The object of this invention is to provide a readily portable apparatus for use in the editing of motion picture films. The invention is especially well adapted for amateur work with narrow motion picture films (8 or 16 mm. in size, for example), which, after exposure and development, may be successively viewed, and portions eliminated or rearranged in order.

My invention provides a folding apparatus which when spread out will carry the supply and receiving reels in desirable position on opposite sides of a viewing device and in proper relation thereto and to a film splicing device, so that the film may be readily passed through the viewing device and then, whenever desired, shifted to the splicing device and the undesired portions removed and the film spliced. The frame of the apparatus is so constructed and arranged that it may be folded to constitute a carrying case with the parts above enumerated, and all other necessary adjuncts, on the interior. I thus furnish the amateur with a complete and compact apparatus which may be readily carried by him on a trip, and enables him to edit the films at any convenient time and place, and, when not being used, takes small space storage.

The invention as illustrated in the drawings hereof is hereinafter more fully described, and the essential novel characteristics are set out in the claims.

In the drawings, Fig. 1 is a perspective of my apparatus partly unfolded; Fig. 2 is a perspective of the apparatus completely closed; Fig. 3 is a plan of the apparatus completely unfolded; Fig. 4 is a sectional elevation, as indicated by the line 4—4 on Fig. 3.

It is convenient to describe first the frame of the apparatus which, when folded, constitutes the carrying case for the various parts used in the editing operation. As shown in Figs. 1 and 3, I have provided a case made up of six panels, designated respectively A, B, C, D, E and F, suitably hinged together so that they may be spread out flat to lie on a table or folded to make an enclosing parcel. More particularly, the panel B constitutes the base of the apparatus, or case; panels E and F hinged respectively to the opposite ends of the panel B constitute the ends of the folding case; panels A and C hinged to the front and back edges of the panel B constitute the front and back of the folding case; and panel D, hinged to the panel C, the top of the case.

The panels are preferably of sheet metal. The various hinges designated respectively e, e, a, c, d may be of the piano hinge type illustrated, formed by overlapping ears on the meeting panels, embracing a wire pintle indicated by g in Fig. 1, or other form of hinges may be employed. The panels could be of fibre, wood or other material, and as such material might be of considerable thickness, the panels would be sufficiently spaced at the meeting edges to permit the folding thereof.

As shown in the drawings, the panels are made of sheet metal. The panels B, E, and F are flat plates, except for the curled hinged ears. The panels A and C are flat plates provided with the hinged ears, and also flanged at their ends as at a-1 and c-1, so that in folding they may overlap the end panels E and F. Likewise, the panel D which forms the top is preferably provided with flanges d-1 at its ends, and d-2 at its free edge, so that these flanges may overlap both the front panel and the ends when the case is folded as shown in Fig. 2. The front and back plates A and C may be provided with small angle clips a-2 and c-2 respectively, which, when the case is folded, engage the inner faces of the end panels E and F, and limit their inward movement.

The top panel D may be provided with a suitable handle or carrying strap indicated at H, in Fig. 2, and may also have a hasp J with a hook to cooperate with a staple K on the front panel. The various instrumentalities used in editing the film are carried on the inner faces of the different panels in the proper position for use when the case is folded out flat, as shown in Fig. 3, and in a position where they do not impinge on each other when the apparatus is folded. Thus, the panel B carries the viewing device 18, which is preferably secured in position by a flange 11 clamped to the base plate B. The panel E carries a winding device 20 which carries and operates one of the reels, as for instance, the supply reel 21. The panel F carries the winding device 30, which carries a reel 31, which may be the receiving reel.

In use, the film 5 is drawn from the supply reel, threaded through the viewing device, and thence passes to the receiving reel. Illumination is supplied to the viewing device through an electric cord 40, which leads to a bus-connector 41 secured to the panel C from which it leads an electric cord 42, terminating at plug 43, adapted to be inserted in the usual base receptacle. The conductor 42 is of considerable length and may be wound up about a cleat 45 secured to the panel C. It will be seen that when the apparatus is folded out, as shown in Fig. 3, and the film threaded from the reel 21 to the viewer 18 and
thence to the reel 31, the simple manual operation of the crank 32 winds the film along while it is being viewed at the inspection window 12 of the viewer. When the film is completely wound on the receiving reel 31, the free end may be passed to the reel 21 independently of the viewer and wound on the latter reel by the rotation of the crank 22.

