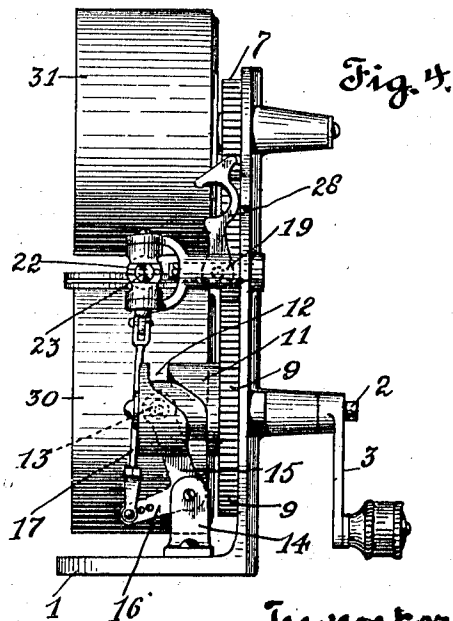
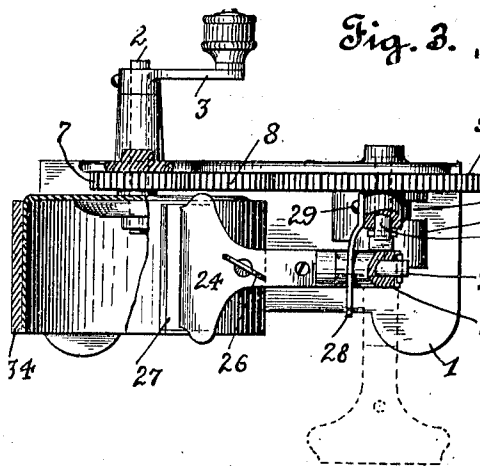
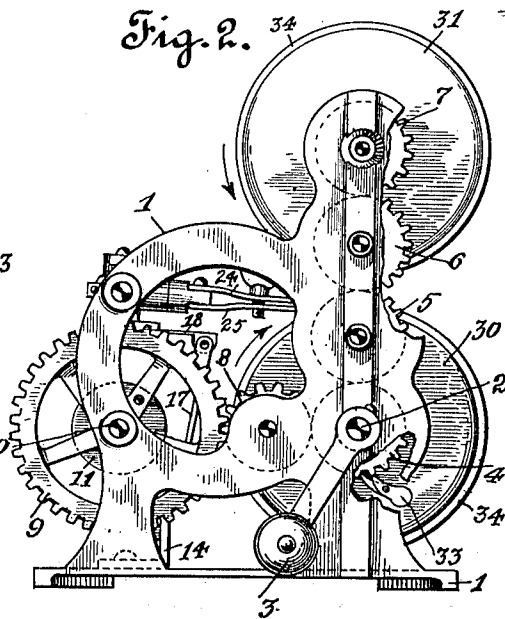
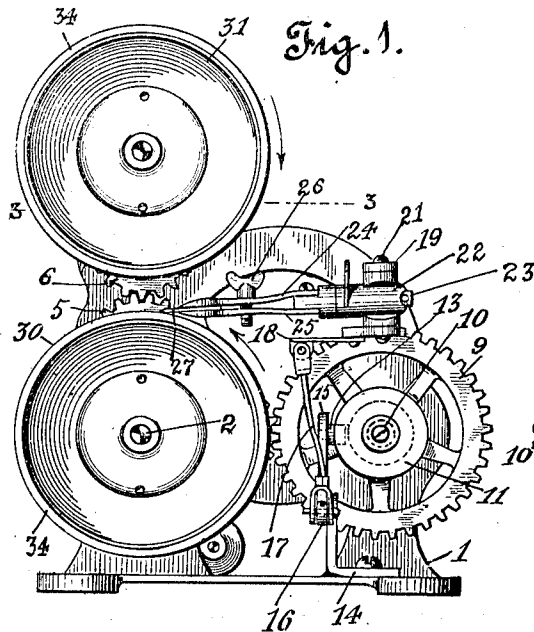


L. J. ODELL.
 DEVICE FOR SHARPENING BLADES.
 APPLICATION FILED APR. 22, 1909. RENEWED MAY 1, 1911.

1,051,818.

Patented Jan. 28, 1913.



Witnesses,
St. Ant. Verde.
A. L. Meady.

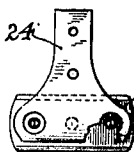


Fig. 5.

Inventor,
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UNITED STATES PATENT OFFICE.

LEVI J. ODELL, OF GLENDBORA, CALIFORNIA, ASSIGNOR TO ODELL MANUFACTURING COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

DEVICE FOR SHARPENING BLADES.

1,051,818.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed April 22, 1909, Serial No. 491,492. Renewed May 1, 1911. Serial No. 63,468.

To all whom it may concern:

Be it known that I, LEVI J. ODELL, a citizen of the United States, residing at Glendora, in the county of Los Angeles and State of California, have invented a certain new and useful Device for Sharpening Blades, of which the following is a specification.

My invention has relation to a machine for stropping razor blades, and has reference more particularly to that class of blades commonly employed with safety razors, and an important object thereof is to provide a machine that will quickly and accurately resharpen the blades in a uniform manner, provision being made whereby the pressure of the blade against the stropping members during the operation is controlled.

