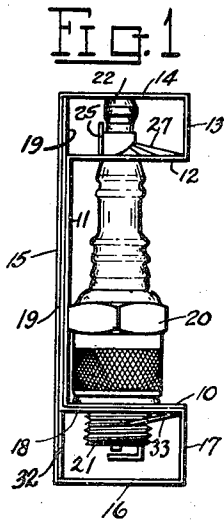
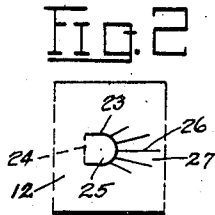
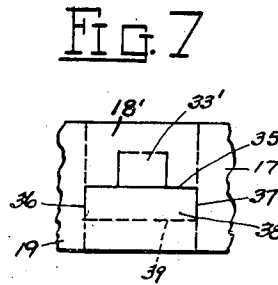
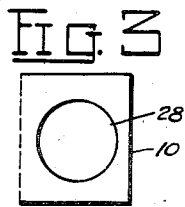
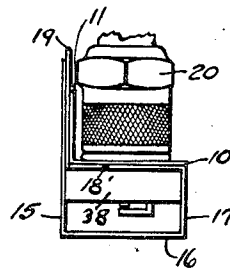
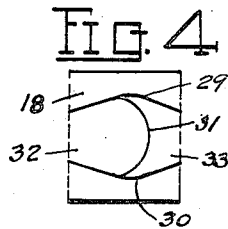
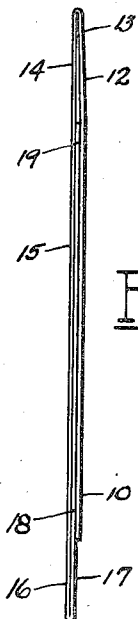
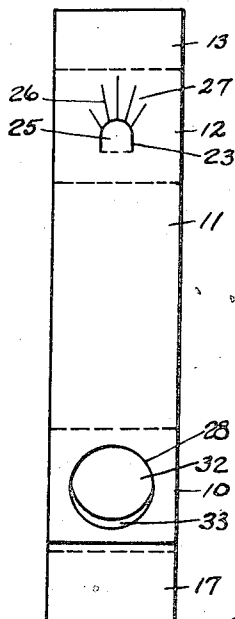


June 8, 1948.

J. F. LEWIS, JR
SPARK PLUG DISPLAY HOLDER

2,442,980

Filed Aug. 14, 1945



Inventor
James F. Lewis, Jr.

Coven & Coven

Attorneys

UNITED STATES PATENT OFFICE

2,442,980

SPARK PLUG DISPLAY HOLDER

James F. Lewis, Jr., Maumee, Ohio, assignor to
Champlon Spark Plug Company, Toledo, Ohio,
a corporation of Delaware

Application August 14, 1945, Serial No. 610,754

1 Claim. (Cl. 206—79)

1

This invention relates to a spark plug holder and has for its object to provide a holder or carton for an individual spark plug which will be suitable for holding the spark plug in place when a plurality of these holders are assembled in a container, and which will hold the spark plug suitably and in readily seen position when the individual holder is removed from the container.

Details and further objects of the invention will appear as the description proceeds.

In the accompanying drawings forming a part of this specification,

Fig. 1 is a side elevation of a holder embodying one form of the invention and having a spark plug positioned therein.

Figures 2, 3 and 4 are plan views of certain sections of the holder.

Fig. 5 is a side elevation of the holder in flattened form as it may be packaged for shipment or storage.

Fig. 6 is an elevation of the holder shown in Fig. 5 viewed from the right of Fig. 5.

Fig. 7 is a plan view of a portion of the holder arranged in a somewhat different manner from that shown in Fig. 4; and,

Fig. 8 is a view similar to the lower part of Fig. 1, but showing the form of holder illustrated in Fig. 7.

In the form of the invention disclosed in Fig. 1, the holder is made from one continuous strip of paperboard or the like, which is bent into successive sections and adhered together. The sections are indicated by reference characters beginning with section 10, which is immediately below the knurled part of the spark plug. The next section 11 runs vertically along the side of the spark plug, while the next section 12 has the upper end of the spark plug inserted there-through. Section 13 again runs vertically to a point even with the top of the spark plug and then joins section 14 which runs horizontally over the top of the spark plug. Section 15 runs vertically upward to 14 and downward to below the lower end of the spark plug and then section 16 runs across beneath the spark plug, and section 17 again runs upward to join the lower side of the end of section 10. Section 18 then runs horizontally beneath section 10 and section 19 runs vertically upwards between sections 11 and 15. Sections 10 and 18 may be pasted together and sections 15, 16 and 11 also may be pasted together. The spark plug 20 mounted in the holder has its lower threaded end 21 inserted through a hole through sections 10 and 18. The upper end 22 of the spark plug is inserted through

2

an opening in section 12. A plan view of section 12 is shown in Figure 2, the ends where the section adjoins 11 and 13 being indicated by dotted lines. A semi-circular cut 23 is provided near the middle of section 12 and may be bent about dotted line 24 to form a tab 25, which may be bent upward to admit the upper end 22 of the spark plug. Lines 26 radiating from cut 23 produce a plurality of tongues 27, which are also bent upward when the top of the plug is inserted. This readily permits insertion of the top of the plug, but tends to hold it in place after it has been inserted.

