Hiram B. Sevey. PATENTED JUL 18 1871

Machine for Punching, Cutting and Upsetting Tires.

117116

Fig. 1.

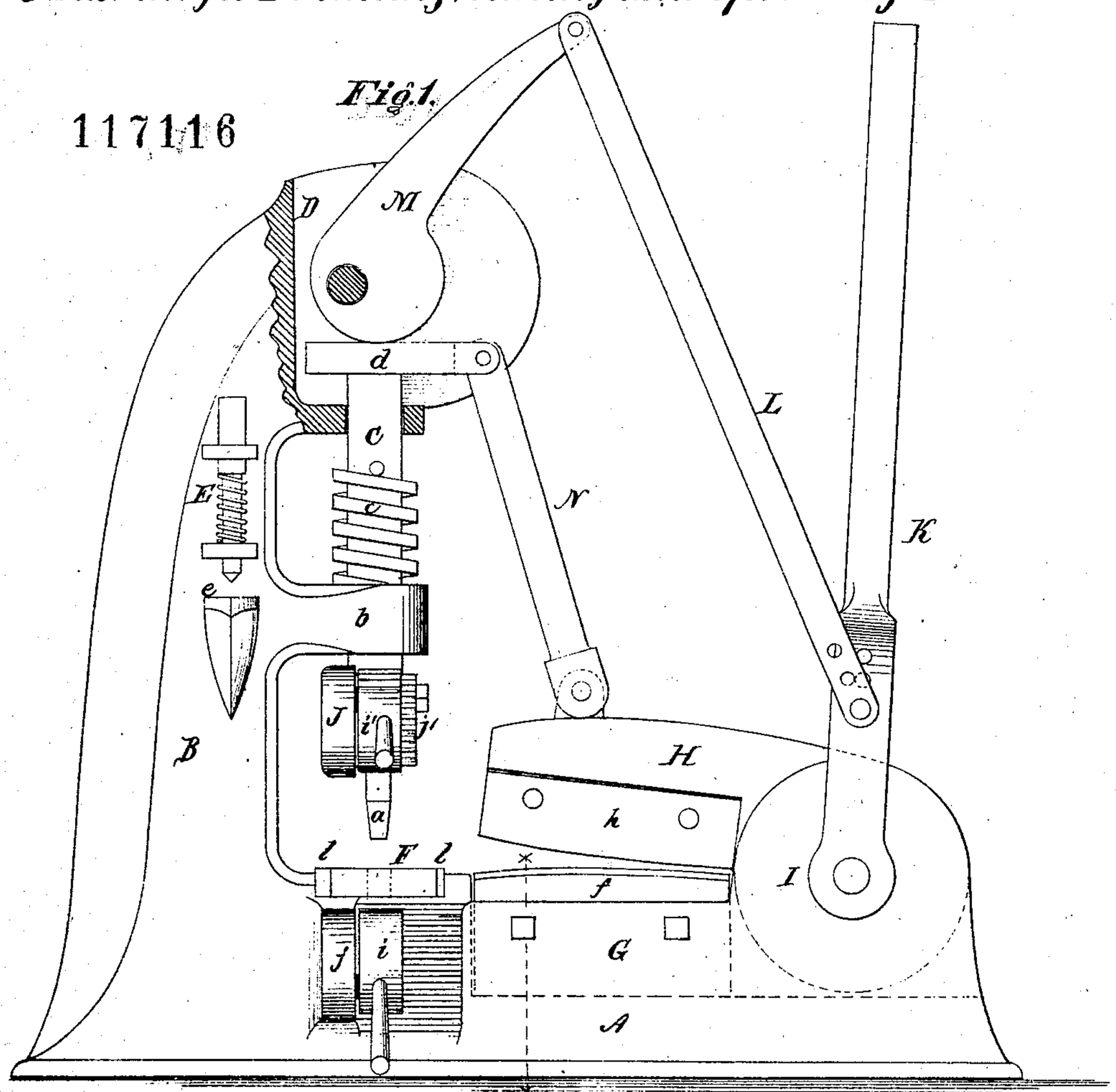
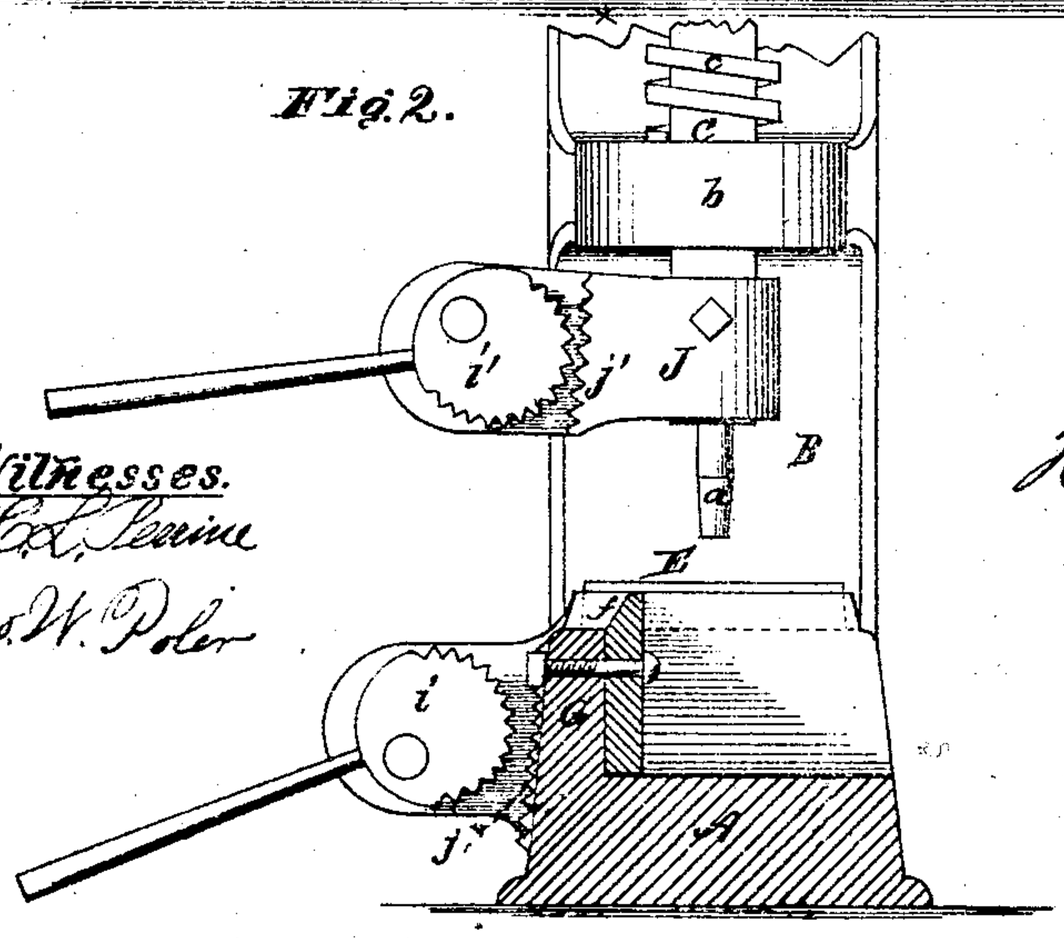


