

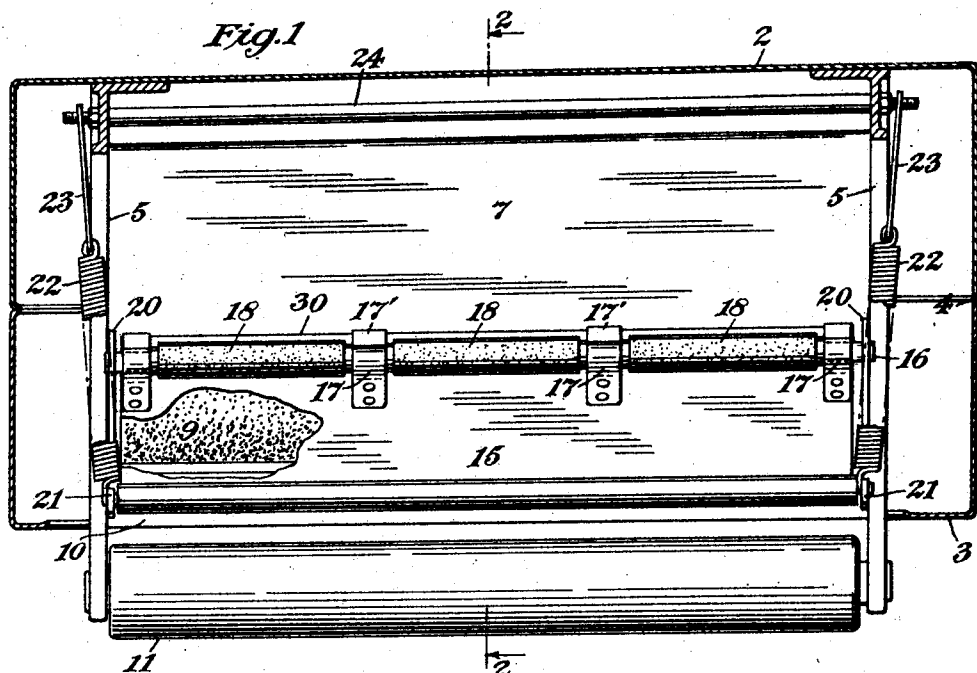
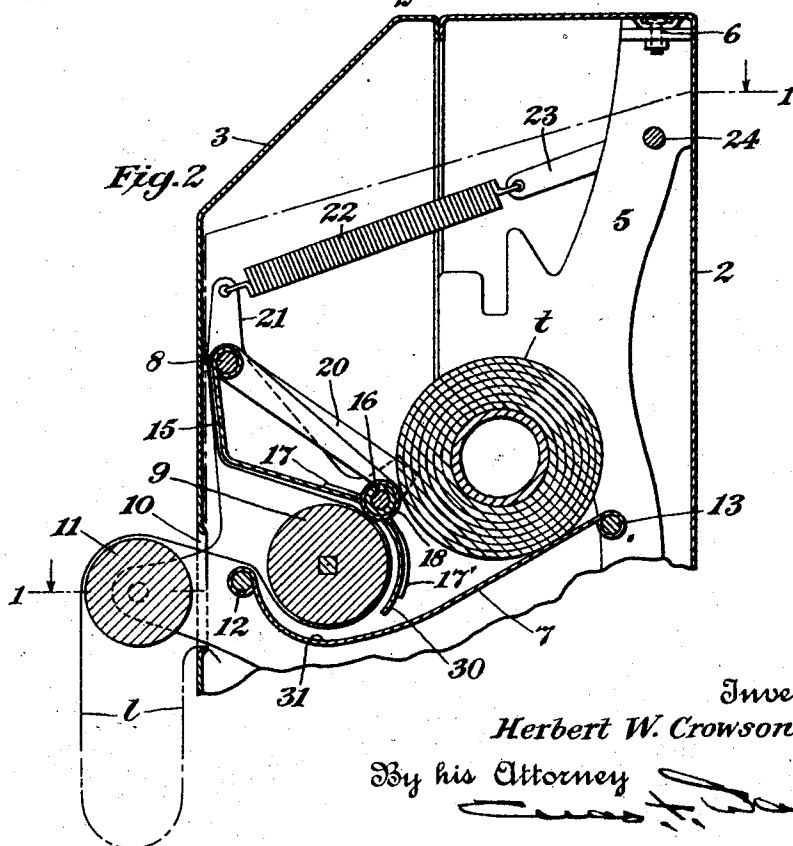
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H. W. CROWSON

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TOWEL CABINET

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Inventor

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By his Attorney

[Signature]

UNITED STATES PATENT OFFICE

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TOWEL CABINET

Application filed May 2, 1930. Serial No. 449,214.

