

(No Model.)

A. L. F. MITCHELL.
HEEL BURNISHING MACHINE.

No. 452,033.

Patented May 12, 1891.

Fig. 1.

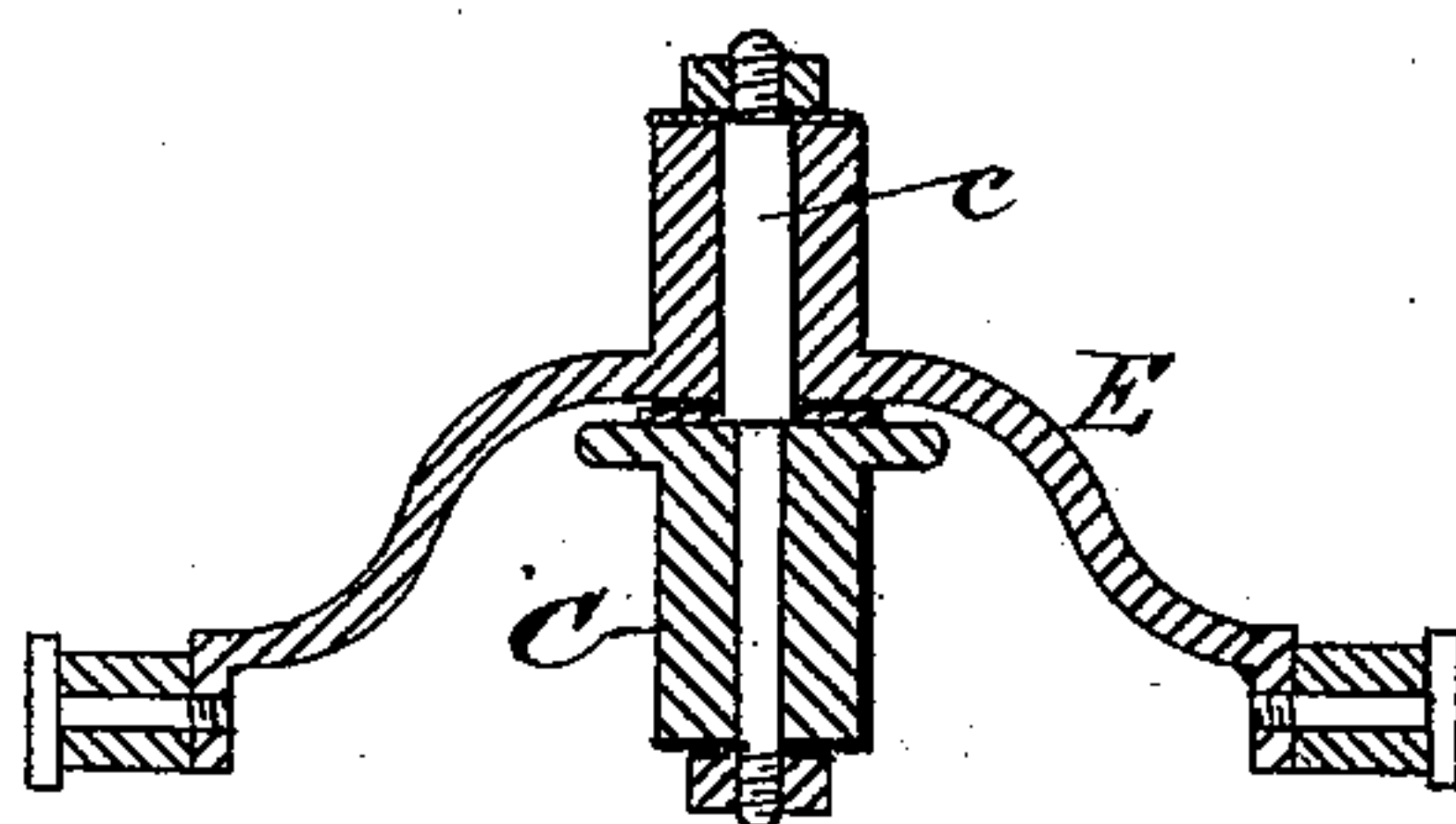
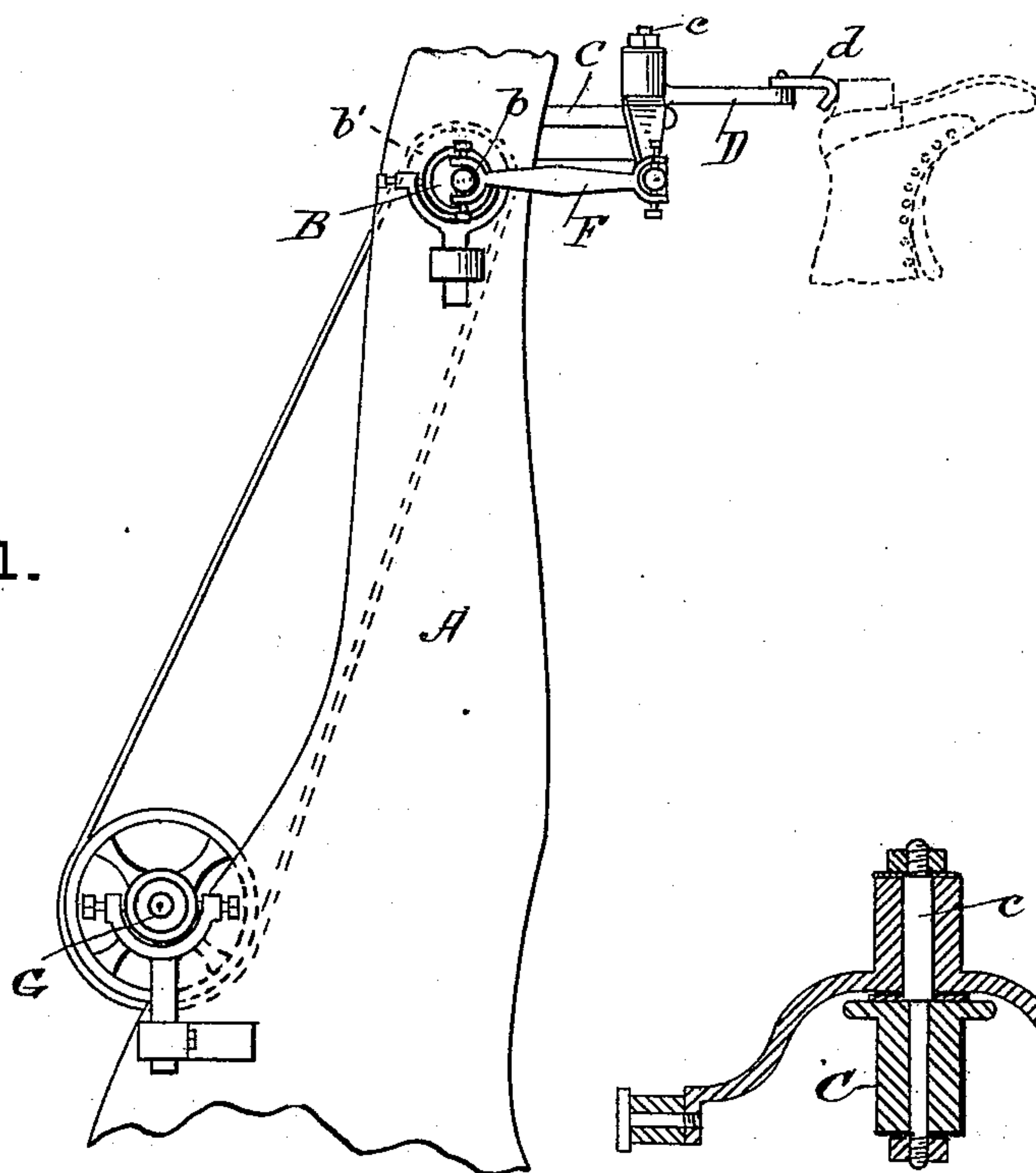


