

H. A. CHRISTY.
MATCH.
APPLICATION FILED NOV. 22, 1909.

953,659.

Patented Mar. 29, 1910.

Fig. 3.



Fig. 6.



Fig. 9.

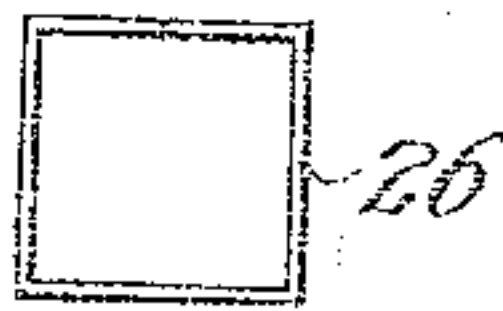


Fig. 11.

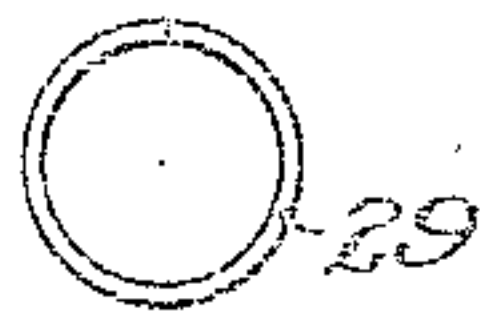


Fig. 14.

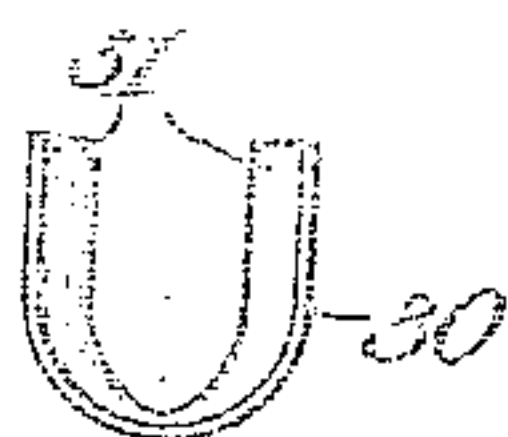


Fig. 16.

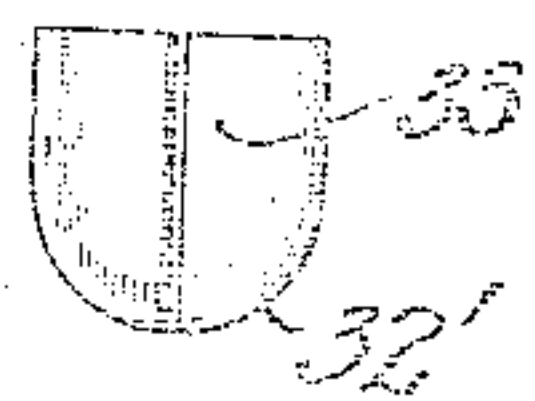


Fig. 1.

