No. 818,692. PATENTED APR. 24, 1906.

A. C. JACKSON.

INKING PAD.

APPLICATION FILED APR. 7, 1905.

Fig. 1.

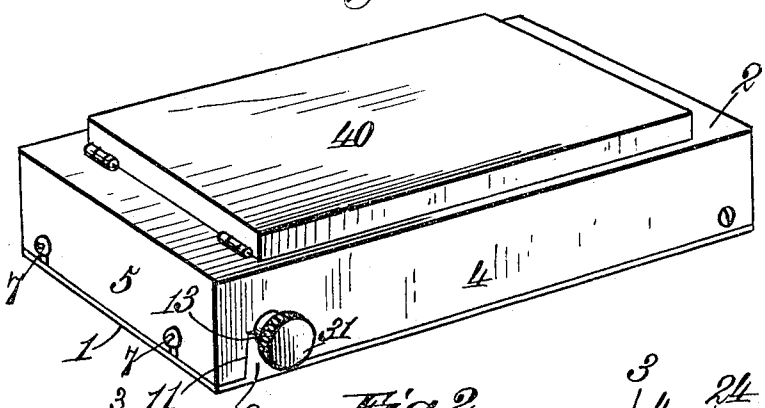


Fig. 2.

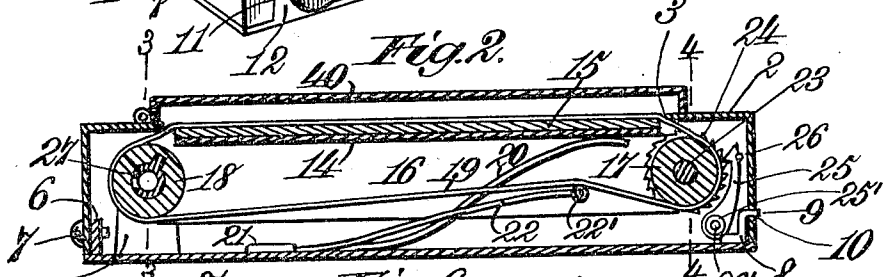


Fig. 6.

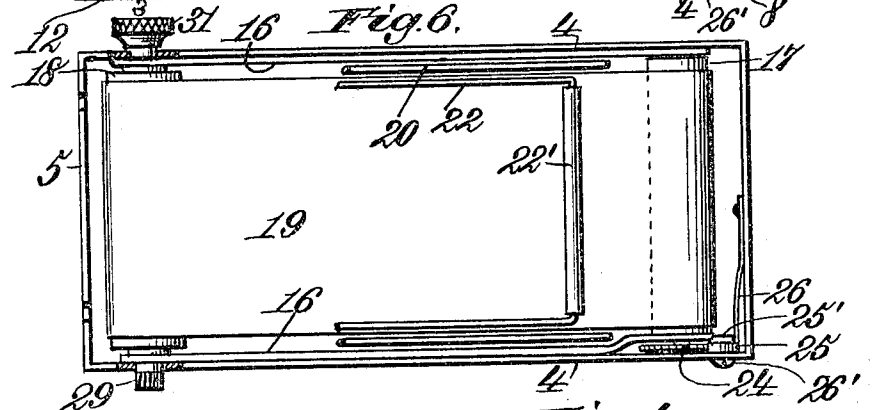


Fig. 3.

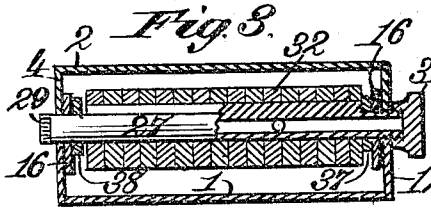


Fig. 4.

