

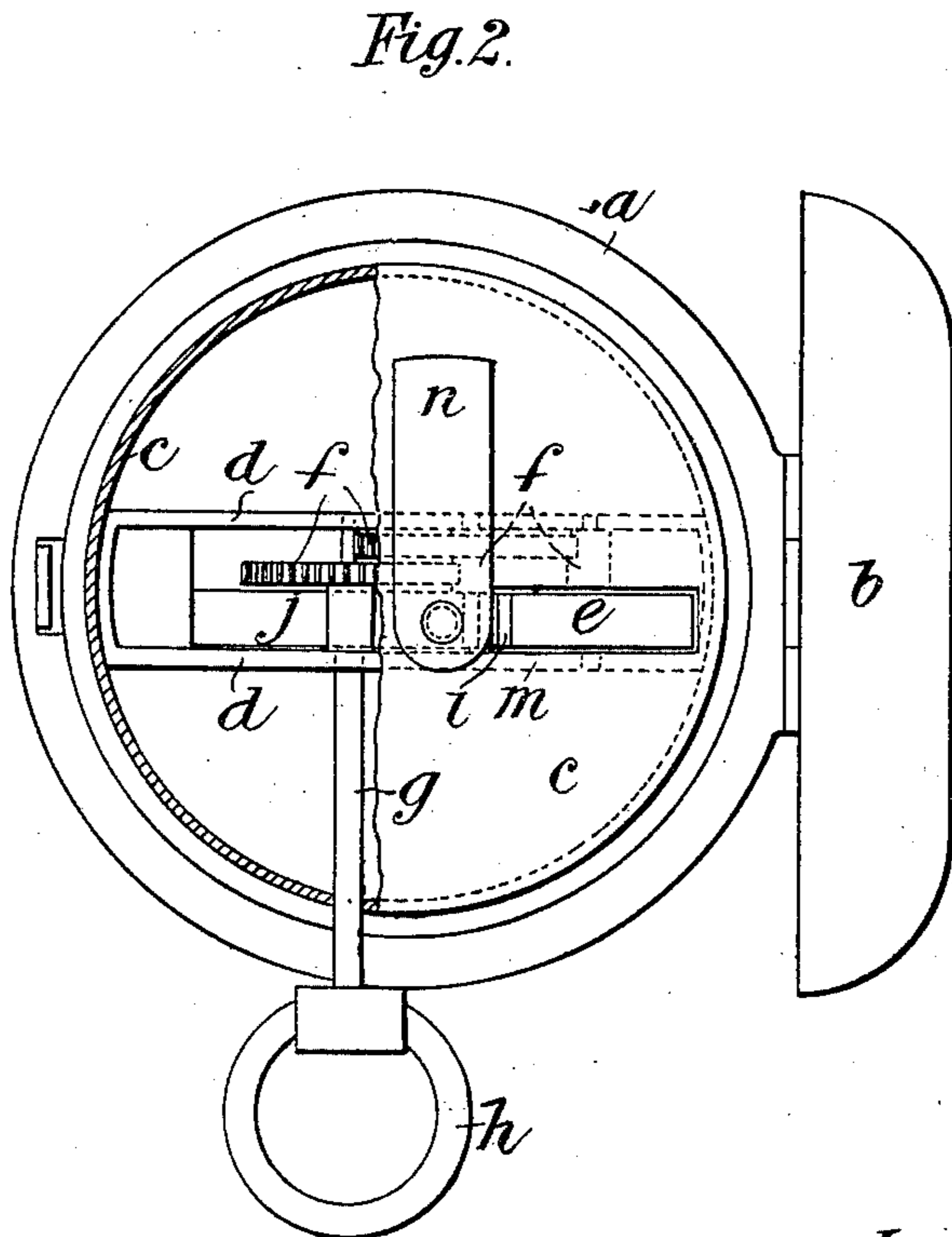
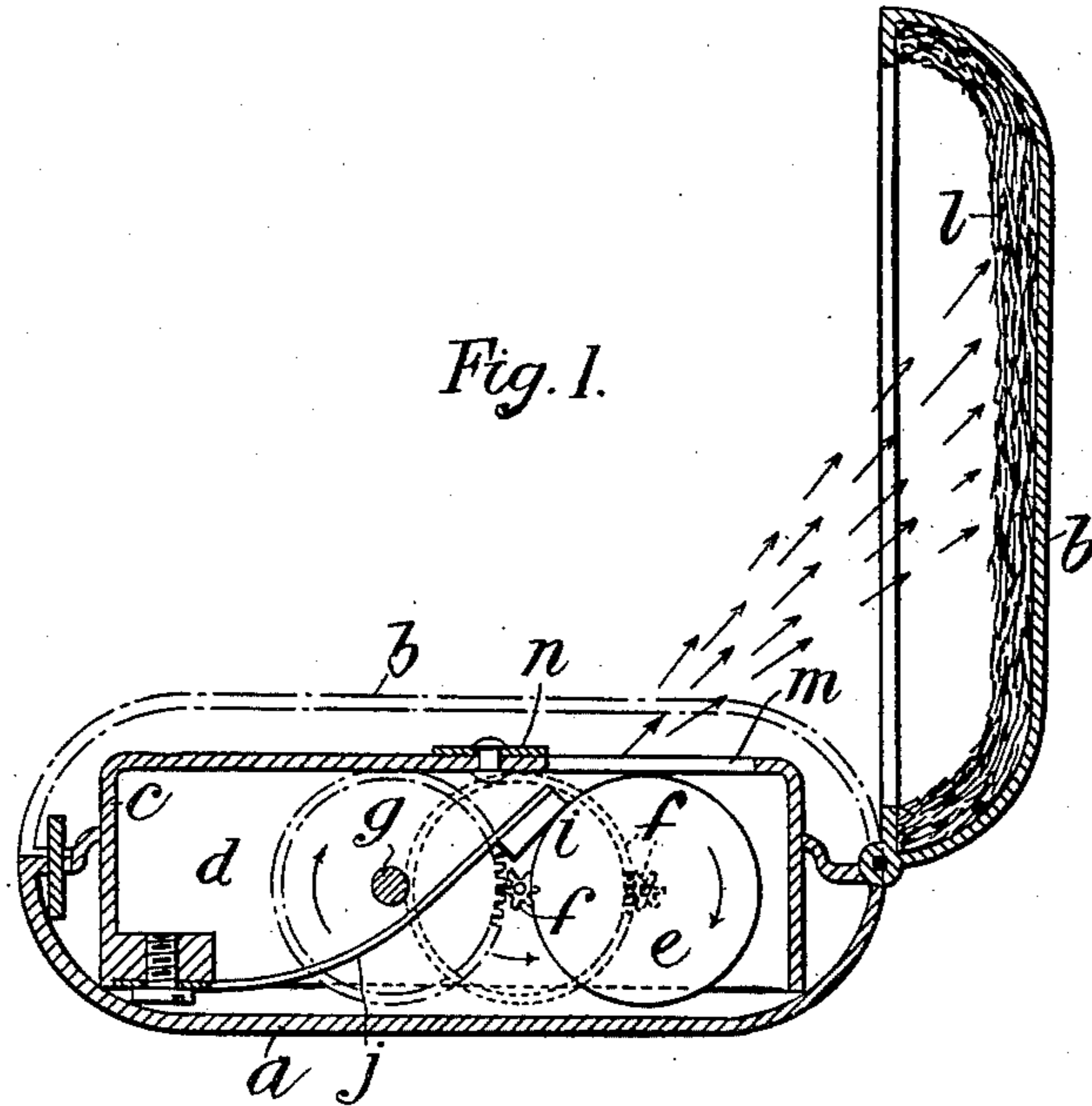
No. 657,728.

