Sept. 1, 1936. F. A. STIRRUP 2,052,950

PAPER ROLL FIXTURE

Filed June 15, 1935

Fig. 1

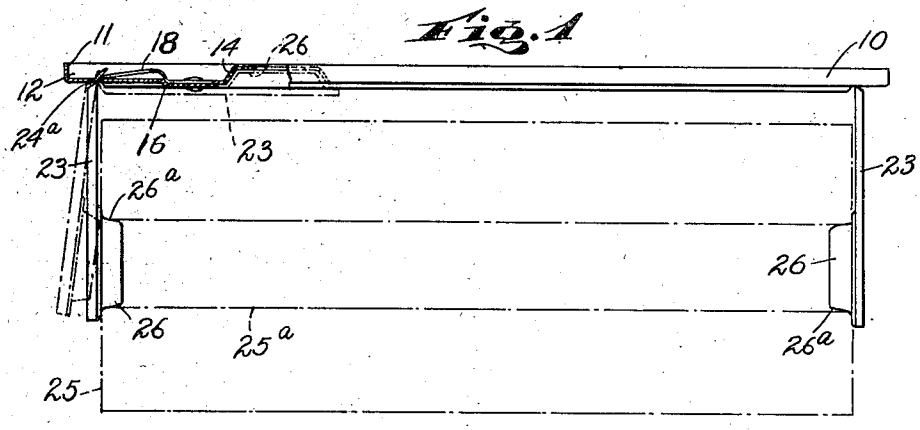


Fig. 2

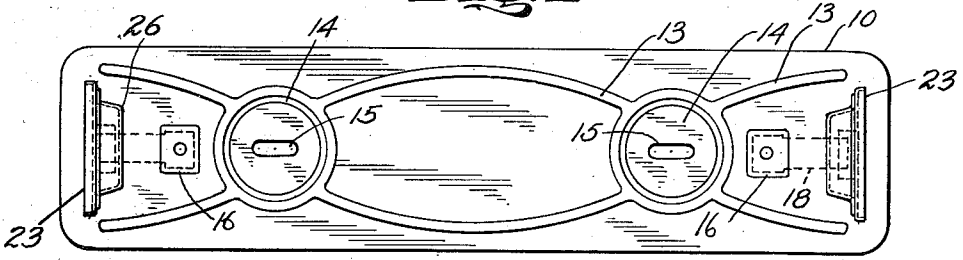


Fig. 3

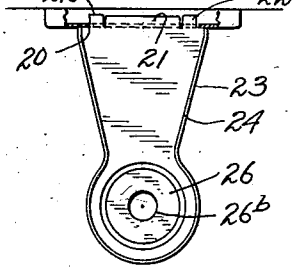


Fig. 5

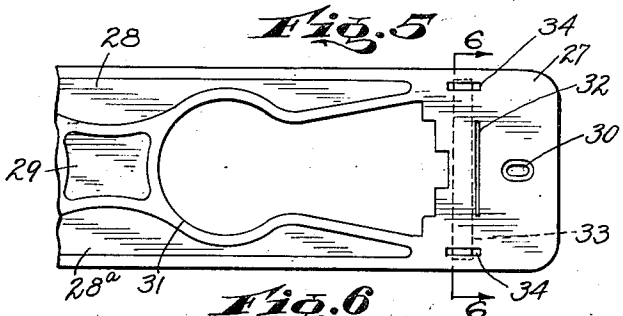


Fig. 4

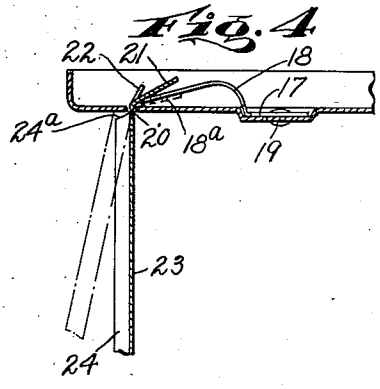
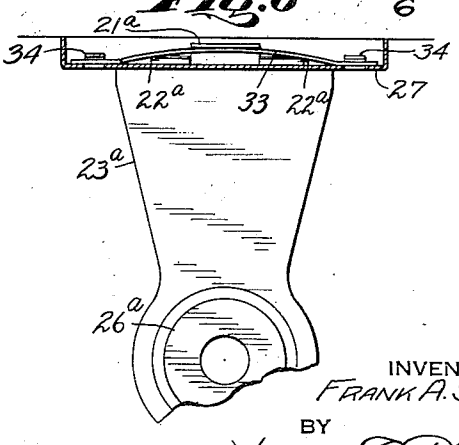


Fig. 6



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PAPER ROLL FIXTURE

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9 Claims. (Cl. 242—55.2)

This invention relates to fixtures designed for supporting a roll of paper or other material, such for example as paper toweling, to facilitate the mounting of the roll in connection with a suitable support and the removal of paper therefrom; and the object of the invention is to provide a fixture device of the class specified employing hingedly supported arms or parts adapted to nest within the base of the device to form a relatively thin and compact package facilitating packing and shipment thereof; a further object being to provide a simple and economical spring construction for tensionally retaining the arms in operative position; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified, which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a side and sectional view of one form of device which I employ indicating the manner of its use.

Fig. 2 is a face view of the device as seen in Fig. 1.

Fig. 3 is an end and sectional view of the device shown in Figs. 1 and 2.

Fig. 4 is an enlarged sectional detail view of a part of the construction shown in Fig. 1.

Fig. 5 is a view similar to Fig. 2 showing only a part of the construction and showing a modification; and,

Fig. 6 is a transverse section on the line 6—6 of Fig. 5.

In the construction shown in Figs. 1 to 4 inclusive, I provide a fixture device consisting of an elongated base plate 10 having depending peripheral flanges 11 forming a chamber 12 at the lower face of said plate, the front face of the plate being pressed outwardly to form a plurality of ribs 13 of the design or contour indicated in Fig. 2 of the drawing. At spaced intervals, the plate is pressed inwardly to form disk-shaped sockets 14 having apertures 15 in the bottom walls thereof for receiving the screws, nails or other devices employed for mounting the base plate 10 in connection with a suitable support.

