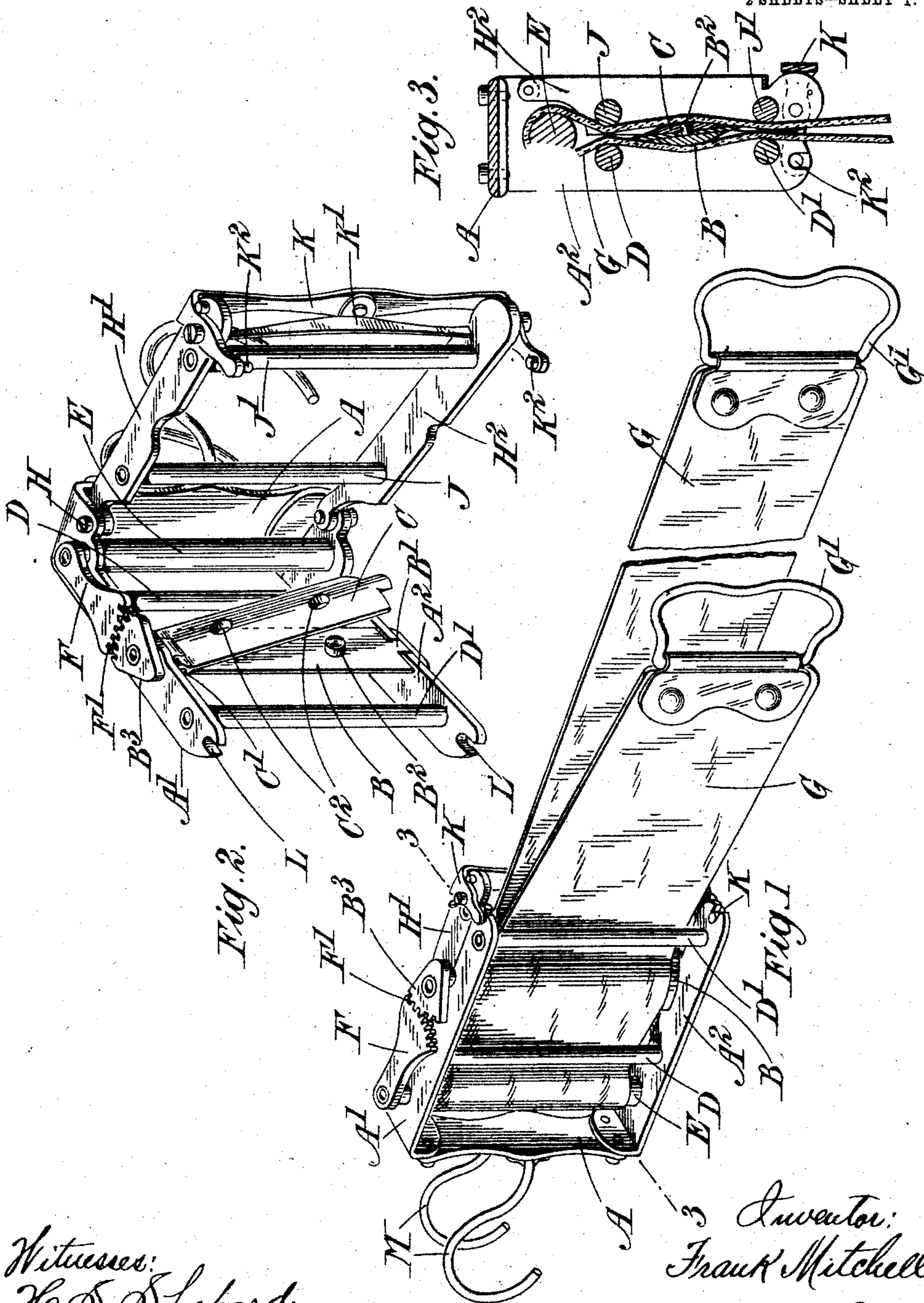


F. MITCHELL.
 DEVICE FOR STROPPING DOUBLE EDGED SAFETY RAZORS.
 APPLICATION FILED AUG. 18, 1908.

928,318.

Patented July 20, 1909.

2 SHEETS—SHEET 1.



Witnesses:
 H. B. Shepard.
 W. J. Warriner.

