To all whom it may concern:

Be it known that we, WILLIAM F. ALBRECHT AND JOSEPH SHEBOL, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in a Folding Safety Razor, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a folding safety razor in which a guard plate and a clamping plate with the blade clamped between them are hinged to a suitable handle to swing or fold into and out of a lengthwise opening therein and are also movable relatively to each other to hold or release the blade.

The main object is to hinge or pivot the guard plate and clamping plate to the handle to swing about the same axis relatively to each other and to the handle so that the blade may be more easily accessible for removal and replacement from the outer end of the guard plate in adjusting the device for use and at the same time to enable both plates with the blade between them to be housed wholly within the marginal edges of a handle only slightly longer than the blade whereby the entire device may be attached to a vest chain as an ornament or carried in a vest pocket or in any small container ready for use at any time.

Another object is to provide means for frictionally holding the guard plate and clamping plate with the blade between them in different angles of adjustment relatively to the handle for convenience in shaving with either hand or with opposite sides of the double edge blade.

A further object is to provide the outer ends of the guard plate and clamping plate with inter-engaging portions capable of tightening said plates upon the blade when adjusting the same for use.

Other objects and uses relating to specific parts of the shaving device will be brought out in the following description.

In the drawings:

Figs. 1 and 2 are opposite face views of a folding razor embodying the various features of our invention, the blade-clamping-plates being shown in their closed position within the handle in Fig. 1 and extended by dotted lines in the same figure while Fig. 2 shows the clamping plates as extended and adjusted relatively to each other for permitting the removal or replacement of the blade.

Fig. 3 is an edge view of the same device with the blade-clamping-plates and blade held between them extended for use.

Fig. 4 is an enlarged longitudinal sectional view, partly broken away, taken on line 4—4 of Fig. 1 except that the blade holding plates are shown in their extended positions as indicated by dotted lines in Fig. 1.

Fig. 5 is an enlarged end view of the detached clamping plates with the blade between them omitting the handle.

As illustrated, this folding razor comprises a handle —1—, a guard plate —2—, and a clamping plate —3— for receiving a removable shaving blade —4— having opposite lengthwise cutting edges —5—, the parts —1—, —2— and —3— being only slightly longer than the blade —4— to permit them to be folded into compact space, while the transverse width of the handle is slightly greater than that of either of the plates —2— and —3— and blade —4— to protect the edges of the blade and plates against contact with external objects when folded within the handle.

The handle —1— is preferably made of a single piece of non-corrodible sheet-metal of somewhat more than twice the length of the plates —2— and —3— and blade —4—, and is folded intermediate its ends in the same direction and in parallel spaced relation to form a lengthwise slot or opening —6— of sufficient size to receive the plates —2— and —3— and blade —4— when folded therein, thereby forming a handle with a transverse opening extending through opposite edges thereof.

The plates —2— and —3— are hinged to and between the opposite sides of the open end of the handle by means of a single pivot —7— to allow them to swing about the same axis in a plane coincident with that of the opening —6—, the distance between the axis of the pivot —7— and free ends of the plates —2— and —3— being somewhat less than the distance between said axis and the closed end —8— of the handle to allow said plates with the blade —4— between them to swing wholly within the handle when closed and also to be opened in line with or to different angles relatively to the longitudinal center of said handle, said plates being also movable independently of each other about the axis of the same pivot —7— to permit...
the removal and replacement of the blade.

Suitable friction washers —9— and —10— are interposed between the opposite arms of the handle —1— and adjacent outer faces of the plates —2— and —3— and also between the pivotal ends of the plates for frictionally holding the plates with the blade between them in different positions of opening or closing adjustment, said washers being preferably concentric with the pivotal pin —7— which passes through registering openings in the plates and washers for holding them in operative relation to the handle, the washers —9— also serving to protect the outer faces of the plates —2— and —3— against frictional contact with the inner faces of the opposite sides of the handle, thus permitting said plates to be highly polished or finished without liability of marring.

The washer —10— also serves to hold the plates —2— and —3— in sufficiently spaced relation to permit the plate —3— to be readily moved relatively to the plate —2— about the axis of the pivotal pin —7— without excessive friction with the shaving blade —4—.