Outwardly of the sockets 14, the plate is pressed outwardly to form rectangular portions 16 in which the ends 17 of flat springs 18 are seated and secured by rivets 19. Beyond the rectangular portions 16, the plate is provided with transverse apertures 20, through each of which wide flanges 21 and narrow flanges 22 on arms 23 are passed, each arm being of identical construction and the brief description of one will apply to the other.

The arms 23 are pressed from sheet metal to provide peripheral flanges 24 extending outwardly from the edges thereof which are of the contour indicated in Fig. 3. The flanges 24 of the side walls are cut away as indicated at 24*a*, Figs. 1 and 4 of the drawing, to provide outward swinging of the arms in the manner indicated in dot and dash lines at the left of Fig. 1, facilitating the attachment of a paper roll, as is indicated in dot and dash lines at 25 in Fig. 1 of the drawing.

The outer end portions of the arms 23 are pressed inwardly to form bearing studs 26 to receive the core or tube 25*a* of the roll and to facilitate frictional rotation of the roll on said bearings. The walls 26*a* of the bearings 26 are beveled to seat in the ends of the core 25*a* and to maintain the side edges of the roll 25 in spaced relation with respect to the arms 23. The free end portions 18*a* of the springs 18 extend outwardly in the direction of the ends of the plate 10 and are adapted to be engaged by the wide central flanges 21 of the arms 23 to hold the arms 23 tensionally in the position shown in full lines in Fig. 1 of the drawing and to relieve this tension when the arms are swung inwardly upon the upper surfaces of the plate 10 with the bearings 26 nesting in the sockets 14 as is indicated in dot and dash lines at the left of Fig. 1 of the drawing.

