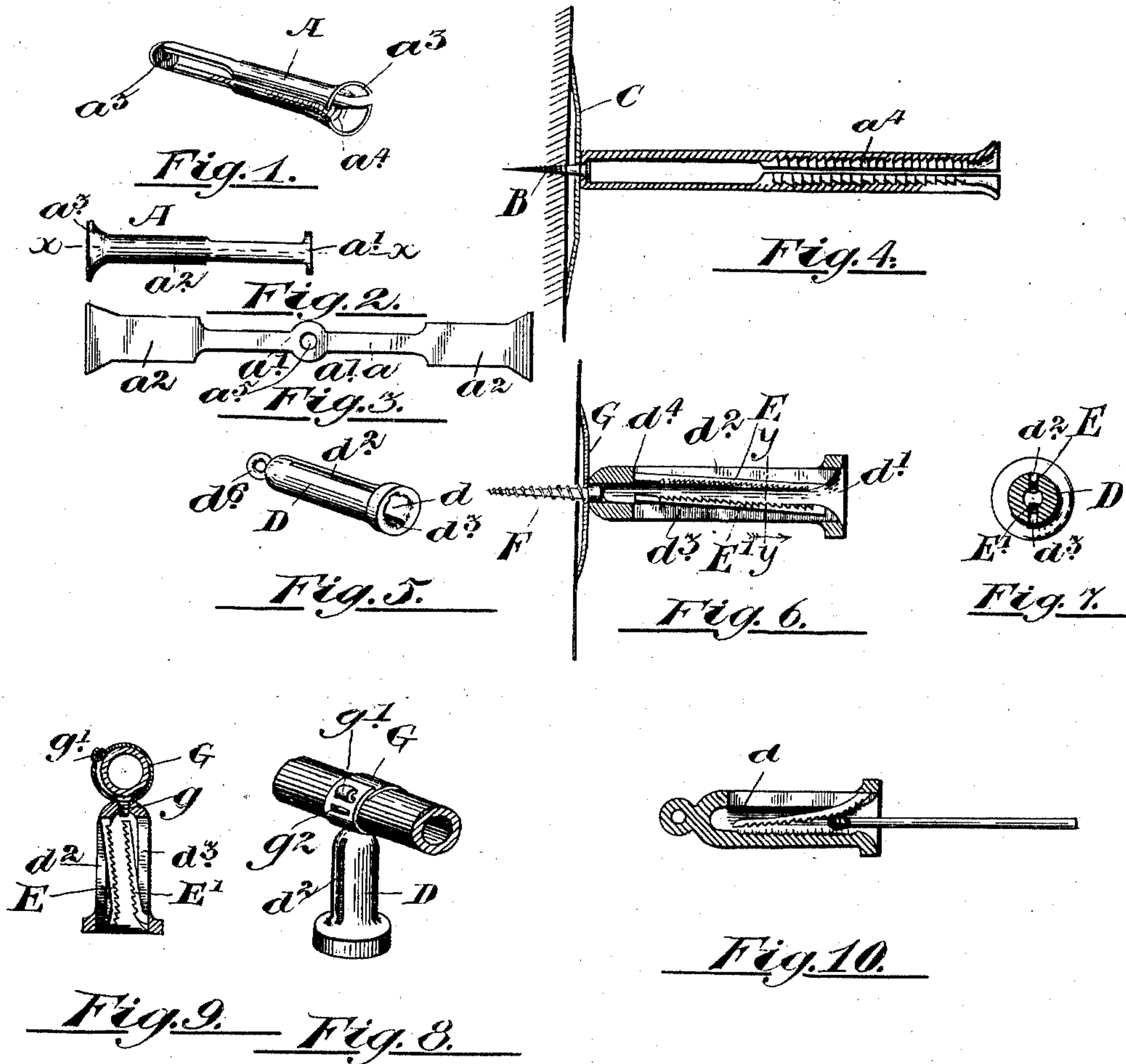


No. 759,942.

PATENTED MAY 17, 1904.

F. W. TUEBK.
MATCH IGNITING DEVICE.
APPLICATION FILED MAY 15, 1903.

NO MODEL.



Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM TUERK, OF BERLIN, CANADA.

MATCH-IGNITING DEVICE.

SPECIFICATION forming part of Letters Patent No. 759,942, dated May 17, 1904.

Application filed May 15, 1903. Serial No. 157,297. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM TUERK, manufacturer, of the town of Berlin, in the county of Waterloo, Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Match-Igniting Devices, of which the following is a specification.

My invention relates to improvements in match-igniting devices; and the objects of my invention are to devise means for igniting matches which shall be convenient to carry or to be secured in a stationary position, will avoid breaking the match to be ignited, and will further prevent the ignited particles of the match from shooting up when the match is ignited, thereby avoiding danger to the eyes, a further object being to make the device visible by night and simple and cheap in construction; and it consists, essentially, of a pair of members including between them a hole or recess into which the end of the match may be thrust longitudinally, said members being spring-held together and having rough inner surfaces with which the head of the match will contact, whereby on rapidly inserting and withdrawing the match the match will be ignited, suitable means being provided for securing the device to any desired object and the various parts of the device being constructed and arranged in detail, as hereinafter more particularly described.

Figure 1 is a perspective view of one form of the igniting device, this form being made, preferably, of sheet metal suitably stamped and formed. Fig. 2 is a plan view of the same. Fig. 3 is a plan view of the blank from which the device is to be formed. Fig. 4 is an enlarged sectional view of the form of the device shown in Figs. 1, 2, and 3, also illustrating means for securing the same on a stationary support. Fig. 5 is a perspective view of an alternative form of the device, the body of which is preferably made of cast metal. Fig. 6 is a section through Fig. 5, taken longitudinally, the dimensions being slightly exaggerated for the sake of clearness. Fig. 7 is a section through Fig. 6 on the line

Y Y. Fig. 8 is a perspective view of one of the devices, such as illustrated in Fig. 5, showing means for securing the same to a gas-pipe or portion of a gaselier. Fig. 9 is a section through the device shown in Fig. 8, taken on a transverse plane with respect to the gas-pipe. Fig. 10 is a sectional view of an alternative form of the device in which one igniting-spring only is used.

In the drawings like letters of reference indicate corresponding parts in each figure.

Referring now to the form of the device shown in Figs. 1, 2, 3, and 4, in this form the body A of the igniting device is made from a blank *a* of sheet metal or the like, as shown in Fig. 3, which is bent first at *a'* *a'* and also at *a''* *a''*, the latter bends forming when brought together a substantially cylindrical hole or inclosure. The end *a'''* is flared out, as shown, to facilitate the insertion of the match. The inside surfaces of the two portions *a'* *a''* are made rough in any suitable manner, but preferably by forming inwardly-projecting teeth *a⁴*, as shown in Fig. 4. This form of the device may be provided with any suitable means for securing it to any desired object, and in Fig. 4 one means is shown for securing it to a stationary object, and this consists of a screw B, which passes through the hole *a⁵* in the end of the body. A disk C may be provided between the inner end of the body of the device and the surface of the stationary portion, the screw passing through the center thereof, and this disk may be painted with suitable luminous or phosphorescent paint, so that it will be plainly visible at night. It may also be pointed out that, if desirable, a ring or any other suitable device could be provided for securing the igniting device, for example, to a watch-chain. In order to ignite a match, the head of the match is simply inserted rapidly in the flared end of the igniter and then withdrawn, when it will be ignited, owing to the friction with the roughened surface.

