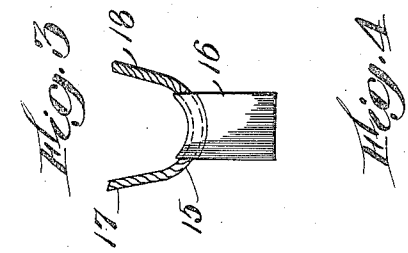
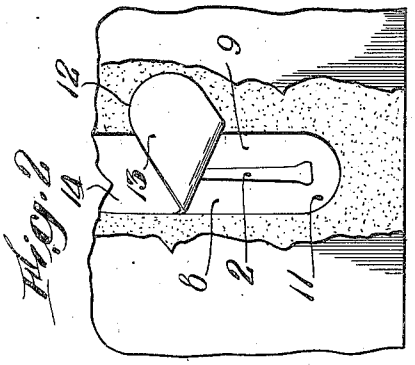
Feb. 15, 1938. E. F. CASEY 2,108,650

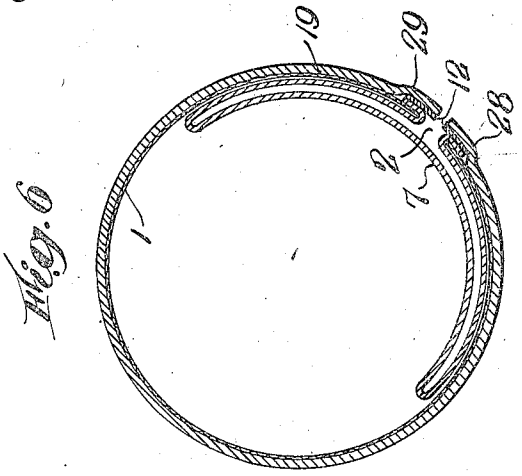
OVERSHOE

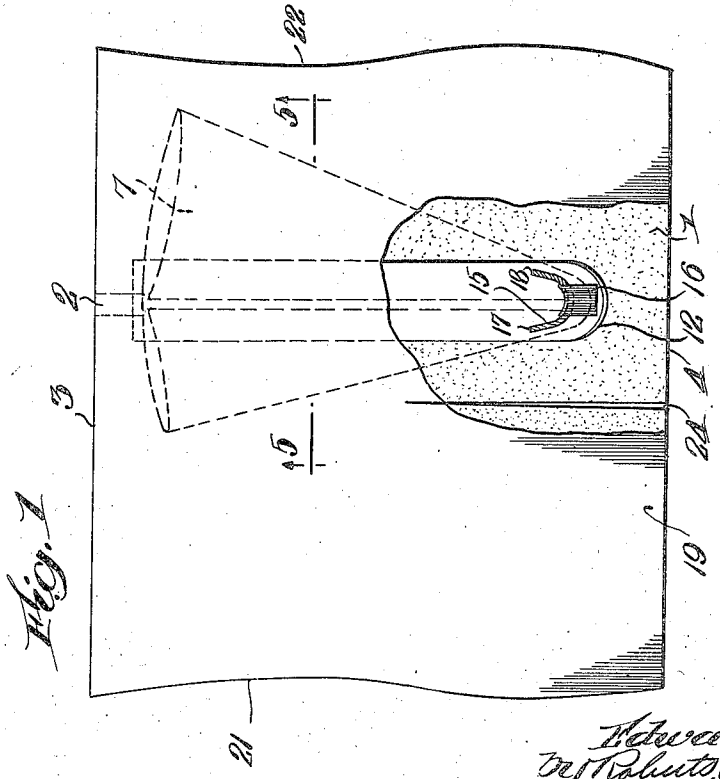
Filed Feb. 28, 1936 2 Sheets-Sheet 1

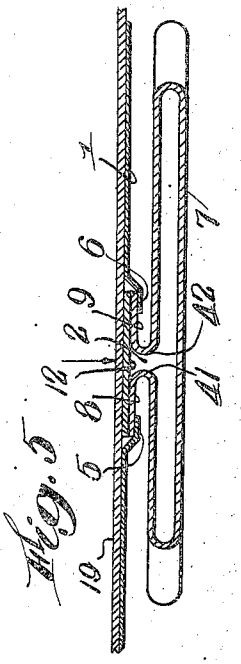




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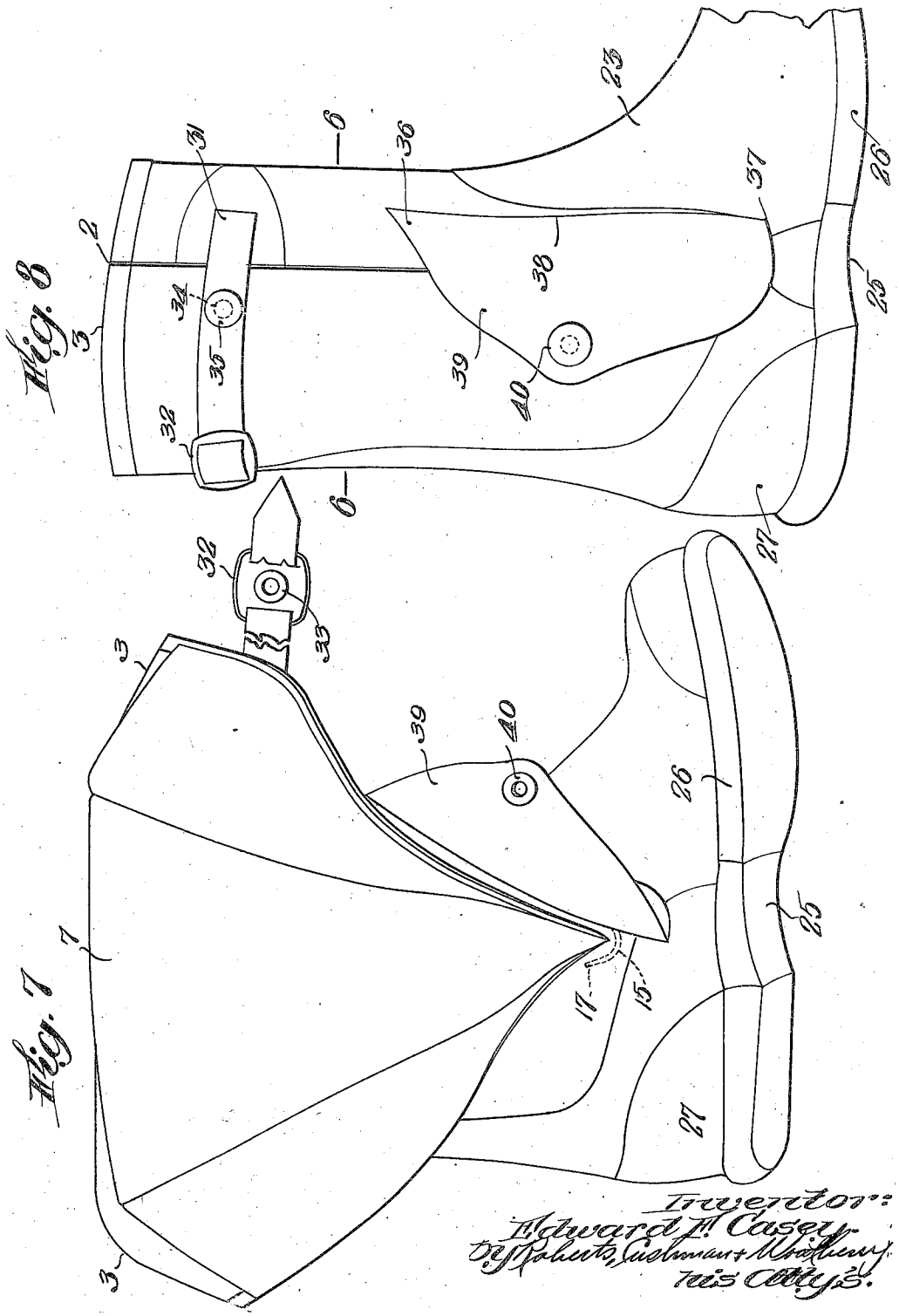


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# UNITED STATES PATENT OFFICE

2,108,650

## OVERSHOE

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Application February 28, 1936, Serial No. 66,211

1 Claim. (Cl. 36—7.3)

This invention relates to overshoes, and more particularly to a construction of the same from elastic sheet materials, such as rubber and/or stretchable fabrics.

