

H. N. FULLENWEIDER.  
IGNITER.  
APPLICATION FILED APR. 18, 1910.

983,489.

Patented Feb. 7, 1911.

Fig. 1.

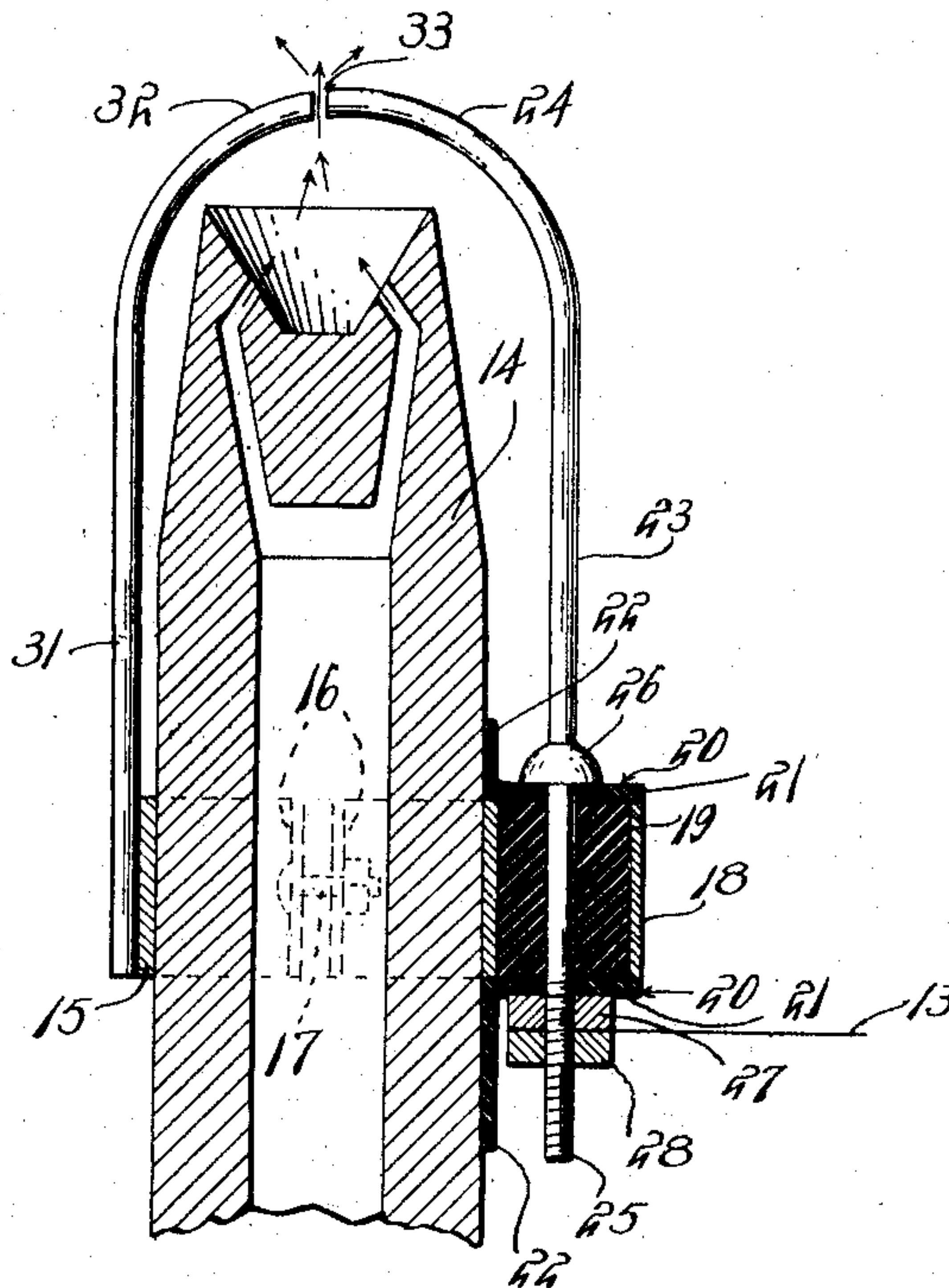
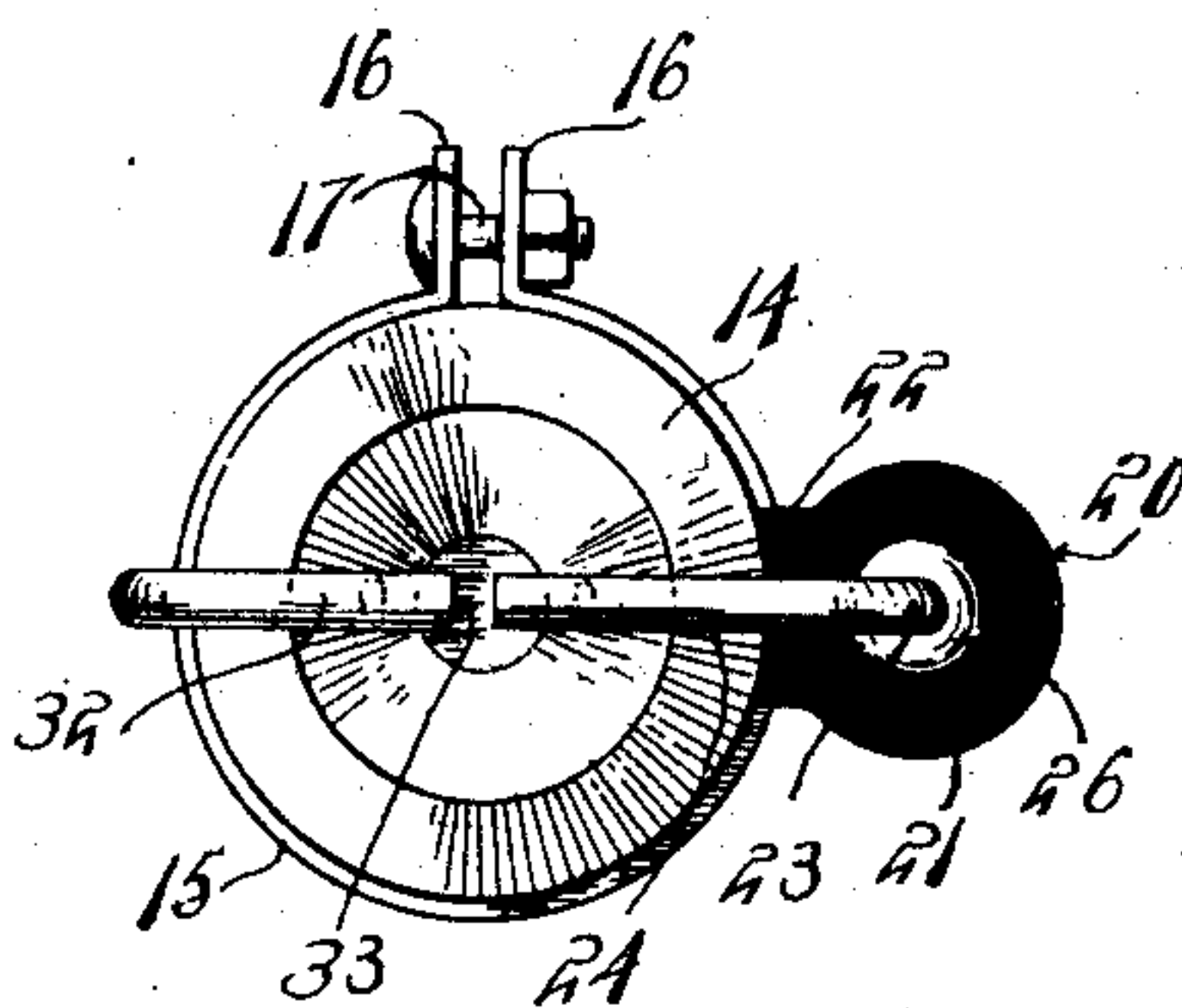


