Nov. 28, 1939. M. ABRAMOWITZ ET AL 2,181,308

SPRING CUSHION FILLING MACHINE ATTACHMENT

Filed May 25, 1938 2 Sheets-Sheet 1

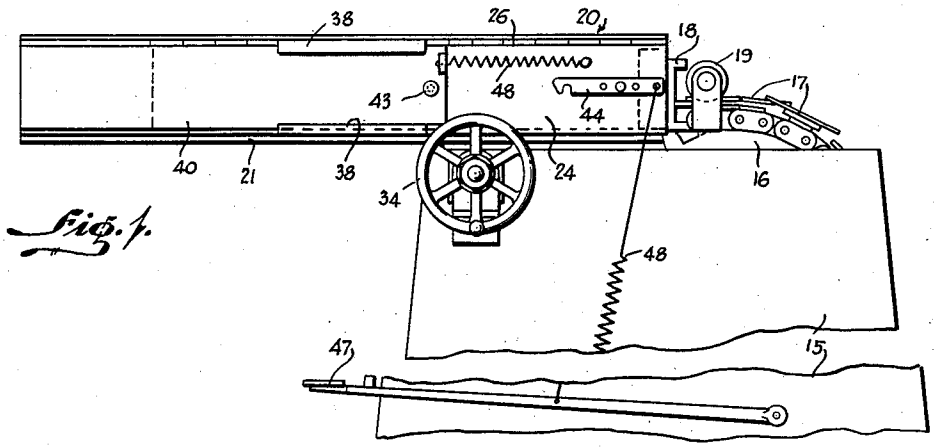


Fig. 1.

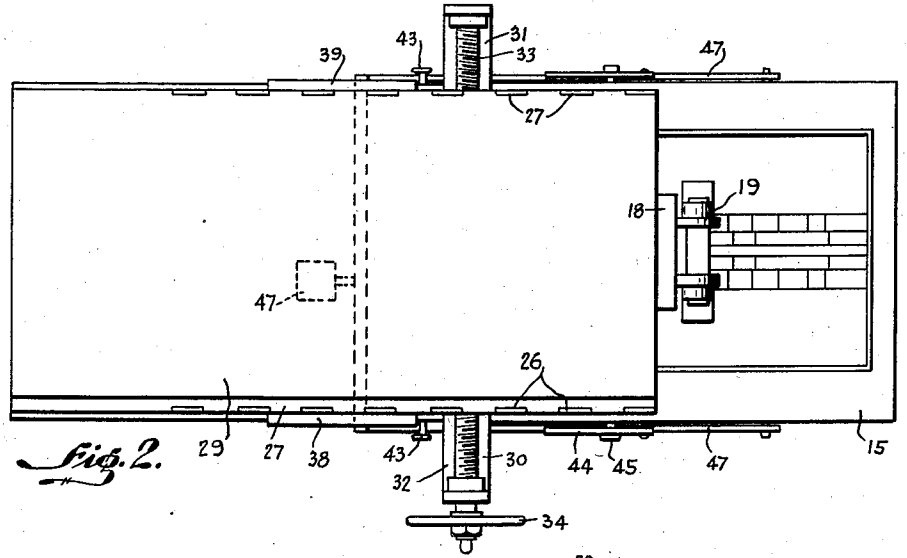


Fig. 2.

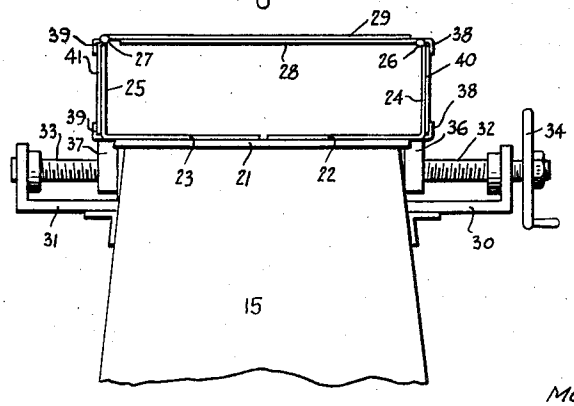


Fig. 3.

