE, OF MEDFORD, MASSACHUSETTS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 465,415, dated December 15, 1891.

Application filed May 5, 1890. Serial No. 350,686. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FRANK POTTLE, of Medford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Cutters, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of devices known as "pipe-cutters" for cutting off iron, brass, and other pipe; and its object is to improve the construction of these devices, as herein set forth. This object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 is an elevation of my device. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a cross-section taken on line *x x* of Fig. 2.

In the drawings, *A A' A²* represent the body or frame of the cutter, *A²* being the pipe-holding end, and is to be shaped substantially as shown in Figs. 1 and 2, so as to form a good resting-place for the pipe *P*, which is to be operated upon.

A' is the shank end of the frame and has a socket *S²* to receive the shank or handle *S'*, Fig. 2.

S is an internal screw adapted to receive the screw part of the handle *S'*.

B is a sliding block adapted to hold the knife or cutting-tool *K*. This block is forced forward by turning the screw-handle. The cutting-tool *K* is held firmly in place by means of a clamping-key *L*, Fig. 3, the clamping-plate *L'*, and the clamp-screws *T T*.

B' represents a second sliding block, which, when the tool is in use, is forced against the pipe to be cut by the thrust of springs *R*, interposed between this block *B'* and the block *B*.

It is desirable that for different weights and kinds of pipe a greater or less degree of initial stiffness should be given to the spring-cushion formed by the springs, as above described, and for this purpose I have provided adjusting-rods *N N*, connecting the blocks *B* and *B'*, by turning which rods the two blocks can be brought together or separated, there-

by giving to the springs *R* a greater or less degree of initial stiffness. As the function of these springs is to act as a cushion and prevent the tool from jumping ahead when it strikes a thin place in the work, it is obvious that in the case of stock of different thicknesses, where different degrees of force may have to be applied to the cutting-tool and its carrying block in order to do the work, it is very desirable that the initial tension or stiffness of the spring should be variable and the combination of the two sliding blocks, with their interposed springs and adjusting-rods, I believe to be a valuable improvement for this purpose.

It will be understood that the block *B'* is provided with a suitable slot or passage through which the cutting-tool *K* may pass freely.

To cause the cutting-tool to act upon the pipe, the block *B* is forced forward by the screw *S*, and as the springs *R R* yield, the block *B'* will become stationary, but resting firmly against the pipe. This forward motion of the block *B* will cause the cutting-tool *K* to engage with the pipe, and as the cutter is revolved around the pipe the cutting action will take place. As the channel made by the tool is deepened, the tool is advanced by shoving forward of the block *B*, and the channel is made still deeper until it extends entirely through the pipe.

I claim—

In an adjustable tension pipe-cutter of the character described, the combination, with the body or frame and the operating screw-rod *S*, of the two-part sliding tool-carrier consisting of the block *B*, to which the tool is secured, the supplementary block *B'*, slotted to allow the passage of the tool, springs *R*, interposed between the said blocks *B B'*, and adjusting-rods *N*, whereby the distance between the blocks may be varied to adjust the tension of the springs, all substantially as set forth.

GEORGE FRANK POTTLE.

Witnesses:

FRANK G. PARKER,
WILLIAM EDSON.

It is hereby certified that Letters Patent No. 465,415, granted December 15, 1891, upon the application of George Frank Pottle, of Medford, Massachusetts, for an improvement in "Pipe-Cutters," was erroneously issued to the said Pottle as owner of said invention; that said Letters Patent should have been issued to *Jott Grant, of Boston, Massachusetts*, said Grant being assignee of the entire interest in said invention as shown by the assignments of record in this Office; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 19th day of April, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,
Commissioner of Patents.