

(No Model.)

J. M. KEEP.
PAPER CLIP.

No. 499,924.

Patented June 20, 1893.

Fig. 1.

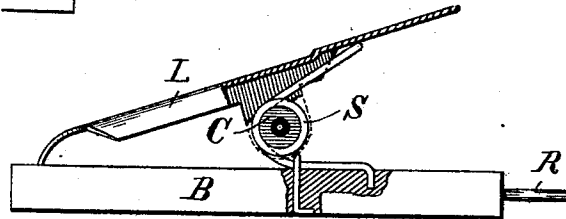


Fig. 2.

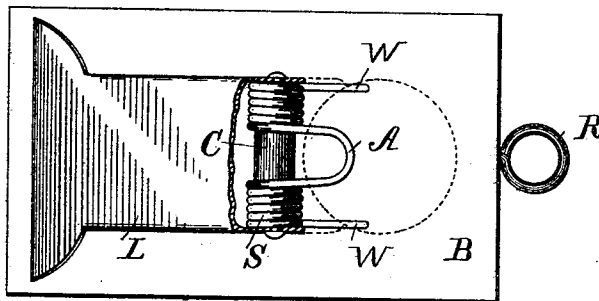


Fig. 4.

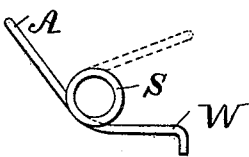
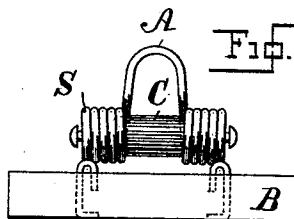


Fig. 3.



Witnesses
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Inventor
James M. Keep

UNITED STATES PATENT OFFICE.

JAMES M. KEEP, OF NEW YORK, N. Y., ASSIGNOR TO ALBURTUS A. WEEKS,
OF SAME PLACE.

PAPER-CLIP.

SPECIFICATION forming part of Letters Patent No. 499,924, dated June 20, 1893.

Application filed January 14, 1893. Serial No. 458,325. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. KEEP, a citizen of the United States, and a resident of New York city, county and State of New York, have invented new and useful Improvements in Paper-Clips, of which the following is a specification.

The object of my invention is to construct a paper or letter clip in a cheap and simple manner that will insure durability, a free and easy motion, a firm grip and a neat and compact appearance.

My invention relates to that class of devices now in general use and known as paper clips, letter clips and board clips, for holding letter sheets, bills, memoranda, &c. These devices are usually composed of two principal parts actuated by a spring. One of the parts forms the upper side or a lever clamp; the other, the base or back of the clip. These two pieces are held together parallel to each other, by means of a joint, which should admit of free motion and of the lever tilting freely thereon. The joint is situated nearer one end of the lever than the other. The shorter or upper end of the lever is the working end, while, by means of the spring, the other or lower end impinges the base to hold the paper placed between them. The joints referred to are made by lugs projecting from opposite sides of the lever and base. These lugs are pierced near their outer ends and are joined together by a rivet passing through them. With this joint flat steel springs or spiral springs are used. When spiral springs are used, they are loosely held in place by the hinging rivet passing through the coil. The free ends of the wire expand against the upper ends of the lever and base. These clips are often stiff and clumsy and require extra labor to finish them. My improvement is upon clips thus or similarly constructed, and differs from them as follows: I dispense with the lugs on the base; I fasten the spiral spring firmly to the base; I use a core which passes through the coils of the spring, to keep the spring and lever true and firm and serve as an axis to which the lever is fastened by means of screws or pins.

I will now proceed to describe and explain the different parts, the operation and advan-

tage of my invention, reference being had to the accompanying drawings which form a part of this specification.

Figure 1 is a side view of my improved clip complete, with the lever clamp and base broken away to show the spring and core. Fig. 2 is a plan view of the same, with the clamp broken away to show the spring and core. Fig. 3 is a detail of a double spiral spring with the core within its coils. Fig. 4 is an end view of the spiral spring.

The same letters of reference indicate corresponding parts in all of the drawings.

