

(No Model.)

H. A. H. GUHL.
KNIFE CLEANER.

No. 551,438.

Patented Dec. 17, 1895.

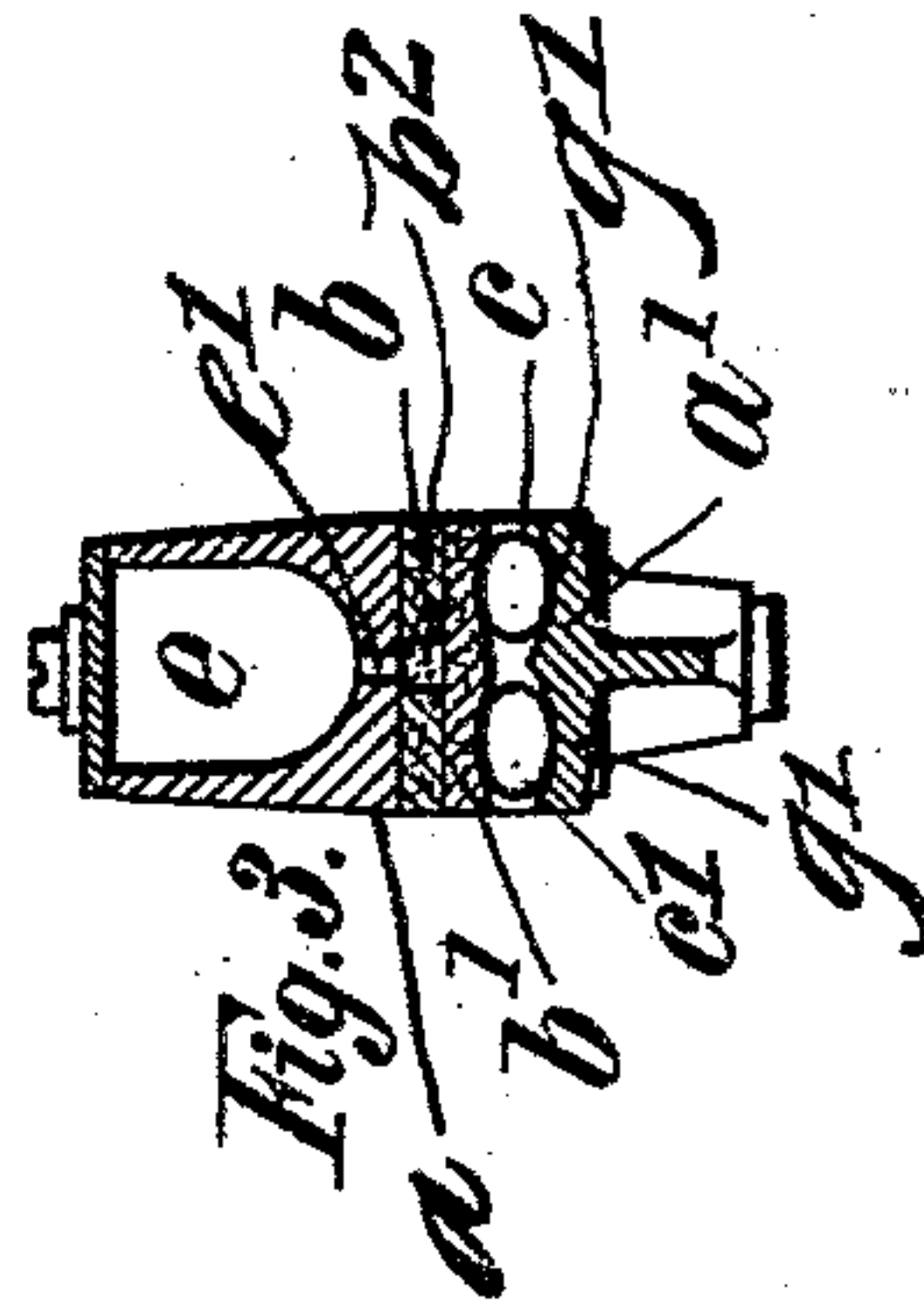
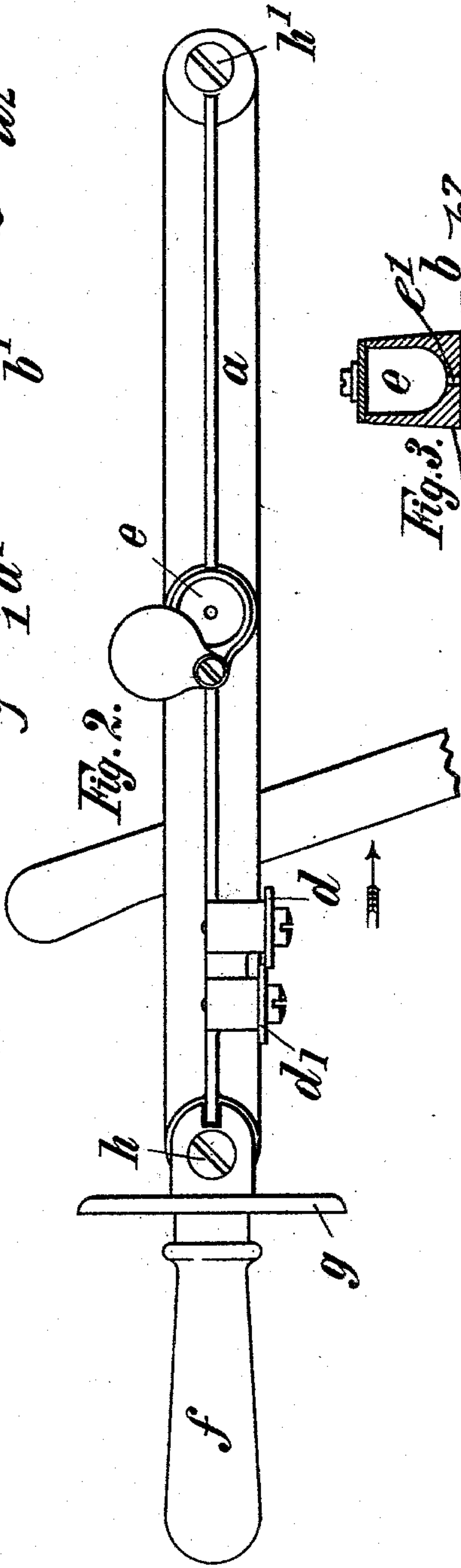
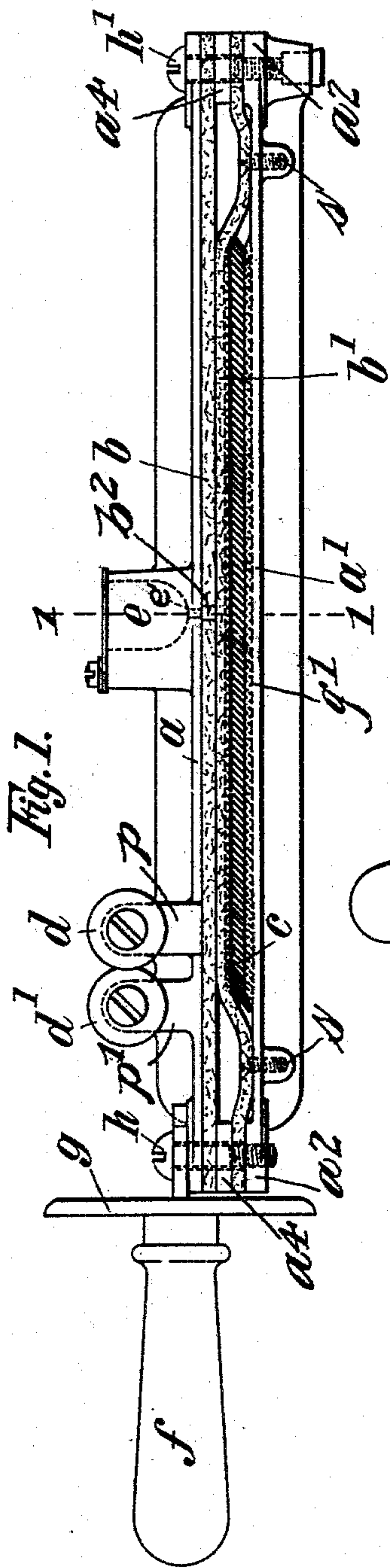