Fig. 2.



Witnesses.
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Jno. W. Poler

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117,116

UNITED STATES PATENT OFFICE.

HIRAM B. SEVEY, OF VIENNA, MAINE.

IMPROVEMENT IN MACHINES FOR CUTTING, PUNCHING, AND UPSETTING TIRES.

Specification forming part of Letters Patent No. 117,116, dated July 18, 1871.

To all whom it may concern:

Be it known that I, HIRAM B. SEVEY, of Vienna, in the county of Kennebec and State of Maine, have invented a new and useful Improved Machine for Punching, Cutting, and Upsetting Tires; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side elevation of my machine with a portion broken away to show the construction. Fig. 2 is a view of part of the same, showing a cross-section on the line *x x* of Fig. 1.

Like letters of reference indicate corresponding parts in both of the figures.

The subject of this invention is a machine for punching, cutting, and upsetting tires, &c.; and it consists of the combination and arrangement of parts hereinafter described and claimed.

A may designate the bed and B a standard, cast in one piece, upon which the punching, cutting, and upsetting mechanisms are arranged. The punching mechanism consists of the punch *a* secured to or made with the carrier *c*, which is secured in and passes through the openings or bearings made in the recessed head D and a projection, *b*, of the standard B. A coiled spring, *c*, resting on the projection *b*, surrounds the carrier for a suitable distance, and is held in place thereon by a pin or other device. The carrier, also, is provided with a head-plate, *d*, which is situated within the recessed head D, and against which the operating-cam bears. A removable plate, F, having an opening through its center for the passage of the punch, is secured in a recess in the bed A made for that purpose, and an opening underneath the opening in plate F is made through the bed A for the passage of the pieces punched out of the tire, or whatever is being perforated. The plate F is secured in the recess in the bed by means of one or more wedges, *l l*. A spring-punch or countersink, E, is secured in lugs projecting from the side of the standard, and is provided with a rest or table, *e*, also projecting from the standard underneath the countersink. The cutting mechanism consists of a stationary blade, *f*, bolted or otherwise secured to a flange, G, cast with the bed A; and a blade, *h*, secured to a heavy lever or jaw, H, hinged between two flanges, I, on the bed. The blades *f* and *h*, punch *a*, spring *c*, and plate F, and the countersink E, should be made of steel to insure strength and perfect cutting-edges. The upsetting mechanism consists of a serrated cam, *i*, secured to a flange projecting from the bed, and is provided with an operating-handle and a serrated bed, *j*, made opposite the cam on the bed A, between which and the cam one part of the tire is held, while the other part is held between a similar cam, *i'*, and bed *j*, the former of which is secured to, and the latter made with, a removable casting, J, attached to the carrier C.

The several parts are operated by the means and in the manner now to be described.

A lever, K, forked at one end, is secured on the pivot on which the jaw H is hinged. A cam-lever, M, is hinged in the recessed head D over the plate *d*, and is connected by one or more links, L, to the lower part of the lever *k*, and a pitman, N, connects the head *d* of the carrier and one end of the lever H. The lever K and link or links L are provided with a number of holes through them, by means of which the several devices can be adjusted to conform to the size of the article being worked. By pulling the lever K down the link L draws the cam-lever M also down, and it presses against the plate *d*, whereby the punch is operated, and by means of the pitman N the upper blade of the shears is also pressed downward so as to cut whatever may be placed between the blades, the spring *c* forcing the parts back to their normal position after each stroke. As will be seen, if a tire which is to be upset be secured properly between the two cams and the serrated beds when the punch is forced down, the casting J, being secured to the punch-carrier, will also descend with it and thus quickly upset the tire. The countersinking of the bolt-holes in tires, &c., can be readily accomplished by means of the countersink E. Thus constructed, the machine may be secured to the bench or elsewhere by means of screws, bolts, &c., passing through flanges on the bed. As is obvious, any desired size and shape of punch may be used, and, of course, a plate, F, of corresponding size and shape, will also have to be inserted in the recess in the bed A. When not in use the casting J may be detached from the carrier, and so, also, if the shears be not wanted, the pitman N may be detached.

The utility, convenience, and compactness of a machine combining the devices shown in mine will readily show its great value to the blacksmith and carriage-builder especially, and, as will appear, it can be produced at a cost much less than the aggregate of each machine separately, besides being more readily manipulated and occupying much less space in the workshop.

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

The arrangement upon the frame A B and upon one another, as herein described and shown, of the punching and countersinking devices, the upsetting device, the shearing device, and the several levers and springs by which these several devices are operated, for the purposes set forth.

In testimony that I claim the above I hereby subscribe my name before two witnesses.

H. B. SEVEY.

Witnesses:
T. H. KIMBALL,
R. M. MANSUR.