Referring now to Figs. 5, 6, and 7, this form of the device is one adapted to be cast in any suitable metal. A central longitudinal hole *d* is formed in the body D, having, pref-

erably, a flared outer end d' . Slots d^2 d^3 are formed in the body, extending from the outer surface into the central hole d and extending from the forward flared end of the device rearwardly to the point d^4 or thereabout. Within these slots two springs E E' are provided, these springs having toothed or otherwise roughened inner surfaces adapted to form the necessary friction to ignite the match when inserted. One of the springs—E, for example—is secured at its rearward end in the slot, the forward or outer end being free, and the other spring, E', is secured at its forward end in the slot, the inner end being free. The object of securing the springs in this manner is to insure a continuous contact between the head of the match and the springs during the inward and outward motion, and, further, to prevent the springs being bent permanently, for it will be seen that when the head of the match is in the forward portion the free end of the spring E will be bent, the secured end of the spring E' moving very slightly, and when the head of the match is near the inner end of the recess the spring E' will be bent, the spring E remaining practically unbent, and with this construction the springs will last very much longer than if they were forced apart near their secured ends. Suitable fastening devices may be provided on this device—for example, the screw F, which is preferably cast into the metal of which the body of the device is composed and is adapted to be secured into a wall or other suitable stationary support. A disk may also be provided and painted with any luminous material, as described in connection with Fig. 4, or, if desirable, a ring d^6 , as shown in Fig. 5, might be cast with the body of the device.

In Figs. 8 and 9 I have shown a means for securing the device to a gaselier, gas-pipe, or other object into which it would be impossible to insert a screw. This fastening device consists of a band G of steel, brass, or other suitable material, which is secured to the end of the device by means of a suitable screw or the equivalent thereof, and the ends of the band are provided, respectively, with a hook g' and slots g^2 , adapted to be engaged thereby.

The igniter is preferably secured in the downwardly-extending position, as shown, when secured to a gaselier or the like in order that the direct upward thrust will not tend to swing the gaselier or to bend it out of place.

In Fig. 10 I have shown the device with only one spring with a roughened inner edge, and, if desirable, in this form of the device the inner surface of the hole d in the body portion could be roughened, as shown.

It will now be seen that I have invented a device which possesses numerous advantages.

Among these may be mentioned the following: First, that the match is thrust directly into the device and withdrawn therefrom by a direct pull, so that there is no bending action, which would tend to break the match, as in any ordinary scratching device.

A second advantage, which has been before referred to, lies in the fact that the match will be ignited before it is actually withdrawn from the hole in the device, and consequently the eyes will be protected from sparks, which have been a source of great danger in igniting devices of the ordinary types at present in use. Further, it will be an extremely cheap device and may also be constructed in such a manner as to be ornamental as well as useful and will facilitate the lighting of a match in a draft or on a windy day.

It is to be understood that in constructing the device it may be made in a number of different ways. Of these I have pointed out one manner of constructing the main or body portion from sheet metal and one way by which it could be constructed in cast metal; but it is to be understood that I do not wish to limit myself to the exact forms shown, as it might be necessary in completing the invention to make changes which would come within the scope of the invention and would require mere mechanical skill.

What I claim as my invention is—

1. In a device of the class described, the combination with the body having a longitudinal recess or hole therein, the outer end of said hole being flared or bell-shaped to receive the head of the match when thrust longitudinally into the hole, of an abrasive surface in said recess or hole and spring means for producing frictional contact between the abrasive surface and the head of the match whereby the match when inserted and rapidly withdrawn from the hole will become ignited as and for the purpose specified.

2. In a device of the class described the combination with the body having a longitudinal recess adapted to have the head of a match longitudinally thrust therein and withdrawn therefrom, of a slot formed in the body and extending from the outer surface into the recess, a spring located in said slot and extending normally into the recess, said spring having an interior abrasive surface adapted to be in frictional contact with the head of a match while being inserted in and withdrawn from the hole or recess as and for the purpose specified.

3. In a match-igniting device the combination with the body having a longitudinal hole or recess adapted to receive the head of a match, said body having a pair of diametrically opposite slots formed longitudinally therein and extending from the outer surface

into the hole or orifice, of a spring secured
by its inner end in one of said slots, its outer
end being free to move and a spring secured
by its outer end in the other end of one of said
5 slots, its inner end being free to move, said
springs having inner abrasive surfaces as and
for the purpose specified.

Signed at the city of Ottawa, in the Prov-
ince of Ontario, this 9th day of May, 1903.

FREDERICK WILLIAM TUEBK.

Witnesses:

EDWARD P. FETHERSTONHAUGH,
MAY LYON.