

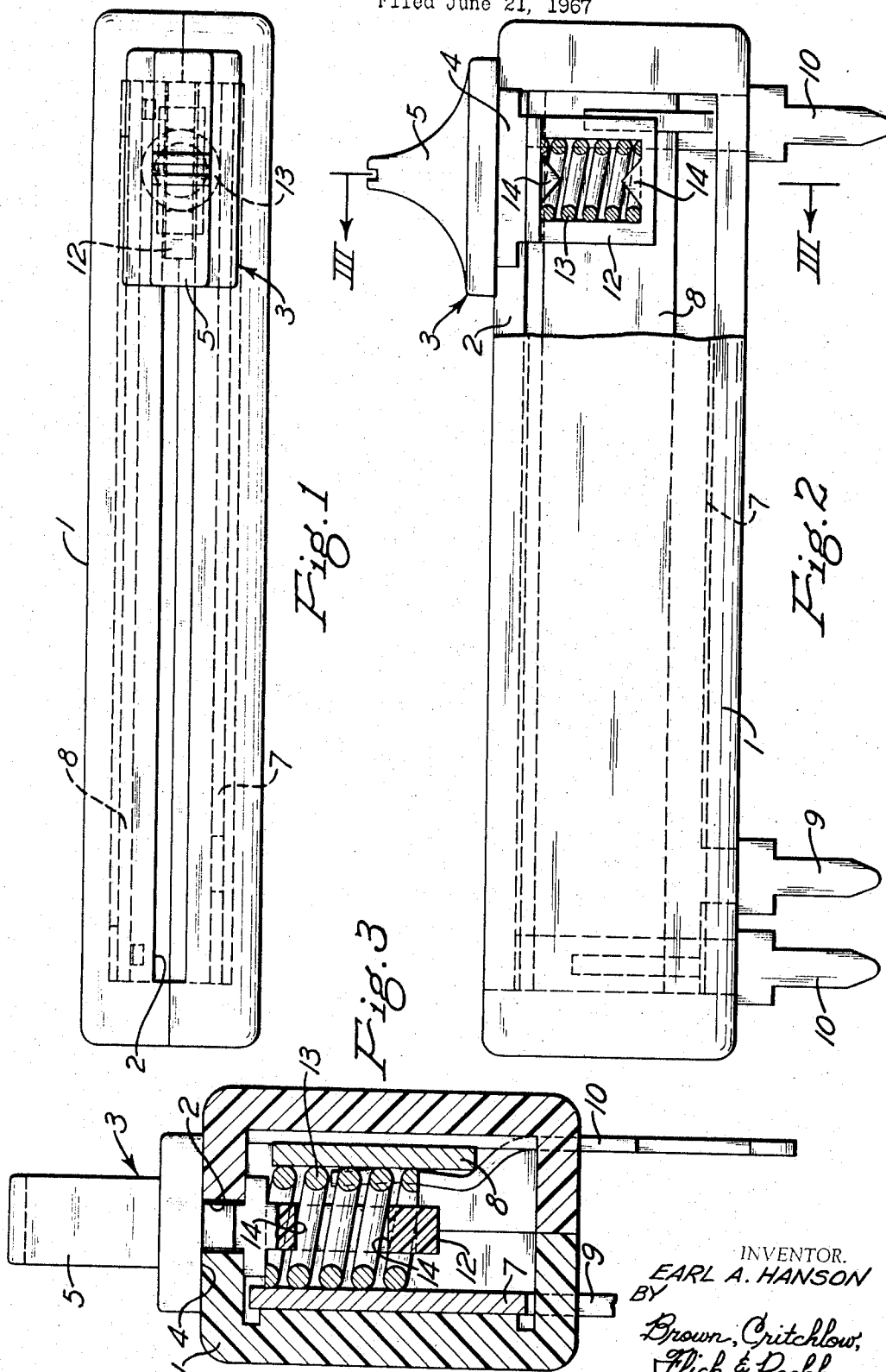
July 1, 1969

E. A. HANSON

3,453,584

SLIDING CONTACT UNIT FOR POTENTIOMETER

Filed June 21, 1967



INVENTOR.  
EARL A. HANSON  
BY  
Brown, Critchlow,  
Plick & Peckham  
ATTORNEYS.

