No. 686,657. Patented Nov. 12, 1901.

C. J. W. JAMES.

FRICTION ATTACHMENT FOR MATCH BOXES.

(Application filed Apr. 10, 1901.)

(No Model.)

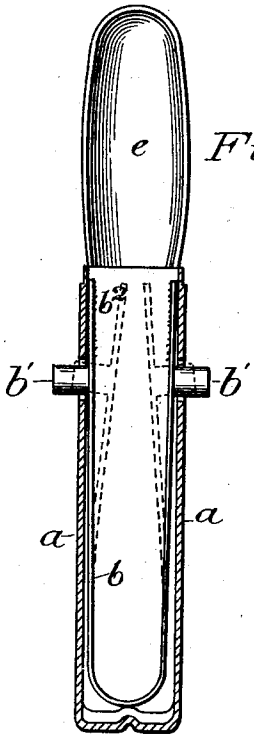


Fig 1.

Fig 2.

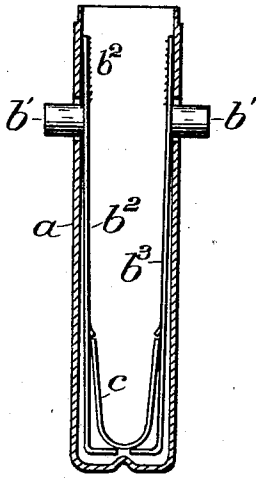


Fig 4.

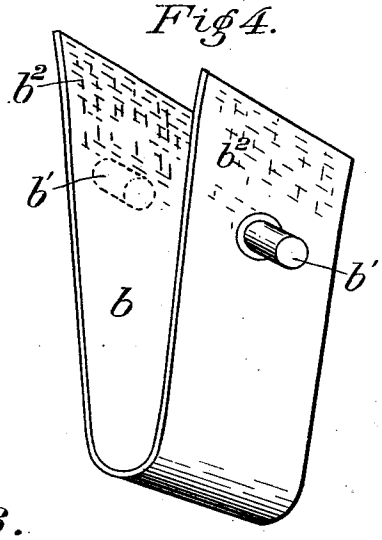


Fig 5.

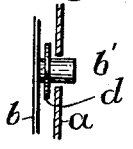
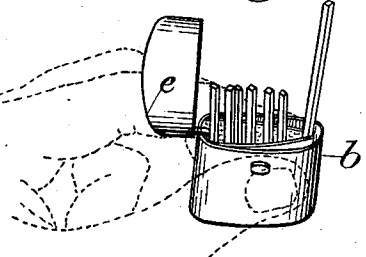


Fig 3.



Witnesses:

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Inventor;

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by F. Geisler

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UNITED STATES PATENT OFFICE.

CECIL J. W. JAMES, OF PORTLAND, OREGON.

FRICTION ATTACHMENT FOR MATCH-BOXES.

SPECIFICATION forming part of Letters Patent No. 686,657, dated November 12, 1901.

Application filed April 10, 1901. Serial No. 55,227. (No model.)

To all whom it may concern:

Be it known that I, CECIL J. W. JAMES, a citizen of the United States, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Friction Attachment for Match-Boxes, of which the following is a specification.

My invention relates to pocket match-boxes, so constructed as to light the match withdrawn. The convenience of such contrivance has long been recognized; but match-boxes embodying this feature were heretofore of special construction.

Now my invention has for its object to provide a simple attachment which may be readily inserted in the ordinary match-box to convert the same into the match-igniting kind, such attachment to be of inexpensive construction and merely adding the friction action to be used at will without in any respect interfering with the use of the match-box as originally intended. My attachment is also constructed to work equally well with the match-box filled or containing but a single match, and, furthermore, if the match-box be filled the operation of my attachment to cause the ignition of a match withdrawn at the same time holds back the remaining matches, so as to prevent them being dragged out accidentally.

The construction and operation of my invention are as shown in the drawings hereby referred to as a part of this specification.