In the present demand for overshoes, it is found desirable not only that the overshoe shall fit readily and smoothly over the regular leather shoes which are customarily worn under them, but that they shall go on and come off readily, fit snugly over the shoe, be tight against snow and water, etc., when on,—and, in conjunction with these provisions, also permit and provide for fitting over the cuff of trousers, the lower edge of ski pants, the bulging of thick woolen socks or stockings, and the like,—without binding on the one hand or being loose to permit the entrance of snow, ice, water, etc., over the tops, on the other.

Overshoes which are on the market at the present time do not provide these combinations of features in construction, convenient adjustment, and close fitting. It is, accordingly, an object of this invention to provide an overshoe construction which may be conveniently, inexpensively and practically manufactured, and which will meet these several conditions and serve these various purposes, in actual practice, and under the innumerable combinations of circumstances to which the wearer of such overshoes is apt to subject them as a mere incident of his desired activities.

It is also an object to provide an overshoe which, while adapted to serve under the severe conditions above enumerated (which may be considered as related to stormy or snowy weather, sporting use, and the like)—may also be adapted to the more compact fitting of the foot and ankle of the wearer when heavy stockings, etc. are not worn or when the overshoe is to fit under the cuff or the trousers, ski pants, etc., rather than over them, when the weather or under-foot conditions are more moderate. It is a further object to provide a simple construction, not only in respect of use and wear, but also in respect of the manufacturing steps for its assembly and construction. Another object is to provide for such relative disposition, assembly and arrangement of the parts, that they will not tend to rupture or tear each other, in manufacture or use, and hence so that they need not be greatly reinforced nor fashioned of heavy, bulky or unnecessarily large or numerous parts. A further object is to produce a relatively inexpensive and yet satisfactory product, which is suitable for either hard or moderate usage, as the ultimate desire of the purchaser and wearer may require,—and thus avoid the necessity of his anticipating the conditions under which he expects to use them. A further object is to provide a method of making such overshoes, which shall combine simplicity and low cost with good quality of materials, reliable and secure assembly of the parts and attractive appearance in the finished product. Other objects will appear from the following disclosure.

While the invention is generally applicable to various kinds of footwear, and more especially those which are made of stretchable materials and adapted to fit over both the foot and ankle of the wearer, for purposes of setting forth a preferred and typical example, it will be described in relation to its practical application in the fabrication of the several parts, assembly and construction of an overshoe, as illustrated in the accompanying drawings, in which:

Fig. 1 is a plan view of an upper piece for a left foot overshoe, as cut out and assembled, and with a portion of the sheet rubber removed to show the construction and arrangement of the several parts;

Fig. 2 is a detail showing the termination of the slit opening in the lining, the gusset fitting therein, and the overlapping binding strip folded back therefrom;

Fig. 3 is a detail view of a tear-resisting cord with patch for affixing the same;

Fig. 4 is a cross-section of the same;

Fig. 5 is a cross-section along the line 5—5 of Fig. 1 in the direction of the arrows;

Fig. 6 is a horizontal cross-section along the line 6—6 of the leg portion of the finished shoe as shown in Fig. 8;

Fig. 7 is a side view of a finished right foot overshoe with slit opening and gusset expanded; and

Fig. 8 is a side view of such finished overshoe in closed position.