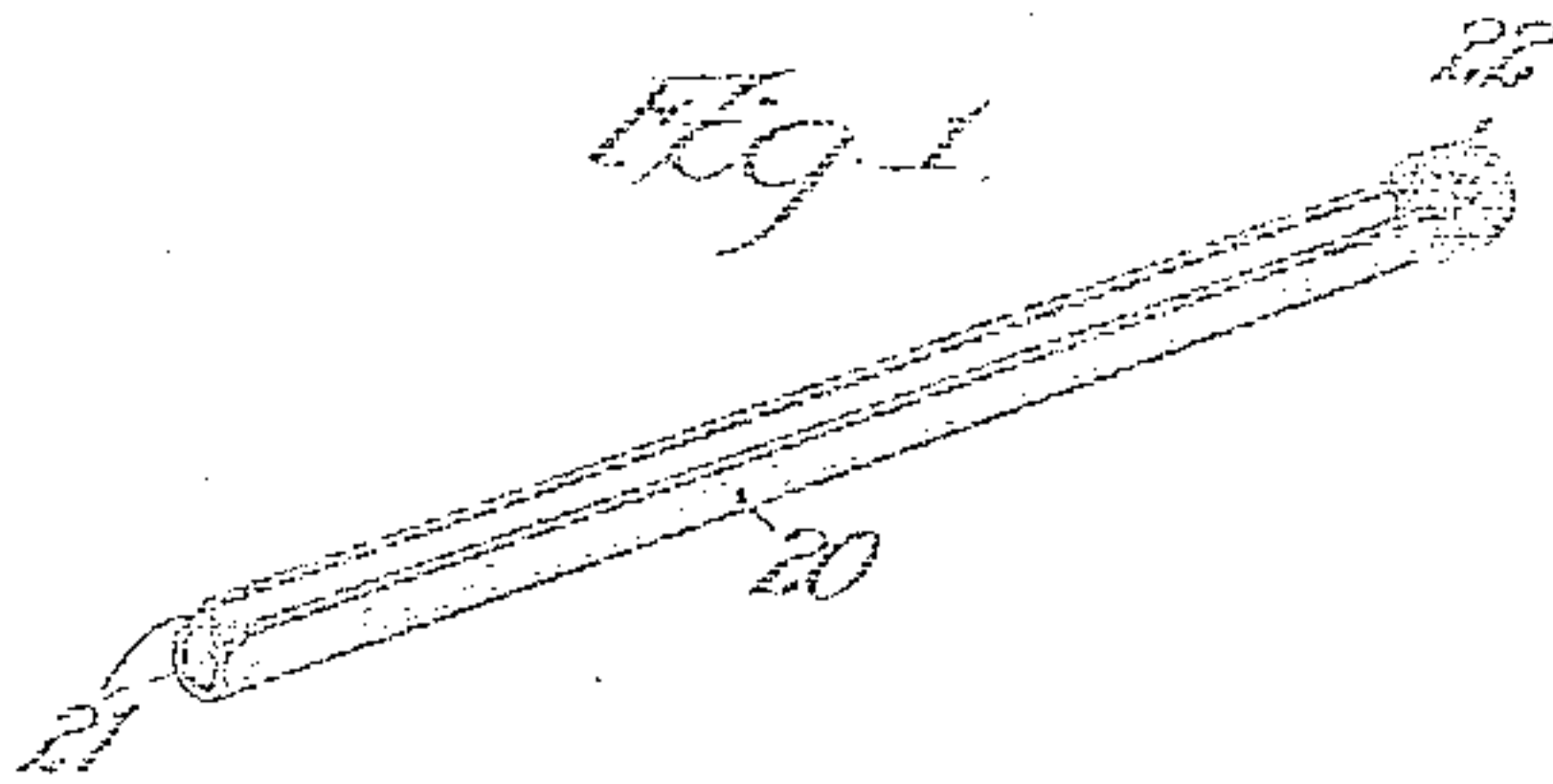


Fig. 4.

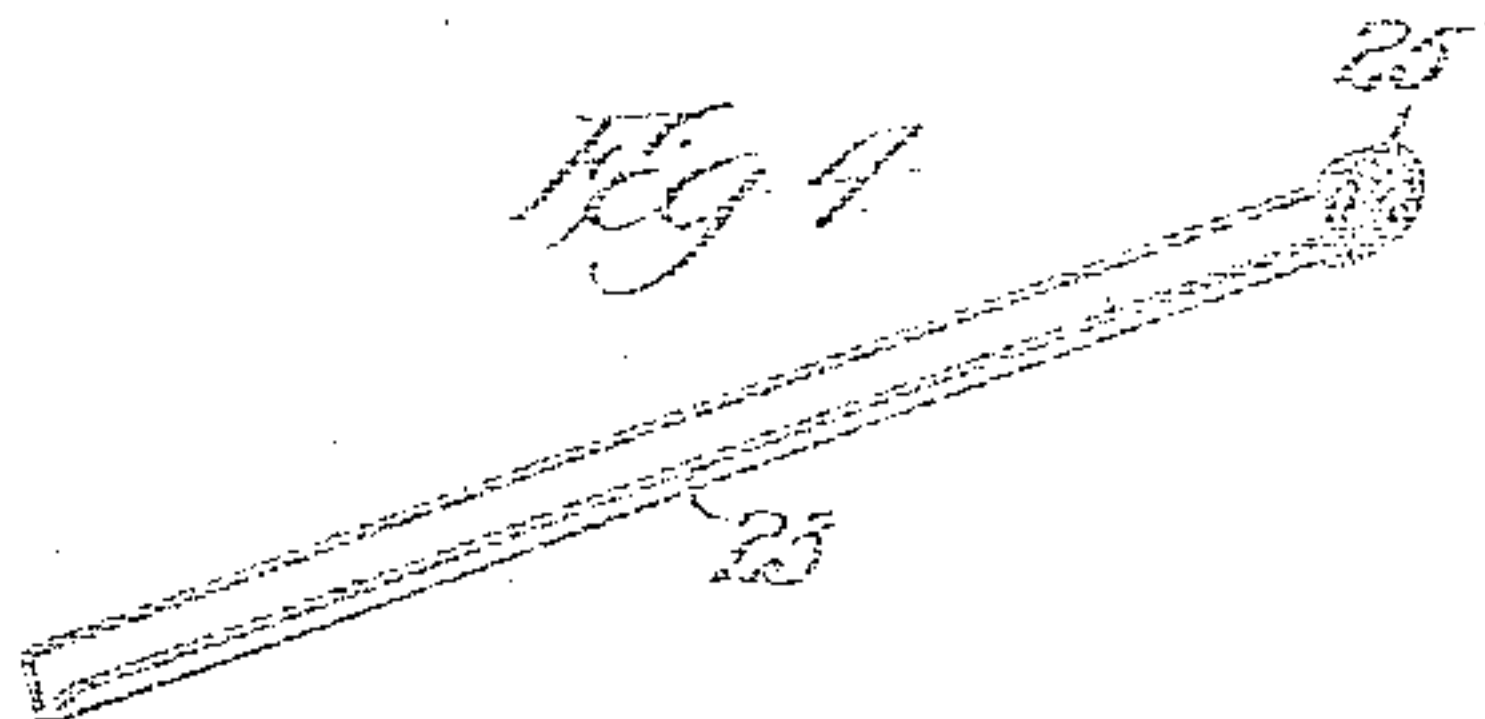


Fig. 7.

