

(No Model.)

W. H. TRAVIS.

IMPRESSION HAMMER FOR TYPE WRITING MACHINES.

No. 513,543

Patented Jan. 30, 1894.

FIG. 1.

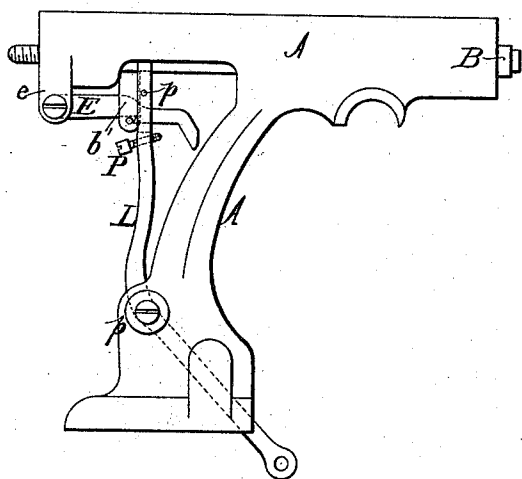


FIG. 2.

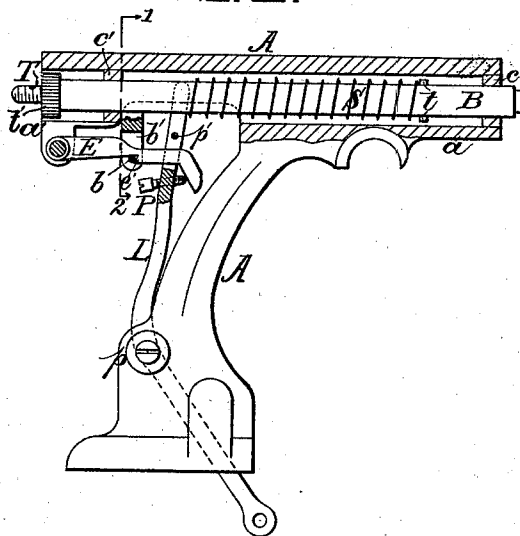


FIG. 3.

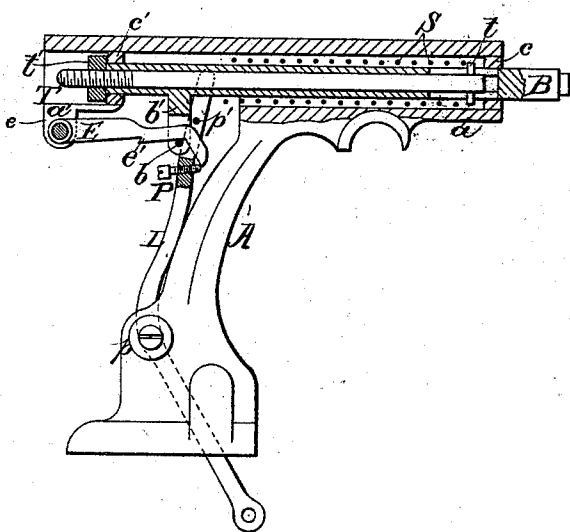
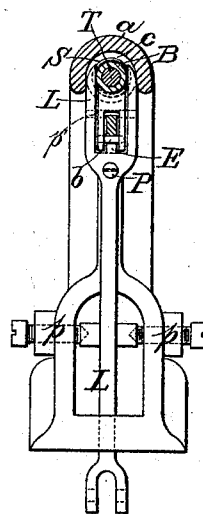


FIG. 4.



WITNESSES:

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IMPRESSION-HAMMER FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 513,543, dated January 30, 1894.

Application filed May 5, 1893. Serial No. 473,070. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. TRAVIS, a citizen of the United States, residing at Philadelphia, Pennsylvania, have invented an Improved Impression-Hammer for Type-Writing Machines, of which the following is a specification.

My invention relates to an improved construction of impression hammer adapted for use upon wheel type writing machines.

In the accompanying drawings Figure 1 is a side elevation of my improvements. Fig. 2 is a longitudinal section showing the hammer in its normal position. Fig. 3 is a corresponding longitudinal section, showing the hammer thrown out, as when striking the paper against the type to make an impression, and Fig. 4 is a transverse section on the line 1—2, Fig. 2.