In such drawings, Figure 1 is an enlarged vertical transverse section of a match-box having my automatic friction attachment inserted therein, the cover *e* being shown as if the match-box were open. Fig. 2 is a like partial section of the body of the match-box on the same scale as Fig. 1, the friction-plates being in this case made in two sections and a spring inserted between their lower ends spreads them normally apart. In Fig. 3 one is looking down on an open match-box provided with my attachment, and the free ends of the friction-plates are compressed, as in the act of withdrawing and lighting a match. Fig. 4 is a perspective of the friction-plates made in the form shown in Fig. 1. The letters designate the parts referred to.

The walls of the match-body *a* have punctured through them oppositely-registering apertures to receive the studs *b'* of the friction-plates *b*, the free ends of which are normally spread. In Fig. 1, *e* represents the cover in a raised position.

As already mentioned, my friction attachment is designed to be inserted in any match-box of the common form. Herein lies a great advantage. The common match-box may be purchased anywhere at moderate price, and my attachment, also produced at small cost, may be inserted at the expense of a minute's work.

A convenient method of constructing my attachment is to stamp a blank of suitable form out of a sheet of metal having sufficient resiliency. The extremities b^2 are then subjected to some suitable treatment producing on the opposed interior faces roughened surfaces. On the back of the blank the same is provided near its extremities with the studs *b'*. The friction attachment is now ready to be formed by any suitable means into the shape in which it appears in Fig. 4, and after such forming it is ready for insertion in the match-box the walls of which have been previously perforated, as described. The perforations in the walls of the match-box may be readily punctured by a suitable instrument, and the work of inserting my attachment and seating the laterally-projecting studs *b'* in such perforations requires but a moment. The studs *b'* functionate in two ways: First, they provide the means for retaining the attachment in place, and, second, they project some distance on the exterior of the walls of the box, so that when the igniting action is to be brought into play the friction-plates may be readily compressed between the fingers of the hand. The compression of the friction-plates brings roughened surfaces b^2 closely together, so that the act of withdrawing a match will also cause the same to ignite, because of the friction to which it is subjected while being pulled out. The same operation of the friction-plates also causes them to bear upon and hold the remaining matches in the box, so as to prevent them from being accidentally pulled out.

In Fig. 2 I have shown a modified construction of my friction-plates, the same in this instance consisting of two sections b^2 b^3, which are in other respects constructed like the cor-

responding integral members of the style shown in Fig. 4. The friction-plates are inserted in the match-box, as usual, and thereupon a U-formed spring *c* is inserted between their lower ends. In other respects it operates just as the other form of friction-plates. The roughened surfaces being near the mouth of the box, the match-head placed down does not come in contact therewith until the match is pulled out of the box between the roughened surfaces purposely held compressed.

The construction of my attachment so as to be removable adds another advantageous feature. After having been used for some time the roughened or friction surfaces will be rendered more or less inefficient, because of the foreign matter deposited thereon. Hence it is convenient to be able to take out the friction attachment to clean the same and make it as good as ever.

Having fully described my invention, now what I claim, and desire to secure by Letters Patent, is—

1. The combination with a match-box of a friction attachment, comprising a removable friction-lining for the inner surfaces of the front and back of the box, the lining being adapted to normally lie against said front and back, and being compressible at the mouth of the match-box; and studs projecting laterally from said friction-lining through perforations therefor provided in the walls of the box, said studs operating to retain the friction-lining in place, and also enabling the same to be compressed, substantially as described.

2. The combination with a match-box of a friction attachment comprising a removable strip of resilient material, approximately U-shaped, arranged on the inner surfaces of the front and back of the box, the free ends of which strip spread normally apart, and have opposed roughened or friction surfaces; and studs projecting laterally near the free ends of said strip through perforations therefor provided in the walls of the box, said studs operating to retain the strip in place, and also enabling the free ends thereof to be compressed, substantially as described.

3. As a friction attachment for match-boxes, a strip of resilient material approximately U-shaped, the free ends thereof normally spreading apart, and having opposed roughened, or friction, surfaces; and studs projecting laterally from the outer sides of said strips near the free ends thereof, adapted to be inserted in perforations therefor provided in a match-box, and operating to retain the said strip in place, and also to enable the free ends thereof to be compressed, substantially as described.

In testimony whereof I have hereunto affixed my signature, in the presence of two witnesses, this 27th day of March, 1901.

CECIL J. W. JAMES.

Witnesses:
T. J. GEISLER,
F. W. AYERS.