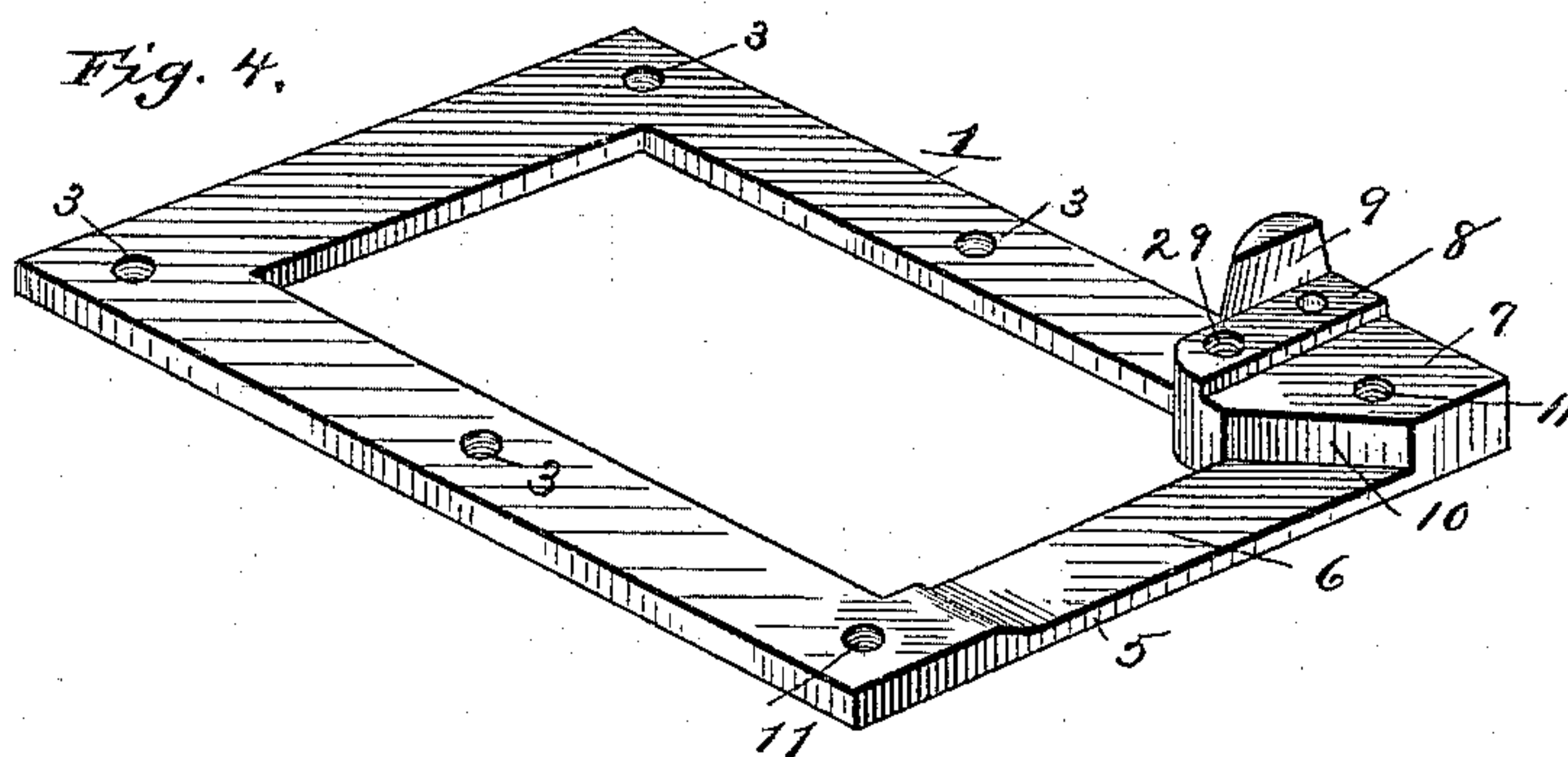