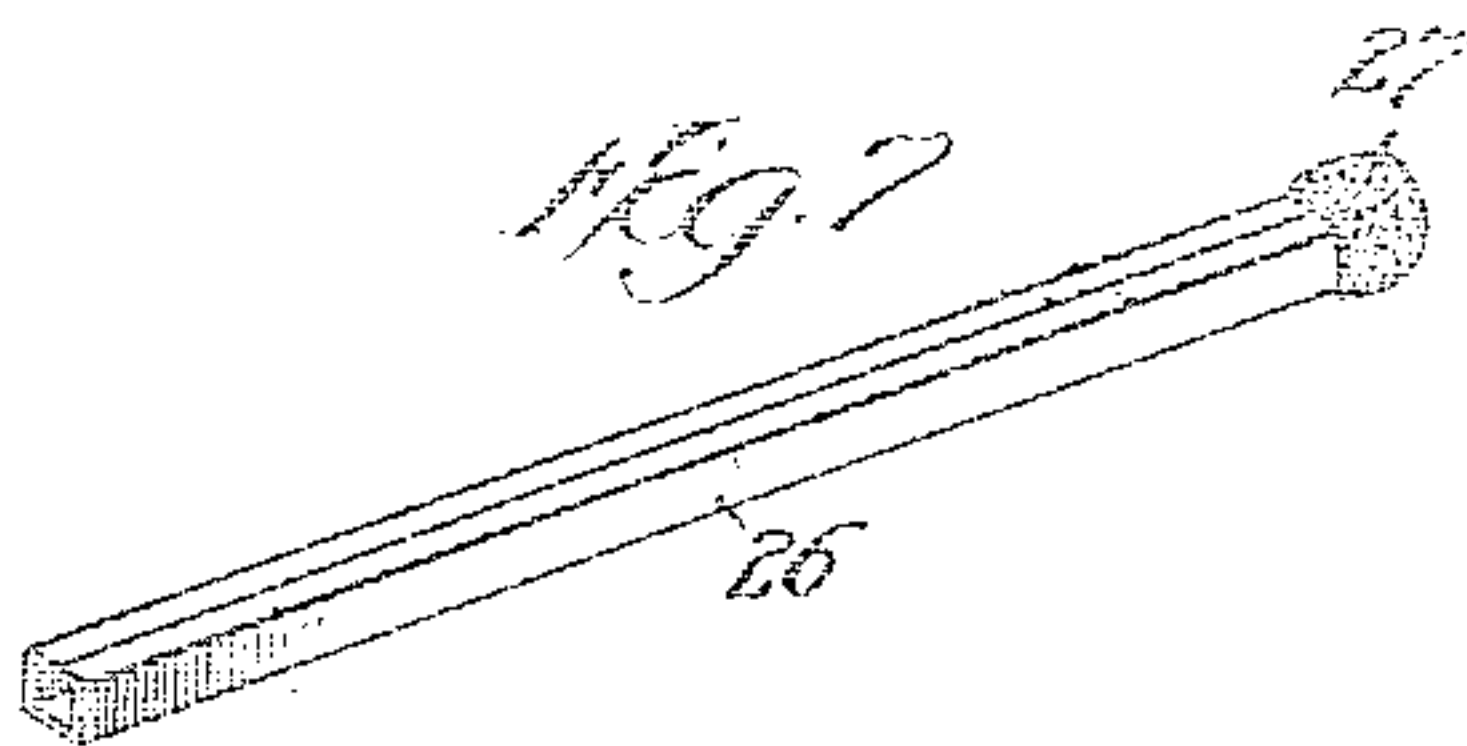


Fig. 10.

