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PROVISIONAL SPECIFICATION.

Improvements in Pencil-cases, Penholders, Penknives, Surgical Instruments, and the like.

We, S. MORDAN AND COMPANY, LIMITED, Manufacturers, and EDWARD NORRIS, Pencil-case Maker, both of 41, City Road, in the County of Middlesex, do hereby declare the nature of this invention to be as follows:—

5 This invention relates more particularly to what are known as "drop-action" pencil-cases, although equally applicable to pen-holders, pen-knives, tooth-picks, surgical instruments, and similar articles constructed on the same principle; and it has for its object to provide these articles with means whereby, when they are not in use, their mouth or orifice, through which the lead, pen, blade, pick, lancet, or the like, is projected, shall be automatically and effectually
10 closed, so preventing the entry of dust, or other foreign matter, therein, and ensuring the proper working of the article at all times.

To this end, and assuming the invention to be applied to a pencil-case of the type mentioned the so-called "inner tube" of the "action", is formed integrally with, or furnished with, spring-arms equipped at their outer or free ends with
15 semi-circular, or other suitably shaped, heads, knobs, or blocks, adapted to separate when opening the pencil case, and to be brought together, when closing the same, as hereinafter described, and to form when the pencil-case is closed, a plug or stopper, which effectually closes the orifice or mouth through which the lead-carrier is projected.

20 At the top of the outermost tube or sheath, is a conoidal "mount" or cap, the interior of which is so shaped as to bring about the drawing together or contraction of the spring arms, and consequently the coming together of their heads, knobs, or blocks, to close the mouth or orifice in the said conoidal "mount" or cap, through which the lead carrier is projected.

25 In order to actuate the said mechanism, the outermost tube or sheath is divided into two portions, one of which is a fixture, while the other is movable, and is capable of a longitudinal and a slight angular movement. The movable portion is advantageously adjacent to the usual spring butt of the pencil case, and is controlled by a spring (preferably that usually employed to lock the
30 "motion"). It is further provided with a pin adapted to work in a slot, which is partly straight and partly angular, and by means of which the longitudinal and angular movement above mentioned is produced, the said slot being cut in the tube surrounding that which carries the spring-arms and their semi-circular heads, knobs, or blocks.

35 By turning the pencil-case downwards, and depressing the spring-butt in the well-known manner, the aforesaid movable portion of the outermost tube or sheath is retracted, so causing the spring-arms and their heads to retire and expand, and the lead-carrier is projected by gravity. On pressure being removed from the spring-butt, the movable portion of the outermost tube or
40 sheath is locked in position, owing to the pin having now entered the angular portion of the aforesaid slot, and the lead-carrier is retained in its projected position ready for use. By turning the pencil-case upwards, and again depressing the spring-butt, the movable portion returns to its normal position, that

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Improvements in Pencil-cases, Penholders, Penknives, Surgical Instruments, &c.

is to say abutting against the fixed portion, the lead-carrier falls inwards, by gravity, the spring-arms advance, and the semi-circular heads close together, so closing the mouth or orifice in the conoidal "mount", and preventing entry of dust, or other foreign matter, into the pencil-case.

Dated this 1st day of April, 1911.

ERNEST DE PASS,
Chartered Patent Agent,
78, Fleet Street, London.
Agent for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Pencil-cases, Penholders, Penknives, Surgical Instruments, and the like.

We, S. MORDAN AND COMPANY, LIMITED, Manufacturers, and EDWARD NORRIS, Pencil-case Maker, both of 41, City Road, in the County of London, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the accompanying drawings and to the letters and figures marked thereon, that is to say:—

This invention relates more particularly to what are known as "drop-action" pencil-cases, although equally applicable to pen-holders, pen-knives, tooth-picks, surgical instruments, and similar articles, or instruments, constructed on the same principle; and it has for its object to provide them with simple but improved means whereby, when in their normal condition or out of use, their mouth or orifice through which the lead, pen, blade, pick, lancet, or the like is projected, shall be automatically and effectually closed, so preventing the entry of dust, or other foreign matter, into the case, and ensuring the proper working of the instrument at all times.

And in order that the invention may be readily understood, we will now proceed to describe it fully with reference to the annexed drawings, forming part of this specification, wherein:

Fig. 1 is an elevation of a "drop-action" pencil-case, in its normal or closed condition, provided with the usual "action".

Fig. 2 is a similar view, but partly in section, shewing the pencil-case open and the lead-carrier projected.

Fig. 3 is a plan of the nozzle end of said pencil-case.

Fig. 4 is a transverse section, taken on the line *x, x*, of Fig. 6, shewing the spring-heads as they would appear when the lead-carrier is projected.

Figs. 5 and 6 are longitudinal sections shewing the spring-arms and their heads in the closed and open positions, respectively; all the figures being drawn to an exaggerated scale for the sake of clearness.