In accordance with the present invention, a sheet of soft, napped fabric 1, that is preferably napped on the inner surface and provided with a thin layer of tacky adhesive on its outer surface, is cut into the shape of an entire upper for the overshoe including both quarters but not the vamp. This is provided with a slit 2 (so positioned as to come on the outer side of the finished overshoe) extending from the top edge 3 almost to the bottom 4, forming edges 5 and 6 (Fig. 5). A broad V-shaped elastic, fabric-lined rubber gusset 7 is then set into this slit, with its V-edges 8, 9 extending through the slit (i. e., from

napped side of the liner) and overlapping the edges of the slit 5 and 6, to lie upon the adhesive side of the liner 1 (Fig. 2). The pointed end 11 of the gusset 7 also extends through and slightly beyond (below) the end of the slit (Fig. 2). The edges of the slit are now brought nearly together, and approximately parallel, with the edges of the gusset caught therebetween, which are then pressed down flat upon the adhesive surface of the fabric liner and attached thereto by the application of pressure and rolling down. In this position, a strip of strong binding material 12, coated on both sides 13, 14 with adhesive cement, is laid over both of the cemented margins of the gusset 8, 9, and substantially co-extensive therewith, and with the tip 11, as shown in Fig. 2, but it may advantageously overlap them somewhat on either side and adhere to the adjacent portions of the liner, and extend below the end of the slit and preferably also below the pointed end of the gusset 11, overlapping the same at this point and adhering directly to the fabric at this point also, if desired.

A short length of stout cord 15 (which may be more securely held in position by folding a short strip of adhesive sheet rubber or binding material 16 over it) is applied across the bottom of the strip of binding material, above mentioned, so as to lie horizontally and approximately at (or slightly above or below) the end of the slit in the fabric liner beneath. It is found advantageous to have this cord not only strong but hard, so as to resist tearing. It is also convenient to have it thick and turned upwardly at both ends into a sort of U-shape, the ends 17, 18 running longitudinally of and adjacent to the slit, for reasons which will appear more particularly hereinafter.

A sheet of rubber 19 may be cut out to the size and shape of the fabric liner and applied to overlie and correspond to the adhesive side of the fabric liner as above prepared. In practice, however, this is found to be more readily effected by laying the assembled liner, adhesive side down and smoothly, upon a large sheet of rubber of the desired thickness, elasticity, etc. The sheet rubber is then cut out around the liner, and usually ¼ to ⅜" beyond so as to leave a margin of rubber, free from and extending beyond the margins of the liner.

The margins of the rubber 21, 22, which correspond to the back of the overshoe, are now cemented together. Thereupon the upper is drawn over a last (not shown) and the upper edge 3 or mouth of the overshoe held in position on the last by taping it to the last with strips of adhesive tape passing over the end of the last and adhering to the top portion or mouth of the upper.

A vamp 23, made by applying a suitably shaped piece of fabric liner to a correspondingly shaped sheet of rubber, with a margin of the latter extending beyond the fabric, is now joined to the edges of a slit 24, in the forward margin of the previously formed upper, and forms the toe portion of the overshoe (Fig. 8). The free lower portions of the upper and vamp may now be drawn over the sole portion of the last and the insole, fillers (not shown) and outer soles 25 are joined thereto with rubber cement, adhesives, or other means, in the customary ways. The outer sole will be joined to the upper, and the joint overlaid with a band of foxing 26, which may also be applied as at 27 and over the joint between the margins (21, 22) of the upper, in the back of the overshoe, mentioned above.

At this stage, the location of the slit in the fabric liner is indicated by a slight bulging 28, 29 (Fig. 6), due to the strip of binding material 12 which overlies the slit but is, in turn, underneath the rubber sheeting 19 which has been applied over both the strip and the liner. With this slight bulge as an indicator, a strap of rubber or rubber covered textile material 31 (Fig. 8) is cemented to the outside of the upper, near the mouth of the overshoe and in front of the slit 2; and of sufficient length to extend horizontally back over the slit an appreciable distance. This strap is provided with an adjustable slide 32 carrying a female snap member 33 adapted to engage a male snap member 34, which is carried in a fabric patch and by which it is cemented to the upper, at a point rearwardly of the slit and also near the top of the overshoe. The strap may also carry a female member 35 which is fixed thereon and adapted to engage the male member 34 when the shoe is in closed position, as in Fig. 8.