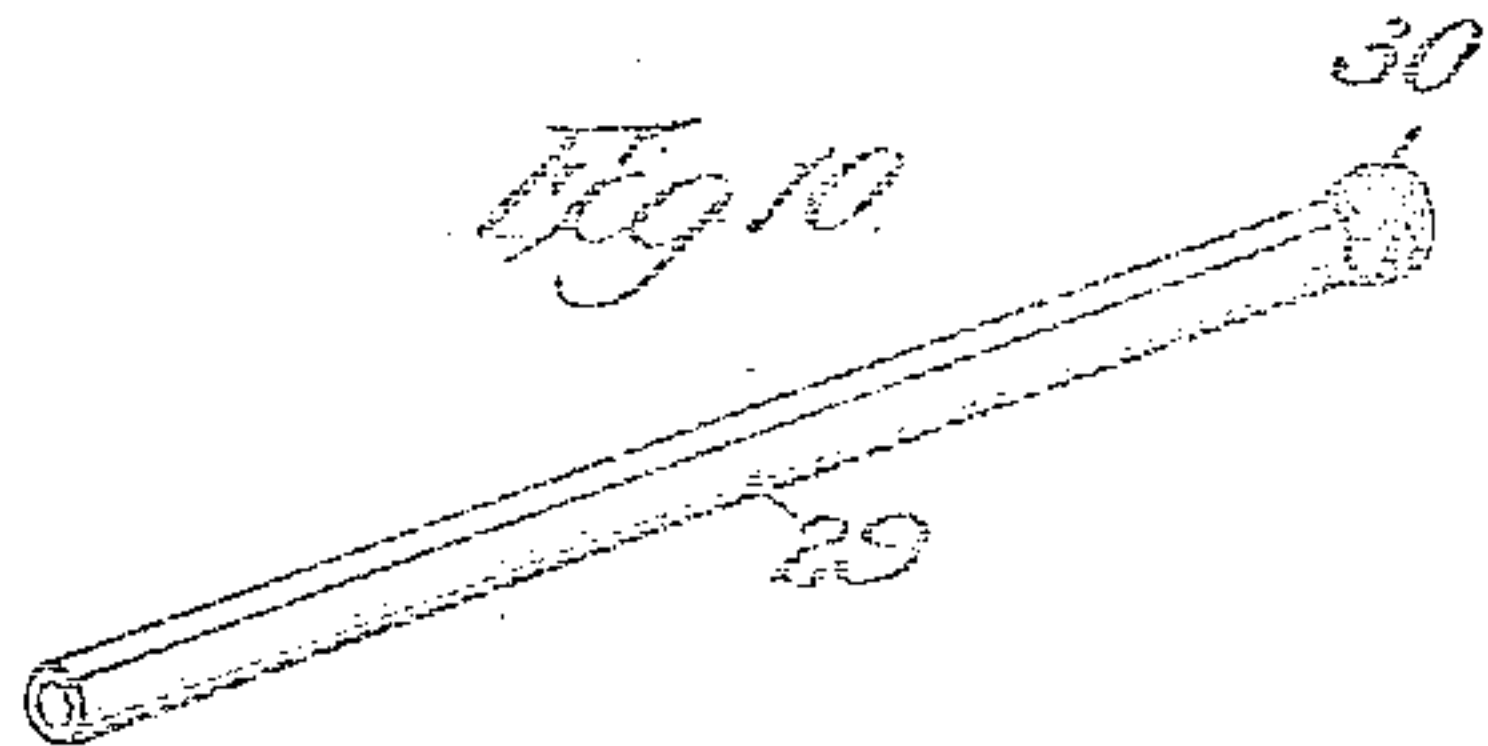


Fig. 12.

