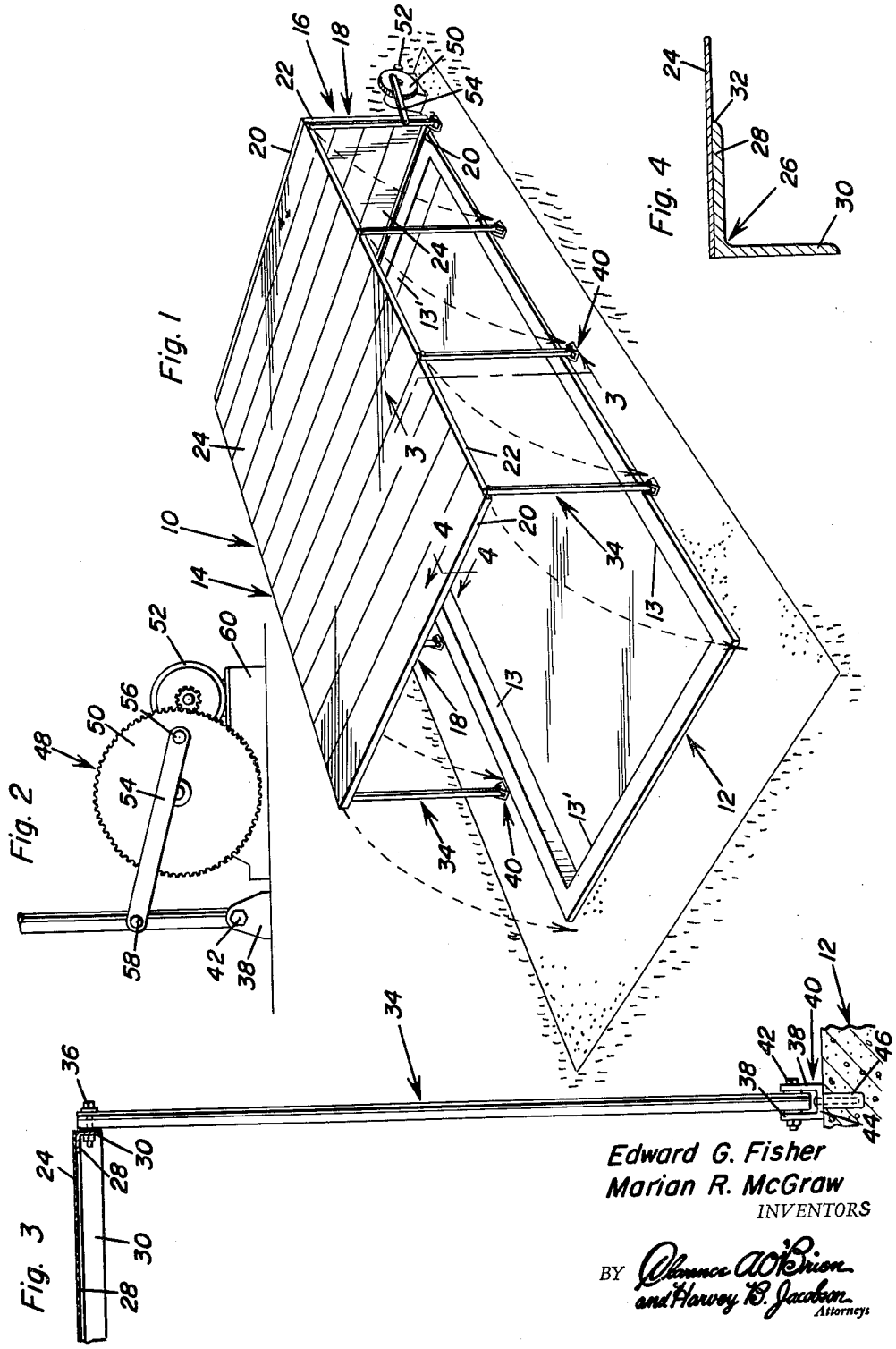
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COMBINATION SUN SHADE AND POOL COVER

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COMBINATION SUN SHADE AND POOL COVER

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This invention relates to a novel and useful combination sun shade and pool cover, and more particularly to a pool cover which is supported in a horizontally disposed position and may be raised and lowered over the upper surfaces of a swimming pool.