INVENTORS.
Morris Abramowitz
Joseph Marino.

BY

Warren E. Willis.
ATTORNEY.

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SPRING CUSHION FILLING MACHINE ATTACHMENT

Filed May 25, 1938 2 Sheets-Sheet 2

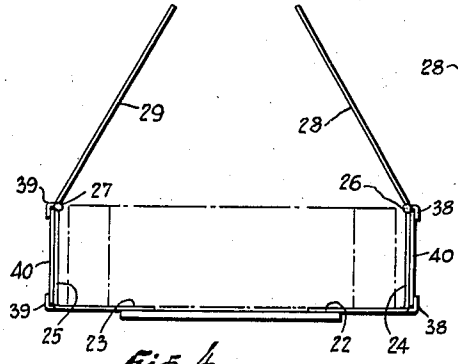


Fig. 4.

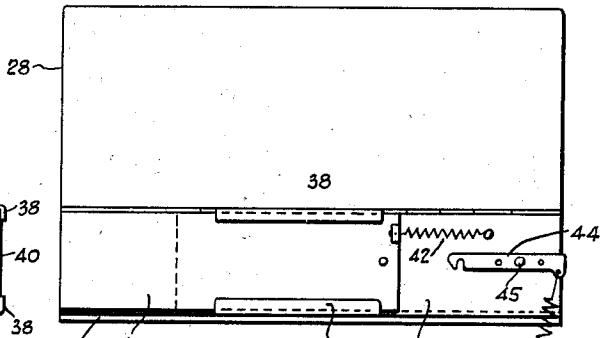


Fig. 5.

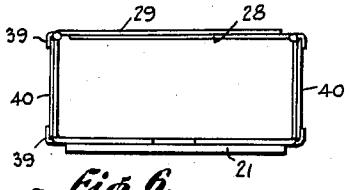


Fig. 6.

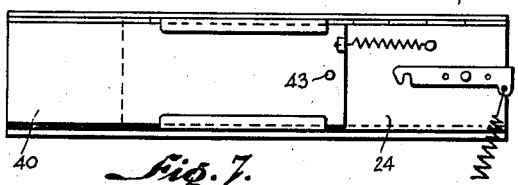


Fig. 7.

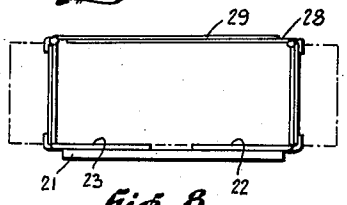


Fig. 8.

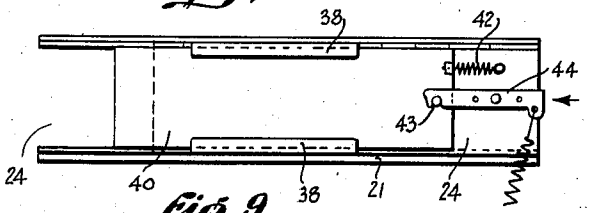


Fig. 9.

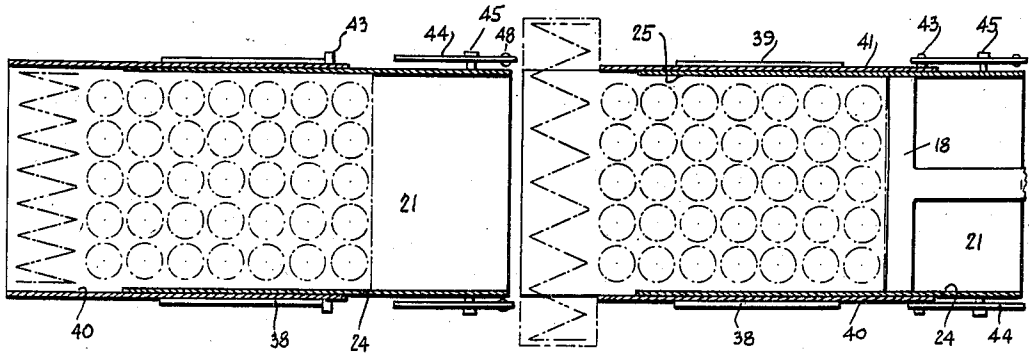


Fig. 10.

