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Yazvac

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[54] **HANDLE INTERLOCK ARRANGEMENT FOR A PAIR OF ELECTRIC CIRCUIT BREAKERS**

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[52] **U.S. Cl.** ..... **200/50 C,** 335/160, 337/143

[51] **Int. Cl.** **H01h 33/46**

[58] **Field of Search** ..... 337/43; 335/160, 11; 200/DIG. 6, 50 C

[56] **References Cited**

UNITED STATES PATENTS

2,259,298	10/1941	Loache	200/DIG. 6
3,492,448	1/1970	Phillips, Jr.	200/50 C
3,421,128	1/1969	Klein	335/160
3,319,020	5/1967	Shaffer	200/50 C

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[57] **ABSTRACT**

Two manually-operable circuit breakers are mounted side by side in reversely positioned relationship and are staggered lengthwise to align the handles. The aligned handles are connected by a handle tie member to prevent both handles from being in the ON position simultaneously.

2 Claims, 2 Drawing Figures

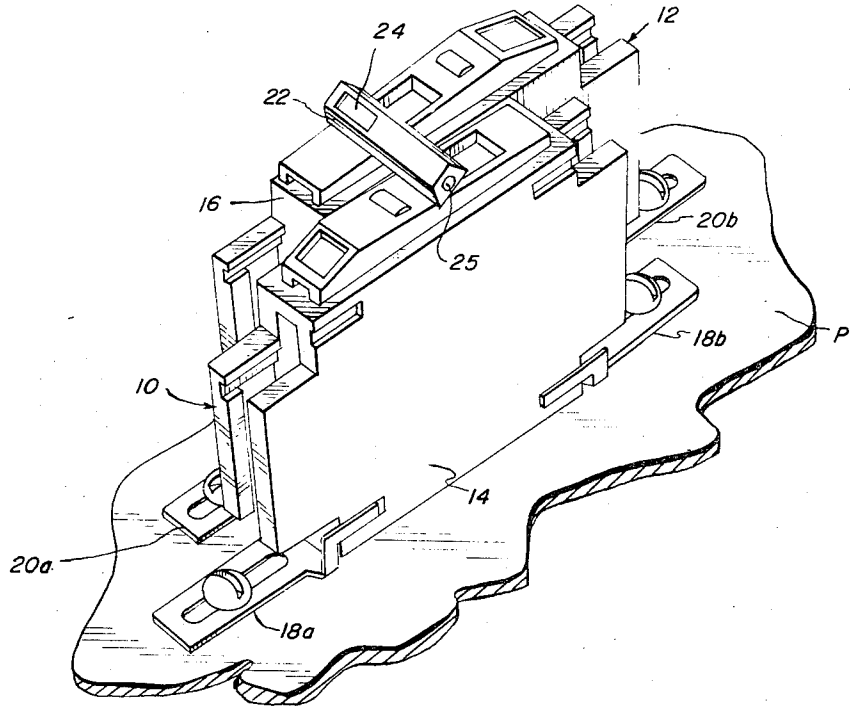
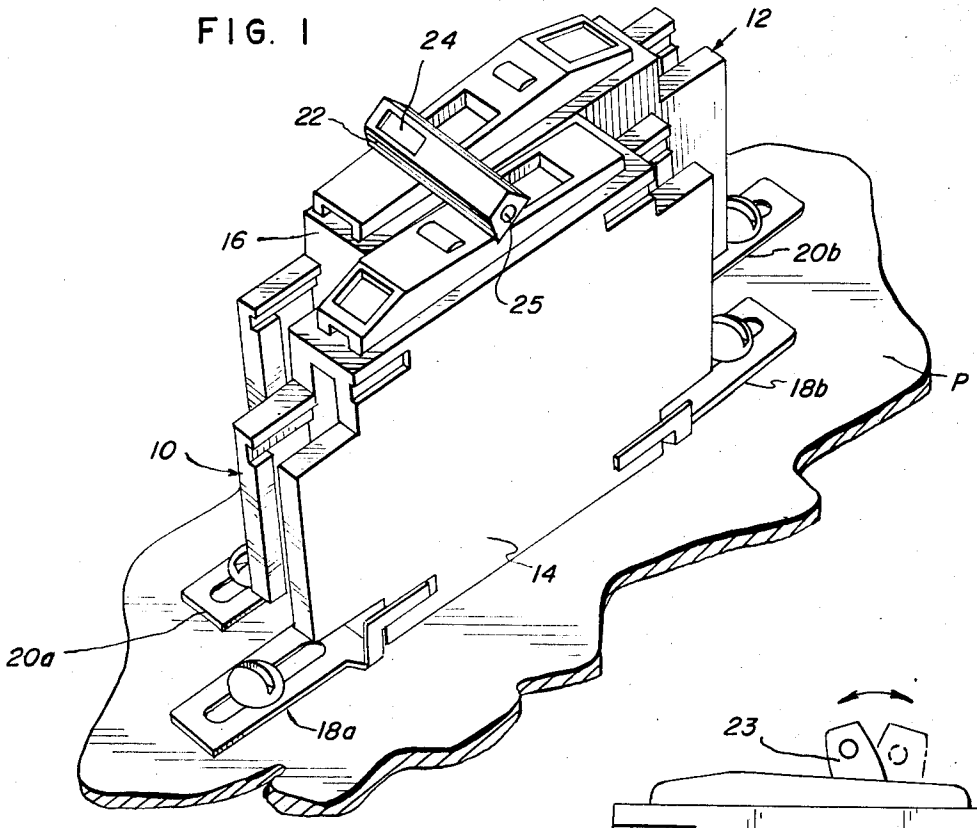