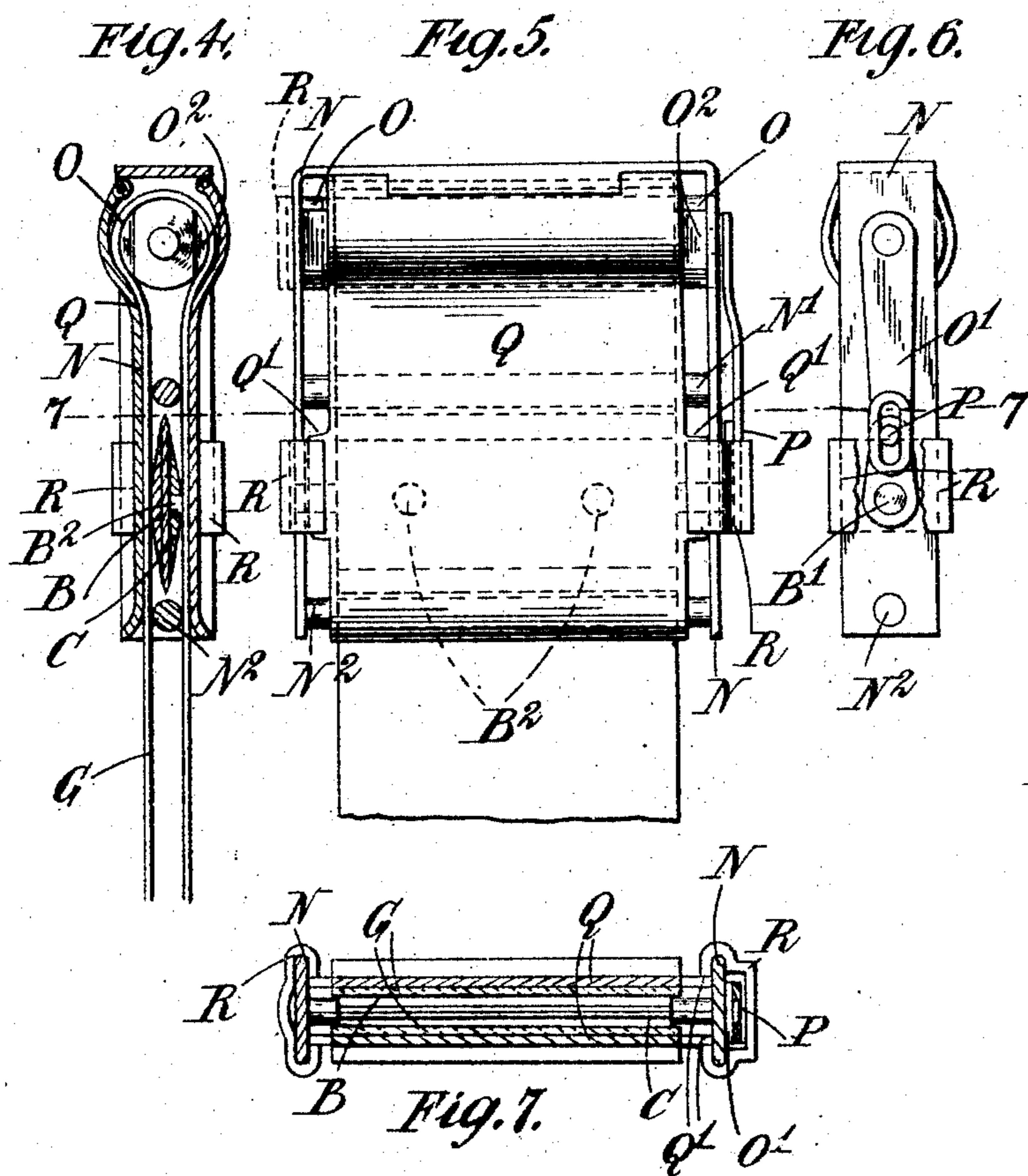
Inventor:
 Frank Mitchell,
 per Battwell, Byrnes & Parmer,
 his attorneys.

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 L. S. Shepard
 M. J. Harriner

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UNITED STATES PATENT OFFICE.

FRANK MITCHELL, OF LONDON, ENGLAND.

