O. J. SUNDSTRAND.

CHECK PROTECTOR.

APPLICATION FILED JAN. 3, 1921.

1,378,496. **Patented May 17, 1921.**

Fig. 8

SUNDSTRAND.

DEVELOPMENT

Fig. 2

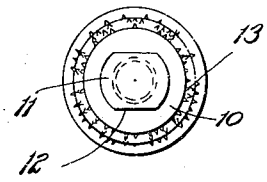


Fig. 3

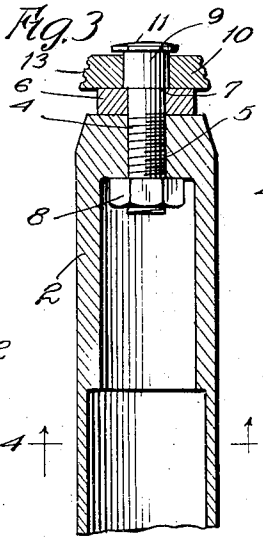


Fig. 5

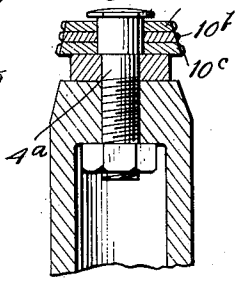


Fig. 4

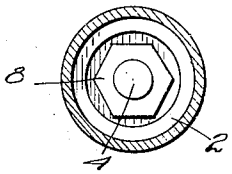


Fig. 1

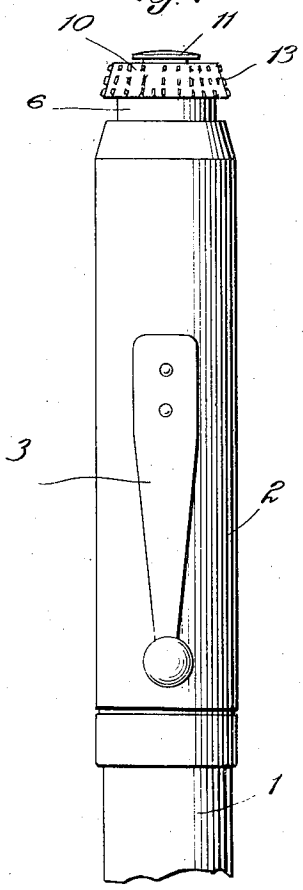


Fig. 6

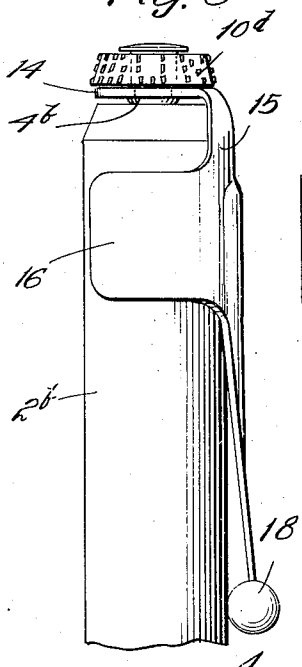
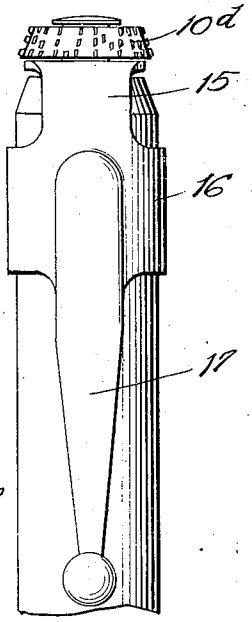


Fig. 7



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UNITED STATES PATENT OFFICE.

OSCAR J. SUNDSTRAND, OF ROCKFORD, ILLINOIS.

CHECK-PROTECTOR.

1,378,496. Specification of Letters Patent. Patented May 17, 1921.

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To all whom it may concern:

Be it known that I, OSCAR J. SUNDSTRAND, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Check-Protectors, of which the following is a specification.

The invention relates to devices for preventing the alteration or erasure of writings on paper by impressing or perforating portions of the paper on which the writing is made, and relates more particularly to such devices commonly known as check protectors which are used to protect the written money values or signatures on checks.

An object of my invention is to provide a simple efficient device of this character which may be conveniently carried in the pocket of the user.

Another object is to provide a construction and arrangement of the device which is adapted for attachment to a fountain pen without materially adding to the bulk or dimensions of the pen.