Patented Sept. 11, 1900.

L. E. BUTCHER & M. G. WOOD.
LIGHTER FOR CIGARS, CIGARETTES, OR THE LIKE.

(Application filed Mar. 9, 1900.)

(No Model.)



Witnesses,
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UNITED STATES PATENT OFFICE.

LEOPOLD ERNEST BUTCHER, OF LONDON, AND MARSHALL GEORGE WOOD,
OF BRIGHTON, ENGLAND.

LIGHTER FOR CIGARS, CIGARETTES, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 657,728, dated September 11, 1900.

Application filed March 9, 1900. Serial No. 8,001. (No model.)

To all whom it may concern:

Be it known that we, LEOPOLD ERNEST BUTCHER, residing at 60 Gresham street, London, and MARSHALL GEORGE WOOD, residing at 21 St. James street, Brighton, Sussex county, England, subjects of the Queen of Great Britain, have invented new and useful Improvements in Lighters for Cigars, Cigarettes, and the Like, (patent applied for in Great Britain, No. 22,187, dated November 6, 1899,) of which the following is a specification.

This invention relates to improvements in lighters for cigars, cigarettes, and the like and to that class of such lighters wherein a steel plate or strip is held against the periphery of a wheel or disk of emery or like material in such a manner that when the disk is rotated sparks are generated and directed against tinder, which is thereby ignited.

According to this invention we make a lighter inclosed in a case similar to a watch-case, the spark-generating devices being arranged in one part of the case, while the tinder is arranged in the other part of the said case.

In the accompanying drawings, Figure 1 is a vertical section of our improved igniter drawn to an exaggerated scale, and Fig. 2 is a sectional plan of the same.

a b are the two parts of the case, which are hinged together at one side and adapted to spring one over the other in order to hold them closed together or to be connected by means of a spring-catch.

c is a cylindrical casing which is inserted into the part *a* of the case and provided internally with two cross-bars *d d*, forming a frame in which the emery-wheel *e* and the gear-wheels *f f*, through which motion is imparted to the said emery-wheel, are mounted.

One of these wheels is connected by a shaft *g* with a ring or handle *h*, which also serves as the ring by means of which the lighter can

be attached to a watch-chain or the like and the rotation of which produces the desired rotation of the emery-wheel.

i is the steel plate, which is carried and pressed against the emery-wheel *e* by a spring *j*, fixed to a lug on the casing *c*.

l indicates the tinder, which is placed in the part *b* of the outer case and against which the sparks are directed, as indicated by the arrows in Fig. 1. At the top of the cylindrical case *c*, which is represented as being partly broken away in Fig. 2, is an opening *m*, through which the sparks will be projected, and adjacent to the said opening is a lid *n*, which can be turned to cover the said opening to obviate the liability of pieces of timber which may become detached from falling through the said opening when the lighter is shut up.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. In a lighter for cigars, cigarettes and the like, the combination with a box containing the spark-generating devices, of a cover lined with and carrying tinder on its under surface, all substantially as described.

2. The improved lighter for cigars, cigarettes and the like, comprising a case and its cover hinged together, such cover being surface-lined with tinder, an emery-wheel, a steel plate pressed against the wheel, a handle, and means for transmitting motion of the handle to the said emery-wheel to produce sparks, all substantially as described.

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Witnesses:

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