Again, on the outer, rubber surface of the upper, along a line corresponding to the forward edge of the slit in the fabric, (and from high upon or above the instep as at 36 to a point 37 at or below the lower end of the slit) is cemented one edge 38 of a more or less triangular tab 39, the remainder of which extends rearwardly of the overshoe, overlapping the slit, and extending to a point above and near the side of the heel.

The opposite free end or corner of the tab has a female snap member 40 thereon; while a male snap member (not shown) carried in a patch of fabric, is then cemented to the rear portion of the surface of the upper (i. e., rearwardly of the slit) and positioned to engage therewith.

As thus assembled, the rubber overshoe, upon the metal last, is ready for passing into the vulcanizing chamber where it is vulcanized in the usual ways to develop the strength and elasticity of the shoe as a whole, to integrate the several joints, and the adhesion of like and unlike surfaces to each other is assured, by the setting or vulcanizing of the adhesives used, which usually contain rubber.

After vulcanizing, the rubber sheet of the upper (and the strip of reinforcing fabric material therebeneath) is cut from the top or mouth of the overshoe 3 nearly to the bottom 4 along a line falling between the engaged edges of the V-shaped gusset, indicated by an arrow in Fig. 5,—thus releasing those edges of the gusset (previously held together by the binding strip 12 and rubber sheet 19 spanning the same) and permitting them to be opened out, as shown in Figs. 6 and 7. In this cutting operation, the space between the folded edges 41, 42 of the unfolded margins 8, 9 of the gusset, serves as a guide on the inside. On the outside, it is indicated by the slight bulging of the edges 28, 29 of the enclosed strip of reinforcing fabric 12, because it corresponds substantially to the median line of this strip (Figs. 5 and 6). In this cutting operation, the cord 15 above mentioned, by bulging outwardly somewhat, also indicates the desired position for the end of the slit. That is, the bottom of the U-shaped bulge of the cord, which surrounds the end of the slit in the fabric, also defines the terminus of the slit in the fabric and cut to be made in the rubber sheet (see Fig. 7).

The overshoe is now ready to wear. The V-shaped gusset, spanning the margins of the slit

in the upper, permits substantially the whole height of the upper to be expanded to receive the foot of the wearer, without being opened. After inserting the foot, the triangular lower strap may be drawn back and the snap positively fastened, thus drawing the vamp and upper smoothly and firmly over the body portion and around the instep of the shoe and foot.

The trouser cuff or stockings, etc. may now be adjusted, the gusset **7** is drawn over them and any excess of the gusset folded in, and the upper strap **31** then drawn backwardly, the slidable fastener adjusted thereon to the required length (which will thereafter be substantially the same for such use) and snapped onto the top button **34** already mentioned. In this way the top or mouth **3** of the overshoe is firmly fitted around the leg and garment of the wearer at this point. It may be observed that the total circumference of the leg and garment is not always greatest at this point as is sometimes assumed. When the trousers to be worn have cuffs, or the socks are folded over the shoe tops, etc., the overall circumference may be greater below than at this point. On the other hand, if the trouser legs are drawn up or the stockings rolled down from the top only, they will tend to bulge out to the greatest extent at or near the top of the overshoe. In either case, suitable allowance may be made accordingly, with an overshoe of the present construction, without binding on the one hand or leaving gaps around the mouth of the overshoe, on the other. Such provisions have not been made on overshoes as heretofore constructed.

Another advantage of the present overshoe construction is that while the stockings, trouser cuffs, etc., can be turned inside of the mouths of the overshoes as above described, they may also be turned out, at will,—and a perfectly tight, firm fit over the foot and shoe will be assured in either case. Moreover, while the stockings, trousers, etc. may fit inside of the top of the overshoe, and the overshoe upper drawn snugly around them,—when the trousers, stockings, etc. are worn outside the mouth of the overshoe, then the upper part of the overshoe snugly fits the ankle of the wearer and permits the trousers to fall naturally thereover on the outside, without interference. The fixed female snap member **35** on the upper strap may then be used and engaged with the male member **34**, as in Fig. 8.

