

(No Model.)

E. D. HICKS.
DETACHABLE PENCIL.

No. 586,495.

Patented July 13, 1897.

Fig. 1

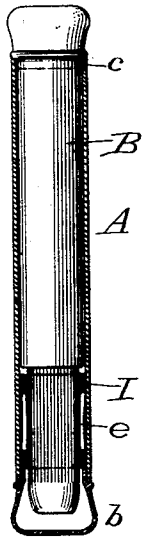


Fig. 2

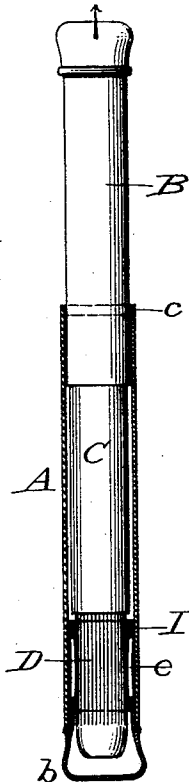


Fig. 3

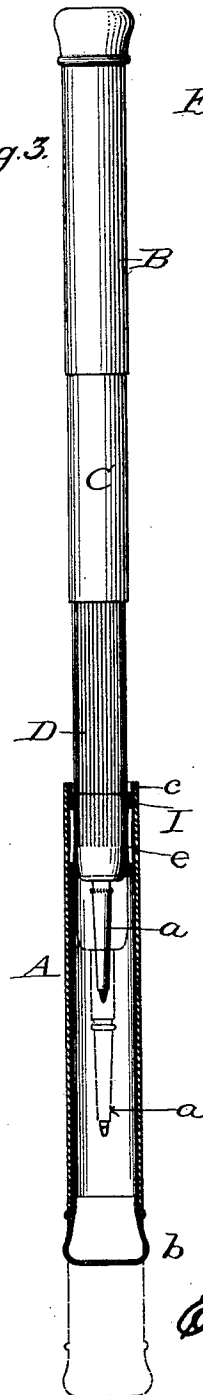


Fig. 4

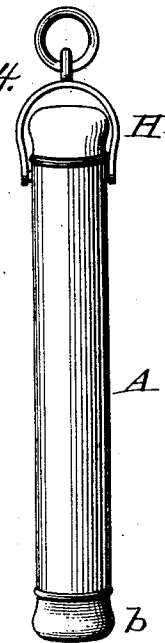
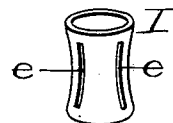


Fig. 5



Witnesses

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DETACHABLE PENCIL.

SPECIFICATION forming part of Letters Patent No. 586,495, dated July 13, 1897.

Application filed May 15, 1897. Serial No. 636,675. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. HICKS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Detachable Pencils, of which the following is a specification.

My invention relates to pencil-cases; and the invention consists in the combination of a telescopic pencil-case with a sheath and a sliding friction-clutch so arranged that in withdrawing the pencil from its sheath the point of the pencil will be automatically extended, all as hereinafter set forth.

Figure 1 is a side elevation of the sheath with the pencil therein and a portion of the sheath broken away to show the position of the sliding clutch. Fig. 2 is a side elevation showing the sheath in section and the pencil partly withdrawn. Fig. 3 is a similar view showing the pencil still more withdrawn and the pencil-point protruded. Fig. 4 is a side elevation of the completed device with the parts closed. Fig. 5 is a perspective view of the sliding spring-clutch shown detached, all the figures being enlarged in order to show the parts more distinctly.

This invention belongs to that class of pencils which are carried in a sheath or case usually suspended from a watch chain or cord; and the object of the invention is to so construct the parts that when the pencil is drawn out of the sheath the pencil-point will be automatically extended or protruded from the case, ready for use, and be automatically retracted when the pencil is inserted in the sheath, and so that the pencil will be securely held when inserted in the sheath.

In the drawings, A represents the sheath, which is a simple straight tube having one end closed by an ornamental cap *b* and having secured to its opposite end a pivoted yoke H, to which a ring is attached, as shown in Fig. 4.

