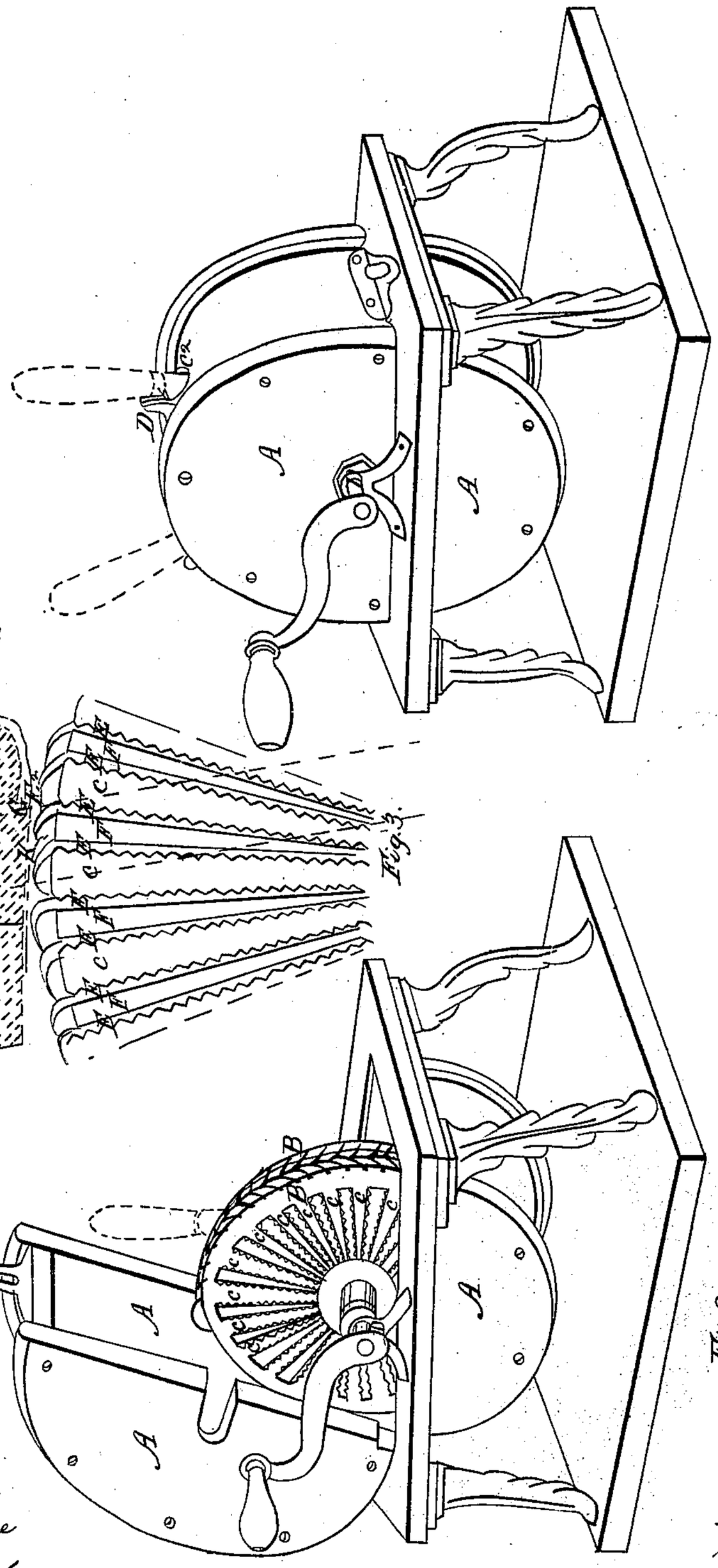
W. Vine.

Knife Cleaner.

No. 96,642. Patented Nov. 9, 1869.



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WILLIAM VINE, OF NORWALK, CONNECTICUT.

Letters Patent No. 96,642, *dated November* 9, 1869.

IMPROVED KNIFE-CLEANER

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM VINE, of the town of Norwalk, county of Fairfield, and State of Connecticut, have invented new and useful Improvements in the Construction of Rotary Knife-Cleaning Machines; and I do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement of the metallic wheels or disks that hold the leathers, with serrated or corrugated sides, to the ribs, and the mode of forming the blocks, to support and hold the knives.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

The Drawing.