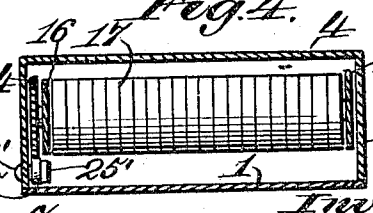
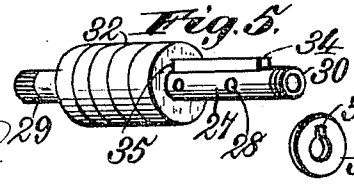


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALBERT C. JACKSON, OF HARRIMAN, TENNESSEE.

INKING-PAD.

No. 818,692. Specification of Letters Patent. Patented April 24, 1906.

Application filed April 7, 1905. Serial No. 254,339.

To all whom it may concern:

Be it known that I, ALBERT C. JACKSON, a citizen of the United States, residing at Harriman, in the county of Roane and State of Tennessee, have invented new and useful Improvements in Inking-Pads, of which the following is a specification.

This invention relates to pads for inking rubber and other hand-stamps or analogous devices; and the primary object of the same is to provide mechanism directly coöperating with a bed over which an endless ribbon or web of suitable material is trained for automatically shifting the said ribbon when pressure of the hand-stamp on the bed for inking purposes ensues.

Automatically-shifting endless ribbons or webs for inking purposes have been heretofore used; but the mechanism employed therewith has been of a complex and indirect engaging nature, and consequently considerable lost motion has resulted. In the present improved pad the number of coacting parts are reduced to a minimum, and the entire organization is thus materially strengthened and has greater wearing qualifications and durability.

Among other essential features of the invention is an inking-pad consisting of a spring-supported or yielding bed, rollers at or about the ends of said bed, one of said rollers being perforated and constituting an ink-reservoir and being covered with felt or similar material, an endless ribbon or web trained over the bed and said roller, and means actuated by the depression of the bed to rotate one of said rollers and automatically move the ribbon. The rollers over which the ribbon or web is trained also have a particularly advantageous structure for convenience in assembling the same and also to compensate for wear of different portions thereof. The necessary tension on the ribbon or web is maintained by a simplified device which is automatic in its operation and does not require to be positively adjusted or modified, as in analogous structures wherein screws or sliding bearing devices have been employed.

Other advantages in the several details of construction will be more fully hereinafter set forth.

In the drawings, Figure 1 is a perspective view of an inking-pad embodying the features of the invention and showing a cover or inclosure therefor arranged above the same. Fig. 2 is a longitudinal vertical section of the pad. Fig. 3 is a transverse vertical section on the line 3 3, Fig. 2. Fig. 4 is a transverse vertical section on the line 4 4, Fig. 2. Fig. 5 is a detail perspective view of the inking-roller and the frictional covering thereof forming one of the means for operating the ribbon or web. Fig. 6 is a plan view looking toward the bottom of the pad with the lower closure plate or member removed to illustrate the position and engagement of the elevating and tension-spring devices.

Similar numerals of reference indicate corresponding parts in the views.

The frame or body of the pad consists of a bottom plate 1, a top member 2, having an opening 3 therein, preferably of rectangular contour, and side and end flanges 4 and 5, which connect and coöperate with parts of the bottom plate 1. The bottom plate 1 has an upwardly-projecting flange 6 at one end insertible within one end flange 5 of the top member 2 and is separably secured to the latter by suitable screws 7 or analogous devices inserted through the said end flange 5 and flange 6. The opposite end of the bottom plate 1 is provided with upstanding hinge or coupling projections 8, with outwardly-deflected ends 9 to engage openings 10 in the adjacent end flange 5 of the top member 2. When the members 1 and 2 are assembled, they have the appearance of a box-like closure, the joints being closed or having a snug fitting to exclude the entrance of dust or dirt into the interior of the pad. The side flanges 4 of the top member 2 near the end flange 5, engaged by the screws 7, are also formed with downwardly-opening slots 11 to removably receive bearing projections 12, extending upwardly from the bottom plate 1, the said projections and slots having coinciding counter-recesses 13 for a purpose which will be presently set forth.

