July 12, 1938. W. I. JONES 2,123,849

SPOOL PACKING INSTALLATION

Filed Oct. 14, 1935

Fig. 1.

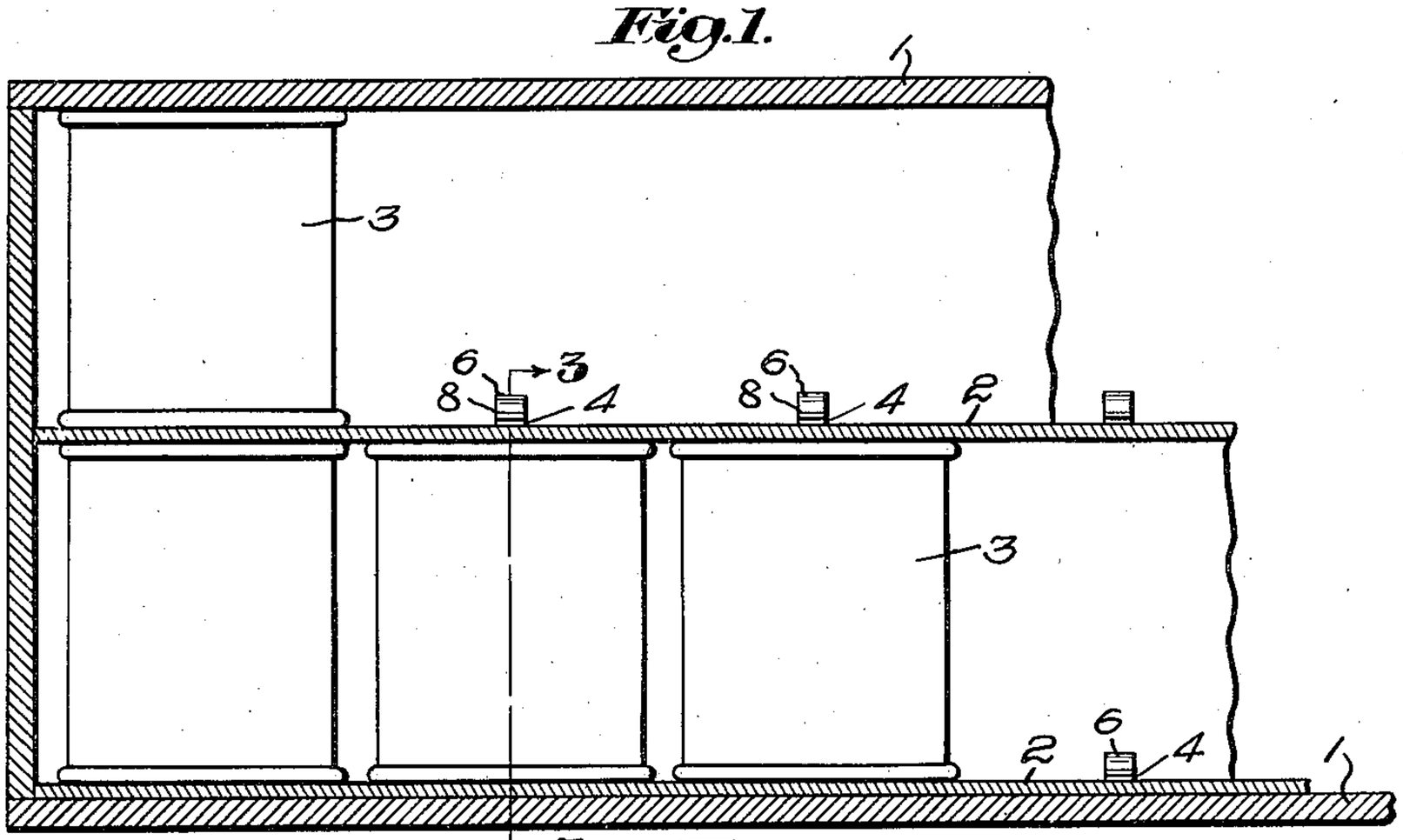

Fig. 2.