DEVICE FOR STROPPING DOUBLE-EDGED SAFETY-RAZORS.

No. 928,318.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed August 18, 1908. Serial No. 449,033.

To all whom it may concern:

Be it known that I, FRANK MITCHELL, a subject of the King of England, and residing in London, England, have invented certain new and useful Improvements in Devices for Stropping Double-Edged Safety-Razors, of which the following is a specification.

This invention relates to improvements in devices for stropping double-edged safety razors and belongs to the type of machine in which a reciprocating flexible strop passes over a roller operatively connected with a pivoted blade-holder so that as the flexible strop is reciprocated, the two faces of a cutting edge are alternately brought into contact with the strop.

One object of this invention is to enable a double-edged blade to be stropped on both edges at the one operation and subsidiary objects are to enable the blade holder to be locked in a safe position when the strop is not in use, to insure that the blade-holder shall be in its proper initial relation to the strop before beginning a stropping operation, also so that the edges shall be guarded by rollers or bars, and to enable the strop to be held up to its work when in use.

A device for stropping double-edged razor blades according to this invention comprises a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, a flexible strop doubled over the roller and arranged to contact with both faces of the support, a gate hinged to the frame and coöperating with the frame to hold the strop in contact with the blade-support on both sides and means for causing one face of each cutting edge to be stropped at each movement of the strop.

In the accompanying drawings, Figure 1 is a perspective view of one form of stropping device embodying certain features of this invention as in use; Fig. 2 is a perspective view of the same mechanism opened out with the strop and razor blade removed; Fig. 3 is a section on the line 3—3 of Fig. 1; Fig. 4 is a transverse section of another form of stropping device embodying this invention; Fig. 5 is a side elevation of the same; Fig. 6 is an end elevation, and Fig. 7 is a horizontal section on the line 7—7 of Figs. 4, 5 and 6.

Referring to Figs. 1, 2 and 3, the main frame is in the form of a yoke having a transverse member A and two sides A¹ and A². Between the two sides of the frame is journaled a blade-holder consisting of two plates, one plate B having journals or pivot pins B¹ at its ends and having projections B² to engage the holes in a thin blade, and a second plate C hinged at one end as at C¹ to the first plate B and having holes C² arranged to engage the pins B². Between the two sides A¹ A² of the frame are fixed two transverse bars D D¹ parallel to the blade-holder and in proximity to the edges of the blade, so that when the blade-holder is in a central position, the edges of the razor will be completely guarded by the transverse bars D D¹. Journaled between the side plates A¹ A² and parallel to the blade-support B is a roller E which carries a radial arm F having a toothed segment F¹ arranged to engage another toothed segment B³ connected to the blade-support B, so that as the roller E rotates to and fro, the blade-support B is tilted to and fro in a direction opposite to the rotation of the roller. A flexible strop G is passed over the roller E and brought down with its ends close together so that the strop lies in proximity to the blade-holder on both sides. In the arrangement shown the strop passes inside the transverse bars D D¹. Hinged at H to the main frame is a gate or second frame consisting of two side plates H¹ H² connected by transverse bars J J¹ so arranged that when the gate is folded down on to the main frame, the bars J J¹ coming opposite the bars D D¹ hold the strop in proximity to the blade-holder on both sides. At the free ends of the arms H¹ H² is pivoted a locking member K controlled by a leaf spring K¹ and having at its ends pins K² adapted to engage with slots L in the ends of the plates A¹ A² of the main frame, the arrangement being such that when the gate is pressed into contact with the main frame the pins K² ride over into the slots L and lock the mechanism in operative position, while to open the mechanism, it is only necessary to press the pivoted member K, so as to lift the pins K² out of the slots L against the action of the spring K¹. Hooks M pivoted to the yoke A, serve to connect the mechanism to a rail or other fixed projection. The arrangement is such that when a double-edged razor-blade is inserted between the plates B and C and the mechanism is closed, the strop is held close to the blade-

support as shown in Fig. 3 and when the strop is pulled to and fro by means of the handles G^1 , the blade-support is alternately tilted from side to side so that at each movement of the strop one face of each cutting edge of the razor is operated upon, thus in the position shown in Fig. 3 the right hand of the strop being pulled the right hand face of the lower cutting edge and the left-hand face of the upper cutting edge are both being stropped simultaneously, while on the reversal of the movement of the strop the other two faces of the cutting edges are stropped.