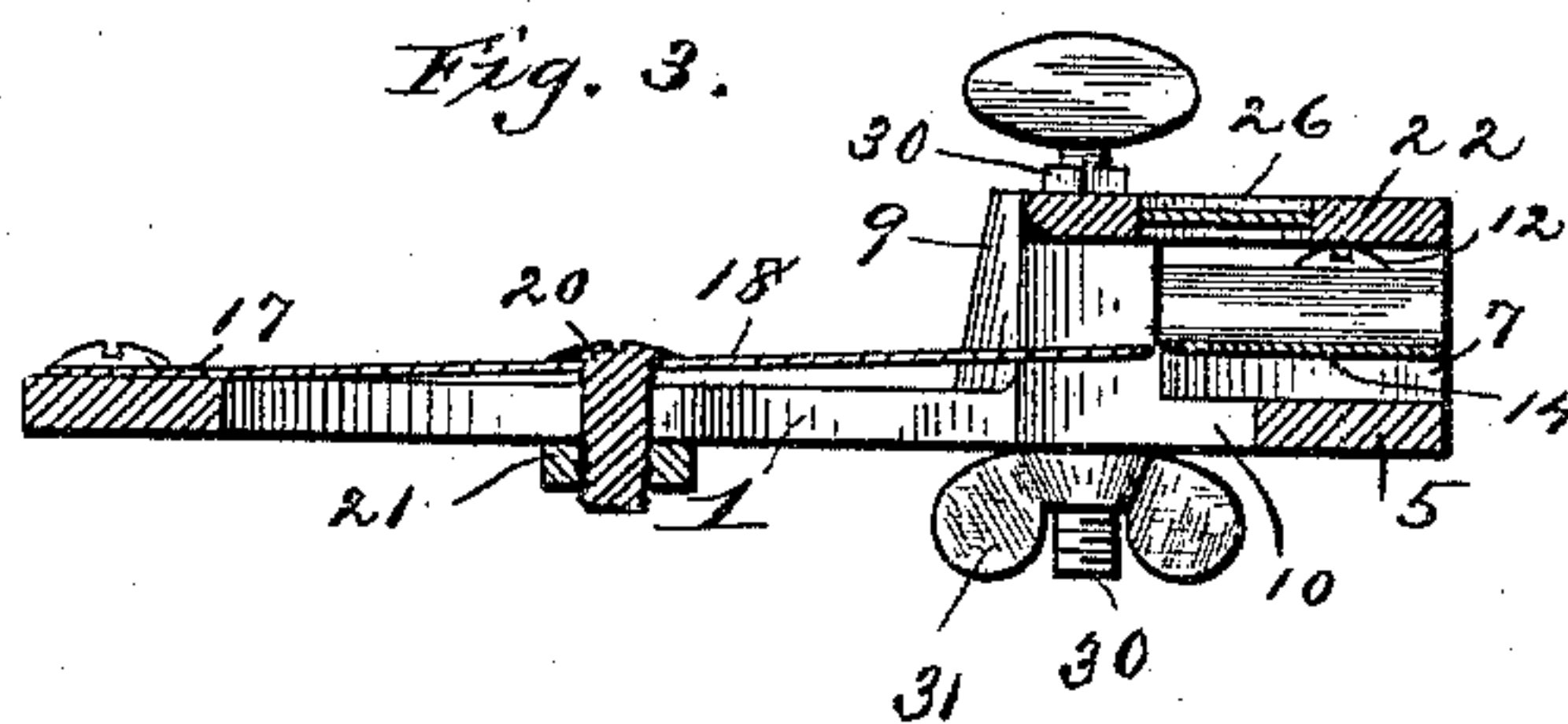
