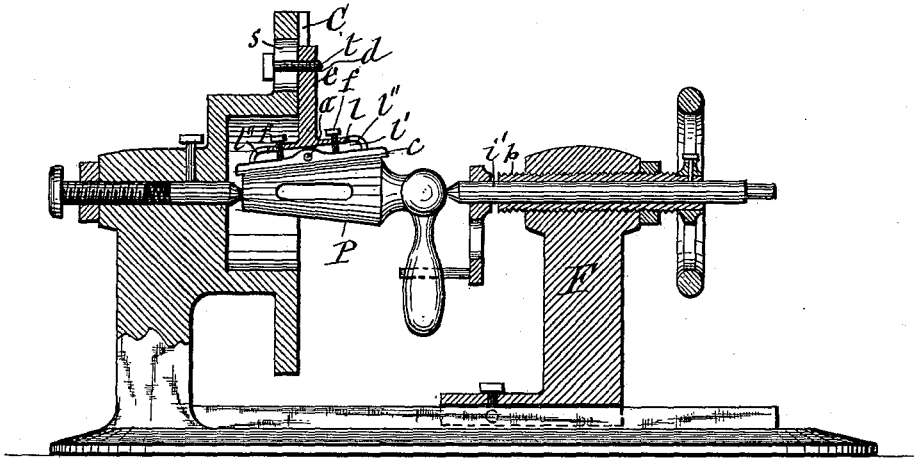


(No Model.)

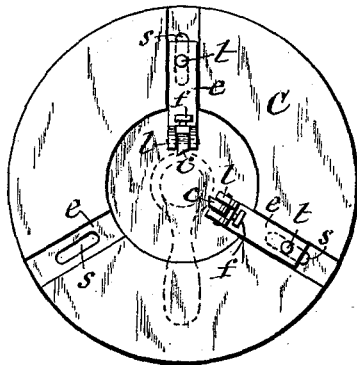
C. F. HALL.  
MACHINE FOR REFITTING VALVES.

No. 463,787.

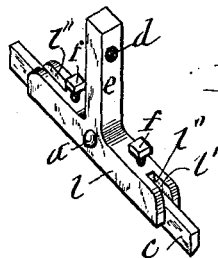
Patented Nov. 24, 1891.



*Fig. 1*



*Fig. 2*



*Fig. 3*

WITNESSES:

*G. L. Pennington*

*J. J. Gass*

INVENTOR:

*Charles F. Hall*

*By* *Hull, Lasso & Hull*  
*his* ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES F. HALL, OF SKANEATELES, NEW YORK.

## MACHINE FOR REFITTING VALVES.

SPECIFICATION forming part of Letters Patent No. 463,787, dated November 24, 1891.

Application filed July 6, 1891. Serial No. 398,553. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HALL, of Skaneateles, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Machines for Refitting Valves, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates specifically to the refitting of the valves of stop-cocks and analogous valves. Such valves and their seats are usually tapered to some degree, and in order to properly fit them to each other, so as to prevent leakage, it is necessary to taper the valve corresponding to the taper of its seat.

The object of this invention is to provide simple, efficient, and convenient means for properly fitting valves as aforesaid; and to that end the invention consists in the novel construction and combination of the cutter-holder and devices connected thereto, as hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a vertical longitudinal section of a lathe or valve-fitting machine equipped with cutter-holders embodying my invention. Fig. 2 is a detached face view of the lathe-head with two of the cutter-holders attached thereto, and Fig. 3 is a detached perspective view of the cutter-holder.

Similar letters of reference indicate corresponding parts.

My improved cutter-holder consists, essentially, of the elongated shoe *l*, which is formed with the longitudinal groove *l'*, extending throughout the length of one side thereof and terminating with slots *l'' l'''*, extending through to the opposite side of the shoe. Lengthwise in the groove *l'* lies the cutter *c*, which is pivoted to the shoe, preferably at the center of its length, by a pin *a*, passing transversely through the shoe and cutter. The edge of the cutter projects from the face of the shoe to allow it to operate on the valve *P*, as represented in Fig. 1 of the drawings, and there is sufficient space at the back of the cutter to allow it to be adjusted to different angles longitudinally, according to the bevel of the valve to be operated on. Through the back of the shoe and into the groove *l'*, at opposite sides of the pivot *a*, extend screw-threaded holes, in which are inserted set-screws *f f*, by means of which the cutter *c* can be set and retained at the desired angle.

From the shoe *l*, preferably at the center of the length thereof, extends the attaching-shank *e*, either rigidly attached thereto or formed in one piece therewith. The described cutter-holder is secured with its attaching-shank *e* to the face of the head *C* of the lathe by means of a bolt *t*, passing through a radial slot *s* in said head and entering a screw-threaded eye *d* in the shank *e*, as shown in Fig. 1 of the drawings.

The cutter-holders stand with their shoes *l* lengthwise along the sides of the valve *P*, and are to be set equidistant from the axis of the lathe, and the cutters *c* are to be all set to the same angle corresponding to the taper to be imparted to the valve.

In the operation of refitting the valve said valve is forced gradually longitudinally between the cutters *c c c* by turning the spindle *v'*, which is secured in a sleeve *b*, which is screw-threaded externally and works in a screw-threaded barrel formed on the top of the stationary post *F*.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cutter-holder for refitting valves, comprising the shoe *l*, formed with the longitudinal slot *l'*, and the cutter-seat *c*, seated in said groove and pivoted to the shoe, as set forth.

2. A cutter-holder for refitting valves, consisting of the shoe *l*, formed with the longitudinal groove *l'*, the cutter *c*, seated in said groove and pivoted centrally of its length to the shoe, and set-screws *f f*, passing through the back of the shoe and bearing on the back of the cutter at opposite sides of the pivot thereof, substantially as set forth and shown.

3. In combination with the lathe-head *C*, the cutter-holder consisting of the shoe *l*, formed with the attaching-shank *e* and with the longitudinal groove *l'*, the cutter *c*, seated in said groove and pivoted centrally of its length to the shoe, and set-screws *f f*, inserted in the back of the shoe and bearing on the back of the cutter at opposite sides of the pivot thereof, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 29th day of June, 1891.

CHARLES F. HALL. [L. s.]

Witnesses:

SIDNEY SMITH,  
C. S. HALL.