The overshoe as thus made is readily removed, for upon releasing the upper and lower fastener members the vertical slit **2** expands along the whole height of the upper and to the whole width of the V-shaped gusset plus its elastic stretch. This releases not only the garments within the upper portion but also the shoe and foot from the lower portion. And at all stages of adjustment, the interior of the overshoe is kept both dry and warm. Moreover, after wearing the overshoe through snow and ice so that it is both wet and perhaps caked with ice and snow on the outside—such matter is confined to the outside of the overshoe and can not enter when the overshoe is taken off. Accordingly, if the overshoe is to be put on again before the ice and snow has melted off and dried,—it may be put on without getting the foot or garments of the wearer wet in so doing. Nor will the snow and ice interfere with the adjustments. The lower triangular band and snap having been in position when covered with ice and snow will be free to be replaced and snapped in position; even though the ice and snow have not melted off, and the upper band will likewise be free to be adjusted and fastened. Again, what is of great importance in the practical use of these overshoes, the garments of the wearer covering the foot and ankle will be kept dry. Garments above the ankle (as at the knee) are looser and less likely to become wet through, for, being loose, they shed both rain and snow more effectively. But the lower ends of these garments, such as trousers, tend to get wet or hold snow, and the snug fitting folds, such as rolled down stockings or the upper edges of socks also tend to collect moisture, snow, ice, etc.

Another feature of the construction here disclosed is that if the wearer should prefer to leave the mouth of the overshoe open and unfastened, as children are very likely to do in fair weather, the shoe portions of the overshoe will nevertheless fit snugly and firmly over the foot and shoe. This not only effects a neatness of appearance but assures the firm retention of the overshoe upon the foot, preventing the heel from sagging downwardly or slipping in walking, and holding the upper portion of the overshoe upright instead of flopping loosely about the feet, which is apt to cause tripping and slipping, and in any event makes the wearer awkward and at a disadvantage in looking out for himself under all circumstances.

Attention may be called to the fact that the entire upper and vamp are composed of two pieces of rubber covered fabric, that these are integrally joined by a single seam, between the upper edge of the vamp and the edges of slit **24**, passing transversely over the instep of the overshoe, and that the whole is elastic and adapted to conform intimately to the foot and shoe of the wearer. A further feature, from the manufacturing standpoint is that substantially all of the joints may be fabricated from sheet rubber and sheet fabric materials—except the metallic fasteners and short piece of cord **15**, which are easily procured. A further feature is that they may be assembled and joined by rubber cements or the like and finally developed to the desired strength, flexibility, elasticity, etc., by the usual vulcanizing operation. Moreover, during the operation and before cutting open the slit, through the outer rubber sheeting **19**,—the latter forms a continuous, form-retaining envelope which holds the overshoe together and snugly upon the last during the lasting operation, against the pulling and shaping and drawing of the fabric over the last and attachment of the sole elements thereto; and also retains the lasted size and shape of the overshoe during the vulcanizing operation. Hence, the overshoe is lasted and vulcanized accurately to the size and shape desired and required to fit over the wearer's foot and shoe,—and about the ankle,—without additional garments therein. The opening out of the expanded slit and gusset, plus some elasticity in the triangular tab, and upper as a whole, provide for the extra volume introduced by tucking outer garments therein, but without interfering with the snug fit of the overshoe over the foot and shoe portions.

I claim:

An overshoe, characterized by having an upper composed of a single sheet of elastic rubber and liner, having a vertical seam between two opposed edges thereof at the rear, a vertical slit from the mouth of the overshoe extending almost to the bottom, on the outer side of the shoe, a soft V-shaped fabric gusset having its

edges and point attached along the margins and around the bottom of said slit, a triangular tab, having one edge attached to said upper along the lower part of the forward edge of said slit, whereby the upper may be stretched and drawn snugly over the foot, and its apex having fastening means, cooperating fastening means on the rearward lower portion of the upper to engage said tab fastening means, in such stretched position, and an adjustable fastening means attached to the upper, along the forward edge of said slit, near the mouth of the shoe and cooperating fastening means attached to the rearward portion of the upper to engage said adjustable fastening means.

EDWARD F. CASEY.