FIG. 1



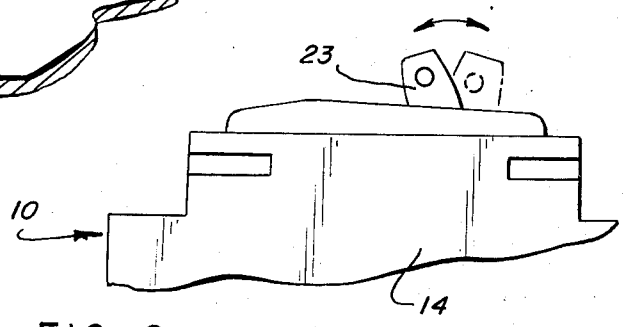


FIG. 2

HANDLE INTERLOCK ARRANGEMENT FOR A PAIR OF ELECTRIC CIRCUIT BREAKERS

This invention relates to a handle interlock means for a pair of manually-operable circuit breakers.

In accordance with the invention, two circuit breakers are mounted side by side on a panel in reversely positioned and staggered relationship to align their operating handles. The aligned handles are joined by a handle tie member which prevents the handles from being in the ON position simultaneously and also serves to facilitate their simultaneous operation.

The arrangement of the present invention is particularly useful in those circumstances wherein the user has the option of an alternate power source. One example is in a mobile home wherein one of a pair of circuit breakers controls an internal power source such as a generator and the other circuit breaker controls an external power source such as a power outlet unit provided by a mobile home park.

An object of the invention is to provide an improved handle interlock arrangement for a pair of manually-operable circuit breakers whereby only one operating handle at a time can be in the ON position.

Further objects and advantages of the invention will become apparent from the following description wherein reference is made to the drawings, in which:

FIG. 1 is a perspective view of a pair of molded case circuit breakers and handle interlock means therefor in accordance with the invention; and

FIG. 2 is a fragmentary view of the forward circuit breaker of FIG. 1 showing an operating handle in the OFF position.

Referring to the drawings, a pair of molded case circuit breakers **10** and **12** having elongated molded cases **14** and **16**, respectively, are mounted on a panel P by mounting means more fully disclosed in U.S. Pat. No. Re. 27,365 issued May 16, 1972. The mounting means comprises identical pairs of mounting brackets **18***a*–**18***b* and **20***a*–**20***b* and cooperating grooves in the cases **14** and **16**. The circuit breakers **10** and **12** have respective operating handles and internal mechanisms similar to those of the circuit breaker disclosed in U.S. Pat. No. 2,902,560, issued Sept. 1, 1959.

A box-shaped handle tie member **22** receives outer end portions of pivotally mounted operating handles **23** and **24** of the respective circuit breakers **10** and **12**, and is secured thereto by a rivet **25** passing through aligned openings in end walls of the member **22** and in the handles **23** and **24**. The handle tie member **22** has an opening in a top wall for display of current rating indicia

(not shown) on an upper surface of handle **24**.

In accordance with the invention, the circuit breakers **10** and **12** are mounted side by side in reversely positioned relationship, and, because the handles **23** and **24** of the circuit breakers **10** and **12** are off-center longitudinally of their respective casings, the circuit breakers **10** and **12** are in longitudinally staggered relationship thereby to align the handles **23** and **24** transversely of the cases.

Because the circuit breakers **10** and **12** are reversely positioned endwise with respect to each other with their operating handles **23** and **24** aligned transversely of their respective cases, one of the circuit breakers will be turned ON and the other circuit breaker will be turned OFF when the outer end portions of both operating handles are moved together in the same direction by manual force exerted against the tie member **22**.

Upon automatic tripping of either of the circuit breakers **10** and **12**, one of the handles **23** or **24** will move to a position intermediate the ON and OFF positions shown in FIG. **2** as explained more fully in U.S. Pat. No. 2,902,560 supra. Sufficient lost-motion is provided within the respective circuit breaker mechanisms, however, to enable the ON circuit breaker to trip without turning the OFF circuit breaker ON.

I claim:

1. An assembly comprising a pair of identical electric circuit breakers each having an elongated molded case and an operating handle pivotally mounted in the case, extending outwardly thereof, and having an outer end portion movable toward one end of the case to an ON position and toward an opposite end of the case to an OFF position, the circuit breakers being mounted side-by-side with their operating handles aligned transversely of the cases and being reversely positioned endwise with respect to each other to effect turning of one circuit breaker ON and the other circuit breaker OFF when the outer end portions of both operating handles are moved together in the same direction, and handle tie means rigidly connecting the outer end portions of the operating handles to each other for insuring movement thereof together as a unit in the same direction between their respective ON and OFF positions.

2. An assembly as claimed in claim **1** wherein the operating handle of each circuit breaker is off-center longitudinally of the casing and the circuit breakers are longitudinally staggered to effect the alignment of their operating handles transversely of the cases.

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