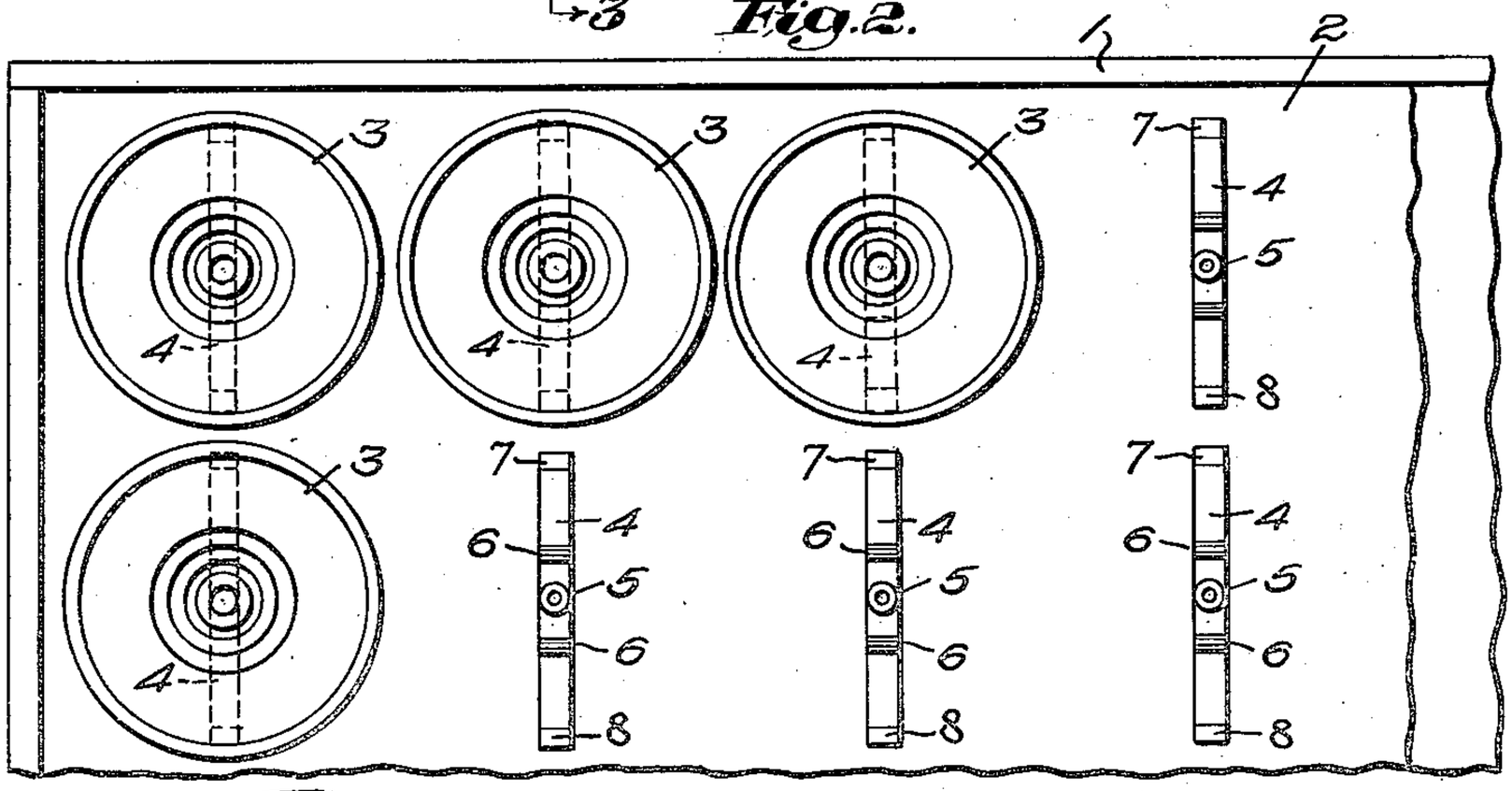

Fig. 3.