In carrying out the invention, the usual slotted "inner tube" *a*, of the action is, for the purpose in view, formed integrally with (or is provided with) spring-arms *b, b*, which are equipped at their outer or free ends with semi-circular, or other suitably shaped, heads, knobs, or blocks *c, c*. These heads, or the like, form, when the pencil-case is in its normal or closed condition, a plug, stopper, or obturator, which effectually closes the orifice or mouth *d* in a conoidal "mount" or cap *e*, hereinafter fully referred to, and fixed on, or forming part of, the outermost tube or external case of the instrument. The said heads are adapted to separate or diverge, as shewn in Figs. 4 and 6, on the pencil-case being opened, but to converge and abut one against the other, as shewn in

Improvements in Pencil-cases, Penholders, Penknives, Surgical Instruments, &c.

Figs. 3 and 5, when the pencil-case is closed, and to form the said plug, stopper, or obturator.

At the top of the tube or external case is fixed the afore-mentioned conoidal "mount", or cap *e*, the internal wall of which is also of conoidal shape, as seen in section in Figs: 5 and 6, and the function of which is to produce the convergence or drawing together of the spring arms *b, b*, and hence the coming together of the heads *c, c*, to close the mouth or orifice in the "mount" *e*, through which the lead-carrier *g* is projected. This conoidal "mount" is furnished at its mouth with a flange or rim *f*, which forms a bearing surface for the heads *c, c*, when closed together, as shewn clearly in Fig: 5.

For the purpose of actuating the said device, the outermost tube or external case is made in two parts *h, h¹*, the part *h¹*, being fixed to the usual slotted "outer" or intermediate tube *i*, of the "action", while the part *h* is movable, and is capable, as is common in "drop-action" pencil-cases, of a longitudinal and a slight angular movement, so as to lock the lead carrier *g*, when projected. The said movable part *h* is advantageously controlled by the usual spiral spring *j* employed to lock the "action", and also to free the lead-carrier on the depression of the spring butt *k*; and said fixed part *h¹* is further fitted with a pin *l*, passing through a slot *l¹* in the "outer" or intermediate tube *i*, of the "action", and fixed to the "inner tube" *a* of such action. The slot *l¹* is partly straight and partly angular, as clearly seen in Fig. 2, and by means of which the longitudinal and angular movement above referred to is produced.

The working is as follows:—By holding the pencil-case with its nozzle end, or conoidal "mount" downwards, and then depressing the spring butt *k*, in the well-known manner, the movable part *h* of the outermost tube or external case, with its conoidal "mount", is advanced, so releasing the spring arms *b, b*, and their heads *c, c*, and enabling them to diverge or expand, and the lead carrier *g*, to be projected. On pressure being removed from the spring butt *k*, the movable part *h* of the outermost tube, or external case, is thereupon locked in position by the "action" in the usual manner, and the lead carrier *g* is thereby retained in its projected position, the pencil case being then ready for use. But by reversing the position of the pencil-case, that is to say turning it upwards, and then depressing the spring butt *k*, the lead carrier *g* falls inwards, by gravity, and upon pressure being removed from the butt, the movable part *h* of the external case returns to its normal position, abutting against the fixed part *h¹* of the case, as in Fig. 1, the spring arms *b, b*, at the same time converging while being guided in this movement by the inner wall of the conoidal "mount", or cap, *e*, and bringing the heads *c, c*, close together, so effectually closing the mouth or orifice *d* in the pencil-case, and preventing the entry of dust, or other foreign matter thereinto.

Although we have described and shown the invention as applied to a "drop-action" pencil-case, it will be obvious that it can equally well be applied, in similar manner, to pen-holders, pen-knives, tooth-picks, surgical instruments, and analogous articles, the lead-carrier *g* being then replaced by a carrier for the pen, blade, pick, lancet, or the like.

The "action" proper, hereinbefore referred to, remaining the same as in former constructions no detailed description of the same is here necessary.

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. A "drop-action" pencil case, or analogous instrument, provided with means, under the control of the "action," for preventing the entry therein of dust or other foreign matter, comprising; spring-arms carried by the "inner tube" of the "action," heads on the said arms acting as a plug or obturator to close the mouth of the instrument, and a conoidal mount or cap on the outer-

Improvements in Pencil-cases, Penholders, Penknives, Surgical Instruments, &c.

most or external case of the instrument for producing, on the release of the said "action" the drawing together or convergence of the heads simultaneously with the closing of the instrument.