Fig. 3.

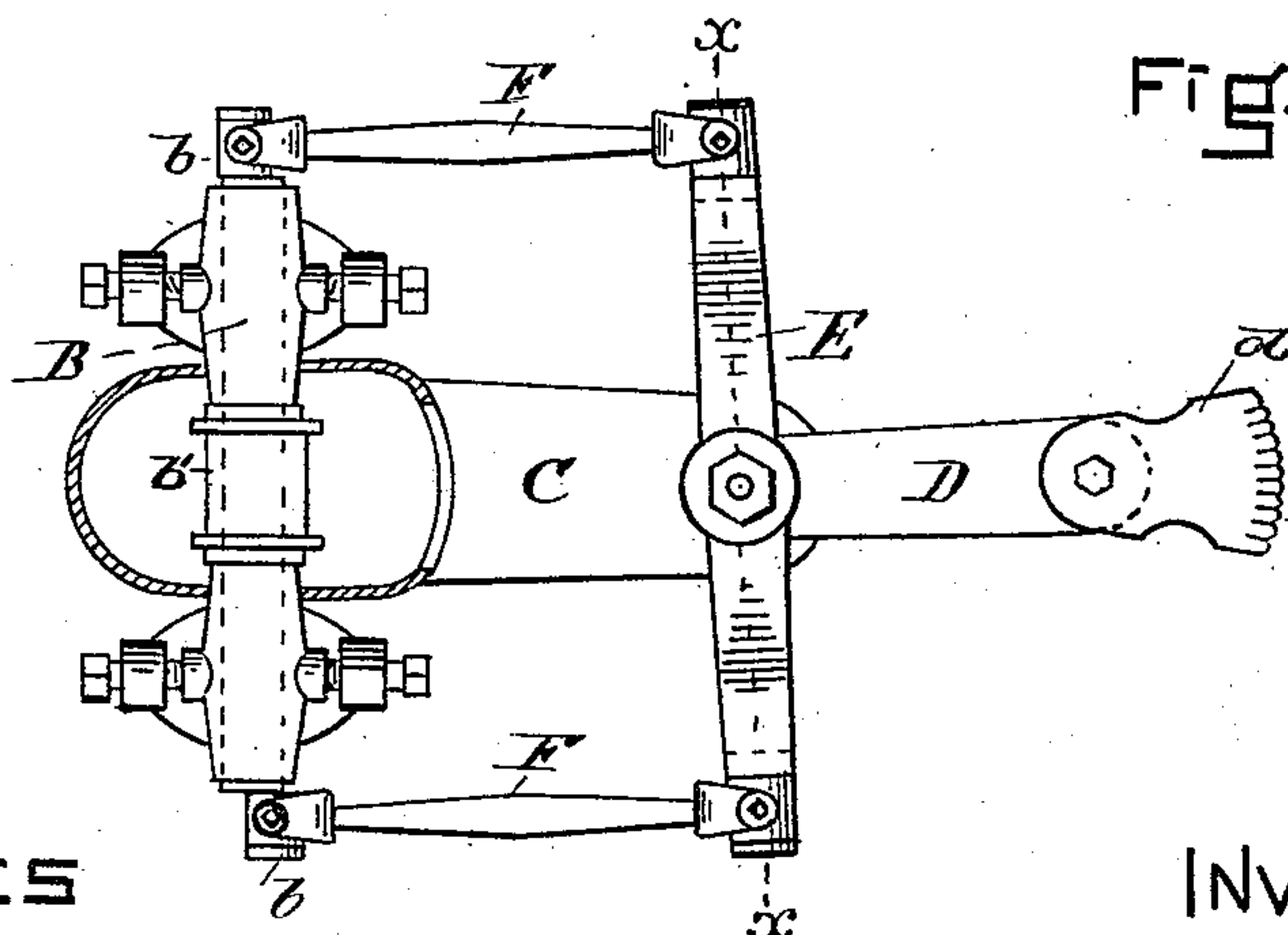


Fig. 2.

WITNESSES

Frank L. Parker
Ernest A. Guild

INVENTOR

Alfred L. F. Mitchell
By Geo. O. G. Boale
his Attorney.

UNITED STATES PATENT OFFICE.

ALBION L. F. MITCHELL, OF LYNN, MASSACHUSETTS.

HEEL-BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,033, dated May 12, 1891.

Application filed September 1, 1890. Serial No. 363,707. (No model.)

To all whom it may concern:

Be it known that I, ALBION L. F. MITCHELL, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Heel-Burnishing Machines, of which the following is a specification.

My invention relates to that class of machines in which the burnisher is mounted on the end of an oscillating lever; and the purpose of my invention is to furnish an easy-running, rapid, and well-balanced machine which may be run at a very high rate of speed with comparatively little noise and jar, and for this purpose I duplicate the mechanism for operating the burnishing-tool and so arrange it that each part is balanced by a corresponding part, all working together to transmit motion from one shaft to one burnishing-tool.

My invention is particularly adapted for use in such a machine as is described in an application, Serial No. 357,690, filed by me July 3, 1890.

In the drawings is shown in Figure 1 a side elevation of portion of the post in such a machine to which my improvement has been applied, the position of the heel being indicated. Fig. 2 is an enlarged plan, partly in section, showing the construction of my means for oscillating the burnisher; and Fig. 3 is a section on line *xx* of Fig. 2. The shoe may be supported by any of the well-known means for that purpose.

A is the post, in which is mounted the shaft B, on each end of which is a stud or crank-pin *b*, set on opposite sides of the axis of the shaft.

C is an arm projecting from the post A, carrying a stud *c*.

D is an arm which carries the burnishing-tool *d*.

E is a cross-bar to which the arm D is attached, the lever and cross-bar forming one solid piece provided with a boss which fits

onto the stud *c*, and is oscillated thereon. Connecting-rods F are provided, each of which connects one end of the cross-bar E with the crank-pin *b* on the corresponding end of the shaft B. Each connecting-rod F is provided at each end with a yoke by means of which it is connected with a journal-box in which the stud is mounted, so that with each oscillation of the burnisher the angle of the connecting-rods with the shaft B and the cross-bar E may change as required.

The shaft B is provided with a pulley *b'*, from which a belt runs to the main shaft G of the machine or any other source of power.

The operation of my device will be easily understood. Power being applied by means of the belt, the shaft B is caused to rotate very rapidly, and by means of the crank-pins *b* an oscillating movement is given to the cross-bar and lever E D, and consequently the necessary movement is given to the burnisher.

The universal joints are necessary, as will be seen, because the angles between the connecting-rods and the shaft and cross-bar are continually changing. It is obvious that instead of the lever and cross-bar D E a single bell-crank could be used; but the form above described is much more effective, being well balanced and easily operated.

What I claim as my invention is—

In a heel-burnishing machine, the combination of the arm D, carrying the burnisher, the cross-bar E, the connecting-rods F, and the crank-shaft B, all connecting and operating substantially as described, and adapted for the purposes set forth.

In testimony whereof I have hereunto subscribed my name this 27th day of August, A. D. 1890.

ALBION L. F. MITCHELL.

Witnesses:

GEORGE O. G. COALE,
EVA A. GUILD.