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BRACKET FOR DISPENSING ROLLS

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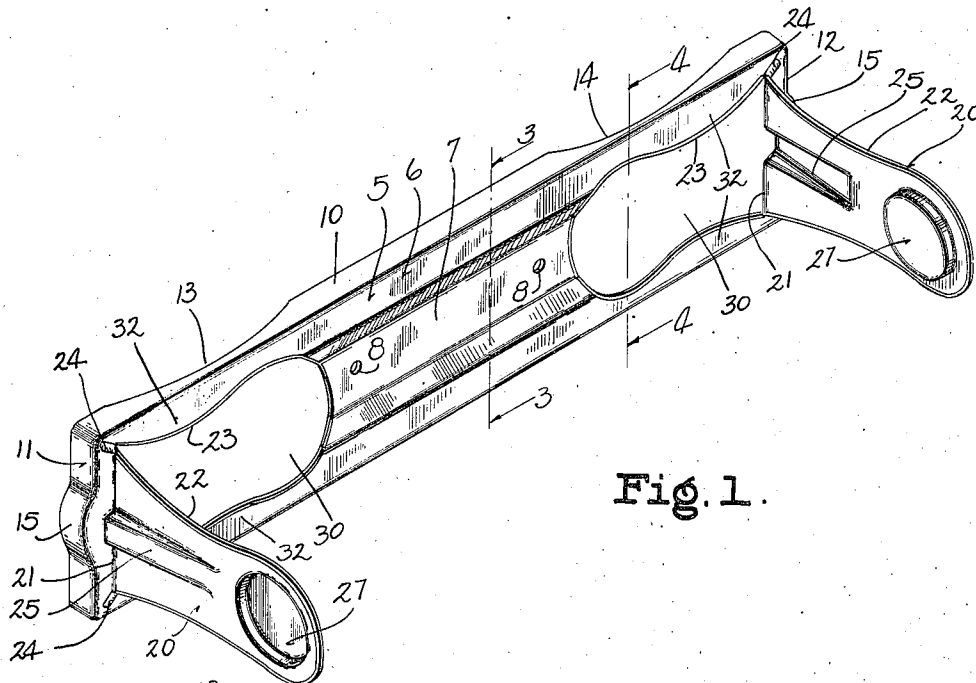


Fig. 1.

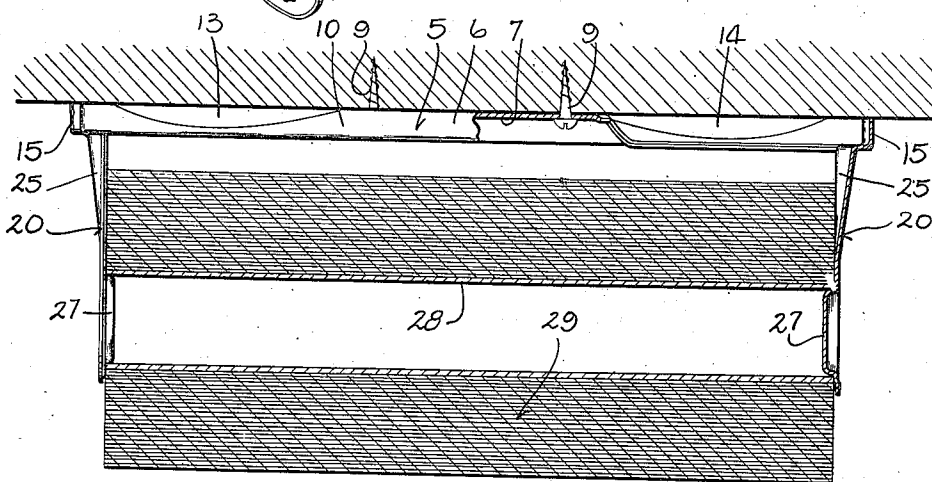


Fig. 2.

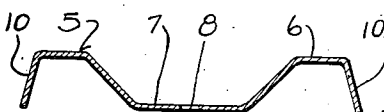


Fig. 3.

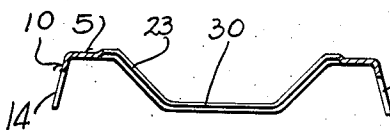


Fig. 4.

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BRACKET FOR DISPENSING ROLLS

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3 Claims. (Cl. 242—55.2)

This invention relates to improvements in bracket for dispensing rolls.

The bracket herein disclosed is particularly adapted for supporting a roll from which paper toweling or the like is dispensed, but the bracket is also useful for a variety of other purposes.

It is the primary object of the invention to provide a bracket having a base and a pair of roll supporting arms formed integrally of sheet metal with provision for reinforcing the arms and the base adjacent the point of connection therebetween and providing elsewhere for such resilience as is required to permit the arms to be sprung apart to receive the roll which is to be dispensed.

It will be understood by those skilled in the art that the arms in a device of this character must be sprung to receive the core of the roll to be mounted thereon. Yet they must have sufficient strength to firmly engage and retain the core in position during use. When the arms are made sufficiently strong for the work required of them, their resistance to the movement necessary for the insertion of the roll is such as to tend to crack the arm or the base at the point where the arm and the base are integrally joined. Repeated movement of the arms fatigues and crystallizes the metal at this point, the tendency being to localize all of the strain upon a line.

More particularly stated, it is the object of the present invention to strongly reinforce the metal along the line at which it tends to bend, and to distribute the bending strains in the arms and the base, a large part of the stress being transferred to the base, in such a manner that there will be no fatigue of the metal over long periods of use and cracking is avoided.