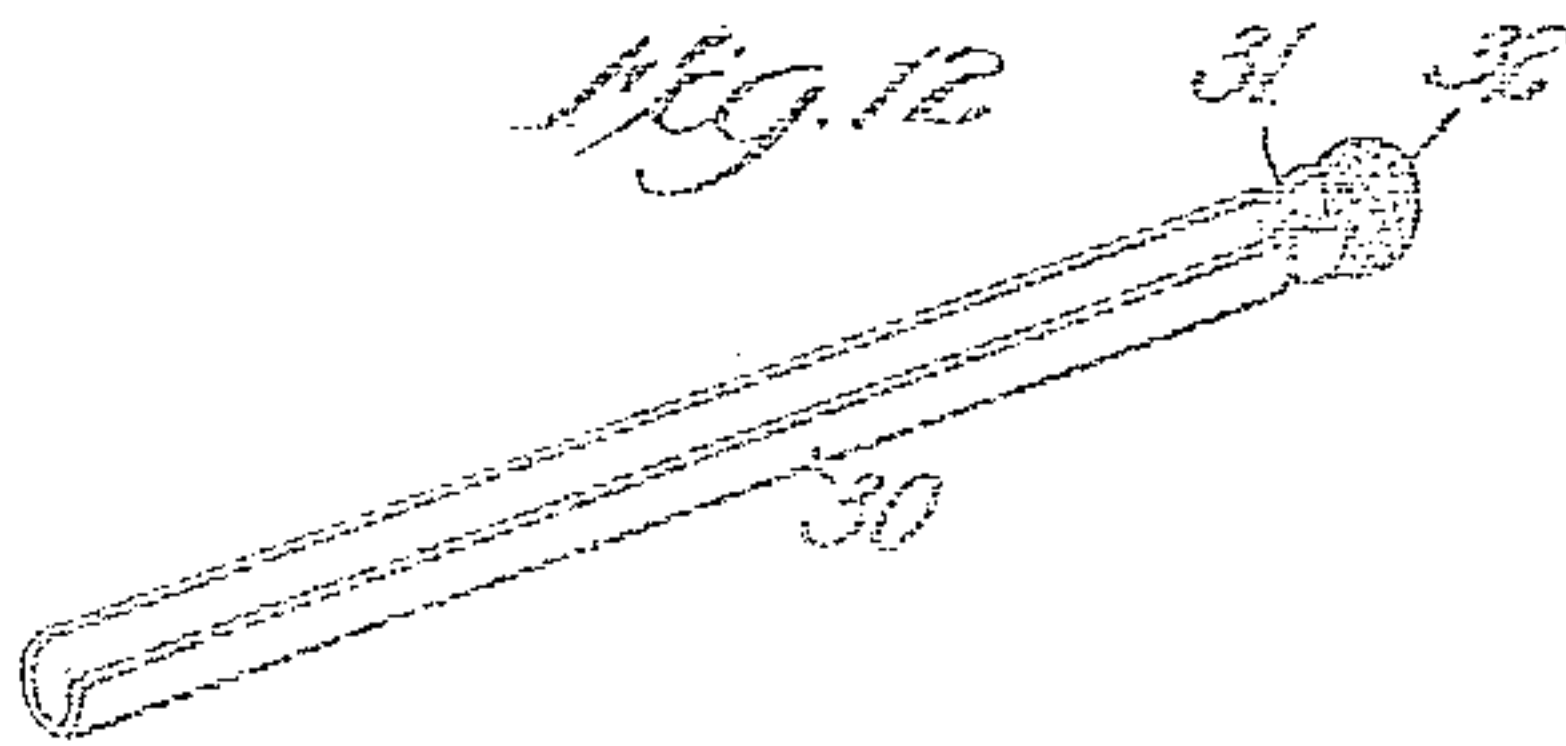


Fig. 15.

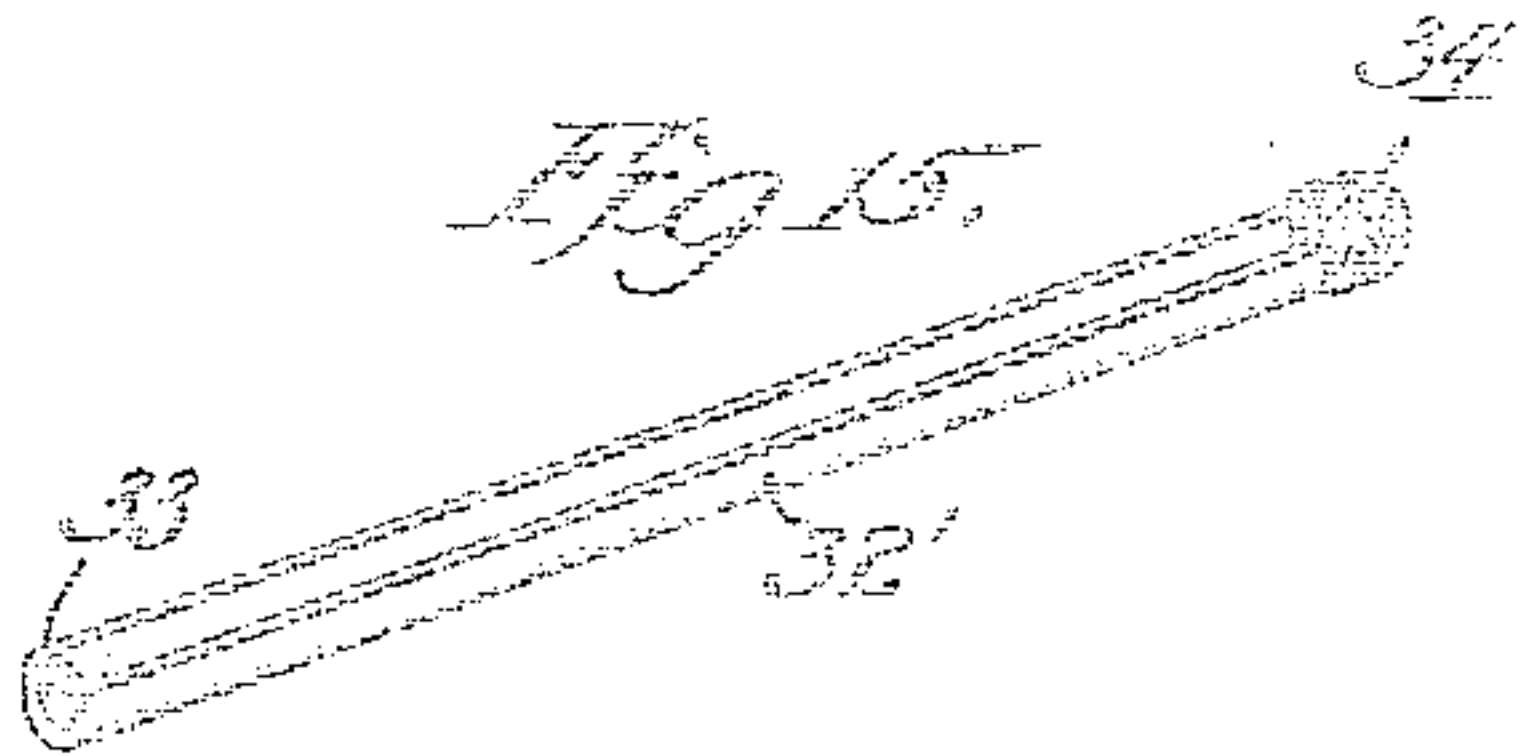


Fig. 2.