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

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KNIFE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 551,438, dated December 17, 1895.

Application filed March 9, 1895. Serial No. 541,096. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH AUGUST HERMANN GUHL, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements in Knife-Cleaners, of which the following is a specification.

My invention has relation to appliances for cleaning and polishing, or cleaning, polishing, and sharpening knives, and more particularly to that class of knife cleaners and polishers in which the cleaning and polishing are effected by friction between more or less flexible bodies that are or may be coated or supplied with an abrading substance.

The object of my invention is to provide means whereby the cleaning and polishing straps are uniformly pressed together throughout their length, means for supplying the straps with an abrading substance, and means whereby the knives may be sharpened either before or after cleaning and polishing the same, as will now be fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, Fig. 2 a top plan view, and Fig. 3 a section on line 1 1 of Fig. 1, of a knife cleaner, polisher, and sharpener embodying my invention. Fig. 4 is a detached view of the spring or one of the springs that support one of the flexible straps and form a resilient bearing therefor.

The device consists of two clamping-plates a and a' , the upper clamping-plate a being preferably provided with a handle f , secured thereto by means of a screw h , said handle being provided with a discoidal shield or guard-plate g for the protection of the hand holding the device. The clamping-plate a is further provided about midway of its length with a feed-receptacle e , covered by a suitable lid, and having a feed port or passage e' , Fig. 3, in its bottom, said receptacle or cup being intended for the reception of a suitable abrading substance, as finely-ground pumice-stone, emery powder, or the like, mixed with a suitable liquid, as water or oil.

The clamping-jaw a' has at each end a projection a^2 for the ends of the lower polishing strip or strap b' for the purpose of holding said ends slightly above the face of the plate,

while the upper polishing strip or strap b lies flat against the under side of the upper clamping-plate a and has a hole b^2 , Fig. 3, also shown in dotted lines in Fig. 1, said hole registering with and forming a continuation of the feed-port e' in feed-cup e , whereby the abrading material is supplied between the cleaning and polishing straps.

As shown in Fig. 1, the two straps are suitably spaced by washers a^4 , and both straps are firmly clamped between the plates by means of screws h and h' , the screw h also serving to secure the handle f to the upper plate a , as hereinbefore stated.

The plate a' has one or more longitudinal channels or grooves g' , two being shown in Fig. 3, for the reception of coiled springs c and c' of a length nearly equal to that of the clamping-plates a a' between the washers a^4 , the grooves for the springs being shallow, and said springs are of such diameter as to project above their seats when placed therein and compressed and press the straps firmly together and to the plain bearing-surface of the plate a .

In order to provide a substantially even yet resilient bearing-surface for the lower strap b' , I place the springs in their grooves or seats, then place the lower strap b' over the same and secure such strap to the lower clamping-plate a' , first by means of screws s at the end of the spring-seats g' , thereby compressing the springs to such an extent that the coils thereof will lie close to one another and on a line oblique to the upper face of the lower clamping-plate, as shown in Fig. 1, forming a substantially even bearing-surface for the strap b' and pressing the same firmly against the upper strap b , while the depressed ends of the said strap b' form slots for the ready introduction of the knife.

It is obvious that by compressing the spring-bearings, as described, the resiliency of the springs is not as rapidly destroyed as would be the case otherwise, nor could any pressure usually exerted in the operation of cleaning and polishing knives distort said springs.

The clamping-plate a is provided with two posts or uprights p p' for two grinding disks or wheels d and d' , respectively, revoluble on screw-bearings screwed to said posts, said

disks being arranged so as to overlap slightly, and by means of which knives can be sharpened in a well-known manner.

5 The straps *b* and *b'* may be of any usual material, as a stout textile fabric or leather or other like flexible material, and may be coated with an abrading substance, as emery or the like.

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

15 1. A knife cleaner comprising two cooperating straps *b* and *b'*, a fixed bearing for strap *b*, a resilient bearing for strap *b'* consisting of a coiled spring or springs of substantially the same length as the operative face of said strap *b'*, and a rigid support for said spring or springs, substantially as and for the purpose set forth.

20 2. A knife cleaner comprising two cooperative straps *b* and *b'*, a rigid bearing for strap *b*, a resilient bearing for strap *b'* consisting of one or more coiled springs of substantially the same length as the operative face of said strap *b'* and having their coils oblique to such face, and a rigid bearing for the springs, for the purpose set forth.

25 3. A knife cleaner comprising two cooperative straps *b* and *b'*, a bearing plate for strap *b*, a supporting plate for strap *b'* having a

raised portion intermediate of its ends, means for securing said strap *b'* to the ends of its supporting plate whereby openings are formed between the straps for the introduction of the knife, and a resilient bearing interposed between strap *b'* and the raised portion of its supporting plate, for the purpose set forth. 35

4. In a knife cleaner, the combination with two cooperating straps *b* *b'*, of bearing and supporting plates *a* and *a'* between which said straps are clamped, the plate *a* provided about midway of its length with a receptacle *e*, and a port or passage extending from said receptacle through the plate, the supporting plate *a'* provided with a raised portion between its ends, means for securing the strap *b'* to the plate at the ends of said raised portion whereby openings are formed at each end of said raised portion for the introduction of a knife, and a resilient bearing between the said raised portions and the strap *b'*, for the purpose set forth. 40 45 50

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 21st day of February, 1895. 55

HEINRICH AUGUST HERMANN GUHL.

Witnesses:

ALEXANDER SPECHT,

E. H. L. MUMMENHOFF.