The working mechanism of the pad consists of a rigid bed 14, having a felt or other fabric covering 15 on the upper surface thereof, the said bed being connected to or formed with depending side flanges or guards 16, projecting beyond the terminal of the bed 14, to accommodate the application of end rollers 17 and 18, over which is trained a continuous ribbon or web 19, primarily having sufficient tautness to render its feed over the bed 14 and felt or other covering 15 positive and practicable. The rollers 17 and 18 provide movable means at opposite extremities of the bed for direct engagement of the rib-

bon, these rollers being the only parts or devices of the pad structure controlling the feed of the ribbon over the bed. The bed 14 and ribbon or web 19 are held up in proper position in the top member 2 with respect to the opening 3 by spring-arms 20, terminally secured to upstruck seats 21, forming a part of the base-plate 1 and having sufficient resistance structurally, through the medium of the adoption of prerequisite dimensions, to hold the bed 14 and the parts carried thereby continuously in elevated position when not depressed by the application of a hand-stamp thereto. Between the spring-arms 20 a resilient tension-loop 22 is also terminally secured to the seats 21 and has such vertical projection or extent as to firmly bear against the under portion of the ribbon or web 19 and impart to the latter a tension of such stress as to insure a regular or positive movement of the ribbon or web over the rollers and bed when the pad is operated. The portion of the loop 22 bearing against the ribbon has a roller 22′ thereon to reduce friction. This simplified means of preventing slack movement of the ribbon or web is exceptionally economical in view of the numerous terminal adjusting devices heretofore employed for a similar purpose and located to such point as to render the pad cumbersome and inconvenient. The ribbon or web 19 will primarily have a tight fitting with respect to the rollers 17 and 18, over which it moves, and the pressure of the tension spring or device 22 against the under portion thereof will increase the efficiency of operation of the pad by holding the ribbon or web in close engagement with the rollers 17 and 18. Moreover, a material advantage arises structurally and from a standpoint of durability by inclosing the spring-arms 20 and the resilient tension device 22 fully within the body of the pad and dispenses with the necessity of the formation of longitudinal slots or longitudinal shiftable bearings for the rollers 17 and 18, which in some pad constructions have been under resilient tension.

The spindle 23 of the roller 17 is loosely fitted in the terminals of the flanges 16, depending from the bed 14, and on one end of this spindle a ratchet-wheel 24 is fixed and projects sufficiently for engagement with a dog 25, fulcrumed on one of the side flanges 4 of the top member 2, near the end flange 5, having the openings 10 therein to receive the hinge or coupling projections. This dog 25 is engaged by an inwardly-pressing spring 26, operating at all times to hold the dog in contact with the ratchet-wheel 24 and operating when the bed 14 and the parts carried thereby are depressed to rotate the roller 17 and move or shift the ribbon or web 19, trained thereover. The dog 25 is held positively in applied position by a set-sleeve 25′, passing through the lower end thereof, and a securing-screw 26′. The end of the bed 14 at which the ratchet-wheel 24 is located is free to swing vertically under the restriction of the dog 25; but the opposite end of the bed and the flanges 16, forming a part thereof, are positively fulcrumed, and the roller 18 at this end of the bed has a tubular support or spindle 27 with a series of openings 28 therein and the opposite ends 29 and 30 projected outwardly through the adjacent ends of the flanges 16, the end 29 being milled or otherwise roughened for manually turning the roller 18, and the opposite end of said spindle is externally screw-threaded and receives a closing-cap 31 to give access thereto without drawing the said spindle from its applied position, and also serving as a means for manually turning the roller 18. The spindle 27 serves as an ink-reservoir, the ink feeding through the openings 28 and saturating the fabric covering 32 on the said spindle and constituting the roller at the end of the pad over which the ribbon or web has movement. The opposite roller 17 also has a fabric covering, and both fabric coverings are preferably in the form of felt sections or washers, which are keyed on their respective rollers for convenience in the formation of the rollers and also to accommodate a ready withdrawal and substitution of any section or washer to compensate for wear or to meet any other irregularity resident in the operation of the rollers and which might affect accuracy in the feed of the ribbon or web 19. The spindle 27 between the flanges 16 has a spline 34 thereon which engages the sections or washers of felt composing the roller 18, the said sections or washers having corresponding slots 35 formed therein to receive the spline, and the opening in the one flange 16, through which the end 30 of the spindle 27 projects, also has a spline-slot 36 communicating therewith to permit a withdrawal of the spindle 27. Under normal conditions the spindle 27 will be obstructed in having any tendency toward accidental disengagement by washers 37 and 38, arranged thereon inside of the flanges 16 and between the latter and the outer ends of the roller 18 or the sections composing the latter, the washer 37 having a spline-slot 39, which must register with the spline slot or opening 36 in the one flange 16 before the spindle or tubular bearing 27 can be withdrawn.

