F. A. KENNEDY.

CLIP AFFIXING DEVICE.

APPLICATION FILED JULY 29, 1915.

1,205,219. Patented Nov. 21, 1916.

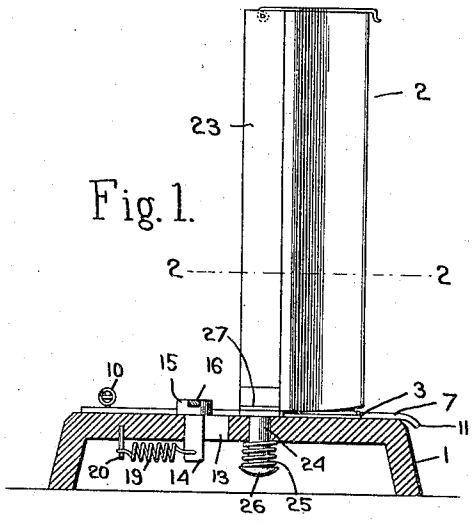


Fig. 1.

Fig. 2.

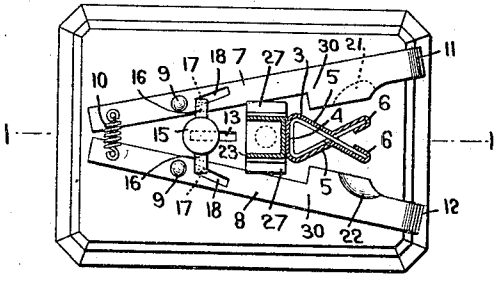


Fig. 3.

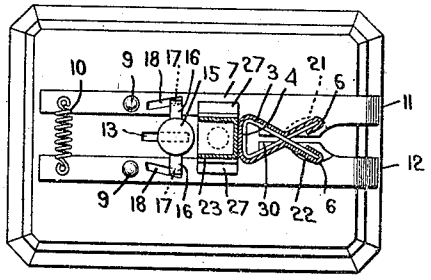


Fig. 4.

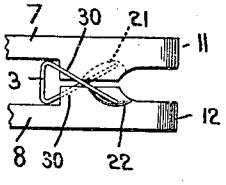
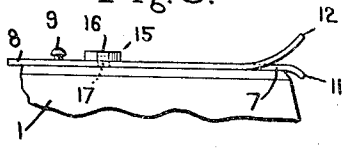


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CLIP-AFFIXING DEVICE.

1,205,219. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed July 29, 1915. Serial No. 42,575.

To all whom it may concern:

Be it known that I, FREDERICK A. KENNEDY, a citizen of the United States, residing at Danielson, county of Windham, State of Connecticut, have invented an Improvement in Clip-Affixing Devices, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to an improvement in clip affixing devices.

This novel structure affords a means for easily and rapidly applying a clip to a plurality of documents, papers, sheets and similar objects, so that they may be clasped or retained together. The clips employed in connection with this embodiment of the invention are of a common variety, consisting of a strip of spring-wire bent to form a base portion with two crossed legs or clamping members. The clip affixer is provided with a reservoir or magazine adapted to hold many clips in such manner that they may be fed automatically to the base into the path of the mechanism which functions to part the clamping members of the successive lowermost clip of the magazine in such manner that a plurality of papers or like articles may be inserted therebetween. And, upon further movement of the clamping member parting mechanism, the clip will be released and left upon the papers, and the magazine moved out of the way when the clip affixed papers may be removed.

The object of the invention is to provide an efficient and rapid clip affixer.

Another object is to provide a clip affixer which functions to clamp a clip upon a plurality of papers or similar articles without changing the position of the clip.

Other objects of the invention will more fully appear from the following description and the accompanying drawings and will be pointed out in the annexed claims.

In the drawings, Figure 1 is a cross sectional view through the base, on the line 1—1 of Fig. 2, the magazine being left in elevation; Fig. 2 is a plan view showing the jaws open, the magazine and standard being shown in section on the line 2—2, Fig. 1; Fig. 3 is a similar plan view showing the jaws closed; Fig. 4 is a detailed view of the engagement of the jaws and a clip; Fig. 5 is a side elevation of a portion of the base, the magazine being removed.