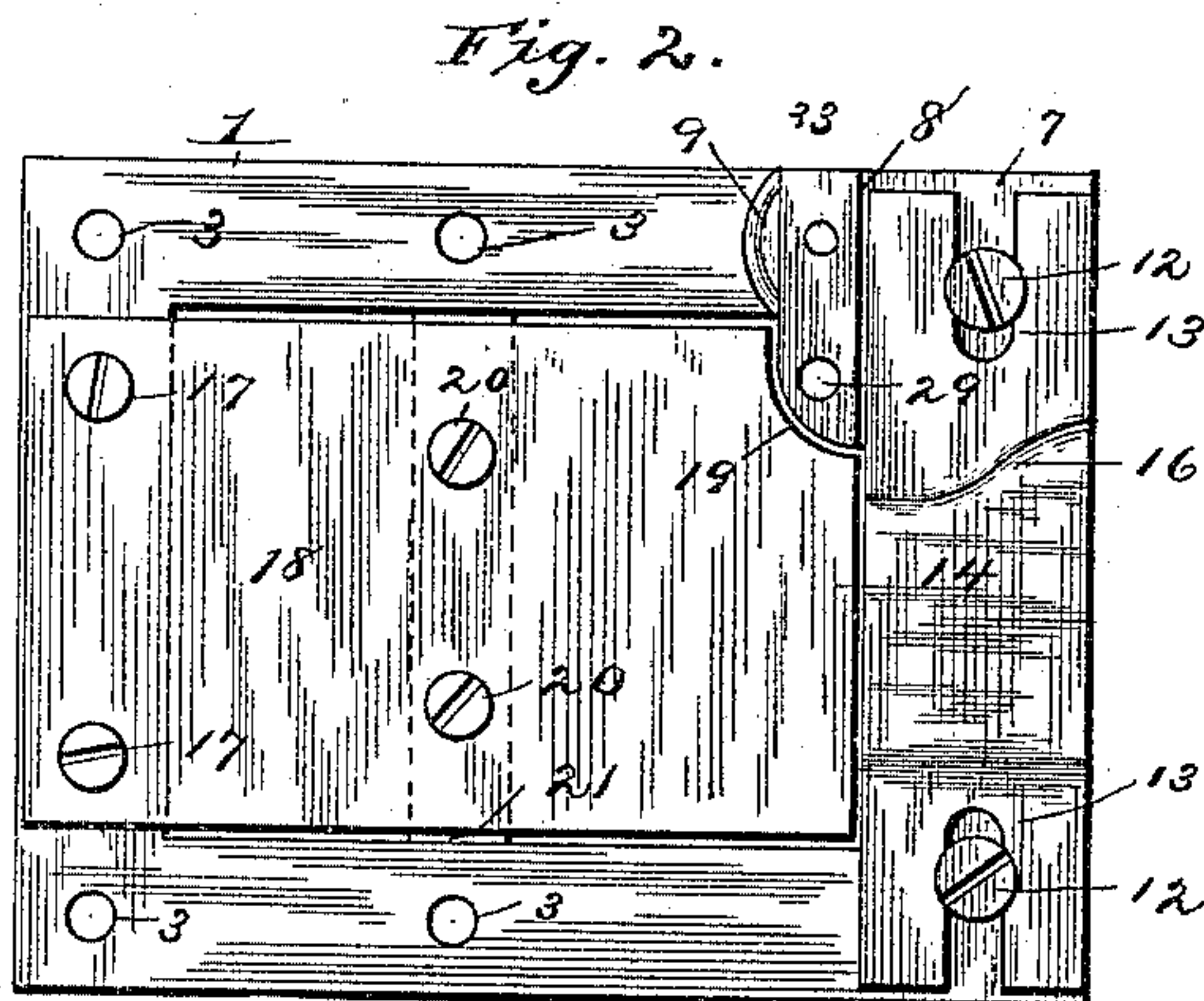