In the drawing forming a part of this application:—Figures 1 and 2— are side elevations of the device. Fig. 3— is a plan view, parts being broken away, and showing in dotted lines the blade carrier swung out to the position for inserting the blade. Fig. 4— is an end elevation of the device. Fig. 5— is a detail view showing a modified form of blade carrier adapted to carry a double edged blade.

Referring more specifically to the drawings in which similar reference numerals indicate like parts, 1 is a frame carrying the shaft 2 on which is mounted a handle 3 adapted to drive the device, the pinion 4, and the stropping wheel 30. The pinion 4 actuates a train of gears 5, 6 and 7, all of equal diameter and pitch therewith. The shaft bearing pinion 7 also carries stropping wheel 31. Pinions 4, 5, 6, and 7 being of like diameter, it will be seen that both stropping wheel 30 and stropping wheel 31 will be rotated exactly in unison. Pinion 4 also meshes with an idle pinion 8 which in turn meshes with a pinion 9 mounted on the shaft 10. Shaft 10 also carries a cam wheel 11 provided with a cam groove 12. Within said cam groove 12 a cam stud 13 engages. Said cam stud 13 is carried on the arm 15 of a bell crank lever which is mounted in a bearing stud 14. The other arm 16 of said bell crank lever adjustably carries an arm 17 which engages with a spring, or resilient arm 18, attached to a bearing 19 mounted on the shaft 20. The bearing 19 carries a pinion shaft 21 on which is mounted a bear-

ing 22, within which a shaft 23 carrying the razor blade engaging arms 24 and 25 is adapted to have limited movement. The razor blade engaging arms 24 and 25 are provided with a clamping screw 26, by means of which the razor blade 27 may be secured in position.

28 is a catch pivoted to the bearing 19 at 29, which operates to keep the razor bearing arms in operative position. The stropping wheels 30 and 31 are provided on their outer rims with stropping bands 34.

33 represents a dog adapted to prevent back motion of the device.

The operation of the device is as follows: 70 A razor blade having been secured within the razor blade carrying arms, pinions 4, 5, 6, and 7 are set in rotation by operation of the crank 3, causing the stropping wheels 30 and 31 to be simultaneously operated in 75 opposite directions away from the point of support of the blade to be sharpened. The idle pinion 8 also set in motion by pinion 4 carrying as it does the cam wheel 11, causes the arm 17 to be reciprocated through the bell crank lever arms 15 and 16. This 80 causes the razor blade carrying arms to be alternately raised and lowered, so that periodically each side of the razor blade engages a stropping wheel. It will be noted 85 that pinion 9 is relatively much greater in diameter than pinion 8, thereby giving a slow reciprocation to the blade carrying arms. The device is so constructed that the razor blade impinges against each stropping 90 wheel during one revolution thereof at each reciprocation of the blade carrier. The razor blade carrying arms are given a slight swivel motion on shaft 23 so as to compensate for any unevenness in the surface of 95 the stropping wheels. When it is desired to remove the stropper blade and insert another blade, the catch 28 is raised and the blade carrying arms are swung out on the shaft 21, thereby making the blade clamping screw 26 easy of access. 100

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

1. In a stropping device, rotary stropping 105 members, means for actuating the same, a swiveled blade carrying member having an intermediate hinged joint, the said intermediate hinged joint facilitating the turning 110 of the blade out of position from between

the stropping members, a bell crank lever for oscillating said blade carrying member, a pitman connecting the lever with the blade carrying member, a resilient member being interposed between said pitman and said blade carrying member, a cam for actuating the said lever, the said cam having a peripheral cam path adapted to engage one end of the lever, and means for turning the said lever whereby a positive rocking movement is imparted to the blade carrying member.

2. In a stropping device, rotary stropping drums, a rocking member, a swivel blade holder on said rocking member adapted to present a blade to said drums, an actuating cam wheel, a bell crank lever operated thereby, and a pitman for communicating movement from the lever to said rocking member.

3. A stropping device, comprising rotary stropping drums, a rocking member, a hinge member pivoted thereto and adapted to extend at right angles to the axis of said rocking member, a swivel member carried by said hinged member and having a blade securing means mounted thereon, and means for positively rocking the said rocking member.

4. A stropping device comprising rotary stropping drums, a rocking member, a swivel blade holder on said rocking member, a cam, means interposed between the cam

and the rocking member for communicating movement to the latter comprising a lever, a pitman, and a spring arm. 35

5. A blade sharpening machine including a pair of sharpening rolls, a rocking blade carrier, a blade holder upon the blade carrier, a blade being brought alternately into engagement with the two rolls as the carrier is rocked, a bell crank lever having an operative connection with the rocking blade carrier, and cam means for operating the bell crank lever. 40

6. A blade sharpening machine including a pair of sharpening rolls, a rocking blade carrier, a blade holder upon the blade carrier, a blade being brought alternately into engagement with the two rolls as the carrier is rocked, an arm projecting from the blade carrier, a member provided with a cam groove, a lever pivoted between its ends and provided at one end with means for engaging the cam groove, and an operative connection between the opposite end of the lever and the arm of the blade carrier. 45 50 55

In witness that I claim the foregoing I have hereunto subscribed my name this 14th day of April, 1909.

LEVI J. ODELL.

Witnesses:

EDMUND A. STRAUSE,
MYRTLE A. PALMER.