The flanges 22 are offset angularly with respect to the flanges 21 and serve to prevent displacement of the arms 23 from the base plate 10, it being understood that the flanges are bent relatively to each other after the same have been passed through the apertures 20 in the assembly of the several parts of the device. From the foregoing description, it will be apparent that my complete device is constructed from three main parts, namely, the base, the arm and the spring, the arm and spring being duplicated in the completion of one device.

In Figs. 5 and 6 of the drawing, I have shown a slight modification in which a base 27 substantially similar to the base 10 is employed, the base having depressed portions 28, 28*a* at opposite sides thereof, a central depressed portion 29 and an apertured depression 30 at each end thereof, the latter serving as means for receiving the screws or nails for mounting the base plate in connection with a suitable support. With this construction, each end portion of the top wall of

the base plate is cut out as seen at 31. From this cut out portion, arms 23a substantially similar to the arms 23 are formed, the only difference being that the arms 23a have a long narrow central flange 21a and short wider side flanges 22a as may be clearly seen from the contour of the cut-out opening formed in the top plate of the base. The flanges 21a and 22a pass through elongated apertures 32 formed in the top plate of the base, and adjacent said apertures is arranged a transverse flat spring 33 seating in loops 34 pressed inwardly from the top plate of the base 27. The central portion of the spring 33 is bowed downwardly and the central flange 21a extends angularly in the direction of this spring so that the spring normally tends to move the arm 23a inwardly toward the central portion of the base plate 27 and exerts tension on the arm in moving the same laterally in the manner indicated with the structure shown in Fig. 1 in dotted lines at the left of said figure. The flanges 21a and 22a are angularly disposed with respect to each other to prevent displacement of the arms from the base plate, it being understood that the shoulders at opposite sides of the lower portions of the arms limit inward movement of the arms with respect to the base plate.

The arms 23 of the studs 26 thereof may also include apertures 26b as may also the arms employed in the structure shown in Figs. 5 and 6 of the drawing to provide supports for rollers, pins or the like upon which a roll or tube may be rotatably supported or which may form a support for any other article. Whether or not the apertures 26b are employed, the mounting of the arms may simply be reversed to expose the sockets of the studs 26 inwardly to provide recesses in which the ends of a rod or roller may be mounted. From the foregoing, it will be apparent that the device is not limited to any specific use, the distinctive feature of the invention residing in the structure of the fixture as a whole.

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

1. A fixture of the class described comprising a base plate, an arm hingedly and collapsibly mounted in connection with said plate, said arm being fashioned from a sheet of metal, said base plate having an elongated aperture, the width of which is substantially equal to the thickness of the sheet metal in said arm, one end of the arm having independent portions adapted to be passed through the aperture in said plate, said portions extending in divergent relationship with respect to each other to retain the arm against displacement from said base plate and to provide hinge movement of the arm on said plate, and a tensional device engaging one of the portions of said arm to tensionally support the arm in a position substantially perpendicular to the base plate.

2. In a fixture of the class described, a base provided with an elongated aperture, an arm movably supported in connection with the base, one end portion of the arm having inwardly of the side edges thereof projecting flange portions adapted to be passed through the aperture in said base and extending in different directions one with respect to the other to provide a hinge mounting of the arm in connection with said base, and a flat spring on the base engaging one of said flange portions to tensionally support the arm in a position substantially perpendicular to said base.

3. In a fixture of the class described, a base provided with an elongated aperture, an arm movably supported in connection with the base, one end portion of the arm having inwardly of the side edges thereof projecting flange portions adapted to be passed through the aperture in said base and extending in different directions one with respect to the other to provide a hinge mounting of the arm in connection with said base, a flat spring on the base engaging one of said flange portions to tensionally support the arm in a position substantially perpendicular to said base, and the side edges of said arm having flanges fashioned to limit the hinge movement of the arm in one direction upon said base.

