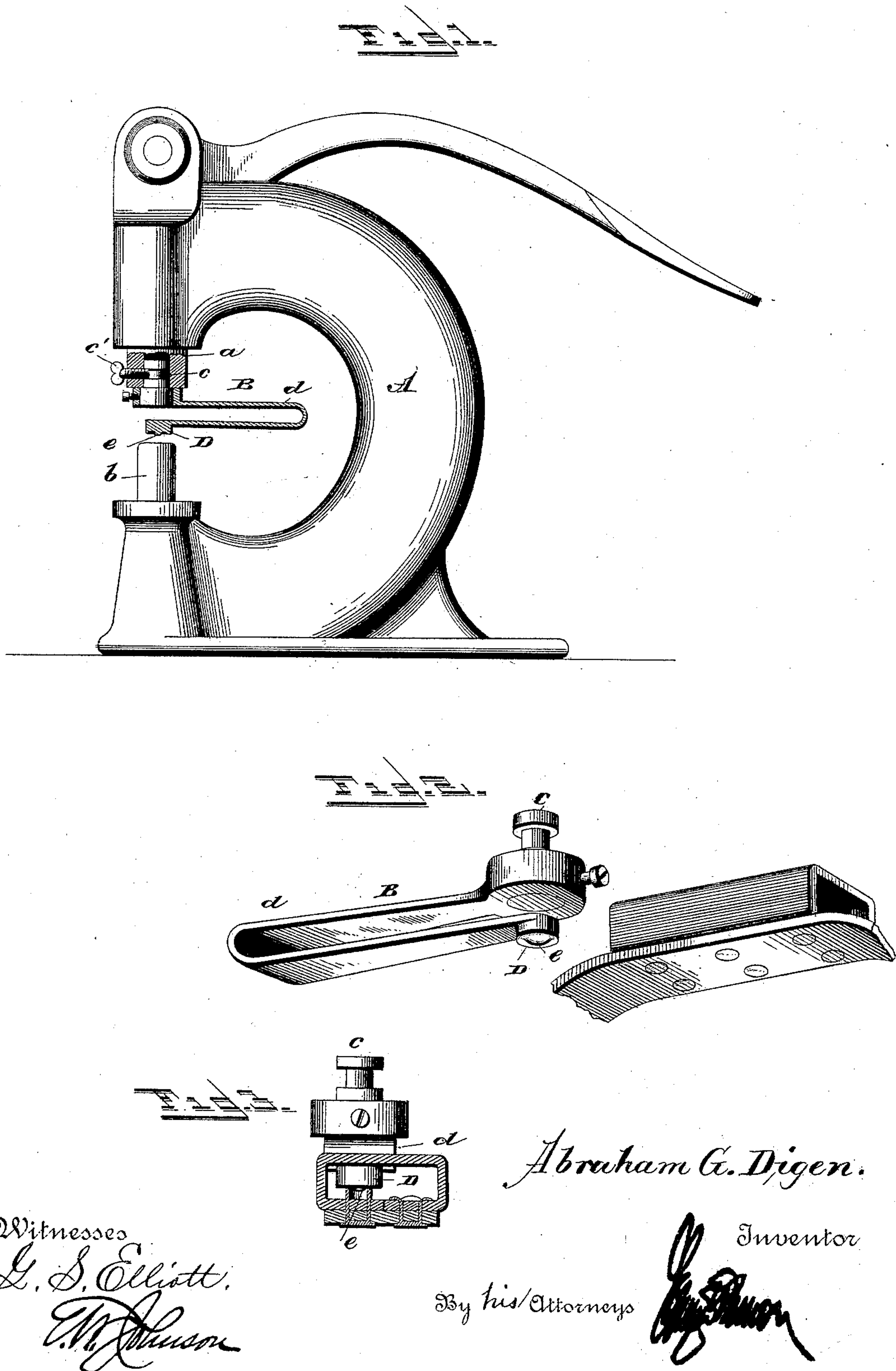


(No Model.)