In the drawing:

Fig. 1 is a view in perspective showing a completed bracket embodying the invention.

Fig. 2 is a plan view thereof partially in section showing the bracket in operation in support of a roll of toweling or the like.

Fig. 3 is a view taken in section on the line 3—3 of Fig. 1.

Fig. 4 is a view taken in section on the line 4—4 of Fig. 1.

Like parts are identified by the same reference characters throughout the several views.

As above indicated, my improved bracket is preferably made of a single piece of sheet metal stock from which both the arms and the base are formed. The base 5 has a relatively rigid central portion at 6 reinforced by a central channel 7 wherein apertures are provided at 8 for the mounting screws 9.

The entire base is provided about its perimeter with a marginal flange at 10 which is of uniform depth at the central side portions of the base and around the ends 11 and 12 thereof, but is relieved by being cut away on arcuate lines at 13 and 14 to such an extent that at the middle of the arc very little of the flange remains.

The end portions 11 and 12 may be, and preferably are, further reinforced by the channels 15. Thus the end portions 11 and 12, both by reason of the channels 15 and the fact that the flange 10 is of full height around all four corners, will be relatively rigid.

The arms 20 are cut from the material of the base and folded at right angles thereto upon the line 21 (Fig. 1). Where the margin 22 of each arm joins with the margin 23 of the base at the opening from which the arm was formed, the base is preferably provided with a rib 24. The several ribs 24 preferably extend in a generally diagonal direction from the ends of the line 21. These reinforcing ribs 24 tend to prevent the metal from tearing at these points when the arm is deflected from its normal position at right angles to the base.

To further strengthen the line of connection between the arm and the base, I prefer to provide each arm with a reinforcing rib or channel 25 of box-like rectangular cross section merging with the base at one end and thence tapering in cross section until it runs out near the extremity of the respective arm, as best shown in Fig. 1. This box-like rib is sufficiently sturdy to render each arm substantially rigid next to the base and to permit it increasing flexibility toward the end of the arm.

The respective arms have bosses at 27 engageable in the core 28 of the supply roll 29, there being no provision for engaging the bosses in such core except by springing the arms apart.

The area of the openings 30 formed in the face is materially in excess of the projected area of the respective arms formed therefrom. The elimination of material from the base adjacent the cuts 13 and 14 in the base flange has the effect of reducing the stiffness of the base. Since the width of the base panel is greatest at 32 near the points 13 and 14 where the base flange is narrowest, the effect is to distribute the bending strains throughout the flexible portions of the base without tending to establish weakness at a line such that crystallization might occur.

As a result of this construction I have provided a bracket with a base which has relatively rigid portions at its ends and at its center, the center

portion line being mounted on the wall and the relatively rigid end portions being left free of the wall. The arms, and particularly the line of connection between each arm and the rigid end portion of the base, are heavily reinforced so as to prevent breakage, or even bending, along these lines.

Thus when the arms are sprung apart to permit of the removal or introduction of a core, the flexibility requisite for the separation of bosses 27 is found primarily in the relieved portions of the base between its central rigid part and its terminal rigid parts. The panel portions 32 of the base are free to spring but their stresses are well distributed instead of being concentrated at any one point, as is inevitably the case where the yielding occurs along the line of connection of each arm with the base.

As a result of this construction breakage is practically eliminated and the device will retain its full resilience and full strength almost indefinitely.

I claim:

1. A sheet metal bracket of the type comprising a base and projecting arms having free end portions requiring separation to receive a roll of material to be dispensed, said bracket comprising an elongated sheet metal base having longitudinally spaced apertures and sheet metal arms integrally connected with the base between the apertures and the respective ends of the base, said arms projecting at right angles to the base in substantial parallelism with each other and provided with end portions having roll supports, side and end flanges connected with the base, the side flanges being relieved opposite the respective apertures between the central portion of the base and its respective ends, said side and end flanges reinforcing against bending the central and end portions of the base, and means for reinforcing against bending the respective arms at their respective connections with the base, whereby the separation of the free ends of the said arms is accommodated in the base between the central and end portions thereof.

2. A device of the character described comprising an elongated base having a reinforced central portion provided with mounting means, said base having ends reinforced against bending and having apertures between its central portion and its respective ends, a flange substantially continuous along the perimeter of the central and end portions of the base, said flange being relieved at each side of the base adjacent the apertures thereof, arms projecting from the reinforced end portions of the base adjacent the apertures and formed of material derived from the apertures in integral connection with the base, said arms projecting substantially at right angles to the base and provided with free end portions having roll supporting means, and said arms and base being provided with reinforcing rib means stiffening the respective connections of the arms with the base, whereby the arms and the end and central portions of the base are all more rigid than the apertured portions of the base.

3. In a device of the character described, the combination of a base of elongated form having a central portion adapted to be mounted on a support and provided with means reinforcing said central portion against yielding with respect to said support, said base having terminal portions reinforced against bending and normally engaged with said support and intervening relieved portions sufficiently flexible to permit of bending and integrally connecting the central portion of said base with the end portions thereof, arms integral with the end portions and projecting substantially at right angles thereto and to said support, said arms having means reinforcing them against bending with respect to said base and being provided with free ends and with roll engaging means requiring spreading to receive a roll, the relieved portions of said base being sufficiently flexible to accommodate such movement of said arms and the end portions of said base as may be required to introduce a roll between said supports.

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