4. A fixture device for paper rolls comprising an elongated base, opposed end portions of the base having elongated apertures extending transversely thereof, arms hingedly mounted in connection with the apertured portions of the base, said arms including flanges passed through the apertures in said base and angularly disposed with respect to each other to retain the arms against displacement from the base, springs cooperating with said arms, means adjacent said apertures for supporting said springs on the lower surface of said base and at least one flange of each arm operatably engaging the adjacent spring of said base to tensionally support the arm in an outwardly extending position with respect to the base.

5. A fixture device for paper rolls comprising an elongated base, opposed end portions of the base having elongated apertures extending transversely thereof, arms hingedly mounted in connection with the apertured portions of the base, said arms including flanges passed through the apertures in said base and angularly disposed with respect to each other to retain the arms against displacement from the base, springs cooperating with said arms, means adjacent said apertures for supporting said springs on the lower surface of said base and at least one flange of each arm operatably engaging the adjacent spring of said base to tensionally support the arm in an outwardly extending position with respect to the base, the free end portions of said arms having inwardly extending bearing portions, and the central portion of the base being recessed to receive the bearing portions of said arms when the arms are in collapsed and folded position to provide compact packing of the complete device.

6. A fixture device for paper rolls comprising an elongated base, opposed end portions of the base having elongated apertures extending transversely thereof, arms hingedly mounted in connection with the apertured portions of the base, said arms including flanges passed through the apertures in said base and angularly disposed with respect to each other to retain the arms against displacement from the base, springs cooperating with said arms, means adjacent said apertures for supporting said springs on the lower surface of said base and at least one flange of each arm operatably engaging the adjacent spring of said base to tensionally support the arm in an outwardly extending position with respect to the base, the free end portions of said arms having inwardly extending bearing portions, the central portion of the base being recessed to receive the bearing portions of said arms when the arms are in collapsed and folded position to provide compact packing of the complete device, and said base having sockets forming seats for said springs.

7. A fixture of the class described comprising an elongated base consisting of a top plate having

depending peripheral walls, said top plate being provided with elongated apertures arranged transversely of and adjacent the ends of said base, sheet metal arms for hinged mounting in connection with said base, said arms having flanges adapted to pass through the apertures in said base, the flange of each arm being divided into a plurality of parts extending in angular relation with respect to each other in hingedly mounting the arms to the base and in retaining the same against displacement therefrom, flat springs mounted in connection with the base adjacent the apertures therein, and at least one flange of each arm engaging the adjacent spring for tensionally supporting the arm in a substantial perpendicular relation with respect to said base.

8. A fixture of the class described comprising an elongated base consisting of a top plate having depending peripheral walls, said top plate being provided with elongated apertures arranged transversely of and adjacent the ends of said base, sheet metal arms for hinged mounting in connection with said base, said arms having flanges adapted to pass through the apertures in said base, the flange of each arm being divided into a plurality of parts extending in angular relation with respect to each other in hingedly mounting the arms to the base and in retaining the same against displacement therefrom, flat springs mounted in connection with the base adjacent the apertures therein, at least one flange of each arm engaging the adjacent spring for tensionally supporting the arm in a substantial perpendicular relation with respect to said base, the free ends of the arms including integral, inwardly pressed bearing portions upon which a roll of paper is adapted to be mounted, and the base inwardly of said apertures being provided with sockets adapted to receive the projecting bearing portions of said arms to maintain said arms in substantial parallel relation to the base in the packing and shipment thereof.

9. In a fixture of the class described, an elongated base plate, arms arranged at opposite end portions of the plate and normally collapsible thereon and adapted to be extended into positions perpendicular to the plate, means on said arms engaging the plate to provide hinge connections of the arms with the plate, the inner opposed surfaces of the arms having inwardly projecting bearings at the free end portions thereof and the base plate having recesses conforming with the peripheral contour of said projecting bearings and into which said bearings are adapted to pass when the arms are in collapsed position to maintain said arms in substantially parallel relation to the base plate in the packing and shipment of the fixture.

FRANK A. STIRRUP.