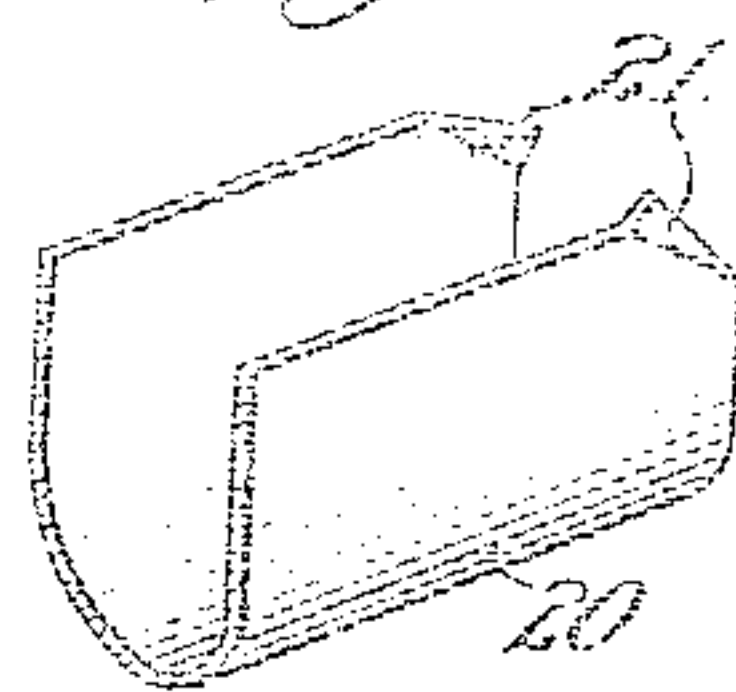


Fig. 5.

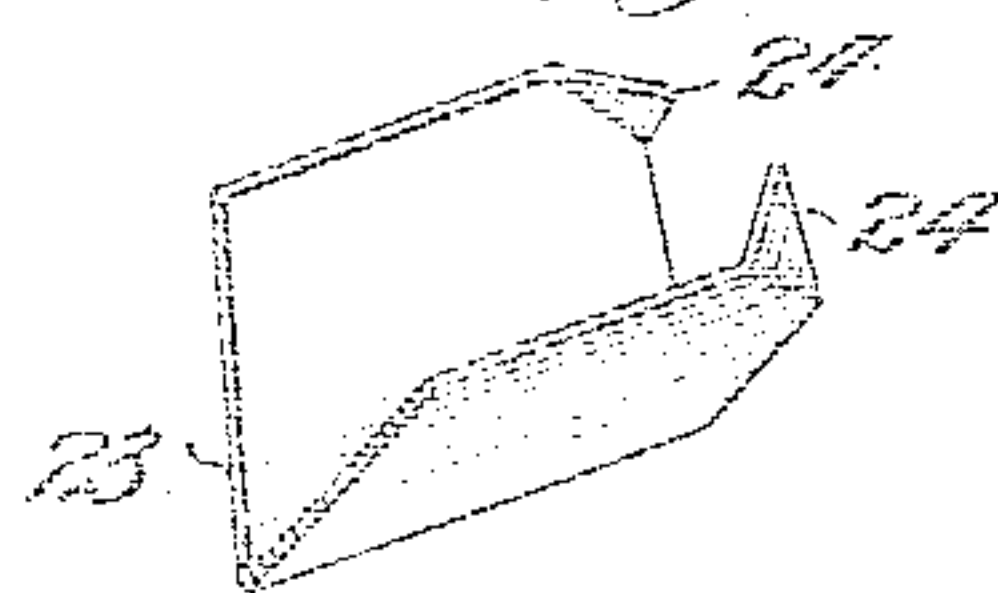


Fig. 8.