The saddle or frame A which carries the hammer, may be of any suitable shape or construction. In the drawings I have by way of example shown it as of a shape or construction adapted for use in connection with and as part of the typewriting machine for which I have applied for Letters Patent of the United States May 3, 1893, Serial No. 473,016. The upper part of this saddle or frame is made in the form of a horizontal tube *a*, slotted at the under side at *a'*, and practically inclosed within this tube is the hammer B, and its spring S. The front end of this tubular portion *a* is closed by a collar *c*, which may be made in one with or secured in the frame A while near the rear end of the tube is a similar collar *c'*. I prefer to make one of these collars movable for convenience of getting at the parts.

The hammer B is adapted to have a limited horizontal sliding motion within these guiding collars *c c'* and inclosing tube. The spiral spring S bears at its forward end upon projections *t* carried by the hammer and at the rear is acted upon by the rear legs of the bifurcated upper end of the operating lever L which is pivoted to the frame at *p* and receives its vibrating motion from the keys of the type writing machine through any suitable means. The projections *t* are preferably carried by an adjustable rod T, which passes through the hammer from the rear end and is there threaded for the reception of an ad-

justing nut *t'*, by means of which the rod T may be adjusted longitudinally to give to the spring any desired tension that the hammer may give a light or heavy blow or impact, as the case may require.

Pivoted to lugs *e* at the rear of the tubular portion *a* of the frame is a trigger E having a catch *e'* co-operating with a cross piece *b* on a depending lug *b'* of the hammer B. When the hammer is drawn back, as shown in Fig. 1, this cross-piece engages with and is held by the catch *e'* of the trigger E. The lever L has however an adjustable projection P in the form of a set screw to act upon the forward end of the trigger E, so that when the vibrating operating lever L is moved, upon the operation of a key lever, to throw its upper end forward as indicated by the arrow in Fig. 2, it will first compress the spring S (Fig. 2), and then the projection P will strike the under side of the forward end of the trigger E, raise the latter and release the hammer, which thereupon is thrown forward by the spring S (Fig. 3) with an impact force dependent upon the adjustment of the rod T. On the return movement of the lever L, a cross pin *p'* thereon acts upon the pendent lug *b'* of the hammer to return the parts to the positions indicated in Fig. 1. It will be seen therefore that under normal conditions the spring is not compressed, and that the one lever L performs the several functions of first compressing the spring, then acting on the trigger to release the hammer and finally returning and resetting the hammer. Furthermore, at the moment the lever has raised the trigger to release the hammer, the lever is itself also tending to throw the hammer forward through the medium of the spring.

I claim as my invention—

1. An impression hammer mechanism for type-writers, comprising a guiding frame, a movable hammer, a spring to throw the hammer forward, a trigger and a lever to act upon the spring and also upon the trigger to release the hammer, substantially as described.

2. An impression hammer mechanism for type-writers, comprising a guiding frame, a movable hammer, a spring to throw the hammer forward, a trigger and a lever to act upon the spring and also upon the trigger to release the hammer the said lever on its return move-

ment also acting to reset the hammer, substantially as described.

3. An impression hammer mechanism for typewriters, comprising a guiding frame, a sliding hammer, and a spiral spring acting upon the hammer, in combination with an operating lever to act upon the spring and a trigger to hold the hammer and released by said lever, substantially as described.

4. An impression hammer mechanism for typewriters, comprising a guiding frame, a sliding hammer, a spiral spring acting at one end upon the hammer, an operating lever upon which the other end of the spring acts, a trigger to hold the hammer, and an adjustable projection upon the lever to act upon the trigger, substantially as described.

5. An impression hammer mechanism for typewriters, comprising a sliding hammer and

spiral spring, with a trigger and operating lever and an adjustable rod passing through a tubular portion of the hammer and having projections against which the operating spring acts, substantially as described.

6. An impression hammer mechanism for typewriters, comprising a hammer having a pendent lug with cross piece, a spring, a trigger cooperating with said cross-piece and an operating lever to act upon the trigger, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

W. H. TRAVIS.

Witnesses:

JOSEPH H. KLEIN,
HARRY SMITH.