The present invention includes a pool cover which may be of any size and configuration to enable the pool cover to be positioned in overlying and overlapping engagement with the upper side surfaces of a swimming pool. A plurality of support standards are provided which have their upper ends pivotally secured to the pool cover for movement about parallel axes. The lower end of each of the support standards is provided with mounting means adapted for engagement with the upper surfaces of the sides of a swimming pool and a means is provided for pivotally securing the mounting means to the lower ends of the support standards about axes parallel to those axes about which the upper ends of the support standards are secured to the pool cover. The support standards are each of the same length and a means is provided for pivoting at least one of the support standards between a vertically disposed position and a substantially horizontal position immediately above the side surface of the pool to which it is secured whereby the pool cover is maintained in a substantially horizontally disposed position and may be swung from a lowered position directly overlying a swimming pool to a position elevated thereover. One end of the cover assembly includes an end flap which is pivotally secured to the cover assembly for movement about an axes parallel with the axes about which the lower ends of the standards are pivotally secured to the upper surfaces of the sides of the pool and the end flap is of a width to extend across the pool and to conform with the width of the main cover section and is of a length equal to the effective length of the support standards. When the main cover section is positioned in an elevated state with the support standards substantially vertically disposed, the free end portion of the end flap lightly engages the upper surfaces of the pool and as the main cover section is swung to a lowered position, the end flap will be pivoted to a horizontally disposed position in alignment with the main cover section. It will be noted that the end of the main cover section adjacent the end flap slightly overlies the corresponding edge of the pool over which the cover assembly is positioned when the support standards are substantially vertically disposed. When the main cover section is in a lowered position, it also overlies that end portion of the pool. Further, it is to be noted that the main cover section is of a length to enable the end of the main cover assembly remote from the end flap to slightly overlie the corresponding end of the pool when the main cover section is in a lowered position. Thus, it will be noted that when the main cover section is in a lowered position that the main cover section together with the end flap will entirely overlie the side edges of the pool.

The main object of this invention is to provide a sun shade and pool cover which may be swung from a lowered position directly overlying the upper edge of the side of the pool to an elevated position over the pool.

A further object of this invention is to provide a means for moving the pool cover at least part of the length of the pool as it is raised to the elevated position.

A further object of this invention, in accordance with the preceding object, is to provide a pool cover which will provide a wind shield when in the raised position for blocking the prevailing winds of the swimming season.

A still further object of this invention is to provide a sun shade and pool cover in accordance with the preceding objects which will be easy to install at existing pool sites.

And a final object to be specifically enumerated herein is to provide a device that will conform to conventional forms of manufacture, be of simple construction and be easy to operate so as to provide a device that will be economically feasible, long lasting and operable by substantially every person having the authorization to use the swimming pool over which it is secured.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the sun shade and pool cover shown in the elevated position above a swimming pool;

FIGURE 2 is an enlarged fragmentary side elevational view of the motor means by which the sun shade and pool cover may be elevated from a lowered position directly overlying the pool and an elevated position thereover, parts of the sun shade and pool cover being broken away and removed;

FIGURE 3 is an enlarged transverse vertical sectional view taken substantially upon the plane indicated by the section line 3—3 of FIGURE 1; and

FIGURE 4 is an enlarged longitudinal sectional view taken substantially upon the plane indicated by the section line 4—4 of FIGURE 1.

Referring now more specifically to the drawings, the numeral **10** generally designates a sun shade and pool cover which is shown mounted over a pool generally designated by the reference numeral **12** in FIGURE 1 and including opposite sides and ends **13** and **13'**.

The pool cover includes a main cover section generally designated by the reference numeral **14** and an end flap section generally designated by the reference numeral **16**. The main cover section **14** and the end flap section **16** each include a skeleton framework generally designated by the reference numeral **18** which includes end and side angle members **20** and **22**, respectively. It is to be noted that the plan shape and size of the pool cover **10** is to be established according to the size and plan shape of the pool **12** over which it is to be secured. If the pool **12** is of irregular configuration, then the skeleton frames **18** will also be of complementary irregular configuration.

The skeleton frames **18** each have cover panels **24** secured thereover in any convenient manner.

With particular attention directed to FIGURES 1, 3 and 4 of the drawings it will be noted that the end and side members **20** and **22** each include an angle member generally designated by the reference numeral **26** having an inwardly directed horizontally disposed flange **28** and a downwardly directed and vertically disposed flange **30**. The cover panels **24** are secured in overlying relation to the upper surfaces of the flanges **28** in any convenient manner such as welding **32**.

A plurality of support standards generally designated by the reference numeral **34** are provided and have their upper ends pivotally secured to the flanges **30** by means of a pivot bolt **36**. The lower ends of the support standards **34** are suitably apertured and are positioned between the furcations **38** of the mounting yokes generally designated by the reference numeral **40**. The furcations **38**

are provided with aligned apertures which are registrable with the aperture formed in the lower ends of the support standards 34 and pivot bolts 42 are secured through the registered apertures to pivotally secure the lower ends of the support standards 34 to the yokes 40. The bight portions 44 of the yokes 40 are provided with suitable anchoring means 46 for securement to the concrete side surfaces of the pool 12.