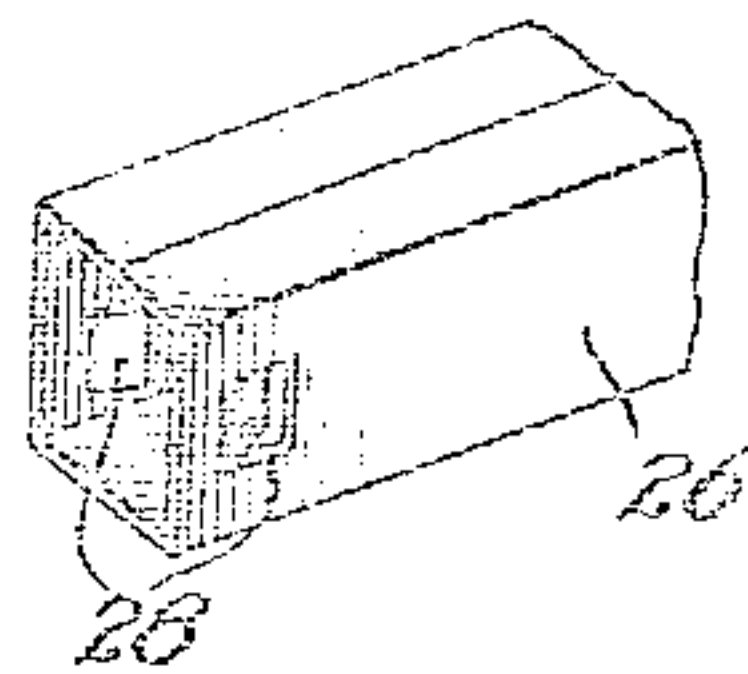
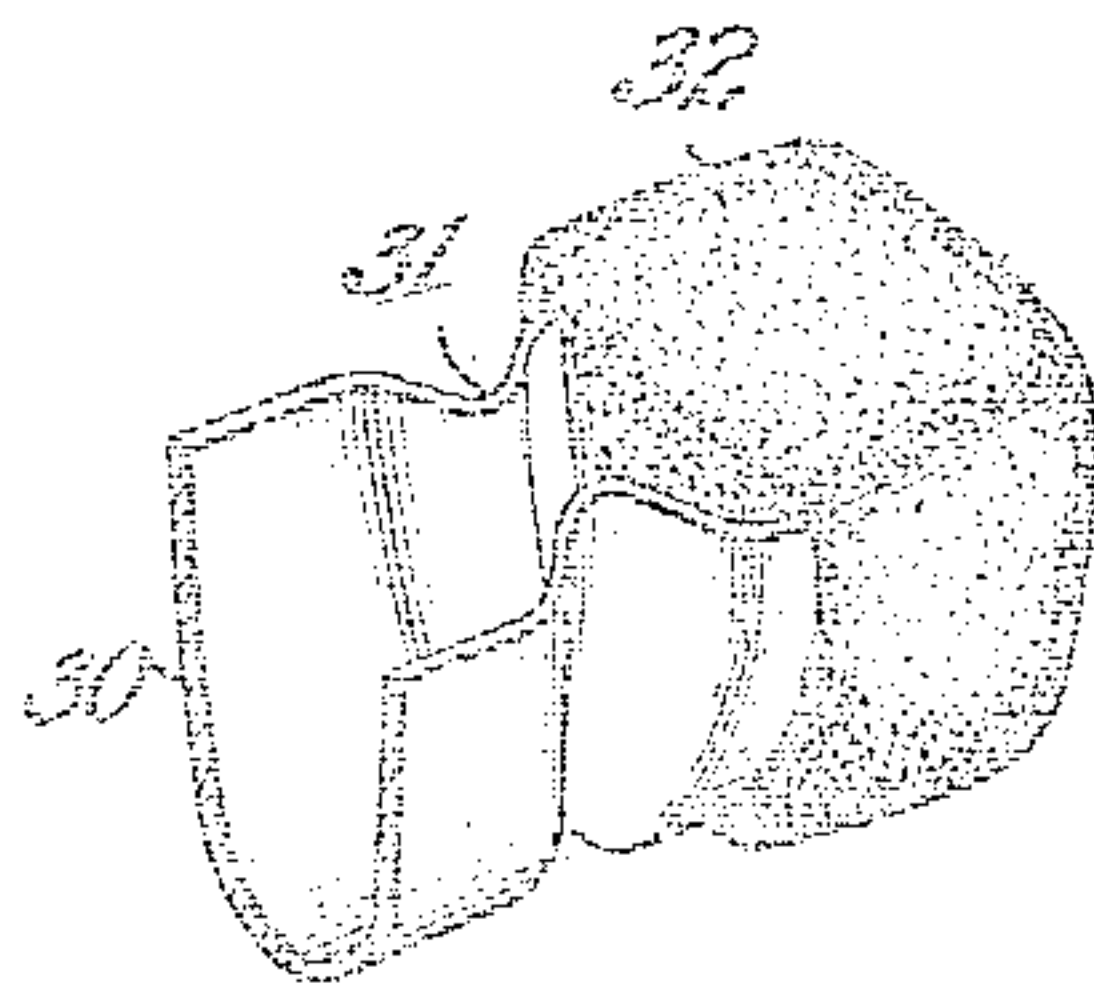


Fig. 13.



Witnesses:

Geo. C. Davis
Clare L. Rorert.

Inventor

Henry A. Christy

By Lithucium (Bell & Fuller)
Atty

UNITED STATES PATENT OFFICE.