Fig. 11.

INVENTORS.
Morris Abramowitz
Joseph Marino.

BY

Warren E. Willis.
ATTORNEY.

Patented Nov. 28, 1939 2,181,308

UNITED STATES PATENT OFFICE

2,181,308

SPRING CUSHION FILLING MACHINE ATTACHMENT

Morris Abramowitz, New York, and Joseph Marino, Brooklyn, N. Y.

Application May 25, 1938, Serial No. 209,964

5 Claims. (Cl. 226—46)

This invention relates to apparatus for filling seat cushions, and other similar articles of an elastic nature, with fibrous, flocculent padding material to produce an attractive, dilated appearance, and comfort in their use, with particular reference to cushions in which metallic springs are incorporated.

While the invention is sufficiently broad to be used in stuffing mattresses, bolsters, pillows and seats of all kinds that embody elastic or resilient material enclosed in an inner casing, it is specifically adapted for use in the construction of seat cushions having edge extensions, as for instance to partially enclose the arms of a chair or protrude below its back.

To merely fill such projecting portions of a cushion with padding is unsatisfactory as, after a period of time, the material becomes condensed and the pristine appearance of the cushion suffers to the detriment of the article with which it is associated.

It is therefore an object of the invention to provide an apparatus in which such lateral extensions of the cushion are provided with means which permanently maintain them in their prime, original condition, irrespective of wear or the lapse of time.

A further feature is in the provision of an attachment for cushion filling machines adapted to introduce the usual type of cushion springs into such marginal extensions as may be desired, the device being adjustable to suit varying shapes, sizes and conditions.

Another purpose is to produce a device easy to operate in an effective manner, inexpensive in construction, and readily applicable to existing machines.

These useful purposes are accomplished by the novel and practical construction, combination and arrangement of simple parts hereinafter described and illustrated in the accompanying drawings, constituting an important component of this disclosure, and in which:

Figure 1 is a partial side elevational view of a conventional type of cushion filling machine showing an embodiment of the invention as applied in operative position.

Figure 2 is a top plan view thereof.

Figure 3 is a front end elevational view of the same.

Figure 4 is a front end view showing the filling container sides widely spaced and the cover plates partially raised.

Figure 5 is a side elevational view thereof.

Figure 6 is a view similar to Figure 4 but showing the side walls as moved laterally towards each other and the cover plates closed.

Figure 7 is a side view of Figure 6.

Figure 8 is an end view showing the parts as in Figure 6 and indicating in broken lines the cushion extension elements.

Figure 9 is a side view of Figure 8, showing the side walls removed rearwardly and held in such position.

Figure 10 is a longitudinal sectional view showing the initial position of the container and spring transfer plates.

Figure 11 is a like view of the same parts when in position to permit expansion of the cushion extensions.

Referring in greater detail to the drawings, the hollow base **15** of the filling machine has rotatably mounted in it a sprocket wheel **16** driving a chain carrying series of pusher bars **17** engaged with a plunger **18**, guided by rolls **19**.

A filling container, generally designated by the numeral **20** is attached to the upper surface of the base by a rigid plate **21** extending over the front of the machine.

This box or container comprises a bottom formed by two horizontal plates **22—23** rigidly attached at their outer edges to upright side plates **24—25**, their height being essentially equivalent to the thickness of the article to be stuffed.

Hinges **26—27**, at the upper edges of the upright sides, connect foldable cover plates **28—29** in overlapping slidable relation.

On opposite sides of the base **15**, are rigid outreaching brackets **30—31** in which are journalled the ends of a screw having right and left hand portions respectively **32—33**, the former provided with a hand-wheel **34** for manual operation.

The right hand portion **32** of the screw engages the threads in a lug **36** at the front side of the machine and the left hand portion similarly engages a lug **37** at the opposite side.

These lugs are firmly attached to the bottoms **22—23** of the container **20** in such manner that the side walls **24—25** may be positively moved different distances apart by turning the hand-wheel **34**, the cover plates **28—29** sliding on each other laterally and the bottom plates **22—23** movable on the plate **21** attached to the top of the column base **15**.