Particular attention is now directed to FIGURE 1 of the drawings wherein it will be noted that each of the support standards 34 is of the same length and that the support standards are positioned at spaced points longitudinally along the opposite sides of the main cover section 14. A motor means generally designated by the reference numeral 48 having a crank wheel 50 driven by a motor 52 is operatively connected to the adjacent upstanding support standard 34 by means of connecting rod 54. The opposite ends of the connecting rod 54 are pivotally secured to the crank wheel 50 and the support standard 34 by means of pivot pins 56 and 58, respectively. Thus, upon operation of the motor 52 the crank wheel 50 will rotate and the main cover section 14 will be raised and lowered. It is to be noted that the distance between the pivot pin 42 and the pivot pin 58 has been determined in relation to the throw of the crank wheel 50 whereby one complete revolution of the crank wheel 50 will move the main cover section 14 from one position to the other position and then back to the first position. The limits of the stroke of the crank wheel 50 establish both the uppermost and lowermost position of the main cover section 14 so that it will be impossible to operate the motor means 48 to move the main cover section 14 beyond these two extreme positions. It will be noted that the motor means 48 is provided with a mounting base 60 which may be secured to the upper surfaces of the pool 12 in any convenient manner.

One end of the end flap section 16 is pivotally secured to the end of the main cover section 14 in any convenient manner and the length of the end flap section 16 is equal to the effective length of the support standards 34. In this manner, when the main cover section 14 is in the raised position, the free end of the end flap section 16 will lightly engage the upper surfaces of the pool 12. As the main cover section 14 is swung to a lowered position the end flap section will be pivoted to a horizontally disposed position in substantial alignment with the main cover section 14. It is to be understood that if the prevailing winds of the swimming season come from either end of the pool 12, the end flap section 16 may be positioned on the windward end of the pool so as to provide a wind break when the main cover section 14 is in the raised position.

It is to be noted that the sun shade and pool cover 10 can be most conveniently constructed of a light weight metallic material such as aluminum for ease of operation and low maintenance. Additionally, the cover panels 24 may likewise be constructed of a light weight metallic material or they may be constructed of a transparent or translucent material to enable some of the sun rays to pass through the cover panels.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those

skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination with a swimming pool of the type including a pair of opposite sides and ends, a combination sun shade and pool cover assembly comprising a main cover section having a corresponding pair of opposite sides and ends, a plurality of support standards, means pivotally securing the upper and lower ends of said standards to corresponding opposite sides of said main cover section and said pool respectively for rotation about axes extending transversely of said pool and main cover section between said opposite sides with a parallelogram style linkage being formed by said standards and said pool and main cover section sides between which said standards are secured, said main cover section being generally horizontally disposed and swingable between an elevated position above said pool sides with said standards upright and a lower position directly overlying said pool with said standards substantially horizontally disposed, said cover assembly including an end flap pivotally connected to one end edge of said main cover section for movement about a generally horizontally disposed axis extending between the opposite sides of said main cover section, two of said standards being pivotally secured between the opposite sides of said one end edge of said main cover section and the opposite sides of the corresponding end of said pool, said end flap being disposed closely adjacent said two standards and engageable thereby for support therefrom during the lowering of said main cover section and pivotal movement of the end flap from its upright position to its lowered horizontal position, said end flap, from its pivotal connection with said main cover section to its free edge portion, being of a length substantially equal to the effective height of said end edge standards and pivotable from a substantially horizontally disposed position when said main cover section is lowered in general horizontal alignment with said main cover section overlying the corresponding end of said pool to an upright position depending from said one end edge of said main cover section when the latter is in the elevated position forming a windbreak between said end edge of said cover section and the corresponding end of said pool, the spacing of said standards along said sides of said main cover section and pool being greater than the length of each of said standards.

2. The combination of claim 1 including motor means operatively connected between one of said standards and said pool and operable to swing said one standard about its pivotal connection with said pool for raising and lowering said main cover section relative to said pool.

References Cited in the file of this patent

UNITED STATES PATENTS

2,542,605	Werner	Feb. 20, 1951
2,838,767	Matlock	June 17, 1958
2,889,875	Turner et al.	June 9, 1959

FOREIGN PATENTS

705,220	Great Britain	Mar. 10, 1954