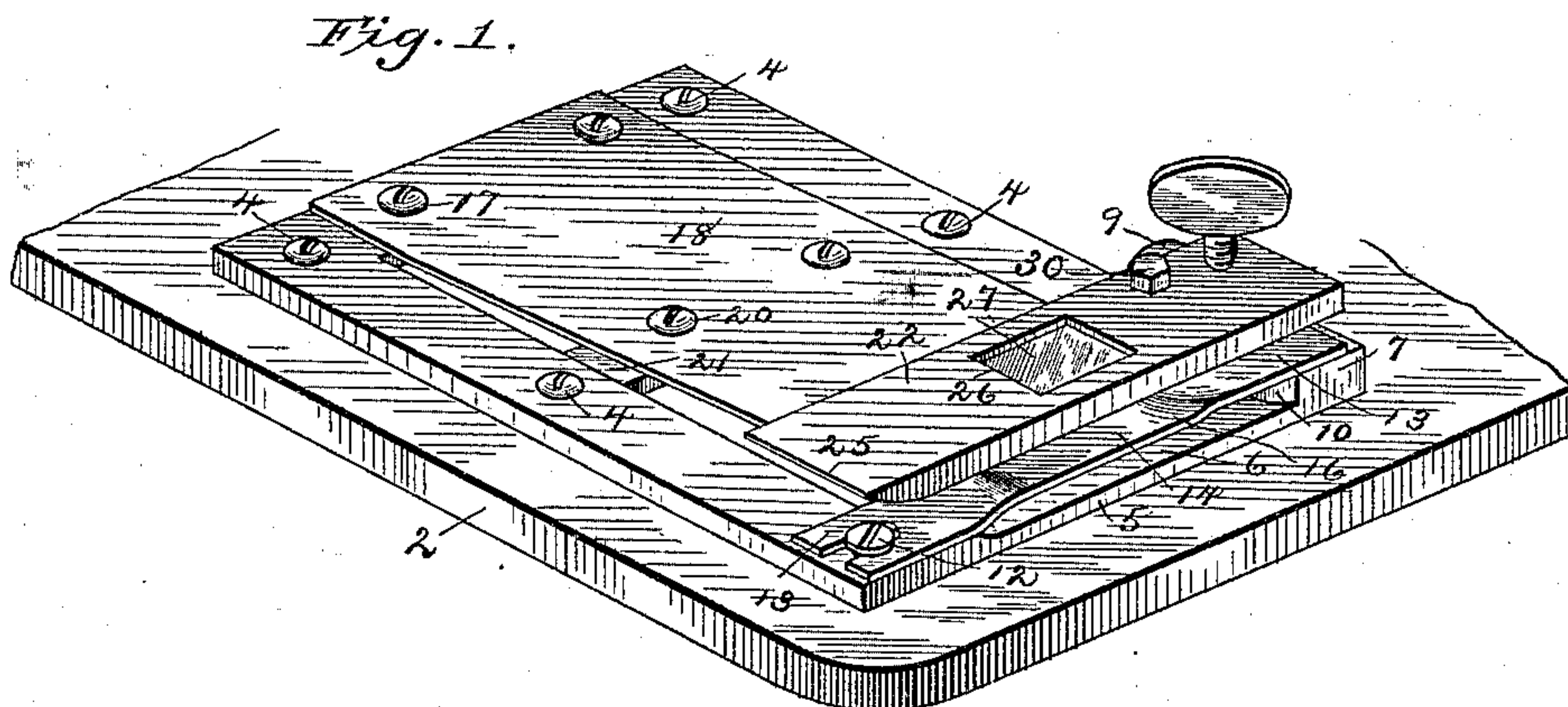