One of the operations of editing film is to remove undesirable sections, then cement together the desirable portions of the retained film. To enable such cutting out of sections to be efficiently performed, I provide on the panel A an improved form of splicing device comprising two adjacent clamping members 50 and 51, which are hinged at their rear edges to a suitable base. Either member provides means to clamp the film while the other may be used to cut it; that is, the edge of either raised clamp coating with the other clamp when lying down on the film provides means for shearing off the film as the raised clamp is lowered into place and moved sufficiently beyond the stationary clamp to shear off the film. Each of the plates 50 and 51 is actuated by a spring 52 (not shown) to hold them normally in the proper position but allow them to remain raised or to be moved to effect the shearing as desired. I have not gone into detail in regard to this apparatus, as it is a well-known device on the market.

In editing film, when the operator observes at the window 12 a section of the film that he desires to either discard or shift, the film is drawn through the viewer sufficiently to reach to the splicing device after having been severed where desired. Such splicing device is mounted on one of the panels in convenient position to engage a loose reel of film between the viewer 10 and wound 30. Thus I have shown the splicer 50, 51 on the panel A near the rear edge thereof, and I have pivotally mounted the standard of the winder 30 on panel A so that the reel 31 may be swung into a vertical plane leading directly to the splicing device in such forward position while in use, and turned directly toward reel 21 for rewinding on reel 21. The operation of splicing film in standard splicing devices is well understood.

To enable the splicing operation to be carried out with the greatest efficiency, I provide a loosely carried by the panel A and located in front of the splicing device and shielded by a reflector 81 in front of the lamp. This lamp may be supplied by an electric cord 62, leading to the bus-connector 41 and in engagement with the conductors of the extension cord 42.

The panel A, as shown, is provided with a pair of leaf spring clamps 70, which may removably retain a box of film cleaning materials, 71. On panel D, spring clamp 78 holds a small bottle of oil 74, and spring clamp 78 holds a small pair of scissors 77.

In Fig. 5 I have shown the two reels 21 and 31 on the spindles of the respective winders 28 and 38. In operation, the supply reel 21 comes from the motion picture camera. The receiving reel may be stored when not in use in a cylindrical container 80, mounted on the panel A and held in place by a removable strap 81. When the apparatus is to be folded, the receiving reel is placed in the container 80, and hence there is no reel on either winder 28 or 38. Now, when the apparatus is folded, the two winders 28 and 38 fold over into the space above the viewer. As shown in Fig. 1. Then the front and back panels are tipped up into vertical position, where they move the parts they carry into the space above the viewer. Then the top may be brought down and secured by its hasp.

It will be seen that I have provided a very compact case, carrying all of the apparatus necessary for editing a film. This case is also readily adapted for placing in a suitable carton for shipping purposes. When folded out on a table, or otherwise, it automatically positions the two winding devices in proper location with reference to the viewer and the splicing device, and presents all parts of the apparatus in convenient position for using.

I claim:

1. A folding film editing apparatus, comprising a case having a base panel and two end panels hinged respectively to the opposite ends of the base panel, a front panel hinged to the base panel, winding devices on the end panels, and a film viewer and a film splicing device on the base and front panels adapted to act on film, the end portions of which are reeled by the two winding devices, all of said devices being mounted on their respective panels to lie within the confines of the case when the panels are folded to form a case.

2. In a film editing apparatus, the combination of a case comprising a base panel, front and back panels hinged to the front and rear edges of the base panel, and end panels hinged to the end edges of the base panel, standards carrying rotatable film spindles mounted on the two end panels in such position that when the case is folded out the two reels carried by the two winding devices will be such distance apart that the film between them is readily viewed between them and a film viewer on the base panel adapted to cooperate with an intermediate region of the film held on said reels, and wherein when the panels are folded to form a case, said devices lie entirely within the confines of the case on their respective panels.

