

J. ROCHE.
 DUPLEX MATCH.
 APPLICATION FILED MAY 22, 1909.

933,393.

Patented Sept. 7, 1909.

Fig. 1.

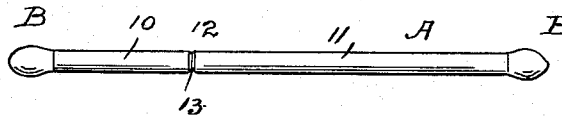


Fig. 2.

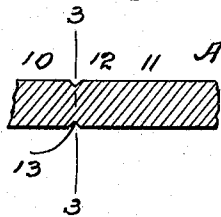


Fig. 3.

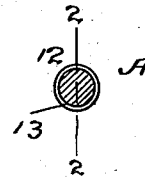


Fig. 4.

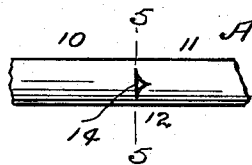
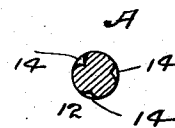


Fig. 5.



WITNESSES:

H. A. Lamb.
 S. W. Asherton.

INVENTOR

James Roche

BY

A. M. Wooster
 ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES ROCHE, OF TERRYVILLE, CONNECTICUT, ASSIGNOR OF ONE-FOURTH TO WILLIAM E. ROCHE, OF BRIDGEPORT, CONNECTICUT, AND ONE-FOURTH TO PATRICK W. SALMON, OF TERRYVILLE, CONNECTICUT.

DUPLEX MATCH.

933,393.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 22, 1909. Serial No. 497,767.

To all whom it may concern:

Be it known that I, JAMES ROCHE, a citizen of the United States, residing at Terryville, county of Litchfield, State of Connecticut, have invented an Improvement in Duplex Matches, of which the following is a specification.

This invention relates more especially to matches made of wood or other relatively stiff and breakable material, and has for its object to provide matches of ordinary size which shall be especially adapted for household and for travelers' and smokers' use, each of which may be lighted twice, as the use of one end of a match does not impair its usefulness for another lighting.

It is of course well understood that the principal items of cost in the production of matches are the cost of the wood and the preparation of the sticks or bodies for dipping or heading, and that the cost of the materials of the heads and the cost of the dipping operation are relatively unimportant items in the expense of production. My present invention therefore enables me to produce matches with but slight increase in the cost of production, each of which shall have the full efficiency of two matches, thus effecting an appreciable saving to the user and furthermore producing matches for travelers' use and for carrying about the person as for use by smokers, that will reduce the space required for packing by one-half; that is to say, the equivalent of two complete matches can be carried in the space heretofore required for one, thus enabling a smoker or any person using an appreciable quantity of matches to carry a double quantity in a pocket box or in a given space as well as reducing the cost of matches for general use by one-half.

With these and other objects in view I have devised the novel duplex match which I will now describe, referring to the accompanying drawing forming a part of this specification and using reference characters to indicate the several parts.

Figure 1 is an elevation of my novel duplex match on an enlarged scale; Fig. 2 a detail sectional view on a still larger scale, on the line 2—2 in Fig. 3; Fig. 3 a transverse section on the line 3—3 in Fig. 2; Fig. 4 a detail elevation on the same scale, illustrating a modified form of breaking point; and

Fig. 5 is a transverse section on the line 5—5 in Fig. 4.

A denotes the body of the match or stick and B heads at each end thereof. It is of course wholly immaterial so far as the present invention is concerned of what material the heads are formed, that is whether they belong to the type of matches commonly known as "parlor", "safety" or "sulfur" matches, or in what manner the operation of dipping the bodies or sticks, *i. e.* forming the heads, is performed. It is sufficient for the purposes of this specification to state that a head B is formed at each end of the body or stick by dipping or in any ordinary or preferred manner. Each body or stick is divided into two sections, indicated respectively by 10 and 11, which are separated by a joint or breaking point indicated by 12. The sections may be of even or of uneven lengths but are preferably formed of uneven length as shown in the drawing. For example, the sections may be respectively two-fifths and three-fifths the length of the body or stick. The breaking point may be formed in any ordinary or preferred manner, it being simply required that the strength of the body or stick be appreciably weakened at that point so that it may be broken there relatively easily but without impairing the strength of the match for ordinary use. For example, the breaking point may be formed, as in Figs. 1, 2 and 3, by rolling or pressing a groove, specifically indicated by 13, in the body of the match or by striking or pressing into the body or stick of the match one or more (three in the present instance) indentations, specifically indicated by 14.

In use the first time, the head on the shorter section is lighted, the match being preferably held at the breaking point to avoid the possibility of its breaking in the lighting operation. The match is then used in the ordinary manner, after which the used end is broken off at the breaking point with the fingers or by pressing it against a solid article and the longer or unused section of the match is replaced in the box or retained in a suitable receptacle for use when required.

I am aware that it has been proposed to make a match of two separable portions each of which carries one of two coöpera-

tive substances which must be brought in contact to ignite the match, but this provides for but a single ignition. I am also aware of Patent 48,913 to Dennis, and I do not claim broadly a match having two igniting ends.

My improved match enables the user to employ first one end and to break off the charred part of the stick or body with no liability of soiling the fingers, so as to have still remaining ample for a second use. In the majority of uses of matches, less than one half of the stick or body is ever charred before the object of the ignition is accomplished. The user of a match having my improved structure can, as soon as the lamp, cigar, cigarette or other article has been lighted, press the burned end against any suitable or appropriate article and break off

the charred portion at a definite point, without splintering the unused portion; a thing which it is practically impossible to accomplish with an unweakened stick or body. The unused portion can then be restored to the box in perfect condition for a second ignition.

Having thus described my invention I claim:—

A match comprising a body weakened intermediate its ends at a point nearer to one end than the other, and having a complete igniting substance at each end.

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

JAMES ROCHE.

Witnesses:

PATRICK W. SALMON.

DANIEL J. HEFFERNAN.