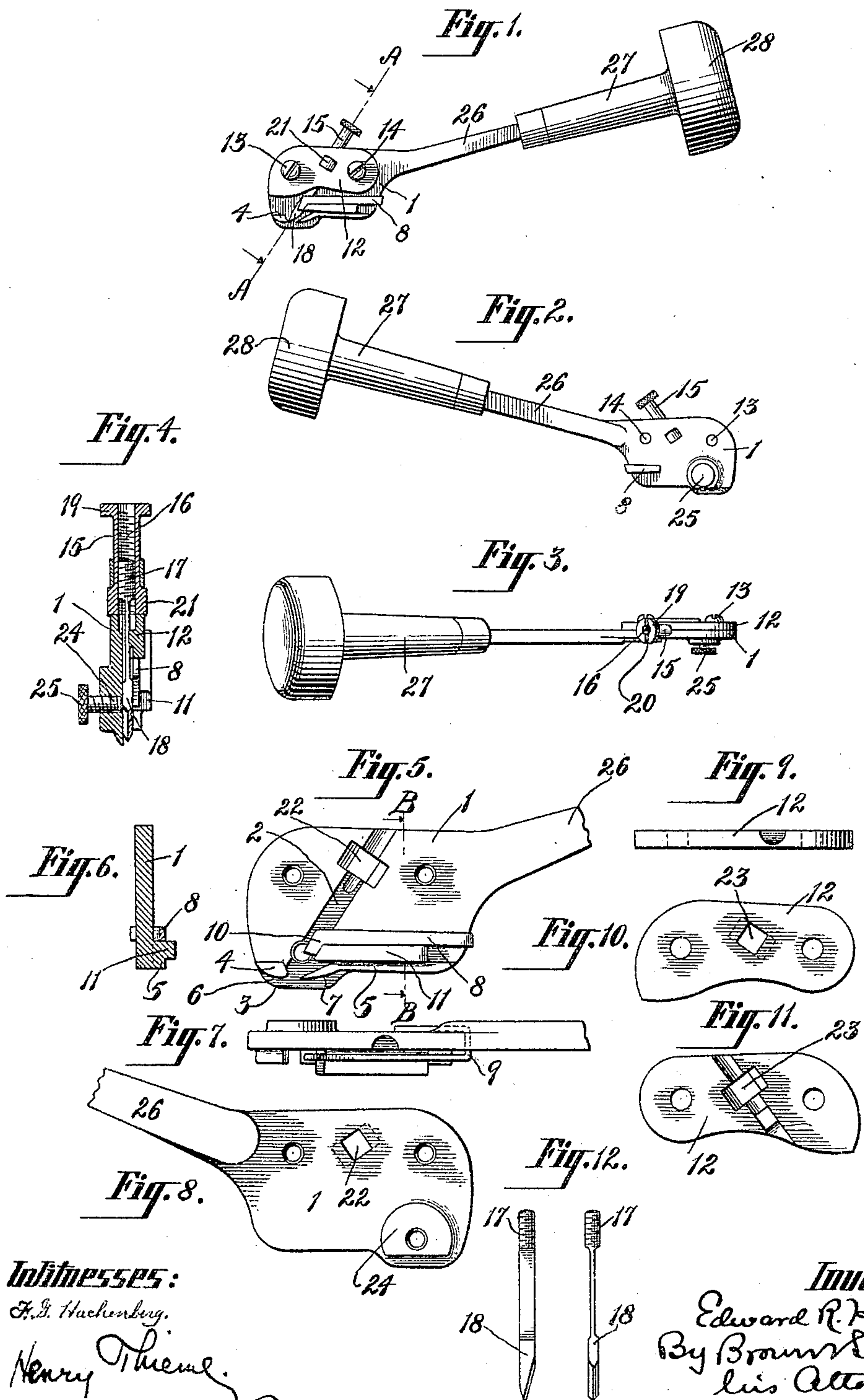


No. 816,794.

PATENTED APR. 3, 1906.

E. R. HARRIS.  
HAND LINING TOOL.  
APPLICATION FILED OCT. 27, 1904.





# UNITED STATES PATENT OFFICE.

EDWARD R. HARRIS, OF NEW YORK, N. Y.

## HAND LINING-TOOL.

No. 816,794.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed October 27, 1904. Serial No. 230,223.

*To all whom it may concern:*

Be it known that I, EDWARD R. HARRIS, a subject of the Crown of Great Britain and Ireland, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Hand Lining-Tool, of which the following is a specification.

My invention relates to a hand lining-tool, and more particularly to a tool of this character for use in connection with plates prepared by photo-engravers, the object being to provide an effective tool for cutting a line in proximity to the edge of the plate.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the tool in side elevation. Fig. 2 is a similar view showing the opposite side. Fig. 3 is a top plan view. Fig. 4 is an enlarged transverse section in the plane of the line A A of Fig. 1. Fig. 5 is an enlarged view in detail of the main plate which forms the body of the tool, the keeper and cutter being removed. Fig. 6 is a transverse section through the same in the plane of the line B B of Fig. 5. Fig. 7 is a top plan view of the same. Fig. 8 is a reverse view of the same in elevation. Fig. 9 is a top or edge view of the keeper. Fig. 10 is a view of the same in side elevation. Fig. 11 is a view of the same in reverse side elevation, and Fig. 12 represents the tool in side and edge elevation.

