(No Model.)

W. KAMPFE & J. NAGENGAST.

ADJUSTABLE CROZE.

No. 438,480. Patented Oct. 14, 1890.

Fig. 1.

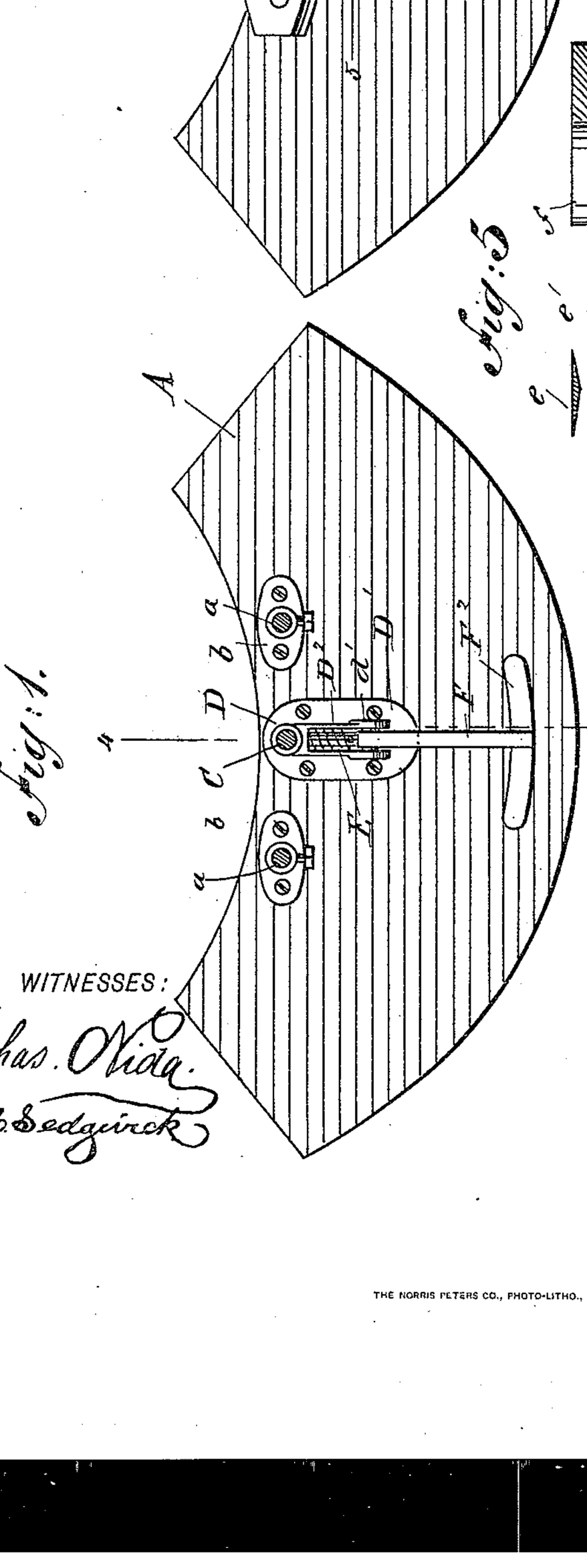


Fig. 2.