Figure 1 is a view of the knife-cleaner.

Figure 2 is a view of the knife-cleaner, with the top raised, to show the interior.

Figure 3, a face of part of the ribbed disk.

Figure 4, a fulcrum-block, to hold the knife, (enlarged.)

The knife-cleaner now in use, and which I patented in 1846, is imperfect in its construction, inasmuch as the leathers that are wedged in between the ribs of the disks, will fly out in revolving, caused in consequence of being exposed to the action of the dry atmosphere, or the warmth of the kitchen-fire, &c., for the leathers and wedges will, in time, shrink and loosen, more or less. This is, and always has been, the principal drawback to the effectiveness of the machine, otherwise a very convenient and useful one.

To obviate this imperfection is the object of this, my present application.

The body of the knife-cleaner, figs. 1 and 2, is composed of a case, A, with wood sides, supported by a frame or legs, with a sheet-iron periphery, to enclose the two iron wheels B B, which are faced with strips of leather, wedged edgewise between the ribs C.

The two wheels B B are on one shaft, D^2, and are placed face to face, between which the blades of the knives are inserted, through holes in the periphery of the case.

I make the two wheels B B of cast-iron, in the usual manner; but the ribs C of the face or disk, to receive the leathers E, and wedges F between them, instead of being plain on their sides, as heretofore made, I serrate or corrugate on each side, as shown in the drawing, fig. 3, so that when I fasten the two leathers E E, with a wedge, F, between them, the serrations will punctuate the side of each of the leathers, so that they will always hold fast, if the wedge or leather should loosen by shrinkage, or otherwise, and the centrifugal force, caused by the quick revolution of the wheels, cannot throw them out forward, and there is no danger of their coming out in front.

Also, in the plain-sided ribs, it required the wedge to be driven so tight that it frequently burst or cracked the rim of the wheels in wedging, as they are necessarily made of cast-iron, light in pattern, both for economy and weight.

Now, to support the knives when the blade is inserted through the holes C^2, in the periphery of the frame and the blocks, it requires a projecting stop, D, outside of the iron rim, for the handle of the knife to lean against, and a sort of fulcrum-bearing, E^2, near the edge of the wheels, so that when the blade is passed in between the leathers of the wheels, and they revolve, the pressure on each side of the blade will naturally tend to draw in the knife, were it not held and resisted by the leather fulcrum or bearing E^2, and of the block and upper stock D, as shown in the drawing, fig. 3.

Several devices have been tried for this purpose, but none so efficient as this, there being, by constant use, a great deal of friction, caused by the polishing-powder on the stopping-parts.

Metal stops have been tried, but the friction makes metal injurious to the finished handle of the knives, and metal also becomes smooth and slippery, and will not hold the knife firmly to prevent slipping in.

My improvement consists in the formation of fulcrum-blocks or bearings, as shown in drawing, figs. 3 and 4, containing a hole, *c*, through the same, with the front part of the hole *c* covered with a firm strip of leather, G, for the edge of the knife to bear against, and the upper stop D, also covered with a strip of leather, H, for the finished handle of the knife to rest against, the two leathers forming what I call the fulcra.

These fulcra will hold the knife at any required distance in, if, at a short distance, to clean the point, or in up to the shoulder, and on the top of the hole of the block, and between it and the iron rim is a thin piece of leather, I, with a + slit in it, for the knife to pass through, to prevent the dust from flying out; also, at the bottom of the hole is another thin piece of leather, K, for the same purpose.

The fulcrum-blocks are fastened in their position by means of screws through the case-sides, and also screws through the upper stop H and the metal case, and are intended to be adjustable and removable, for repairing or replacing.

These improvements are necessary to make the

rotary knife-cleaner one of the most useful and convenient articles for household-use, steamboats, hotels, &c.

I do not claim the general arrangement of the knife-cleaner, but only the improvements, as herein stated.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The disk B, provided with serrated or corrugated ribs C, when used in connection with the wedges F, for fastening the leathers to the ribs, constructed and arranged to operate as herein described, for the purpose specified.

2. In combination with the above, the adjustable and removable fulcrum-blocks D H, and leather bearing G, constructed as herein described, for the purpose specified.

WM. VINE.

Witnesses:
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