2. In a "drop-action" pencil-case, or analogous instrument, as above claimed, the combination, with the "action," of an outermost tube or external case formed in two parts, one movable and carrying a conoidal "mount" or cap for producing the convergence of the headed spring-arms, the other a fixture and connected to the "action" whereby, on the release of the spring-butt to close the instrument, the heads on the spring arms converge and enter the mouth of the instrument, so forming a plug or obturator therefor, and preventing the entry therein of dust, or the like. 5 10

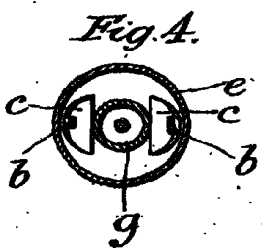
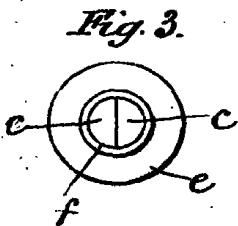
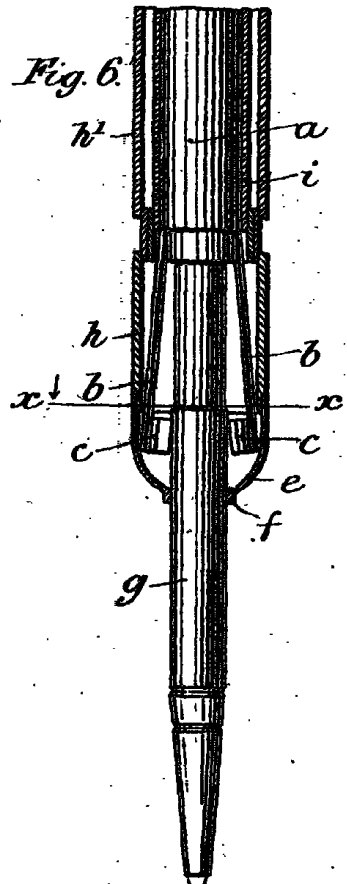
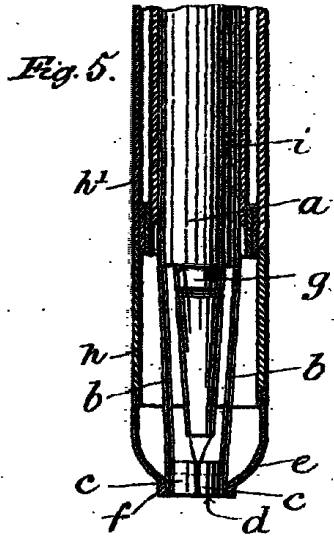
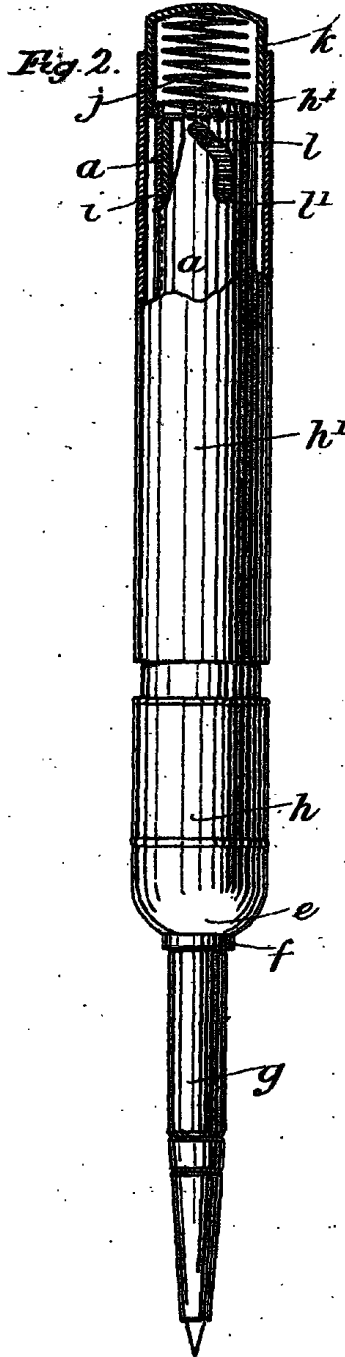
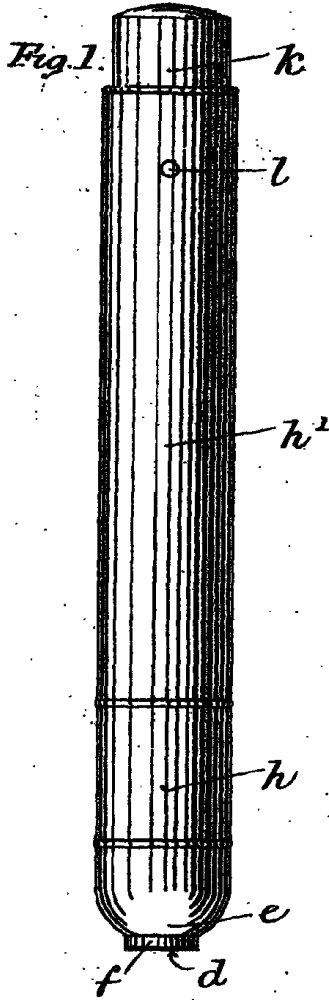
3. A pencil case (or analogous instrument) constructed and arranged to operate substantially as hereinbefore described with reference to, and as shewn in, the annexed drawings, and for the purpose set forth.

Dated this 9th day of September, 1911.

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[This Drawing is a reproduction of the Original on a reduced scale.]



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