3. In an apparatus of the character described, the combination of a folding case having a base panel with end panels hinged to its opposite ends, and front and back panels hinged to the base panel, a winding device secured to each end panel, a winding device on the base panel, a splicing device on one of the panels adjacent the hinge connecting the front panel to the base panel, a device for illuminating the film at the viewing device, a lamp device for illuminating the splicing device, electric cords leading from said illuminating device and said lamp device to a bus connector on the rear panel, an electric cord leading from the bus connector to the front panel, and a film viewer on the front panel, connected and adapted to be attached to a suitable socket, and wherein all such devices are attached to their respective panels to lie within the confines of the case.

4. A folding film editing apparatus, comprising panels hinged together and adapted to be folded to make a carrying case, two winding devices respectively mounted on opposite end panels and arranged and adapted when said panels are unfolded to wind film from either device to the other, and a film viewer carried by the base panel and positioned to cooperate with an intermediate portion of the film extending from one winding device to the other when said panels are unfolded, each of said winding devices when the panels are unfolded being adapted to carry a film reel with the film available between them for inspection, and wherein the winding devices...
and the film viewer are so mounted on their respective panels to lie within the confines of the case when the panels are folded to form a case.

5. A film editing device, comprising panels hinged together at their edges so they may be folded to form a prismatic closed case or folded out flat, the panels constituting one pair of opposite ends of the case each carrying on its inner face one of a pair of cooperating winding devices receiving respectively the opposite ends of the same film, and devices pertinent to the editing operation carried on the inner faces of other panels in position to cooperate with an intermediate region of the film held on said winding devices.

10. A folding film editing apparatus, comprising a case having a base panel and two end panels hinged respectively to the opposite ends of the base panel, a winding device on the inner face of each of the end panels, so arranged that they operate on opposite ends of the same film when the panels are unfolded, and a film viewer carried on the inner face of the base panel between the two winding devices and positioned to cooperate with the film between the winding devices.

15. In a folding film editing apparatus, the combination of a folding case having an intermediate panel and two end panels hinged to opposite ends of the intermediate panel, devices for carrying and rotating film reels mounted on the inner face of the end panels which operate in position when the panels are unfolded, means on the inner face of the intermediate panel for positioning a viewer, the winding devices so located on the end panels that when those panels are turned to right angles to the intermediate panel the winding devices will extend in the idle space above the viewer.

20. A film editing device, comprising a case of six panels, four of these panels being hinged to a base panel so they may be folded into a prismatic case or folded out flat, the panels which constitute the opposite ends of the case each carrying a winding device, other devices pertinent to the editing operation carried by the base panel and by one of the other panels hinged thereto in position to cooperate with an intermediate region of a film held on said winding devices, when the panels are folded flat and wherein all of said devices are so mounted on their respective panels as to lie entirely within the confines of the case when the panels are folded to form a case.

25. In an apparatus of the character described, the combination of a six panel folding case having a base panel with end panels hinged to its opposite ends and front and back panels hinged to its front and rear edges, and a top panel hinged to one of the panels, a winding device on the inner face of each end panel in position to be actuated when the end panels are unfolded, each winding device comprising a standard, a reel-carrying spindle and a crank for operating said spindle, a viewing device on the inner face of the base panel, and a splicing device on the inner face of one of said panels and wherein the film between the reels may be passed through either of said last two named devices.

30. In an apparatus of the character described, the combination of a folding case having a base panel with end panels hinged to its outward ends, and front and back panels hinged to the base panel, a winding device adapted to carry a reel secured to each end panel in such position to be actuated when the panels are unfolded, a viewing device on the base panel through which a film between the reels of the winding devices may be passed, means for illuminating the film at the viewing device, an electrical cord connected with said illuminating means, and wherein said devices are mounted on their respective panels to lie entirely within the confines of the case when the panels are folded to form a case.

MILTON W. BECHTEL.