At any time desired the closing-cap 31 may be removed and ink introduced in the tubular spindle 27, the openings 28 permitting such ink to saturate the parts of the roller 18 and be distributed by the latter to the ribbon or web 19.

When the bottom plate 1 and the top member 2 are assembled over the bed-plate 14, carrying the ribbon or web 19 and the operating parts for the latter, the projecting terminals of the tubular spindle 27 are held within the counter-recesses 13 of the slots 11

and bearing projections 12, and after the screws 7 are secured or the bottom plate 1 and the top member 2 fully assembled the said projecting terminals of the spindle 27 will be positively held in a fixed rotating position and serve as a fulcrum means for the swinging operation of the opposite extremity of the bed-plate and including the roller 17 and ratchet-wheel 24, controlled by the dog 25.

The fabric or felt covering for the two rollers 17 and 18 can be more economical and profitably applied in sections to their respective spindles and keyed in place than if such coverings were formed in solid pieces and an attempt made to interiorly channel or form spline-seats therein. As before noted, the rollers may be readily maintained in perfect working condition, despite irregular wear thereon, by removing the worn sections and replacing the latter by other sections, which will restore the rollers practically to their normal diameter.

When the pad is not in use and to exclude dust and dirt from depositing upon the ribbon or web 19, an auxiliary cover 40 is arranged thereover and may be quickly removed at any time when it is desired to use the pad.

Having thus fully described the invention, what is claimed as new is—

1. A hand-stamp inking-pad, consisting of a yieldingly-supported bed, rollers at or about the ends of said bed, one of said rollers being perforated and constituting an ink-reservoir and having an absorbent covering, the perforated roller directly acting as a fulcrum for one end of the bed, an endless ribbon trained over said bed and rollers, and means actuated by the depression of the bed to rotate one of said rollers and automatically move the ribbon.

2. A hand-stamp inking-pad, consisting of a yieldingly-supported bed, rollers at or about the ends of said bed, one of said rollers directly acting as a fulcrum for one end of the bed and constituting an ink-reservoir, an endless ribbon trained over said bed and rollers, and means actuated by the depression of the bed to rotate one of the rollers and automatically move the ribbon.

3. A hand-stamp inking-pad, consisting of a yieldingly-supported bed, rollers at or about the ends of said bed, one of said rollers constituting an ink-feeding reservoir and having an absorbent covering, an endless ribbon trained over said bed and rollers, an inclosed resilient tension means for engaging the under portion of the ribbon, and means actuated by the depression of the bed to rotate one of said rollers and automatically move the ribbon.

4. A hand-stamp inking-pad having a yieldingly-supported bed, rollers at or about the ends of said bed, one of the rollers being perforated and constituting an ink-reservoir, an endless ribbon trained over said bed and rollers, resilient means for holding the bed elevated, a resilient device inclosed within the pad for instituting a tension on the ribbon, and means actuated by the depression of the bed to rotate one of the rollers and automatically move the ribbon.

5. In an inking-pad of the class set forth, a depressible bed having rollers at opposite extremities, the one roller forming a fulcrum means for the bed, and the opposite roller depressible with the latter, an endless ribbon trained over the bed and rollers, and means for shifting the ribbon automatically when the bed is depressed.