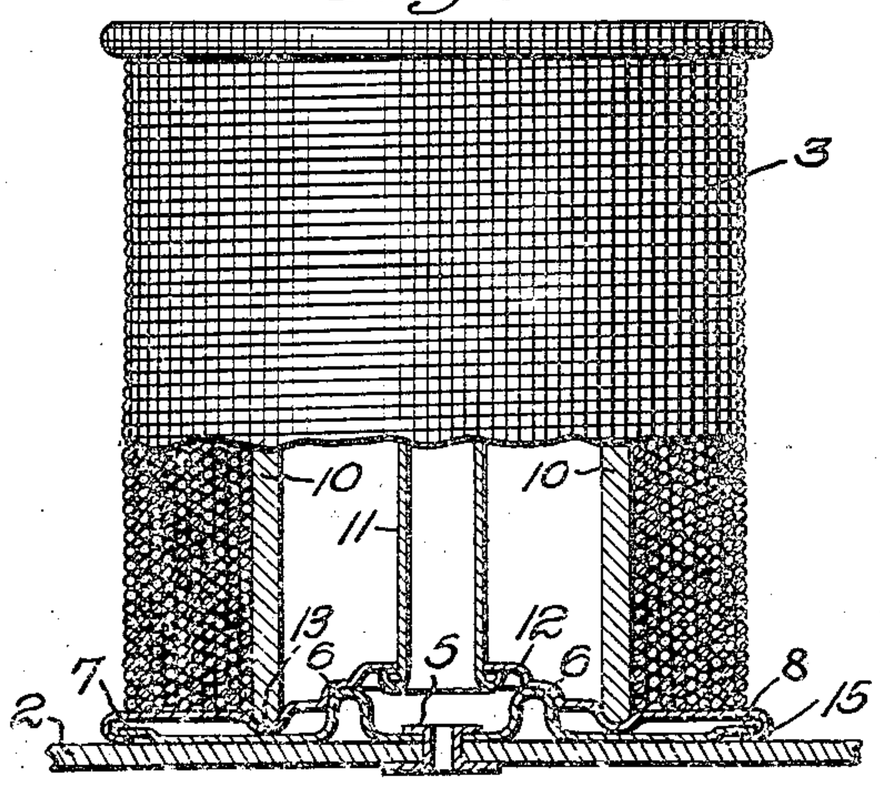

Fig. 4.

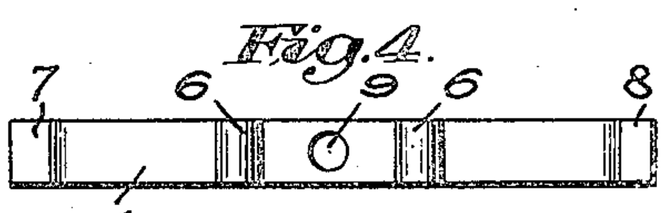

Fig. 5.

Inventor:
Walter I. Jones

Patented July 12, 1938 2,123,849

UNITED STATES PATENT OFFICE

2,123,849

SPOOL PACKING INSTALLATION

Walter I. Jones, Arlington, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Massachusetts

Application October 14, 1935, Serial No. 44,892

3 Claims. (Cl. 248—361)

My invention relates to new and useful improvements in a spool packing installation.

In the drawing which illustrates a preferred embodiment of my invention:

Fig. 1 is a section of a portion of a box or container, several spools in position being shown in elevation;

Fig. 2 is a top plan view of Fig. 1 with the cover removed;

Fig. 3 is a fragmentary section of a spool taken on the line 3—3 of Fig. 1;

Fig. 4 is a top plan view of a fastener member; and

Fig. 5 is a side view of the fastener member shown in Fig. 4.