This selected embodiment of the invention consists of a base 1, preferably a metal casting, upon which is supported the magazine 2 adapted to hold a plurality of clips 3. The magazine 2, as here shown, is stamped or pressed into the form adapted to retain the clips in superposed position and to feed the clips to the base into operative position upon the successive removals of the lowermost clip. The magazine comprises a back 4 and two angled sides 5. The ends 6 of the sides 5 are inwardly turned functioning to form longitudinal guides for the ends of the clamping members of the clips. The magazine is closed by a suitable hinged cover, as shown in Fig. 1.

The jaws 7 and 8, adapted to engage the legs or clamping members of the lowermost clip held by the magazine, are operatively mounted upon the base 1. Each is pivotally secured to the base by means of a pin 9, while a coiled spring 10, suitably secured to each jaw at its rear end, functions normally to hold apart the clip engaging or front ends of the jaws. The jaws 7 and 8 terminate in fingers 11 and 12, respectively, which facilitate the introduction of papers between the clip engaging jaws and hence between the clamping members of the clip when held apart by the jaws. The finger 11 is downwardly turned with relation to the plane of the jaw while the finger 12 is upwardly turned, as best shown in Fig. 5. Provision is made, in this selected embodiment, whereby these jaws are manually operable to engage a clip positioned on the base at the bottom of the magazine. A stem 14 is slidably mounted in a slot 13, cut in the base 1. A button 15 is secured on the top of the stem and carries arms 16 extending substantially at right angles to the stem. The outer end of each arm is preferably downwardly turned to provide a guide 17 to engage operatively a cam slot 18 in each of the jaws.

The normal inoperative position is that shown in Figs. 1 and 2 in which the button stem 14 is held in rearward position under the tension of the coiled spring 19, one end of which is secured to a pin 20 held in the base while the other end is affixed to the stem 14. As the button is pushed forward, the down turned ends of the arms cam along the slots 18, causing the forward portions of the jaws to close against the action of the coiled spring as shown in Fig. 3. The construc-

tion of the forward portion of the jaws is such that as the jaws are closed, each engages one leg or clamping member of the positioned clip so that these clamping members are held apart for insertion of the documents or sheets to be clasped together. Each jaw is provided with an inwardly projecting portion 30. The inner edges of these portions are substantially knife edges. Each of these jaw portions has means thereon for engaging a clip clamping member, that of the jaw 11 functioning, as the jaws are closed, to pass above the lower clamping member, to bend it downwardly and to hold it in such position and that of the jaw 12 functioning, similarly, to pass below the upper clamping member of the clip, to bend it upwardly, and so to retain it while the jaws are closed. These means are, in effect, cam surfaces and comprise in the case of the jaw 11 an undercut cam surface 21, shown in dotted lines in Fig. 4, and, in the case of the jaw 12, a similar cam surface 22 cut in the upper face thereof. Thus, when the mechanism is in the position shown in Fig. 3, the clamping members of the lowermost clip, positioned on the base beneath the magazine, are held apart so that papers, sheets or similar articles, easily guided by the oppositely distended fingers of the jaws, may be inserted therebetween.

In order that the magazine may completely release the lowermost clip and in order that the clip clamping members and engaging jaws may open as fully as necessary to accommodate the inserted papers, and other objects, a novel mounting is provided for the magazine whereby upon insertion of objects between the jaws when in closed and clip engaging position, the magazine is raised and maintained in such position until the jaws are again opened and the now affixed papers are removed. The magazine is carried by a standard 23 to which it is secured, preferably by brazing thereto. The standard employed in this selected embodiment is substantially U-shaped, to the back of which is secured the magazine. The base of the standard has secured thereto a stud 24 which slidably engaging and passing through the base, bears a coiled spring 25 held thereon between the base and the head 26 of the stud. The standard thus reciprocally mounted is adapted to be raised against the tension of the spring 24 which tends to hold it normally resting upon the base. The standard, carrying with it the magazine, is adapted to be raised by the vertical movement of the jaw 8 which bears the upturned finger 12. This jaw is so mounted as to permit of its being raised upon the insertion between the jaws of papers or objects to be clipped together. The head of the pivot 9 of this jaw projects slightly above the plane of the upper face of the jaw, as shown in Fig. 5, so that vertical pivotal play is afforded. Similarly, the arm-carrying stud 14 is mounted so as to permit the elevation of this jaw. To impart this vertical motion to the standard, it is provided with L-shaped brackets 27, one arm of each of which is secured to the standard side while the others respectively project above the normal path of the reciprocatory jaws. Thus, when the jaw 8 is raised by the insertion of papers, etcetera between the jaws, the jaw impinges against the under side of the bracket and raises the standard and, hence, the magazine against the tension of the coiled spring 24. Upon release of the jaws from clip-engaging position, the clip clamping members will securely affix together the papers or other objects therebetween whence they may be easily withdrawn from between the jaws. The withdrawal of the papers permits the return of the jaw 8 and, under the influence of the spring 24, of the standard and magazine, to normal position when another clip is positioned upon the base 1 in normal operative emplacement.