The guard plate —2— is provided with a pair of longitudinally spaced studs or bosses —11— along its longitudinal center and projecting therefrom toward the plate —3— a distance approximately equal to the thickness of the shaving blade —4— and is adapted to enter slots —12— in the ends of said blade to center and hold the latter against endwise or transverse displacement when assembled for use, said slots being disposed in the longitudinal center or midway between the opposite cutting edges of the blades to center the latter on the guard plate —2— when placed in operative position.

The guard plate is provided with opposite sets of guards fingers or teeth —13— or serrations along its opposite longitudinal edges and projecting slightly beyond the cutting edges of the blade —4— when the latter is placed thereon to perform the usual function of safety of cutting the skin when shaving.

The inner face of the guard plate upon which the blade —4— rests is substantially flat while the clamping plate —3— is preferably concavo-convex with its concave side facing the plate —2— so that its edges may be drawn tightly against the blade —4— when the parts are adjusted for use.

It will be observed, however, that the guard plate —2— is slightly wider and that the clamping plate —3— is slightly narrower than the blade —4— and that both plates —2— and —3— are narrower than the handle —1— so that by pivoting them at —7— in the longitudinal centers of the blade and handle, the edges of the parts —2—, —3— and —4— will be wholly within the corresponding edges of the handle —1— when folded to the position shown by full lines in Fig. 1 whereby the handle protects the parts —2—, —3— and —4— from contact with external objects.

The free end of the clamping plate —3— is provided with an extension —14— offset across the plane of movement of the guard plate —2— and adapted to extend across and under the free end of the guard plate to serve as a catch for locking the plates together upon the blade when the plates are aligned with each other as shown in Figs. 5, 4 and 5.

The guard plate —2— is provided at its free end with a stop shoulder —15— adapted to be engaged by one edge of the extension —14— to allow the plate —3— to swing in one direction from a central position over the guard plate —2— and to limit its swinging movement from said central position in the opposite direction, said guard plate being also provided with a cam —16— struck up from its free end at one side of the stop —15— for engagement by the underlying portion of the extension —14— to tighten the plates —2— and —3— upon the blade when aligned with each other or in parallelism one over the other, the stop —15— serving as a handpiece by which the plate —3— may be rocked about the axis of the pivot —7— relatively to the guard plate —2— and is adapted to enter a transverse slot —16— in the corresponding side of the handle when the parts are folded as shown in Figure 1.

Operation.

The plates —2— and —3— with the blade —4— between them are normally folded into the opening —6— in the handle —1—, as shown by full lines in Fig. 1, but may be swung to their open positions, as shown by dotted lines in the same figure, by simply holding the handle —1— in one hand and moving the extension —14— laterally through the opening slot —16— through practically a half circle or to any desired angle relatively to the longitudinal center of the handle —1— ready for shaving or if the blade is to be removed, the plates —2— and —3— may be rocked relatively to each other about the axis of the pivot —7— to the position shown by full lines in Fig. 2, thus exposing the blade —4— and permitting it to be removed from the guard plate —2— after which the same or other blade may be replaced and reclamped by reversing the operation just described, the friction disks —9— and —10— serving to hold the plates in different positions of adjustment relatively to each other and relatively to the handle —1—, while the friction between the extension —14— and cam —16— serves to hold
the plates in frictional engagement with the blade —4—.

What we claim is:

A folding safety razor comprising a U-shaped handle forming a lengthwise slot open at both sides and one end and of greater transverse width from end to end than the cutting blade, a guard plate and a clamping plate having corresponding ends arranged one over the other between the opposite arms of the handle and pivoted to said handle near one end thereof to swing about a common axis into and out of the slot and constructed to lie wholly within the marginal edges of the handle when folded into the slot, studs projecting from the inner face of the guard plate in longitudinally spaced relation and midway between the opposite longitudinal edges of the guard plate, a cutting blade supported on the inner face of the guard plate and provided with notches in both of its ends and midway between its opposite cutting edges for receiving said studs, the free end of the clamping plate being provided with an extension adapted to frictionally engage the outer face of the corresponding end of the guard plate when said plates are brought into superposed relation for clamping the cutting blade between the plates.

In witness whereof we have hereunto set our hands this 12th day of October 1921.

WILLIAM F. ALBRECHT.
JOSEPH SHEBOL.

Witnesses:
H. E. CHASE,
M. R. COOKE.