Fig. 3 shows a plan view of section 16 of the holder, the line on which it joins section 11 being indicated by a dotted line. A hole 28 is provided through section 19 for receiving the threaded end of the spark plug.

Fig. 4 is a plan view of section 18 of the holder. This section is provided with curved cuts 29 and 30 and a curved cross-cut 31 joining cuts 29 and 30 near their middle. This forms tabs 32 and 33 joined to the rest of portion 18 only along the lines where this portion is connected to portions 17 and 19.

For shipment or storage purposes the holder may be readily flattened as indicated in Figures 5 and 6, so as to take up very little space. Dotted lines on Figure 6 indicate creases for facilitating folding. When it is desired to assemble it with a spark plug, the lower end where sections 16 and 17 join may be moved to the right from the position shown in Figure 5, whereupon sections 16, 17, 18 and 19 assume the position in which they are shown in Fig. 1. If desired, tab 32 may previously have been adhered to portion 15 so that it remains in the position in which it is shown in Figure 1, instead of becoming horizontal along with the rest of portion 18. The lower threaded end 21 of the spark plug may then be inserted through opening 28 and tab 33 is pushed down to the position in which it is shown in Fig. 1 and engages the threads of the spark plug and resists somewhat the movement of the spark plug from its position in the holder. Thereafter the upper end of the holder constituted by the line between sections 13 and 14 is moved to the right from the position in which it is shown in Fig. 5, and section 12 is thereby lowered over the upper end 22 of the spark plug, tabs 25 and 27 being bent to the position in which they are shown in Fig. 1 and holding the upper end of the plug in assembled position.

It will be seen that this construction provides a holder which occupies very little space for

3

shipment or storage and may be very quickly and easily applied to a spark plug and retains its position when so applied.

Preferably when a holder has been applied to a spark plug as indicated in Fig. 1, the entire holder and plug are wrapped in a sheet of Cellophane or the like. The holder and wrapper then constitute a package practically square in cross section and rectangular in longitudinal section. Such packages readily fit into a container and may be shipped therein without danger of injury to the spark plugs. When the container is opened, one or more of the holders may be removed from the container at a time and each constitutes in itself a complete package for the spark plug, which is protected by the Cellophane against dirt or contamination, and at the same time the spark plug is protected against accidental blows which may injure it and is exposed to view of the purchaser or of the attendant who is desirous of installing the plug.

While the exact form illustrated operates very simply and efficiently, some minor changes may be made within the scope of the invention as defined in the appended claims. One slight modification is indicated in Figures 7 and 8. In Fig. 7 there is a plan view of a portion 18', which may be employed in place of portion 18. In this construction there are cuts 36 and 37 along the lines where section 18' joins sections 19 and 17, respectively. One end of cut 36 is united by cut 35 to the corresponding end of cut 37 whereby a tab 38 may be bent about the line 39 joining the other end of the cuts 36 and 37. Another tab 33' may be formed by short cuts on the other side of the long cut 35. When the threaded end 21 of the spark plug is thrust downward through a portion 18', such as shown in Fig. 7, it bends downward tab 38 between sections 17 and 15 as shown in Fig. 8, and the tab fitting between these sections acts to stiffen the holder against any tendency to return to the position shown in Fig. 5. At the same time tab 33' acts substantially the same as tab 33 in the form shown in Fig. 1.

It will be seen that the holder consists of a single strip of paper, creased along the fold lines, portions of which may be adhered together, and that when the strip is doubled back upon itself

4

and adhered together the end portions may be bent to one side to provide protecting walls 14 and 16 for the ends of the spark plug and holding walls 12, 10 and 18 parallel with these protecting walls for retaining the spark plug in position.

Other changes may be made within the scope of the appended claim while retaining some of the advantages of the invention.

What I claim is:

A shipping and display holder for an individual spark plug consisting of an elongated strip of stiff paper with its ends overlapped and adhered together and to the middle portion of the strip to form a triple lamination and the ends being creased for bending into rectangles, one at each end of the folded strip, the rectangles consisting of protective walls perpendicular to the central laminated portion, walls parallel with the central portion, and holding walls parallel with the protective walls, one end of the strip constituting one layer of the holding wall for the large end of the spark plug, and the other end of the strip running between the first said end and the middle portion of the strip, a portion of one ply of the holding wall for the large end of the spark plug being bent away from the opening formed for the large end and being disposed with its ends fitting against the adjacent walls of the rectangle at that end of the holder whereby the rectangle is strengthened against angular deformation.

JAMES F. LEWIS, JR.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,170,507	Blum	Feb. 8, 1916
1,687,137	Myers	Oct. 9, 1928
2,015,222	Hinson	Sept. 24, 1935
2,200,867	Weltmer	May 14, 1940
2,205,437	Ringler	June 25, 1940
2,339,555	Glass	Jan. 18, 1944
2,368,753	Elliott et al.	Feb. 6, 1945
2,397,041	Pantalone	Mar. 19, 1946