The object of my invention is to provide a means for packing a quantity of spools or the like in a box or container by a simple and inexpensive method whereby the spools will remain in a fixed position one to another during a movement of the box as in transport.

Referring to the drawing, which illustrates a preferred embodiment of my invention, I have shown in Figs. 1 and 2 a box or container 1, a supporting strip 2, and a series of spools 3. The spools 3 are attached to the supporting strip 2 by means of the fastener members 4. The fastener members 4 may be attached to the supporting strip 2 by the rivets 5 as shown in Fig. 2 and 3.

A fastener member 4, as shown in Figs. 4 and 5, is generally rectangular in shape and preferably made of a single piece of spring metal. Two looped spring portions 6 are pressed upwardly from the base to provide a longitudinal spring action in the fastener member. End portions 7 and 8 are raised slightly from the base line of the fastener member and extend generally parallel to the base line. An aperture 9 is provided as a means for riveting the member 4 to the supporting structure 2.

The spool 3, which I have taken as a preferred illustration, has a hub part 10 surrounding a sheet metal pin 11 as shown in Fig. 3. The hub 10 may be made of any suitable material. To one end of the spool I have attached a metal base part 12. The base 12 is generally circular in shape and is hollowed upwardly toward its center where an aperture is provided as a means for attachment to the pin 11. The base part 12 is bent downwardly at the positions 13, as shown in section in Fig. 3, to provide a support for the hub 10; and the outermost flange of the base part is turned downwardly and inwardly toward its center to provide the hook-shaped portions 14 and 15. The other end of the spool may also have a base part the same as the part 12.

In assembling the spool installation together, the fastener members 4 are attached to the supporting strip 2 in a properly spaced position to receive the spools 3. The supporting strip 2 is then fastened within the container 1. To attach the spools 3 to the fastener member 4, the hook-shaped portion 14 of the spool is hooked over the end portion 7 of the fastener member. Then, if a longitudinal pressure is employed toward the opposite end portion 8, the member 4 will contract sufficiently, due to the spring action in one or both of the looped portions 6, to allow the hook-shaped portion 15 of the spool to slip over the end portion 8. When the longitudinal pressure is released the member 4 will automatically spring back to its normal position and the spool 3 will be securely engaged with the fastener member 4. The fastener member 4 is so constructed that a similar action will take place if the spool 3 is first hooked to the end portion 8.

The spool 3 is disengaged from the fastener member 4 by employing an upward pull force on the spool in a vertical direction to the fastener member. The spring resiliency in the fastener member 4 will permit the opposite end portions 7 and 8 to move upward in a direction with the pull force until they are at a distance, one to another, which will allow the base hooks 14 and 15 to slip off the end portions. The end portions will then return to their normal spaced apart position ready for a future engagement operation.

While I have illustrated and described a preferred embodiment of my invention, I do not wish to be limited thereby, because the scope of my invention is best defined by the following claims.

I claim:

1. In combination with a supporting structure having a fastener member secured thereto, said fastener member having a raised portion at one end and a looped portion providing longitudinal spring action in said fastener member, an article to be supported having a base portion with a hollow rim for cooperative hooking engagement with the fastener member on said supporting structure.

2. In combination with a supporting structure having a fastener member secured thereto, said fastener member having opposite raised end portions and at least one looped portion providing longitudinal spring action in said fastener member, an article to be supported having a circular sheet metal base portion with a hollow rim for

cooperative hooking engagement with the fastener member on said supporting structure.

3. In combination with a rigid supporting structure having a fastener member secured thereto, said fastener member having opposite end portions spaced from said supporting structure and having loop-shaped means formed as a part of the fastener intermediate its ends for providing longitudinal spring action whereby the fastener may be foreshortened, an article to be supported having a hollow rim of fixed dimensions at the periphery thereof for engagement with the end portions of the fastener member on said supporting structure by hooking one end of the fastener into the hollow rim and then longitudinally foreshortening the fastener to permit the other end to engage in the hollow rim.

WALTER I. JONES.