Another object is to provide a check protector which employs a toothed conical roller arranged to describe a rectilinear path over the writing to be protected, impressing the teeth of the roller into the paper and at the same time slightly tearing its fabric at the indentations.

Another object is to provide a toothed perforating roller in a check protector adapted to impress a selected word or design which may be individual to the user and give added security against alterations on a check.

A further object is to provide a pocket check protector constructed of few and simple parts which may be cheaply manufactured.

Pocket check protectors heretofore used have comprised a more or less complicated arrangement of parts requiring considerable attention to the adjustment of the parts in operating the device and being liable to frequent difficulty in their being out of order.

Such devices heretofore have generally required a specially constructed pen or other handling means in which to mount them, and frequently involved the mounting of a bulky mechanism on a pocket pen which was unsightly and inconvenient to carry in the pocket.

My construction comprises a simple roller rotating on a pivot fixed in the end of a fountain pen cap, the roller being the sole moving part in the operation of the device. The roller and its pivot may also be mounted on a clasp support suitable for attachment to any form of pen or pencil.

The conical shape of the roller permits its being mounted on a single pivot support arranged longitudinally of a pen, when so mounted, and operable with the diameter of the roller less than that of the pen cap. By this arrangement the flat roller lies close to the end of the pen and has no projecting parts to interfere or catch in the clothing when carried in the pocket, and is attractive in appearance.

My invention also embodies an especially effective protective action of the conical roller when moved in a straight path over the paper, which is more fully described hereinafter.

Further objects and advantages will appear in the course of the following description of a preferred embodiment of my invention which I have selected for illustration and set out in the accompanying drawings.

I desire it to be understood, however, that I do not limit my invention to its adaptation to a fountain pen, as obviously the conical roller may be used in many adaptations for the protective impression and perforation of written documents, without departing from the spirit of my invention.

In the accompanying drawings, Figure 1 is a fragmentary side view of a fountain pen equipped with my device. Fig. 2 is an end view of the device so mounted. Fig. 3 is a sectional view taken longitudinally through the center of a pen cap carrying my device. Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 3. Fig. 5 is a sectional view illustrating a modified form of roller. Figs. 6 and 7 represent respectively a side and front view of my device as adapted to be removably fitted to a pen or pencil. Fig. 8 is a representative development of the indentations effected by my device in its operation.

Referring to Fig. 1, the numeral 1 indicates the barrel of a fountain pen carrying a conventional cap 2 to which is attached a clip 3 for securing the pen in the pocket of the user. Secured in the closed end of the pen cap is a pivot pin 4 (see Fig. 3) having screw-threaded engagement with a longi-

tudinal bore 5 formed in the end of the cap. A washer 6 surrounding the pivot pin and lying against the outer end of the pen cap 2, is secured in position by an annular shoulder 7 formed on the outer portion of the pin 4. The screw-threaded pivot pin is turned into the cap 2 to effect the snug interengagement of the shoulder 7, the washer 6 and the end of the cap, thereby accomplishing rigid support of the pivot pin. The pin is further secured in its attachment to the pen cap by means of a lock nut 8 engaged with the inwardly protruding end of the pivot pin 4 within the pen cap.

The increased diameter of the pin 5 at the shoulder 7 is continued outwardly to form a bearing 9 for the roller 10 which is freely rotatable on the pivot pin. The pivot pin terminates at its outward end in an annular head flange 11 having oppositely flattened side portions 12 enabling the pin to be gripped by a tool in assembling it with the pen cap.

The roller 10 has a conical outer periphery, and is formed with outstanding teeth 13 on its conical surface. The teeth 13 are adapted to be impressed in the surface of a sheet of paper by grasping the pen in an angular position to bring the conical surface of the roller flatly to bear upon the paper, and pressing the roller into the paper with some force coincidently with moving it across the sheet in a straight path.

The action of the roller in operation is not alone that of the direct indentation of the paper by the teeth of the roller, but due to the greater diameter of the inner edge of the roller as compared with that of the outer edge, it will be apparent that by rolling it in a straight path there will be relative longitudinal movement between the teeth on the inner and outer edges and the paper, which movement in the indentations made by the teeth will effect a slight tearing of the fabric of the paper. This tearing effect prevents the successful smoothing of the paper after its having been indented, and a subsequent writing over the torn edges of the small indentations would cause the ink to run and at once indicate that it had been written after the application of the protective device.

