(No Model.)

H. C. ROSE.

ADDITION REGISTER FOR PENCILS.

No. 380,519. Patented Apr. 3, 1888.

Fig. 1.

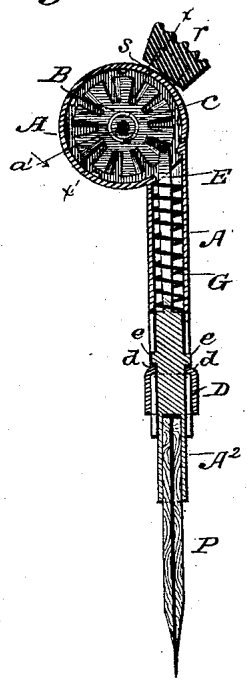


Fig. 2.

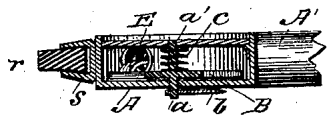
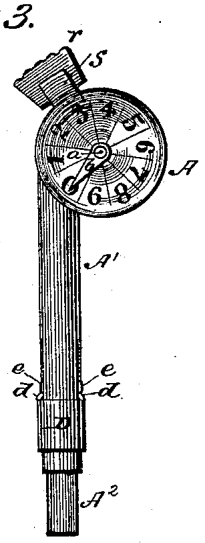


Fig. 3.



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ADDITION-REGISTER FOR PENCILS.

SPECIFICATION forming part of Letters Patent No. 380,519, dated April 3, 1888.

Application filed November 4, 1887. Serial No. 254,333. (No model.)

To all whom it may concern:

Be it known that I, HENRY CLAY ROSE, of Leadville, in the county of Lake and State of Colorado, have invented a new and useful Improvement in Addition-Registers for Pencils, &c., of which the following is a specification.

My invention relates to that class of addition-registers which are mounted upon the end of a pencil, and are provided with register-wheels and an index-hand to indicate the aggregate of the successive additions.

The improvement consists in the peculiar construction and arrangement of parts, which I will now proceed to describe.

Figure 1 is a longitudinal section; Fig. 2, a cross section through line *x x* of Fig. 1; and Fig. 3 is a side view.

A represents a flat circular case, to which is attached in tangential position a communicating tube, A′. Within this circular case, and lying flat against the side of the case, is a toothed disk or wheel, B, having ten radial teeth, whose forward edges are sharp or beveled on one side and whose rear edges are blunt. This toothed disk has on one side an axial stem, *a*, which projects through the case and carries an index-hand, *b*, arranged to move over a dial on the outside of the case, which has ten subdivisions marked from 0 to 9. On the other side of the toothed disk there is a rigid axial stem, *a′*, which projects through the other side of the case, and may have another index-hand thereon, if desired. Around this stem *a′* a spiral spring, *c*, is disposed, whose tension is exerted between the toothed disk and the side of the case, and serves to act as a friction-brake on the said disk to prevent back movement, as hereinafter described.

The tube A′ is slotted at its outer ends diametrically, and has encompassing this portion a detachable collar, D, having lugs *d d*, which lugs are turned into the slots of the tube. Within the tube A′ slides a sleeve, A^2, which forms a holder for the pencil P, and this holder has upon its opposite sides lugs *e e*, which extend into the slots of tube A′, and have a range of movement from the ends of the slots down to the inturned lugs *d* of the collar, which latter prevent the pencil-holder from coming entirely out. This pencil-holder has attached to it a spring-pawl, E, which extends upwardly through the tube A′ and into the case A, where it terminates in a bent end that engages laterally with the teeth of the disk when moved in one direction and passes over them when moved in the opposite direction. Around the spring-pawl, within the tube A′, is wound a spiral spring, G, which bears against the pencil-holder and forces the pencil down and the spring-pawl away from the disk.

To work the register, the point of the pencil is simply pressed on the paper or table, and the pencil-holder and spring-pawl pass up within the tube A′ against the tension of the spiral spring, and as the spring-pawl strikes the rear side of one of the teeth of the disk it turns the latter one point and correspondingly moves the index-hand on the outside. When the pressure on the pencil-point is relaxed, the pencil and pawl move out again and the curved end of the pawl readily passes over the beveled edge of the next tooth, the disk being prevented from turning back by the friction of the disk against the side of the case.

Upon the outer periphery of the case A, I prefer to construct a holder or socket, *s*, for a piece of rubber eraser, *r*.

My register, it will be seen, is reduced to its simplest form, there being but one series of graduations and one wheel and index-hand. This series of graduations is arbitrarily made to represent a definite number—tens, for instance—and it is to be used as follows: If the column of figures is composed of 9 8 7 6, the index-hand is set at zero, and, as 9 and 8 are 17, the pencil-point is put on the figure 8 and pressed. The ten of 17 is thus registered, and the 7 is carried to the next 7, which making 14, the pencil is again pressed to register the 10 of 14, making 20, and 4 is carried to the 6, making 10, for which the pencil is again pressed, making 30.

Having thus described my invention, what I claim as new is—

The combination, with the case A, having communicating tube A′, slotted at its outer end, of the toothed disk B, having axial stem with index-hand, the friction-spring *c*, arranged between the disk and the side of the case, the spring-seated pencil-holder A^2, with lugs *e*, and spring-pawl E, arranged in tube A, and collar D, arranged to hold the pencil-holder against the tension of its spring, substantially as shown and described.

HENRY CLAY ROSE.

Witnesses:
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