The letter L. indicates the lever made of sheet metal; B., the base of wood; S., the spiral spring, made of spring wire; C., the core, preferably made of hard wood; R., a ring or screw-eye by which to hang the clip upon a nail or hook.

As many paper clips are now made with spiral springs it is necessary to hinge the lever and base together by lugs formed upon them, on the sides facing each other; if made of cast metal they have to be drilled, which is expensive. When the base is of wood the lugs are separately formed and then fastened thereon. The spring is loosely confined between the lugs by a rivet which passes through the lugs and the coils of the spring. Clips made by this method of forming the joint and confining the spring, are necessarily stiff and clumsy. In my improved clip the lever L. may be of any design and of sheet or cast metal or of wood, having its sides, or a suitable portion thereof, turned at right angles with the upper surface and of sufficient depth to give a proper elevation and to cover nearly the diameter of the coil of the spring S. The spring should be made of suitable spring wire and for ordinary clips the coil should be about one half inch in diameter, as shown in the drawings. It is a duplex spring having a loop A. formed at and projecting from its center. The free ends of the wire W. are bent at right angles outward. The base B. is made of wood, but may be made of other material, and of any desired size or shape. The core C. may be made of any suitable material, preferably of hard wood; its diameter should permit it to pass loosely through the coils of the spring; its length must be equal

to the space between the inner parallel sides of the lever. These parts constitute the make-up of my improved clip and are best put together as follows: If the base be of wood, fasten the spring to it in the proper position, see Figs. 1 and 3, by puncturing the wood sufficient to admit the bent end of the wire W W.; with small hooks or staples, fasten down the free ends of the wire as near the spiral coil as possible, taking care to have the outer ends of the coils sufficiently spread to bring them flush with the ends of the core and that they may press firmly against the bent parallel sides of the lever. The prongs of the hooks or staples should be long enough to clinch on the under side of the base. Now place the core into the cavity of the spring, draw the loop A. over and nearly down to the base, and by any suitable means retain it there; place the lever over the spring, as shown in Figs. 1 and 2, with the pin holes. At the center of the core, fasten the lever to the core with screws or pins; common escutcheon pins are suitable and make a neat finish. Now release the loop and the clip is complete. When the lever is to be made of thin sheet metal, the bent sides make it very rigid. The double spring forms a compound lever, the loop being one, the free ends of the wire another, the core serving as an axis upon which they freely move. The core, also, retains the coils of the spring in perfect shape and position, and provides means to fasten the lever clamp. It displaces the lugs upon the base which makes the structure less clumsy and gives a better finish.

The method of operating and the general application of my improved clip does not differ from those now in use. Therefore I deem any further explanation unnecessary.

It is evident that my improved clip may be of any desired form, size or suitable material, that the method of fastening the spring to the

base may be varied, that the loop may be fastened to the base and the free ends of the wire may press against the lever; that two or more single coiled springs may be substituted for the duplex spring, and that these changes may be resorted to without departing from the merits of my invention.

What I claim as new and as my invention, and desire to secure by Letters Patent, is—

1. In a paper clip, having a clamp formed with lugs or ears or equivalent downward projection, pierced at their lower ends; a suitable base, a duplex spirally coiled spring formed with a loop projecting from its center, in combination with the spring, the core C, said core preferably made of wood and of sufficient size to fill the cavity of the spring, so that the lugs or ears of the clamp may be fastened to the ends of the core, as and for the purpose shown and described.

2. In a paper clip, having a base to which is fastened the free ends of the wire forming the spirally coiled spring in combination with said spring the core C, said core being made to fill the cavity of the spring and flush with each outer end of the spring so as to admit of the ears or lugs of a clamp being fastened with screws or pins to each end of the core while it is within the spring, thus forming the pivotal point or axis of the clamp, the core also serving to keep the spring in form and position while the upper end of the clamp is being depressed as when the clip is in use, all substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 12th day of January, 1893.

JAMES M. KEEP.

Witnesses:

PETER B. VERMILYA,
CHAS. WOOD.