An additional feature here apparent and materially aiding the protective efficiency of the device is in the use of a selected word or symbol, for example, the name of the user or the manufacturer, which may be fashioned in the arrangement of the teeth upon roller and by which means the name is impressed upon a check or other document. It would obviously be difficult for an unauthorized person to secure possession of another person's pocket pen by which a signature or check was written, to give genuine appearance to an irregular indorsement.

In Fig. 5 I have illustrated a modified form of the roller comprising three toothed disks 10^a, 10^b and 10^c carried upon the pivot pin 4^a and operable in a manner similar to the solid roller. The disks being of increasing diameter from the outer disk inwardly the same conical form is accomplished in the compound roller as in the solid roller. The same convenience of operation is had with less friction between the roller and the paper, and deeper indentations are made with less tearing effect.

In Figs. 6 and 7 I have illustrated a modified form of attachment for the roller 10^d in which a pivot pin 4^b is mounted in a plate 14 extending across the end of the pen cap and carried by the support 15. The latter is formed with a pair of resilient clasping jaws 16 adapted to embrace the sides of a pen cap 2^b. A spring arm 17 may be formed on the support, terminating in a holding ball 18 for gripping a pocket in the clothing.

It will now be apparent that I have provided an effective protective device for checks and other documents which may be conveniently attached to a pocket pen and is ready at all times for instant use. It will also be apparent that its construction is extremely simple and may be cheaply manufactured.

I claim as my invention:

1. A check protector comprising, in combination, a pivoted roller shaped in the form of a truncated cone, a series of projecting teeth formed on the conical periphery of said roller, and means for rolling said roller upon a sheet of paper whereon said teeth describe an indented path to prevent the alteration or erasure of writing thereon.

2. In a check protector, a perforating roller shaped in the form of a truncated cone and having a series of projecting teeth carried on its conical periphery, said roller being arranged to describe a rectilinear path upon a sheet of paper with its said teeth in rolling contact therewith, whereby said projecting teeth carried on the portions of relatively different diameters respectively of the said conical periphery are constrained to develop longitudinal movement relative to said paper and slightly tear the fabric thereof.

3. A check protector adapted to be mounted on a fountain pen having a conically shaped perforating roller pivoted on an axis coincident with the longitudinal axis of said pen, said roller being of less diameter than the diameter of said pen.

4. A check protector having perforating means comprising a plurality of annularly arranged series of projecting teeth, said series being pivotally mounted and having progressively increasing diameters to form a composite outer periphery simulating a

truncated cone, said perforating means being adapted to roll upon a sheet of paper and impress said teeth therein.

5. A check protector comprising, in combination, a pivoted roller shaped in the form of a truncated cone, a series of projecting teeth carried on the conical periphery of said roller, and means for rolling said roller upon the surface of a sheet of paper, said teeth being arranged to form letters or like symbols whereby said teeth will impress said letters or like symbols in the surface of said paper.

6. A check protector adapted to be outwardly mounted on a writing instrument and having a single roller pivoted in axial alinement therewith, said roller carrying a series of projecting teeth adapted to be rolled in contact with the surface of a sheet of paper, said teeth being arranged to form letters or like symbols whereby an impression thereof will be made in said paper when said roller is rolled thereon.

7. A check protector having, in combination with a fountain pen, a pivot pin having a flanged head and an annular shoulder spaced therefrom, a member mounted on said pin and abutting said shoulder, a toothed roller adapted to perforate paper and rotatably supported on said pin between said head and said member, said pivot pin being mounted on said pen with its axis in alinement with the longitudinal axis of the pen.

8. A check protector comprising, in combination, a single tapered roller having a series of projecting teeth carried on its tapered periphery adapted to impress a sheet of paper, a handle, and a pivot member carrying said roller, said pivot member being supported on said handle in axial alinement therewith.

9. The combination of a pen or like writing instrument, and a roller externally mounted thereon to rotate on an axis coincident with the longitudinal axis of said instrument, said roller having peripheral teeth adapted to be rolled upon and to impress a sheet of paper, said instrument serving as a handle in the manual operation of said roller.

10. The combination of a pen or like writing instrument, a toothed perforating roller positioned externally at one end thereof, and a pivot stud having one end secured to said instrument, the other end of said pivot stud extending longitudinally from said instrument and rotatably supporting said roller.

In testimony whereof, I have hereunto set my hand.

OSCAR J. SUNDSTRAND.