This invention relates to towel cabinets of the type adapted to contain a so-called "continuous" towel, that is, a long length of towel, usually in roll form, which is adapted to be drawn outwardly through an opening in the cabinet in suitable predetermined lengths for drying purposes. This type of cabinet is usually provided with a roller mounted therein in position to be engaged and rotated by the towel as the latter is withdrawn from the cabinet, the said roller, usually termed a "feed" roller, being adapted in some instances to cooperate with a stop device for effecting an alternate stopping and releasing of the same to control the feed of the towel from the cabinet, and also being further adapted to operate, through suitable drive connections, a rewinding device for taking up the soiled towelling at the same time that the clean towelling is withdrawn from the cabinet. Both such uses of the feed roller are disclosed in the pending application, Serial No. 412,340.

Because of such uses of the feed roller, it obviously is desirable that it should be positively rotated by the towel as the latter is withdrawn from the cabinet, and in order to effect this it is necessary that the frictional engagement of the towel with the roller when being drawn over the latter should be sufficiently strong to prevent slippage. With such facts in mind, it has been the object of my present invention to provide a simple and effective means for producing a desired or effective degree of frictional engagement of the towel with the roller whereby the towel, when withdrawn from the cabinet, will positively cause rotation of the roller. This object I attain by the new and novel arrangement and combination of parts comprising my invention as hereinafter described and claimed and as illustrated in the accompanying drawings, in which—

Fig. 1 is a sectional plan of a cabinet embodying my invention, the section being a staggered one on the line 1—1 of Fig. 2.

Fig. 2 is a vertical section through the upper part of the cabinet, the section being taken on the line 2—2 of Fig. 1.

In these drawings, which show only so

much of a cabinet as is necessary for the illustration of my present invention, the outer casing is shown as comprising two sections 2 and 3, the front section 3 being hinged at one of its vertical edges to the rear section 2, as at 4, whereby the casing may be opened to permit of ready access to the interior thereof.

Located within the casing adjacent its opposite ends are a pair of frame or bracket plates 5, 5 for the support of certain parts of the towel supporting and tensioning mechanism to be presently described; these plates being fastened together by suitable tie rods and secured to the casing by suitable fastening means, such as the bolts 6.

Mounted between the bracket plates is a stationary shaft 7 upon which is supported the roll of clean towelling, indicated at *t*. When so supported, the leading end of the towel is led from the front side of the roll up and over a guide rod 8, from thence downwardly and partially around a feed roller 9, suitably journaled in the end brackets, and from thence forwardly through an opening 10 in the front wall of the casing to and over a guide roller 11, which latter is journaled in extensions of the bracket plates projected through the opening in the casing to support the roller 11 at the front side thereof as shown. From this roller the towel depends in loop form, as at *l*, in convenient position for use; the towel at the rear side of the loop passing backwardly through the opening 10 to a usual form of take-up or rewinding device adapted to be operated from the feed roller 9 through chain and sprocket connections, said device and its drive connections not being here shown.

The shelf 7, which is preferably formed of sheet metal, is here shown as mounted at its front and rear longitudinal edges on stationary rods 12 and 13 carried by the end frame plates, about which rods the edges of the shelf are bent and secured as shown. This shelf is formed and positioned to present an inclined surface extending from its rear edge downwardly towards the feed roller, as shown in Fig. 2, whereby a supported roll of towelling will always tend to gravi-

tate towards said roller, for cooperation with an interposed tension device.