A. G. DIGEN.
RIVETING MACHINE.

No. 409,939.

Patented Aug. 27, 1889.



UNITED STATES PATENT OFFICE.

ABRAHAM G. DIGEN, OF GRANITE FALLS, MINNESOTA.

RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 409,939, dated August 27, 1889.

Application filed May 9, 1889. Serial No. 310,115. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM G. DIGEN, a citizen of the United States of America, residing at Granite Falls, in the county of Yellow Medicine and State of Minnesota, have invented certain new and useful Improvements in Riveting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in devices for upsetting the ends of rivets.

The object of my invention is to provide a simple device which can be used for upsetting the ends of rivets with harness loops or keepers and other analogous objects; and it consists in providing a spring-arm at one end with a flat block beneath which is located an anvil, which contacts with the end of a rivet for the purpose of upsetting the same, the parts being so constructed that the anvil will rest upon the end of the rivet to be upset, while the head of the rivet bears upon a permanent block, the blow or pressure being imparted to the anvil through a block or head attached to the opposite end of the U-shaped spring-arm, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side view, partly in section, of my improved device for upsetting rivets, showing the same applied to an ordinary rivet punch or press. Fig. 2 is a detail perspective view showing the same detached, a keeper in which the rivets have been secured being located in proximity thereto. Fig. 3 is a vertical sectional view showing the parts in position to upset the end of the rivet.

A refers to the frame of a riveting-press, which is operated by a lever abutting against a follower *a*, said follower being recessed for attaching my improvement thereto. This press is also provided beneath the follower with a rigid block *b*, upon which the head of the rivet is placed prior to upsetting.

B refers to my improved riveting device, which is attached to the follower *a* in any

suitable manner, in the present case the same being provided with an upwardly-projecting portion *c*, provided with a circumferential groove with which a set-screw *c'* engages to secure the same to the follower.

d refers to a spring-bar bent upon itself and formed at one end with an anvil *D*, said anvil being flat upon its upper portion, while its lower portion is provided with a central projecting nib *e*, adjacent to which is formed a circular groove. This construction of the face of the anvil is preferred, as the rivets ordinarily used have hollow ends. The opposite end of the U-shaped spring *d* is of larger diameter than the anvil, and is perfectly flat and smooth, so that it will not injure or abrade the part of the leather with which it contacts. The part of the spring connecting the anvil and opposite end is made U-shaped or bent upon itself, so that the keeper can be passed beneath the same to allow the blow or pressure to be applied upon the keeper through which the pressure is imparted to the upper face of the anvil, thus forcing the anvil upon the end of the rivet to upset the same, while the head of the rivet is upon the rigid block *e*.

By means of this device rivets may be employed for connecting such parts of harness as are covered by loops, and keepers of great length—such as are used with traces—may be secured by rivets quickly and at a small expense.

This device, though adapted to upset rivets beneath keeper, can be used for upsetting the ends of rivets as ordinarily applied, and when so used the upper block will abut directly upon the upper face of the anvil.

I propose to furnish this device to the trade as an attachment for ordinary rivet and punch presses, and therefore do not limit myself to the particular construction of the means employed for attaching the same to the follower of a press, as such means will vary with different styles of presses.

Having thus described my invention, I desire the right to modify the same and change the face of the anvil to suit the different styles of rivets furnished to the trade.

I claim—

1. In a device for upsetting the ends of rivets, an anvil *D* and an upwardly-projecting

portion *c*, said anvil and portion being integrally connected together by a U-shaped spring and presenting the device in a single piece, substantially as set forth.

- 5 2. The combination, in a device for upsetting rivets, of a spring-bar bent upon itself and provided at one end with an anvil *D* and at the opposite end with a block having a plain face, the said block also having means
10 for connecting the same to the follower of a

press, so that the anvil will be located above the rigid block *b*, attached to said press, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ABRAHAM G. DIGEN.

Witnesses:

M. C. SULLIVAN,
BERT WINTER.