

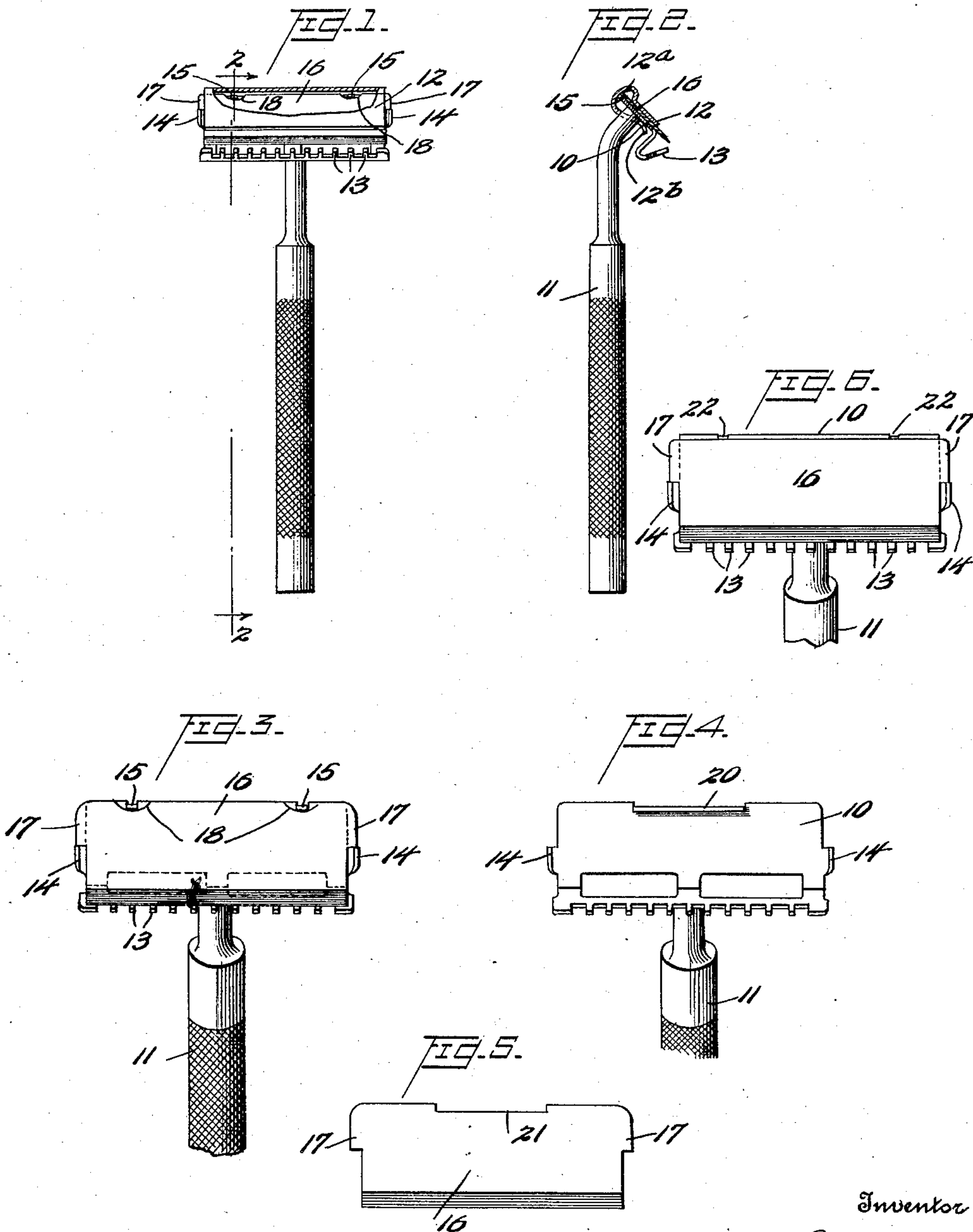
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R. J. CHRISTY

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SAFETY RAZOR

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Inventor

By

R. J. Christy

Watson, Coit, Morse & Grindle

Attorneys



## UNITED STATES PATENT OFFICE

RUSS J. CHRISTY, OF FREMONT, OHIO

SAFETY RAZOR

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This invention relates to safety razors and particularly to razors of the type shown in my prior Patent No. 853,960, May 21, 1907. The object of my invention is to provide an improved razor of the type referred to and one in which the blade is clamped to the holder by means of a spring clamp, the holder having lugs which serve to accurately position the blade and maintain it in the exact position desired for use and which also serve to prevent the blade from sliding off or being withdrawn from the holder when the clamp is removed.

The structure for accomplishing the foregoing and other advantageous ends is illustrated in the accompanying drawings, forming a part of this specification, and in which:

Figure 1 is a front elevation, partly broken away, of a structure embodying my invention;

Figure 2 is a transverse section on the line 2—2 of Fig. 1;

Figure 3 is a view similar to Fig. 1, the holding clamp being removed and the parts being shown on a somewhat enlarged scale;

Figure 4 is a view similar to Fig. 1, the blade being removed and a slightly modified form of guard plate being shown;

Figure 5 is a plan view of a blade adapted for use with the modified form shown in Fig. 4; and

Figure 6 is a further modified arrangement similar to Fig. 3, the guard plate extending slightly beyond the rear edge of the blade and having lugs to cooperate with the rear edge of the blade which is straight.

Referring to the drawings in detail by the reference characters thereon, the blade holder of my improved razor comprises a guard plate 10 to which a handle 11 is rigidly secured, and a substantially U-shaped spring clamping plate 12 which is adapted to hold a blade on the guard plate. The upper surface of the guard plate 10 is preferably flat and along one edge thereof, which will be termed the front edge, this plate is provided with guard teeth 13. At each end the guard plate 10 is provided with lugs 14 preferably formed by striking up the metal of the plate. The rear edge of each of these lugs 14 is prefera-

bly straight for a purpose which will later appear.