Fig. 2.



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By *[Signature]*  
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# UNITED STATES PATENT OFFICE.

HENRY N. FULLENWEIDER, OF WAVELAND, INDIANA.

## IGNITER.

983,489.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed April 18, 1910. Serial No. 556,013.

*To all whom it may concern:*

Be it known that I, HENRY N. FULLENWEIDER, a citizen of the United States, residing at Waveland, in the county of Montgomery, State of Indiana, have invented certain new and useful Improvements in Igniters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to igniters, especially designed for use on automobiles.

The principal object of this invention is to provide a clamp for a gas burner, the clamp having novel guards for preventing the electrode conductor wires from accidental engagement with the burner stem.

To attain the above ends, the invention consists of the novel details of construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a longitudinal sectional view of my improved igniter. Fig. 2 is a plan view of the igniter.

Like characters of reference designate similar parts in the views shown.

The burner stem is designated by the numeral 14, and is of the usual kind. Arranged upon the burner stem is a split clamping collar 15 the terminals of which are offset and directed to form substantially parallel ears 16 through which a bolt 17 is passed to draw the ears together and tightly clamp the collar upon the burner stem. These ears permit of the collar being adjusted to any desired position upon the burner stem as will readily be understood. Fixed to one side of the collar 15 is a metal sleeve 18 which is considerably less in cross diameter than the collar and is substantially the same in length as the collar. This sleeve is brazed, soldered or otherwise rigidly secured to the collar. Disposed in the bore of the sleeve 18 is a tubular insulating element 19 formed of vulcanite, isinglass, glass or other suitable material. This tube snugly fits in the bore of the sleeve and is substantially the same in length as the length of the sleeve.

Arranged upon opposite ends of the sleeve are a pair of angular guard elements 20. Each of these guard elements is preferably L shaped in cross section and is formed with

one of its legs 21 circular in outline, this circular leg being sufficient in diameter to extend to the outer walls of the sleeve. The mating leg 22 is disposed in alinement with the side of the collar 15 and engages the side of the burner stem 14, being preferably formed arcuate in transverse cross section so as to conform to the curvature of the burner stem. The guard elements are formed of insulating material such as vulcanite, fiber or the like. The function of these guards is to prevent primarily the grounding of the conductor wires upon the burner stem as will hereinafter appear.

Disposed in the bore of the tubular insulating element 19 is a rod-like electrode 23 which projects through suitable openings formed in the circular legs 21 of the angular insulating elements. One extremity of the electrode is bent as shown at 24 to overhang the gas outlet of the burner stem 14 and the opposite extremity is provided with screw threads 25. Integral with the electrode is a hemispherical lug 26 the flat bottom face of which bears against the top face of the circular leg of one of the angular insulating elements. A nut 27 is threaded on the threaded extremity of the electrode and is screwed up tightly against the bottom face of the circular leg of the other angular insulating element. The lug 26 and nut 27 constitute locking means which rigidly hold the electrode in position in the bore of the tubular insulating element. It will be seen by referring to the drawings that both the lug and nut are disposed within the borders of the arcuate legs, or in other words, the legs of the angular insulating guard element which are in abutting contact with the sides of the burner stem. This construction prevents sparks jumping from the nut and lug to the burner stem and short-circuiting the igniter.

Disposed upon the threaded extremity of the electrode 23 is a jam nut 28 between which and the retaining nut 27 the terminal of one of the wires of an electric circuit may be tightly clamped. The terminal of the mating wire of the circuit may be hooked over the shank of the bolt 17 between the collar ear and the nut 29 of this bolt.

From the above it is clear that when the terminal of the conductor wire is secured to the electrode between the retaining and jam nuts that should a strand of the conductor wire become partially disengaged from be-



tween the nuts, it will be prevented from contact with the burner stem by virtue of the leg of the guard element and therefore grounding of the current upon the burner stem entirely obviated.

5 Disposed upon the side of the clamping collar 15 is an electrode 31 having its extremity bent to overhang the gas outlet of the burner stem as shown at 32, the extreme  
10 end of this electrode being spaced from the extreme end of the electrode 24 above described by an air gap 33. This electrode 31 is brazed or otherwise rigidly secured to the  
15 collar so that a good electrical connection is maintained between the collar and electrode.

From the foregoing description taken in connection with the accompanying drawings, it is thought the construction and operation  
20 of my invention will be easily understood without a more extended explanation, it being understood that various changes may be made in the form, proportion and minor details of construction within the scope of the appended claims.

25 What is claimed is:—

1. A clamp for gas burners, comprising a clamping collar, an insulated electrode on

one side of said collar having a conductor wire engaging portion, and an angular insulating guard element adapted to extend  
30 along one side of the burner and form a barrier between said conductor wire engaging portion and said burner, whereby to prevent grounding of said conductor wire upon said burner.

2. A clamp for gas burners, comprising a clamping collar, an insulated electrode on one side of said collar, having a conductor wire engaging portion, and a pair of angular insulating elements adapted to extend be-  
40 yond the edges of said collar, means carried upon said electrode for clamping said guard elements in position, one of said elements forming a barrier between the wire engaging portion of said electrode and adjacent  
45 side of a burner and presenting a stop to prevent contact of a conductor wire upon the burner.

In testimony whereof, I affix my signature, in presence of two witnesses.

HENRY N. FULLENWEIDER.

Witnesses:

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