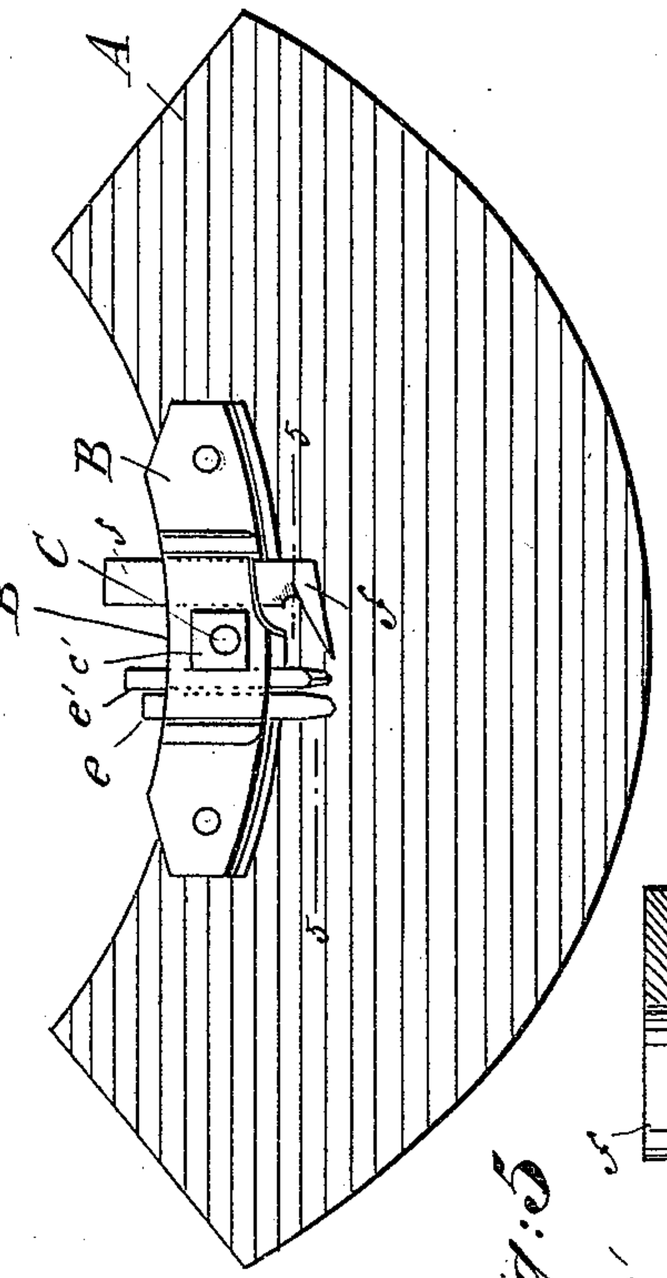


Fig. 3.

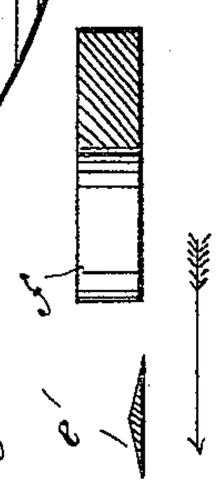
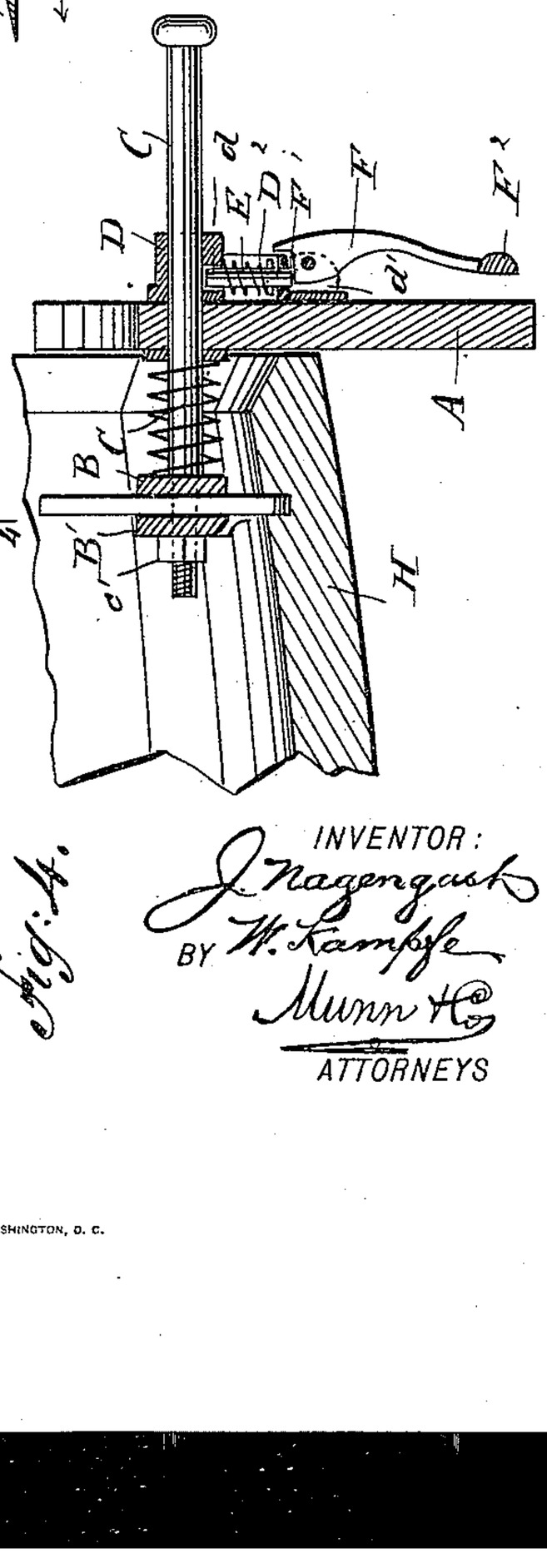


Fig. 4.



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WILLIAM KAMPFE AND JOSEPH NAGENGAST, OF BAYONNE, NEW JERSEY.

ADJUSTABLE CROZE.

SPECIFICATION forming part of Letters Patent No. 438,480, dated October 14, 1890.

Application filed May 27, 1890. Serial No. 353,385. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM KAMPFE and JOSEPH NAGENGAST, both of Bayonne, in the county of Hudson and State of New Jersey, have invented a new and Improved Adjustable Croze, of which the following is a full, clear, and exact description.

Our invention relates to an improved adjustable croze; and the object of our invention is to produce a croze that will be simple in construction and efficient in its operation and that may be instantly adjusted to fit the various sizes of barrels, casks, and similar receptacles.

To this end our invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the croze embodying our invention, taken on the line 1 1 in Fig. 3. Fig. 2 is an inverted plan of the same. Fig. 3 is a front elevation of the same. Fig. 4 is a vertical transverse section on the line 4 4 of Fig. 1, showing the application of the croze to a barrel; and Fig. 5 is a longitudinal section on the line 5 5 of Fig. 2, showing the relative position of the cutting-knives and plow.