This tension device comprises a plate 15, preferably formed of sheet metal, which at its upper end is bent about the rod 8 for pivotal connection therewith, and adjacent its opposite or free end carries a rod 16, held in place by a plurality of metal straps 17 riveted or otherwise secured to the plate 15, on which rod is mounted a plurality of rolls 18, preferably in the form of rubber tubing or like yielding material. These rolls 18 are held by the pivoted plate 15 in a position between the feed roller and the roll of towelling whereby the latter will bear upon said rolls and force them against the feed roller to produce a desired frictional engagement of the towel with said roller in its passage thereover when being drawn outwardly from the cabinet; such frictional engagement of the towel with the roller being augmented by reason of the latter having a roughened or sanded surface as shown in Fig. 1.

As a means supplemental to the roll of towelling for holding the rolls 18 in towel tensioning engagement with the feed roller, I have fulcrumed a pair of levers on the opposite ends of the rod 8 with their lower arms 20, 20 bearing against the roll carrying rod 16 adjacent its opposite ends, and with their upper arms 21, 21 connecting with one end of a pair of springs 22, 22, which latter at their opposite ends connect with links 23, 23 mounted on the ends of a tie rod 24 secured in the end frame plates, as best shown in Fig. 1.

The purpose of having the rolls 18 formed of rubber or other yielding material is to assure a close contact of the towel with the sanded or roughened surface of the feed roller without causing undue wear or tear on the towel such as might result if it were drawn between two unyielding surfaces, one of which is rough, and particularly where the towel is subjected to sudden pulling or jerking in being withdrawn from the cabinet, as in the present case, by different users thereof.

In threading a clean towel through the cabinet, more or less trouble has heretofore been experienced in getting the leading end of the towel to the front of the feed roller, in a convenient position to be grasped by the operator, after passing it backwardly over said roller. I make provision for this in the present cabinet by extending the forward side of the towel shelf 7 beneath the feed roller to a point at the front thereof, and by providing the tension device at its lower or free end with a guide member 30 extending in close proximity to the feed roller from the rolls 18 to a point adjacent the forward towel guiding surface 31 of the shelf, as shown in Fig. 2. With this means, when the leading end of the towel is passed backward over the feed roller, it will be engaged by the guide

member 30 and caused thereby to be delivered onto the shelf 7 in a forwardly moving direction, from whence its further movement will be directed by said shelf to a position at the front side of the feed roller where it may be conveniently grasped for its further feeding.

The guide member 30 may be formed and connected with the tension device in any suitable way, the same as here shown being in the form of a sheet metal strip, curved transversely to conform generally to the curvature of the feed roller, and connected to the plate 15 of the tension device by extensions 17' of the straps 17, to which extensions the member 30 may be secured by soldering or otherwise.

What I claim is:

1. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, and a pivoted tension device having a part thereof interposed between the roller and the roll of towelling to be forced by the latter against said roller.

2. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, and a pivoted tension device having a roll interposed between the feed roller and the roll of towelling to be forced by the latter against said roller.

3. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, and a pivoted tension device having a roll of yielding material interposed between the feed roller and the roll of towelling to be forced by the latter against said roller.

4. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, and a tension device comprising a pivoted frame carrying a rod having mounted thereon a plurality of rubber rolls, said rolls being supported in position between the feed roller and the roll of towelling to be forced by the latter against said feed roller.

5. In a towel cabinet, the combination with a feed roller, of a towel shelf at the rear of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, said shelf being extended as a towel guiding means beneath the roller to the front thereof and in close proximity thereto, and a tension device pivotally supported above the feed roller and having a part thereof extended

between the roller and the roll of towelling to be forced by the latter against said roller, the said tension device having at its lower or free end a towel guiding member extending in close proximity to the roller to a point adjacent the towel guiding portion of the towel shelf.

6. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, a pivoted tension device having a part thereof interposed between the roller and the roll of towelling to be forced by the latter against said roller, and means supplemental to the roll of towelling yieldingly holding the tension device in engagement with the feed roller.

7. In a towel cabinet, the combination with a feed roller, of a towel shelf at one side of said roller inclined downwardly towards the same whereby a supported roll of towelling will gravitate towards the roller, a pivoted tension device having a part thereof interposed between the roller and a roll of towelling to be forced by the latter against said roller, and means supplemental to the roll of towelling yieldingly holding the tension device in engagement with the feed roller, said means comprising a pair of spring-actuated levers acting against the tension device.

In testimony whereof I affix my signature.

HERBERT W. CROWSON.