(No Model.)

W. A. BATES.  
MACHINE FOR SPLITTING LEATHER STRIPS.

No. 445,744.

Patented Feb. 3, 1891.



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLARD A. BATES, OF PRINCETON, MAINE.

## MACHINE FOR SPLITTING LEATHER STRIPS.

SPECIFICATION forming part of Letters Patent No. 445,744, dated February 3, 1891.

Application filed April 9, 1890. Serial No. 347,163. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD A. BATES, a citizen of the United States, residing at Princeton, in the county of Washington and State of Maine; have invented a new and useful Machine for Splitting Leather Strips, of which the following is a specification.

This invention has relation to a machine for splitting leather straps and forming those portions of harness-trimmings usually termed "layers." Layers, as is well known, are pieces of leather cut away in fanciful designs upon their under sides, leaving the central portions considerably thicker than the edges, which edges are stitched to different portions of the harness. After this cutting the layers are pounded or pressed so that the design upon the under side of the leather appears as if formed upon the grain side. The above result is sometimes obtained by employing an inner core of leather tapered at its sides and ends, the melt or taper being formed by the employment of a sharp knife.

The main object of my invention is to provide a layer-forming machine into which leather straps may be introduced and manipulated so as to present the same at different angles to a knife arranged in the machine, whereby, by reason of the inclination and shape of the knife and such varying presentations, fanciful designs may be readily formed upon said strap of leather.

Various minor objects of the invention will hereinafter appear, and the novel features will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a machine constructed in accordance with my invention. Fig. 2 is a plan, the thickness-gage removed. Fig. 3 is a transverse section through the thickness-gage. Fig. 4 is a detail of the bed-plate. Figs. 5 and 6 are details in cross-section of differently-cut layers my machine is capable of producing.

Like numerals of reference indicate like parts in all the figures of the drawings.

The bed-plate 1 consists of a rectangular metallic frame securely bolted to any fixed bed, as 2, as shown, by means of perforations 3 formed in the plate through which are passed the bolts 4. The front transverse bar 5 of the plate is recessed upon its upper surface,

as at 6, and formed upon the upper surface of the plate at the end of the recess is a raised portion 7, at the rear of which there is formed a still higher portion or surface 8, and in rear of this portion a stop-lug 9. The raised portion 7 has its inner face or side wall flared or cut away toward the front of the bed-plate, as shown at 10, and the same forms the side wall of the transverse recess 6. A screw-opening 11 is formed in this raised portion, and a similar opening 11 is formed at the opposite end of the recess, and in said openings are inserted opposite screws 12, which are embraced by the bifurcations 13 formed at the extremities of the knife 14. By reason of the different heights of the bearing-surfaces for the knife, said knife is transversely curved or gradually depressed toward its lower bearing, as shown, and is provided with a transverse curved angle or crease 16 agreeing with the curved side wall of the knife-bearing surface, and in rear of the angle is provided with the thickness-gage.

Various forms of knives may be employed for the purpose of forming different designs, as will be readily understood by those conversant with leather-splitting.

To the rear transverse bar of the bed-plate there is bolted, as at 17, a flat spring-plate 18, the front edge of which occurs in close proximity to the cutting-edge of the knife, and one corner of the spring is cut away, as at 19, to take around the inner wall or end of the raised portion 8, and the opposite corner of the spring is slightly depressed, so that the same is in substantial parallelism with the inclination of the cutting-edge of the knife. Set-screws 20 are passed through the spring-plate and take into a cross-bar 21, located under the bed-plate, whereby the free end of the spring may be raised and lowered to bring the same at various distances below the cutting-edge of the knife.

22 represents the thickness-gage, which is simply a transversely-disposed plate mounted upon the raised portion 8, the rear edge of the plate resting against the flat face of the lug or stop 9, which maintains the gage in parallelism with the edges of the knife and the spring-plate. The rear edge and also the free end of the gage is rounded, as at 25, to



facilitate the introduction of the leather strap to the machine. The plate is also provided with an opening 26, occurring directly over the edge of the knife, and in the same there is secured in any suitable manner a glass or other transparent sight-panel 27, through which the operator may at all times obtain a full view of the operations of the knife upon the stock, and can therefore manipulate the same, so as to produce the desired designs.

An opening 29 is formed in the raised portion 8, and through the same takes a threaded stud or bolt 30, secured to and passed through the thickness-gage, a set-nut 31 being mounted upon the stud, so as to bind the gage in position or at different heights above the cutting-edge, which heights are determined by a set-screw 34, inserted through a threaded opening 32 to one side of the stud, the lower end of the set-screw being seated in a countersunk recess 33, formed in the raised portion 8. By manipulating these screws, the set-screw, so as to raise or lower the gage, and the binding-nut, so as to lock the plate in the desired position, various thicknesses of leather may be introduced into the machine.

The manner of using the machine will readily suggest itself, and may be briefly stated as follows: The stock or strip of leather is introduced laterally under the thickness-gage, which gage, together with the spring-plate, have been previously set in accordance therewith, and with the desired depth of cut. Now, by drawing upon the advance end of the leather and manipulating the same so as to present the same at various angles to the cutting-shoulder and other portions of the cutting-edge of the knife, the various designs may be formed. The entire process may be easily carried on and in full view of the operator. As the cuts are made the scraps pass under the knife and through the transverse recess 6 formed in the cross-bar 5, from which they fall to the ground.