6. In an inking-pad of the class set forth, a depressible bed having rollers at opposite extremities, one roller being vertically movable with the bed, an endless ribbon trained over the bed and rollers, and means coöperating with the roller vertically movable with the bed for automatically shifting the ribbon.

7. In an inking-pad of the class set forth, a depressible bed directly fulcrumed at one extremity and free to have vertical movement at the opposite extremity, an endless ribbon trained over the bed, the latter having movable devices at opposite extremities for direct engagement of the ribbon, these devices being the only parts of the pad structure controlling the feed of the ribbon over the bed, and means coöperating with the device at the vertically-movable end of the bed for automatically shifting the ribbon when the bed is depressed.

8. In an inking-pad, a depressible bed fulcrumed at one end and free to have vertical movement at the opposite end, the bed having movable devices at its opposite ends providing the sole engaging means for a ribbon with respect to the bed, an endless ribbon trained over the bed and said devices, and a yielding tension device loosely engaging the ribbon beneath the bed.

9. In an inking-pad, a depressible bed fulcrumed at one extremity and free to move vertically at the opposite extremity, said bed having rollers at opposite extremities, an endless ribbon trained over the bed and directly engaging the rollers, the rollers being the only part of the pad structure controlling the feed of the ribbon over the bed, and a tension device extending upwardly and bearing against the under intermediate portion of the ribbon.

10. In an inking-pad, a depressible bed having rollers directly carried by the opposite extremities thereof, the bed at one end being fulcrumed and free to move vertically at the opposite end, an endless ribbon tautly trained over the bed and normally having its lower portion longitudinally parallel with the bed, and a yielding tension device bearing against the lower portion of the ribbon and forcing the latter upwardly toward the bed

and out of parallel alinement with the latter to exert an additional stress thereon.

11. In an inking-pad, a depressible bed fulcrumed at one extremity and free to have vertical movement at the opposite extremity, the movable devices being carried by the opposite ends of the bed, an endless ribbon trained over the bed and directly engaging said movable devices, these movable devices being the only parts of the pad structure controlling the feed of the ribbon over the bed, yielding devices engaging the under side of the bed to restore the same to normal elevated position, tension means engaging the under portion of the ribbon, and means for shifting the ribbon over the bed when the latter is operated.

12. In an inking-pad of the class set forth, a depressible bed having rollers at opposite extremities, one of said rollers comprising a tubular spindle to receive ink and apertured for feeding purposes, a plurality of absorbent sections removably disposed on the tubular spindle, an endless ribbon trained over the bed and rollers, and means for imparting to the ribbon a step-by-step shifting movement when the bed is depressed.

13. In an inking-pad of the class set forth, a bed having rollers at opposite extremities, one of said rollers comprising a tubular spindle with feeding-perforations therein and an absorbent covering, the tubular spindle being exteriorly accessible, an endless ribbon trained over the bed and rollers, and means for shifting the ribbon over the bed and rollers.

14. In an inking-pad of the class set forth, a casing having a bottom plate with an upwardly-extending flange at one extremity and coupling projections at the opposite extremity, an upper member having side and end flanges, one end flange fitting over the bottom-plate flange and the other end flange removably receiving the coupling projections, fastening devices engaging the overlapping flanges, the upper member having a top opening, a depressible bed held within the casing, an endless ribbon trained over the bed and exposed through the top opening, and means for imparting a step-by-step movement to the said ribbon.

15. In an ink-pad, an inclosing-casing, a depressible bed in the casing having rollers at opposite extremities, one of the rollers comprising a tubular perforate spindle with a spline thereon and terminally projecting outwardly through opposite sides of the casing and having on one end a removable cap, washers on the spindle adjacent to the inner surfaces of the sides of the casing, one of the washers being provided with a spline-slot and under normal conditions preventing withdrawal of the spindle, absorbent covering means removably mounted on the spindle, and an endless ribbon shiftably trained over the bed and rollers.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALBERT C. JACKSON.

Witnesses:
W. S. McKINNEY,
Jo L. BUCHANAN.