July 28, 1931. C. MATTHAEI 1,816,385

DEVICE FOR UNWINDING COILED WIRES, BAND IRON, AND THE LIKE

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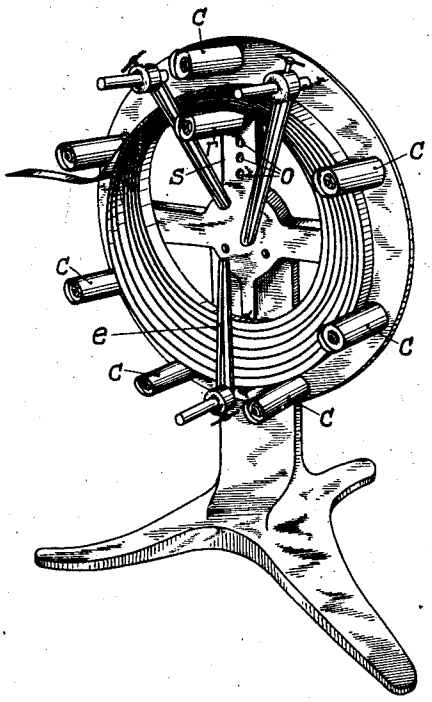

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UNITED STATES PATENT OFFICE

CURT MATTHAEI, OF OFFENBACH, GERMANY

DEVICE FOR UNWINDING COILED WIRES, BAND IRON AND THE LIKE

Application filed February 14, 1930, Serial No. 428,439, and in Germany February 22, 1929.

The invention relates to a device for unwinding coiled wires, band-iron and the like, such as shown and described in the Letters Patent of the United States, No. 1,729,955 granted to me on October 1, 1929 to which reference is made.

In the above mentioned patent I have pointed out characteristics which an unwinding device of the described type should possess. While the aforesaid mentioned patent thus describes and illustrates the device more generally, the present application covers a commercial and practical development of the invention referred to in said prior patent.

The chief object of the present invention is to more specifically adapt the device for coils of wire, band-iron and the like of a comparatively small diameter and even for coils of soft band-iron or the like having but little springiness.

With this object in view I provide below the topmost roller or rollers a supporting element in the stationary casing upon which the coiled wire or band-iron is to be hung so as to occupy an eccentrical position with relation to the casing. In operation the windings of the coil are loose and partially unwound that is as much as the surrounding set of rollers allow so that the outermost winding will come in contact with and rest upon the lower rollers of the set or system due to springiness, if any, or gravity. During the unwinding operation the outermost winding of the coil slides over the lower rollers and remains constantly in contact with the same.

In the preferred embodiment shown in the accompanying drawings forming a part of this specification the said supporting element for the coil to be hung thereupon is in the form of a supplementary roller adjustably mounted in the disk or rear wall of the casing and adapted to be set or positioned radially in accordance with and as required by the particular diameter of the coil of wire, band-iron or the like to be unwound.

In the embodiment shown the supplementary roller r is of usual construction, for instance such as illustrated in Figure 3 of the patent referred to or of any other suitable or equivalent construction comprising a supporting pin and a cylindrical roller, properly speaking, the pin being detachably secured to the upper vertical radial arm s of the disk, preferably by screwing the threaded foot-end of the pin into a threaded bore o of the arm s. As will be seen, there are several threaded bores o provided in the arm s so as to be spaced in radial or vertical direction for adjusting purposes, that is to say the pin of the roller r is to be secured in any one of the holes which on account of its particular distance from the center of the disk is best suited for and in harmony with the particular size or diameter of the coil to be hung on the roller r. The tight-wound coil when hung upon the roller occupies an eccentric position on the disk, but the windings thereof loosen gradually and extend until the outermost winding is in contact with the lowermost roller or rollers c, as shown. The outer end of the wire or band-iron projects between two lateral rollers and upon draught exercised on the same, the wire or band-iron readily unwinds with the circumferential or outermost winding constantly in contact with the lower rollers c as shown detachable and adjustable radial arms e being provided for preventing the coil from sliding off the roller r.

Though I have described and shown with great particularity of detail a certain specific embodiment of my invention, yet it is not to be understood therefrom that the invention is limited to the particular embodiment disclosed. Various modifications in detail and in the arrangement and combination of the parts may be made by those skilled in the art without departure from the invention and without sacrificing any of the advantages of my invention as defined in the appended claim.

What I claim is:

A device for use in unwinding coils of wire, band-iron and the like, comprising the combination with a standard, a vertically arranged disk carried thereby, a series of rollers projecting from one face of said

disk and annularly arranged thereon, adjustable means carried by and cooperating with said disk and rollers to define a shallow cylindrical compartment for receiving a coil of wire, of a supplemental roller between the uppermost of said series of rollers and the axis of said compartment, said supplemental roller constituting an eccentrically disposed support for a coil whose outer loosened turns may slide upon the lower rollers of said series of rollers.

In testimony whereof I affix my signature.

CURT MATTHAEI.