Referring to Figs. 4 to 7, the main frame is in the form of a yoke N . Between the two sides of the frame is journaled a blade-holder consisting of two plates B and C , one plate B having journals or pivot pins B^1 at its ends and having projections B^2 to engage the holes in a thin blade, and a second plate C hinged at one end to the first plate B and having holes arranged to engage the pins B^2 . Between the two sides of the frame are fixed two transverse bars N^1 N^2 parallel to the blade-holder and in proximity to the edges of the blade so that when the blade-holder is in a central position the edges of the razor will be completely guarded by the transverse bars N^1 N^2 . Journaled between the side plates and parallel to the blade-support is a roller O which carries the radial arm O^1 the edge of which is slotted to engage a pin P projecting from the blade-support so that as the roller rotates to and fro the blade-support is tilted to and fro in a direction opposite to the rotation of the roller. Hinged in the frame N are two gates Q which may consist of cover plates, wire frames or the like, and when the strop G is in position the gates are folded down over it and can be secured in position so as to retain the strop close up to the blade on each side. On each side plate of the main frame N is arranged a sliding member consisting of a C-piece R . The roller O is cut away at its ends at O^2 so that when the sliding member R is pushed up to the roller it engages the cut away portions and locks the roller against rotation. The connection between the roller and the blade-holder is such that when the roller is locked, the blade-holder is held in a central position so that the edges of the blade are completely guarded by the transverse bars N^1 N^2 and so that the blade is equally distant between the two parts of the strop and is therefore in proper initial relation to the strop. Conveniently the sliding members are arranged to engage lugs Q^1 on the gates Q so that when the device is in use, the sliding member serves to lock the gates in position and retain the strip in close proximity to the blade.

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

1. In a device for stropping double-edged

razor blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, a flexible strop doubled over the roller and extending across opposite sides of the support in position for simultaneously stropping both edges of the blade, and means hinged to and cooperating with the frame to hold the strop in contact with the blade-support on both sides.

2. In a device for stropping double-edged razor-blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, bars in the frame parallel with and close to the blade-holder to guard the edges of the blade, a flexible strop doubled over the roller and extending across opposite sides of the support in position for simultaneously stropping both edges of the blade, and means hinged to and cooperating with the frame to hold the strop in contact with the blade-support on both sides.

3. In a device for stropping double-edged razor blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, bars in the frame parallel with and close to the blade-holder to guard the edges of the blade, a flexible strop doubled over the roller and extending across opposite sides of the support in position for simultaneously stropping both edges of the blade, means hinged to and cooperating with the frame to hold the strop in contact with the blade-support on both sides, and a locking member to hold the parts of the device together while in use.

4. In a device for stropping double-edged razor blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, bars in the frame parallel with and close to the blade-holder to guard the edges of the blade, a flexible strop, dou-

bled over the roller and extending across opposite sides of the support in position for simultaneously stropping both edges of the blade, means hinged to and cooperating with the frame to hold the strop in contact with the blade-support on both sides, a locking member to hold the parts of the device together while in use, and hooks on the frame by which the device is suspended.

5 5. In a device for stropping double-edged razor blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, a flexible strop doubled over the roller and arranged to contact with both faces of the support, means hinged to and cooperating with the frame to hold the strop in contact with the blade support on both sides and a sliding member on the frame arranged to engage and lock the roller and to hold the blade out of engagement with the strop.

6. In a device for stropping double-edged razor blades, the combination of a frame, a blade-support journaled on its longitudinal axis in said frame and adapted to grip a double-edged blade in the middle so as to leave the two cutting edges exposed, a roller rotatably journaled in said frame parallel with the blade-holder, means for transmitting partial rotation from the roller to the blade-support, a flexible strop doubled over the roller and arranged to contact with both faces of the support, two gates hinged to the frame and cooperating with the frame to hold the strop in contact with the blade-support on both sides, sliding pieces on the frame arranged to hold the retaining gates in position when the device is in use and arranged to lock the roller and hold the blade-holder in a central position when the device is not in use.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK MITCHELL.

Witnesses:

T. H. RANDOLPH,
S. J. VINCENT