HENRY A. CHRISTY, OF KENILWORTH, ILLINOIS.

MATCH.

953,659.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed November 22, 1909. Serial No. 523,456.

To all whom it may concern:

Be it known that I, HENRY A. CHRISTY, a citizen of the United States, residing at Kenilworth, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Matches, of which the following is a specification.

Friction matches may be roughly classified as safety matches, under which designation is included a considerable number and variety or forms of slow-burning matches provided with various ignitable compositions some having slow-burning qualities while others are constructed with special reference to the prevention of the head or inflammable portion breaking off or flying. Those matches which do not have any such special provisions or features of this character are usually designated as parlor matches. The most common material for use for the splint or shank of the match is wood but the greatest danger from the use of matches of this variety arises from the fact that the wood ignites and the ignited portion being covered by the charred portions or the ashes of the inflammable substance are obscured and the match is frequently cast aside into waste baskets or other receptacles containing inflammable materials and frequent fires arise from this cause.

The principal object and aim of this invention is to provide a safety match which can be economically produced, shipped and stored and which shall be safe. To this end I make the shank or body of the match of non-combustible material preferably metal in the form of very thin sheets which can be rolled as thin as one hundred forty or more to the inch. These sheets are, by the use of suitable automatic machinery, severed or cut into blanks and each of the latter is formed or bent to produce a hollow body or a body having a hollow portion at one end to receive the ignitable composition. Among the various metals which are adapted for this purpose may be mentioned steel, iron, tin, aluminum, copper, brass and the like, but black iron sheets are preferred because of the low cost and adaptability for this particular purpose.

My improved safety match may be constructed in various forms or shapes and in the accompanying drawings I have shown a variety of forms in order to clearly illustrate the invention.

Thus, in Figures 1, 2 and 3 I have shown a match of this style of substantially U-shaped cross-section. In Figs. 4, 5 and 6, a match is indicated having a body of V-shape in cross-section. In Figs. 7, 8 and 9 the cross-section of the sheet metal match body is rectangular. In Figs. 10 and 11 I have illustrated a style of match having a hollow cylindrical body. In Figs. 12, 13 and 14 a match is shown having a body somewhat similar to that indicated in Fig. 1 such body being corrugated near the head. And in Figs. 15 and 16 a match is shown of channel form in cross-section and having its ends or one of its ends substantially closed.

Referring now more in detail to these various embodiments of the invention it will be noticed that the match in Figs. 1, 2 and 3 has a sheet metal body 20, substantially U-shaped in cross-section, the free corners 21, at one or both ends, preferably both, being inturned as shown at 21, which prevents their catching in packing or in use and also affords a definite means for anchoring the ignitable composition 22, to the body.

As shown in Figs. 4, 5 and 6, the match body 23, may be made of V-shape in cross-section and have its corners at one or both ends bent in as at 24 for the same purpose. Or if desired the end remote from the head 25, may have its corners in normal position, that is not bent in. The style of match shown in Figs. 7, 8 and 9 characterized 26, is made of sheet metal like the other forms but is of tubular conformation being substantially rectangular in cross-section, and in order that its head 27, may be securely anchored or fixed to the body or shank, the latter may be slit so as to render possible the inward bending of the opposite pair of ears 28, shown in Fig. 8, which as will be readily understood, affords a convenient and effective means for anchoring or holding the ignitable head in place.

The match illustrated in Figs. 10 and 11 is of plain, hollow, cylindrical form, being made by rolling up the sheet metal, the body 29, thereof being supplied at one end with a head 30, of an suitable composition.

The greater portion of the hollow metal body of the match in Figs. 12, 13 and 14 is similar to that of Fig. 1 but the form 30 does not have its corners inturned but is corrugated or crimped at 31 adjacent to the head 32 so as to prevent the traveling of the

flame of the head up the hollow trough or channel of the body toward the portion held in the hand.

5 In Figs. 15 and 16 still another modification is shown in which the body 32' has a channel form being substantially closed at 33, at one or both ends as may be desired, preferably such closed ends 33 being formed by inwardly bending the metal of the body.
10 Such a construction assists in holding the head 34, on the shank or body and the substantial closure of the other end of the match prevents the flame of the head from traveling along the trough or groove.
15 These several and other forms of match body will readily appeal to persons skilled in the art and I have shown those of the drawings merely as typical examples. Each of these styles and forms possesses its own
20 peculiarities or advantage and whereas no

one form has all the valuable features I have consequently not limited myself to any particular style.

I claim:

1. A match having a main body or shank 25 made of sheet-metal bent longitudinally whereby to strengthen or stiffen the same, and an ignitable head on said body or shank, substantially as described.

2. A match having a main body or shank 30 made of sheet-metal bent longitudinally to stiffen or strengthen the same, and also having its end portions bent laterally, and an ignitable head secured to one end of said body or shank, substantially as described. 35

HENRY A. CHRISTY.

Witnesses:

G. E. HOLMES,
MILTON MILLER.