1

2

3,453,584  
**SLIDING CONTACT UNIT FOR POTENTIOMETER**  
 Earl A. Hanson, Ridgway, Pa., assignor to Stack-  
 pole Carbon Company, St. Marys, Pa., a corpora-  
 tion of Pennsylvania  
 Filed June 21, 1967, Ser. No. 647,661  
 Int. Cl. H01c 5/02, 1/12  
 U.S. Cl. 338—183

3 Claims

## ABSTRACT OF THE DISCLOSURE

A sliding contact unit for use between parallel collector and resistor strips includes a slide provided at one side with means for moving it endwise, and an open frame projecting from the opposite side. Mounted in the frame is a wire coil that projects laterally from it to form a bridging contact.

It is among the objects of this invention to provide a sliding contact unit which is simple in construction and quick and easy to assemble.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which

FIG. 1 is a front view of a potentiometer;

FIG. 2 is a side view thereof with part broken away; and

FIG. 3 is an enlarged cross-section taken on line III—III of FIG. 2.

Referring to the drawings, the long rectangular housing 1 of a potentiometer may be formed from a molded plastic or other suitable rigid material. The housing preferably is made from two molded half sections that have meeting edges extending from front to back across the end walls of the housing and lengthwise along its back or base. The half sections are joined together in any suitable manner, such as by adhesive for example. The front or top of the housing is provided centrally with a slot 2 extending of the housing for nearly its full length. The slot has parallel sides.

Slidably mounted in the slot for movement lengthwise of the housing is a rectangular slide 3 that has laterally opening grooves 4 in its opposite sides receiving the side walls of slot 2 to hold and guide the slide. The outer side of the slide is provided with a projection or knob 5 for moving the slide endwise back and forth along the slot. A metal collector strip 7 and an electrical resistor strip 8 are mounted inside the housing at opposite sides thereof. The collector strip is provided with an integral terminal 9 that extends through the back of the housing, while each end of the resistance strip is connected to a metal terminal 10 likewise extending through the back.

It is a feature of this invention that the slide is equipped with means for quickly attaching a bridging contact to it so that the assembly will form a sliding contact unit. Ac-

cordingly, an open frame 12, integral with the slide, projects from the side of the slide opposite its actuating knob as shown in FIG. 2. Thus, the frame is entirely inside of the potentiometer housing. The plane of the frame extends lengthwise of the slide and is parallel to the collector and resistor strips. The frame preferably is rectangular, with the inner side of the slide forming one side of the frame. Disposed in this frame is a wire coil 13, the axis of which is perpendicular to the slide. The coil is held in place by a pair of projections 14 integral with the frame and projecting a short distance into the opposite ends of the coil. Most suitably, the projections are integral with the frame and preferably are tapered toward each other as seen in FIG. 2 of the drawings to facilitate insertion of the spring in the frame. The coil projects from the opposite sides of the frame and slidably engages both the collector strip and the resistor strip, thereby forming a bridging contact between them. The convolutions of the coil are spaced apart sufficiently to have permitted it to be compressed axially and inserted projections 14 and then released, whereupon it is expanded into engagement with the frame. This manner of attaching the coil to the slide in very simple and rapid, thereby reducing the cost of the potentiometer.

According to the provisions of the patent statutes, I have explained the principle of my invention and have illustrated and described what I now consider to represent its best embodiment.

I claim:

1. A sliding contact unit for use between parallel collector and resistor strips, said unit comprising a slide having ends and provided at one side with means for moving it endwise, an open frame projecting from the opposite side of the slide in a plane extending lengthwise of the slide, a straight wire coil disposed in the frame with its axis perpendicular to the slide, the coil projecting from opposite sides of the frame to form a bridging contact.

2. A sliding contact unit according to claim 1, in which said frame is provided with means extending into the coil to help hold it in place.

3. A sliding contact unit according to claim 1, in which the inside of the frame is provided with a pair of projections extending into the opposite ends of the coil.

## References Cited

### UNITED STATES PATENTS

3,362,004	1/1968	Bang	200—166 X
3,233,200	2/1966	Bebel	338—180
2,379,047	6/1945	Thomas	200—166 X

LEWIS H. MYERS, *Primary Examiner.*

A. T. GRIMLEY, *Assistant Examiner.*

U.S. Cl. X.R.

338—202