A segmental plate A constitutes the handle of the device, said plate being of a size to enable it to rest firmly upon the ends of the barrel-staves to adapt it to be easily moved around a barrel end, and extending transversely through the plate A are the rods *a*, which are provided with suitable collars *a'*, having set-screws therein, by means of which the position of the collars on the rods may be fixed, said collars being adapted to prevent the rods from dropping through the plate. The rods *a* are mounted loosely in boxes *b*, which extend through the plate A, and are provided with suitable flanges through which the boxes are secured to the plate. The collars *a'* will thus prevent the rods *a* from dropping through the plate A; but said rods will be free to move in the opposite direction.

Fixed to the lower ends of the rods *a* is a segmental plate B, similar in shape to the plate A, but very much smaller in size. The plate B is provided with a central transverse recess *b'*, said recess having in one side a groove b^2 and in the opposite side a groove b^3, said grooves being adapted to hold the cutters and plow, as hereinafter described.

A clamping-piece B' fits within the recess *b'*, and is adapted to hold the cutters and plow in position. A rod C extends through the clamping-piece B', the plate B, and the plate A, said rod being mounted in the box D, which is centrally secured to the plate A, having a suitable flange D', through which pass the attaching screws for fixing the box upon the plate.

The flange D' has a slide groove or way D^2 upon its upper surface, and mounted longitudinally in said groove is a spring-pressed rod E, one end of which projects through a slot *d* in the box D, so that it may impinge upon the rod C, and the other end of which extends through a perforation in the outer end of the way D^2. The flange D' is also provided with ears *d'*, arranged adjacent to the end of the way D^2, and pivoted between said ears is the lever F, having its inner end provided with a shoulder F', adapted to press against the outer end of the rod E, and having its outer end formed into a suitable handle F^2, said handle being arranged adjacent to the outer edge of the plate A, so that it may be conveniently grasped by the hand of the operator at the same time he is grasping the plate A. It will thus be seen that by pressing the handle F^2 upon the plate A the shoulder F' of the lever F will be forced against the outer end of the rod E, thus pressing said rod against the rod C, and holding the rod and the plate B attached thereto in a desired position.

Mounted in the groove b^2 of the plate B are the cutters *e e'*, which are shaped like the ordinary croze-cutters, being beveled in opposite directions, so as to cut a suitable score upon the barrel-stave, and held in the groove b^3 of the plate B is a plow *f*, which is also like the ordinary croze-plow, and the point of which will follow the points of the cutters when the device is used. The cutters *e e'* and the plow *f* are held in position by the clamping-piece B', which is forced firmly against said parts by the nut *c'*, which is located upon the lower

end of the rod C, said rod being screw-threaded to receive the nut. The plate B is normally pressed downward by the spring *c*, which encircles the rod C between the plate A and the plate B. It will thus be seen that the plate B, which carries the cutting-tools, is easily adjusted in relation to the plate A.

In practice, the plate B is forced upwardly to a point near the plate A, and is held in position by pressing upon the handle F^2, and forcing the rod E against the rod C in the manner described. If it is then necessary to drop the plate B, the operator merely loosens the handle F^2 and the spring *c* will force the plate B downwardly. When adjusted, the collars *a'* are secured on the rods *a*.

The device is used in the same manner as an ordinary croze. The plate A rests upon the top edge of a barrel, as H, in the manner shown in Fig. 4, and the plate B and the cutters *e e'* therein are brought to a desired point within the barrel in the manner described, and by moving the plate A around the barrel and holding the cutters against the inner sides of the barrel the groove for the barrel-head will be cut in the staves in the usual manner.

The device may be used for cutting the grooves entirely around the barrel, or it may be used for cutting grooves in new staves which have been inserted in the barrel to repair the same.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A croze comprising a plate adapted to rest upon the edge of a barrel, a plate arranged parallel with said plate and carrying suitable cutters, rods fixed to the cutter-plate and extending loosely through the main plate, said rods having collars adjustably fixed thereto, as shown, a spring-pressed rod fixed to the cutter-plate and extending through the main plate, and a lever mechanism for fixing the position of the rod, substantially as described.

2. A croze consisting, essentially, of a plate adapted to rest upon the edge of a barrel, a plate carrying suitable cutters and having parallel rods affixed thereto, said rods being loosely mounted in the first-mentioned plate, a spring-pressed rod fixed to the cutter-plate and extending loosely through the first-mentioned plate, and a lever mechanism for fixing said rod and plate in a desired position, substantially as described.

3. The combination, with the plate A, having boxes *b* therein, of the plate B, having means, as rods *a* and collars *a'*, for suspending it from the plate A, and having suitable groove-cutters arranged therein, the spring-pressed rod C, fixed to the plate B and extending through the plate A, as shown, the box D, fixed to the plate A and adapted to encircle the rod C, the said box D, having the flange D' and way D^2 thereon, the rod E, mounted in the way D^2 and adapted to impinge upon the rod C, and the lever F, pivoted in the ears *d'* of the flange D' and adapted to actuate the rod E, substantially as and for the purpose specified.

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