There is thus provided an inexpensive clip affixing device which is efficient, of few parts, economical in construction, of low production cost, not liable to derangement and is simple and rapid in functioning.

It is to be understood that the construction disclosed herein is illustrative but not restrictive and that the same may be modified within the meaning and scope of the claims which follow.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A clip affixing device comprising a base, a clip magazine and movable gripping means on said base acting when moved first to grip and to part the clamping members of a clip presented by the magazine whereby objects to be affixed together may be inserted between the parted members and acting thereafter to release said members whereby the clip will clamp together said objects.

2. A clip affixing device comprising a base, a movable clip magazine, means on said base adapted first to part the clamping members of a clip presented by the magazine whereby objects to be affixed together may be inserted therebetween and thereafter to release said members whereby said objects may be affixed together by the clip and removed from said device, and means for movably mounting said magazine whereby upon its movement said clamping members may be more widely parted to receive said objects.

3. A clip affixing device comprising a base, a movable clip magazine, means on said base adapted first to distend the clamping members of a clip presented by the

magazine whereby objects may be inserted therebetween and thereafter to release said members whereby such objects may be clamped together by said clip, means to raise said magazine upon insertion of said objects whereby said clamping members may be more widely distended to receive said objects, and means automatically to return said magazine to normal position upon removal of said clipped objects.

4. A clip affixing device comprising a base, a clip magazine, pivoted means on said base operable first to engage and part the clamping members of a clip whereby objects to be clipped together may be inserted between said members and operable thereafter to release said members whereby said objects may be withdrawn clipped together.

5. A clip affixing device comprising a base, a clip magazine, jaws on the base reciprocatory first to part the clamping members of a clip whereby objects may be inserted therebetween and thereafter to release said members whereby said objects may be withdrawn clipped together.

6. A clip affixing device comprising a base, a clip magazine, movable jaws on the base, said jaws having means to receive and guide the insertion of objects therebetween and means acting upon movement of said jaws first to part the clamping members of a clip presented by said magazine whereby said objects may be inserted therebetween and acting thereafter to release said members whereby said objects will be clamped together by said clip.

7. A clip affixing device comprising a base, a movable clip magazine, movable jaws on the base operable to engage and distend the clamping members of a clip to permit the insertion of objects therebetween, means on said magazine adapted to be engaged by one of said jaws whereby said magazine may be raised to permit said members to be further distended upon insertion of said objects, said jaws being operable to release said members whereupon said objects may be clamped together by said clip and means to return said magazine to normal position upon withdrawal of said inserted objects.

8. A clip affixing device comprising a base, a movable clip magazine, pivoted jaws on the base operable first to engage and distend the clamping members of a clip to permit the insertion of objects therebetween, pivoting means for one of the jaws adapted to permit said jaw to be raised by the insertion of said objects from the horizontal plane of the other jaw, means carried by said magazine adapted to engage said jaw when raised whereby said magazine is raised and farther distension of said members is permitted, said pivoted jaws being operable to release said members whereby said inserted objects may be clamped together by said clip.

9. A clip affixing device comprising a base, a yieldably mounted magazine, means for parting the clamping members of a clip, and means operable by said parting means to raise the magazine from the base.

In testimony whereof, I have signed my name to this specification.

FREDERICK A. KENNEDY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."