The body of the tool consists of a plate of metal 1, having a slanting groove 2 formed therein for the reception of the cutter, the said plate 1 being provided at the bottom of its forward end with a downwardly-projecting lip 3, which is intended to serve as a guide for holding the tool with the cutting edge of its cutter at the proper distance from the edge of the plate. In working on plates with beveled edges where, as is common, there is a shallow shoulder at the upper edge of the beveled portion the lip 3 would ride along on the beveled portion and be pressed against the shoulder to hold the cutter in proper relation to the plate. The plate 1 is further provided with laterally-projecting guides 4 and 5, the former located in advance of the cutting edge of the cutter and the latter to the rear of the cutting edge, the said guides 4 and 5 having their lower edges curved, as shown at 6 and 7, the said curved lower edges of the guides 4 and 5 being intended to rest on

the plate immediately in front of and to the rear of the cutter to determine the depth of cut and at the same time to permit a rocking of the tool in a vertical plane to lift the cutting point or edge of the tool gradually out of its cutter. The curved lower edges of the guides 4 and 5 are located a short distance above the lower edge of the lip 3, so as to permit the latter to engage the upright wall of the shoulder on the plate before the said guides engage the top of the plate. The said body-plate 1 of the tool is further provided with a bar-spring 8, which, being secured to the rear end of the body 1, reaches forward over the groove 2 in position to press against the side of the tool to hold the lower end of the tool in position. The spring is here shown as having a U-shaped bight 9, by means of which it passes around from one side of the plate 1 to the opposite side before projecting forward, as clearly shown in Fig. 7. The forward or free end of the spring is also preferably provided with a downwardly-projecting nose 10 to give it a more extended bearing against the side of the tool. Furthermore, the body 1 is provided with a ledge 11, extending laterally therefrom along underneath the spring 8, forming a rest for the spring.

The keeper is denoted by 12. It is a flat plate and intended to rest against the side of the body 1 and to be secured in position by means of screws 13 and 14, extending through the keeper 12 and tapped into the body 1. The keeper 12 when in position, as shown in Figs. 1 to 4, inclusive, serves to retain the cutter-adjusting sleeve in position with the shank of the cutter therein.

The cutter-adjusting sleeve is a short tube 15, (see Fig. 4,) provided with an internal screw-thread 16, adapted to engage the screw-threaded shank 17 of the cutter 18. The cutter-adjusting sleeve has therein a knurled disk 19 for convenience in turning it, and it may also be provided with a kerf 20 for using a screw-driver to turn it, if desired. The sleeve 15, furthermore, has an enlarged annular portion 21 on its lower end, which is received when assembled in recesses or openings 22 23, formed, respectively, in the adjacent faces of the body 1 and keeper 12.

The upper and lower ends of the annular enlargement 21 are intended, when assembled, to rest in proximity to the upper and lower walls of the recesses 22 23, so that the sleeve 15 becomes swiveled in its position



between the body 1 and keeper 12, being free to be rotated, but held against a longitudinal movement, whereby the said rotary movement of the sleeve, because of the engagement of the threaded shank 7 of the tool with its interior, will cause the tool itself to be drawn upwardly or forced downwardly, according to the direction in which the sleeve 15 is rotated, and thus will serve to set the cutting edge of the cutter more or less below the curved edges of the guides 4 and 5, and hence will serve to determine the depth of cut.

The lower end of the cutter is forced away from the inner face of the lip 3, and hence away from the outer edge of the plate, to make the line at a greater or lesser distance from the outer end by means of an adjusting-screw 24, set in the body 1 and provided with a knurled head 25 for operating it, the said screw being in position to force the cutter against the end 10 of the spring 8 to move it laterally against the tension of said spring, the pressure of which is exerted to crowd the cutter toward the body 1, and hence, as near as may be, to the face of the lip 3.

The body 1 is conveniently provided with an extended shank 26, which may be secured in a handle 27 in any well-known or approved manner, the handle 27 being conveniently provided with a knob 28 for receiving the pressure of the hand in operating the tool.

The tool as thus constructed admits of ad-

justing the cutter to the greatest degree of nicety either laterally or longitudinally and forms an effective and simple hand device for cutting the line on the plate.

What I claim is—

1. A hand lining-tool comprising a body portion, a handle connected with the body portion, a cutter seated in the body portion, the said body portion being provided with a depending lip to engage the edge of the plate and a guide to engage the surface of the plate, means for adjusting the cutter longitudinally in the body and means for adjusting the cutting edge of the cutter laterally with respect to the body.

2. A hand lining-tool comprising a body provided with a groove, a cutter located in the groove, a sleeve swiveled in the body and having a screw-threaded engagement with the cutter for adjusting the cutter longitudinally along the groove, a spring having a lateral bearing against the cutter and an adjusting-screw seated in the body and working against the cutter in opposition to the tension of the spring.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 25th day of October, 1904.

EDWARD R. HARRIS.

Witnesses:

FREDK. HAYNES,  
HENRY THIEME.