The pencil is provided with a telescopic case composed of three or more sections B, C, and D, as shown in Fig. 3, and in the lower section D is arranged what is known as a "magic movement" for operating the lead-carrying point *a*, the arrangement of this movement being such that when the sections C D are

drawn out the point *a* is protruded from the end of section D, as represented in Fig. 3, and when the sections C D are closed the point *a* is retracted or drawn within the section D, as represented in Figs. 1 and 2. This magic movement being well known it is not shown, as persons skilled in the art are familiar with its construction.

In order to hold the pencil securely in the sheath when inserted and cause the magic movement to operate the pencil-point when the pencil is withdrawn from and also when it is put into the sheath, I provide a sliding friction clutch or clamp I. (Shown detached in Fig. 5.) This clutch is composed of a short tube made concave on its exterior and convex on its interior longitudinally, and having a series of longitudinal slits *e* cut in its walls nearly from end to end, as shown in Fig. 5, thereby imparting to the portions between the slits a degree of resiliency or spring capacity or action.

The two ends of the clutch or tube are made of a diameter to fit snugly in the sheath, but not so snug as to prevent the clutch from being moved to and fro within the sheath after it has been inserted. The internal diameter of this clutch I at its center is slightly less than the external diameter of the lower section D of the pencil, so that when the section D is forced into the clutch (the sides of which spring sufficiently to permit this to be done) the clutch is held to the section by friction sufficient to cause it to slide with the section in the sheath. This clutch or clamp I is inserted in the sheath and is prevented from being drawn out by an internal ring or collar *c*, secured within the open end of the sheath, as shown in Figs. 1, 2, and 3.

The parts being thus constructed and arranged, the operation is as follows: Suppose the pencil to be in its sheath, as represented in Fig. 1. In that case the clutch I will be at the bottom of the sheath, as there shown. Now in attempting to withdraw the pencil the upper section B will be drawn out first, as represented in Fig. 2, as the friction between the sections B C is less than between D and the clamp and less than it is between the clamp and the sheath, but as the withdrawal of the pencil is continued until the section D begins

to move it will draw the clutch I with it to the upper end of the sheath, where its motion will be arrested by the collar *e*, and during which movement the pencil-point will be protruded, as shown in Fig. 3, after which the pencil is drawn entirely out of the sheath and is in condition ready for use. In replacing the pencil this action of the parts is simply reversed, so that when the pencil is shoved into the sheath the point is retracted and the clutch shoved back to the bottom again, the withdrawal and insertion being done as readily and as quickly as though the pencil were a single rigid piece.

By making the clutch as shown it has a bearing at both its ends on the walls of the sheath, and as the slits in its sides enable the intervening portions to yield or spring sufficiently to permit the section D of the pencil to be inserted and held the ends of the clutch can be made thick enough to give it the necessary rigidity to keep it in shape and prevent it from becoming inoperative. In case it becomes worn by constant use it can be removed and replaced by another at any time by simply removing the stop or ring *c* at the mouth of the sheath.

One great advantage of this pencil and sheath is that the pencil-point is always projected ready for use whenever withdrawn from the sheath; and even if the sheath should be broken or injured the pencil can be carried

in the pocket and used the same as an ordinary pencil.

I am aware that a pencil-case has been patented in which a stationary tube is used as a clutch, said tube being made to engage with the point of the pencil, which has no means for its retraction, and being secured centrally within the sheath, with an annular space between it and the sheath, into which the telescopic sections enter when closed, and I do not claim such a device; but,

Having fully described my invention, what I claim is—

1. In combination, the sheath A, the spring-clutch I arranged to slide in the sheath, and a telescopic pencil-case, all arranged to operate substantially as shown and described.

2. In combination, a sheath A, a friction-clutch I arranged to slide to and fro within the sheath, and a telescopic pencil-case provided with a magic movement, whereby the pencil-point is projected in the act of withdrawing the pencil from the sheath, substantially as specified.

In witness whereof I hereunto set my hand in the presence of two witnesses.

EDWARD D. HICKS.

Witnesses:

W. M. HICKS,
O. R. WILCOX.