Although the device is especially designed for the cutting of layers for ornamenting harness, it will be apparent that by the substitution of properly-shaped knives shoe-shanks may be similarly cut from sole-leather.

Various changes in the details of construction of my invention may be made without departing from the spirit thereof; and I would therefore herein state that I do not limit the invention to the exact details herein shown and described, but hold that I may vary the same to any extent within the skill of persons conversant with the art of leather-working.

In Figs. 5 and 6 I have illustrated in cross-section welts of different styles. In the first-mentioned figure the taper from center or thickest portion to the outer edges is gradual. This is accomplished by setting the knife to one side, so that its crease or cutting shoulder is about flush with the inner end of the raised portion 8 of the bed-frame. In the latter figure the cut is made by setting the knife to the opposite side, so that the

shoulder is beyond the inner end of the raised portion 8, so that the straight portion of the knife or that portion to one side of the shoulder is parallel with the under surface of the thickness-gage. By thus setting the knife the opposite stitching-edges are of a uniform thickness their entire widths.

In turning the welt or layer to form various designs the knife is set as for cutting the gradually-inclined stitching.

Having described my invention, what I claim is—

1. In a machine of the class described, the bed-plate, the inclined spring-plate 18, and the inclined knife 14, arranged at the free end of the spring-plate and transversely to the same, said knife being provided with a transverse curved angle or crease 16, forming a cutting-shoulder, as set forth.

2. In a machine of the class described, the spring-plate 18 and devices, substantially as described, for adjusting the same, combined with the knife 14, arranged at the free end of the spring-plate and transversely to the same, and provided adjacent to the center with a transverse curved angle or crease 16, forming a cutting-shoulder, and devices, substantially as described, for longitudinally adjusting the knife, as set forth.

3. In a machine of the class described, the spring-plate 18 and devices, substantially as described, for adjusting the same, combined with the knife 14, arranged at the free end of the spring-plate and transversely to the same, and provided adjacent to the center with a transverse curved angle or crease 16, forming a cutting-shoulder, and devices, substantially as described, for longitudinally adjusting said knife, and the thickness-gage located above the knife and adjustable vertically, as set forth.

4. In a machine of the class described, the spring-plate 18 and devices, substantially as described, for adjusting the same, said plate being vertically adjustable by means, substantially as described, combined with the knife 14, arranged at the free end of the spring-plate and transversely to the same, and provided adjacent to the center with a transverse curved angle or crease 16, forming a cutting-shoulder, and devices, substantially as described, for longitudinally adjusting the knife, and the thickness-gage located above the knife and adjustable vertically, as set forth.

5. In a machine of the class described, the combination, with a base-plate and a superimposed gage-plate, of an inclined knife located between the two and having its upper or highest end in contact with the gage-plate, said knife being provided at one side of the said point of contact with a transverse crease terminating at the edge of the knife in a cutting-shoulder, substantially as specified.

6. In a machine of the class described, the combination, with a knife provided with a cutting-shoulder, of a thickness-gage located



above the knife and having a sight-panel formed therein directly above the shoulder, substantially as specified.

5 7. In a machine of the class described, the combination, with a base-plate provided with the raised portions 7 and 8, of the knife bent to form a shoulder and provided with screw-receiving openings, screws passing through the ends of the knife and the plate and one  
10 of the same through the raised portion 7, the thickness-gage arranged parallel with the knife, the set-screw passing through the raised portion 8 and provided upon the un-

der side of the base-plate with a nut, and the binding-screw passed through the gage and 15 taking in a countersunk recess formed in the raised portion, and the spring-plate connected at the rear end of the plate and provided with adjusting-screws, substantially as specified.

In testimony that I claim the foregoing as 20 my own I have hereto affixed my signature in presence of two witnesses.

WILLARD A. BATES.

Witnesses:

WILLIS R. DRESSER,  
DAVID DRESSER, Jr.