A pair of upper and lower grooved horizontal guides, respectively **38—39** are carried by the side walls **24—25** on their longitudinal edges and slidably engaged therein are plates **40—41** of auxiliary casing sides adapted to transfer coiled

metallic springs from within to the inner enveloping member of a cushion.

The front ends of these plates are normally in register with the outer ends of the container side walls, being pushed outwardly by any preferred means, as for instance springs **42** and are provided with pins **43** engageable by catches **44** pivoted at the rear of the machine, as on the plates **24—25**.

The fulcrum point **45** of the catches may be changed to present more or less space outwardly beyond the front ends of the side walls **24—25** to accommodate lateral cushion extensions of varying width.

To perform the stuffing operation, the padding or spring filling, as represented in broken lines, is inserted in the container, between the walls **24, 25** (Figure 10) and the plates **28—29** closed thereover. The cushion or article cover, not shown, is drawn over the front end of the closed structure, the bottom of the cover being disposed against the open end of the container, in a manner well known in the art. The hand wheel **34** is finally operated for fine adjustment to draw the cushion cover sufficiently taut.

As shown in Figure 11, the plates **40, 41** are retracted against the action of the springs **48**, by the manipulating knobs **43** (Figures 1 and 2), and are held retracted by the members **44**. On retraction of said plates, causing opposed lateral openings in the container, the opposite ends of a front transverse coil spring, encased in padding, such as hereinbefore stated and represented in broken lines, Figure 11, are urged outwardly into suitable pockets of the aforesaid cover.

The sprocket wheel **16**, driving a chain, carrying members **17** in well known manner, then causes the pusher **18** to eject the spring filling, with the cushion cover embraced thereon. The diameter of the transverse spring, which is also padded across its length between said ends, is less than the depth of the vertical coil springs, so that the latter have considerable normal yielding movement before reaching a depth equal to the diameter.

After the cushion has been stuffed, depression of the foot lever **47**, acting through the flexible connection **48**, releases the catch, permitting return of the plates **40—41** to their initial position.

From the foregoing it will be seen that a simple device for this purpose has been disclosed in the preferred form of the embodiment, but it is not desired to restrict the details to the exact construction shown, it being obvious that changes, not involving the exercise of invention, may be made without conflicting with the scope of the appended claims.

Having thus described the invention, what is claimed as new and sought to secure by Letters Patent, is:

1. In combination with a cushion filling machine having an open ended rectangular container provided with laterally movable side walls, and a plunger operable therein, auxiliary plates adjustable lengthwise on said side walls and normally extending therebeyond at the front between the cover and bottoms of the container, latches to retain said plates when adjusted rearwardly thereby to present lateral openings at the front, and means to simultaneously release said latches.

2. In a cushion filling machine, an open ended rectangular box having inner and outer pairs of side walls arranged in juxtaposition and relatively slidable lengthwise, both pairs movable in unison laterally, and upper and lower plates movable conjunctively with said inner walls and extending outwardly beyond said inner side walls at one end whereby, upon moving said outer side walls in a direction opposite said extending plates opposed lateral openings are presented.

3. A machine for transferring a spring filling to a cover comprising opposed top and bottom walls and opposed relatively short side walls, guides carried by said side walls, and slide plates mounted on said guides closely against said walls, whereby the latter may be selectively lengthened.

4. A machine having a rectangular casing for displacably receiving a spring filling for a cushion cover, said casing including an open front end and having relatively short side walls, there being temporary lateral openings at said walls, guides mounted on said walls, slide plates carried by said guides for selectively closing the openings, and means urging the slide plates into closing position.

5. A machine for transferring to a cushion cover a filling having extensible lateral spring projections, comprising in combination, a laterally adjustable casing having an open front end and including short side walls, there being temporary side openings at the ends of said walls, guide means carried by said walls, slidable members mounted on said means and removably closing the openings so as to restrain the projections, and means whereby to slide said members for allowing said projections to automatically spring through the openings.

MORRIS ABRAMOWITZ.
JOSEPH MARINO.