In one form of my invention, illustrated in Fig. 3, the rear edge of the plate 10 is provided with two lugs 15 which are spaced apart and also preferably formed by striking up the metal of the plate. The lugs 14 and 15 it will be understood project upwardly above the flat upper surface of the guard plate 10, the height of the lugs 15 preferably being substantially equal to and not exceeding the thickness of the blade.

The blade 16, which is adapted for use with the form illustrated in Figs. 1, 2 and 3, is provided at each end with ears 17, the front edges of which are straight and which are adapted to cooperate with the rear straight edges of the lugs 14. On its rear edge the blade 16 is provided with spaced notches 18 which are so arranged as to receive the lugs 15 when the blade is placed on the guard plate. The lugs 14 and 15 on the guard plate and the ears 17 and the notches 18 of the blade are so related that when the blade is in position the ears 17 will rest against the lugs 14, and the lugs 15 will rest against the bottoms of the notches 18.

In the form illustrated in Figs. 4 and 5, the guard plate 10 is provided at its ends with ears 14 as in the other form, but in this arrangement the rear side of the guard plate is provided with a single upstanding lug 20 in place of the two lugs 15 in the first mentioned form. The blade 16 for use with the form shown in Fig. 4 is also provided with ears 17 at its ends, but its rear edge is provided with a single notch or recess 21 which is adapted to cooperate with the lug 20.

In the form illustrated in Fig. 6, the guard plate 10 is made slightly wider than the blade and two lugs 22 are struck up from the rear edge of the plate. In this form the rear edge of the blade is made straight or without notches, such straight edge being adapted to lie against the lugs 22, the blade also being provided with end ears 17 which are adapted to lie against the lugs 14 on the guard plate. It will be understood that the lugs 22, like the lugs 15 and 20, project above the upper surface of the plate 10 a distance



substantially equal to the thickness of the blade 16.

It will be understood that in each form of my invention the clamping plate 12 has an upper portion which is adapted to overlie a blade placed on the guard plate 10, this plate at its rear being provided with an upwardly and downwardly curved portion 12<sup>a</sup> which terminates in spring arms 12<sup>b</sup> adapted to lie beneath the guard plate 10. The clamping plate is removable by merely sliding the same rearwardly off of the guard plate.

Referring to the form shown in Fig. 3, it will be seen that when a blade is placed on the guard plate 10, the lugs 14 and 15 cooperate with the ears 17 and notches 18 of the blade and serve to very accurately position the cutting edge of the blade with reference to the guard teeth and when the clamping plate 12 is applied the blade 16 will be very securely held in position, it being impossible for the same to move forward toward the guard teeth or rearwardly therefrom, with the result that the cutting edge of the blade is maintained in the position desired. In the form shown in Figs. 4 and 5, the parts operate in a similar manner, the lugs 14 and 20 cooperating respectively with the ears 17 and the notch 21 to maintain the blade in position. In the form shown in Fig. 6, the lugs 14 and 22 on the guard plate cooperate respectively with the ears 17 and the rear edge of the blade to accurately position and hold the blade.

In addition to the advantages of my improved structure already indicated, it possesses a further and very important advantage. In the form of razor shown in my prior patent above mentioned, it has been found that when the clamping plate is withdrawn or slipped off rearwardly from the guard plate, it frequently happens that the blade is also withdrawn from the holder with the result that the blade may fall to the floor and be injured or broken or sometimes the user is cut in trying to catch the blade as it falls. With my improved arrangement, the rear lugs 15, 22 or 20 will serve to prevent the blade from sliding off the guard plate 10 when the clamp 12 is withdrawn and the difficulty above mentioned is therefore obviated as the blade remains on the guard plate when the clamping plate is removed. Also the lugs at the rear of the guard plate being of a height substantially equal to or not exceeding the thickness of the blade, do not interfere with the free rearward movement of the clamping plate in withdrawing the same from the guard plate.

Changes may, of course, be made in the details of the foregoing structure without departing from the spirit of the invention as covered by the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. The combination in a safety razor, of a guard plate having guard teeth along one edge thereof, and having a flat upper surface, said plate adjacent each end having a lug extending above the upper surface of the plate, and also having one or more lugs at its rear edge the latter extending above the upper surface of the plate a distance substantially equal to the thickness of the blade, a blade mounted on said plate, said blade having an ear at each end formed with an edge adapted to engage said end lugs on the guard plate and said blade also having a rear edge adapted to engage said rear lugs on the guard plate and a removable spring clamping plate having a flat portion engaging said blade and having a curved portion extending around the rear of said guard plate and engaging the lower surface thereof.

2. The combination in a safety razor, of a guard plate having guard teeth along one edge thereof, and having an upper blade-receiving surface, said plate adjacent each end having a lug extending above the upper surface of the plate, and also having a plurality of lugs at its rear edge, the last named lugs extending above the upper surface of the plate a distance not exceeding the thickness of the blade, a blade mounted on said plate, said blade having an ear at each end formed with an edge adapted to engage said end lugs on the guard plate and said blade also having a rear edge adapted to engage said rear lugs on the guard plate and a spring clamping plate having a portion engaging said blade and extending around the rear of said guard plate and engaging the lower surface thereof, said clamping plate being movable from said guard plate and blade by withdrawing the same rearwardly.

In testimony whereof I hereunto affix my signature.

RUSS J. CHRISTY.