Jan. 19, 1960 F. J. DI TORRICE 2,921,725

DRAPE FOLDING MACHINES

Filed March 27, 1958 2 Sheets-Sheet 1

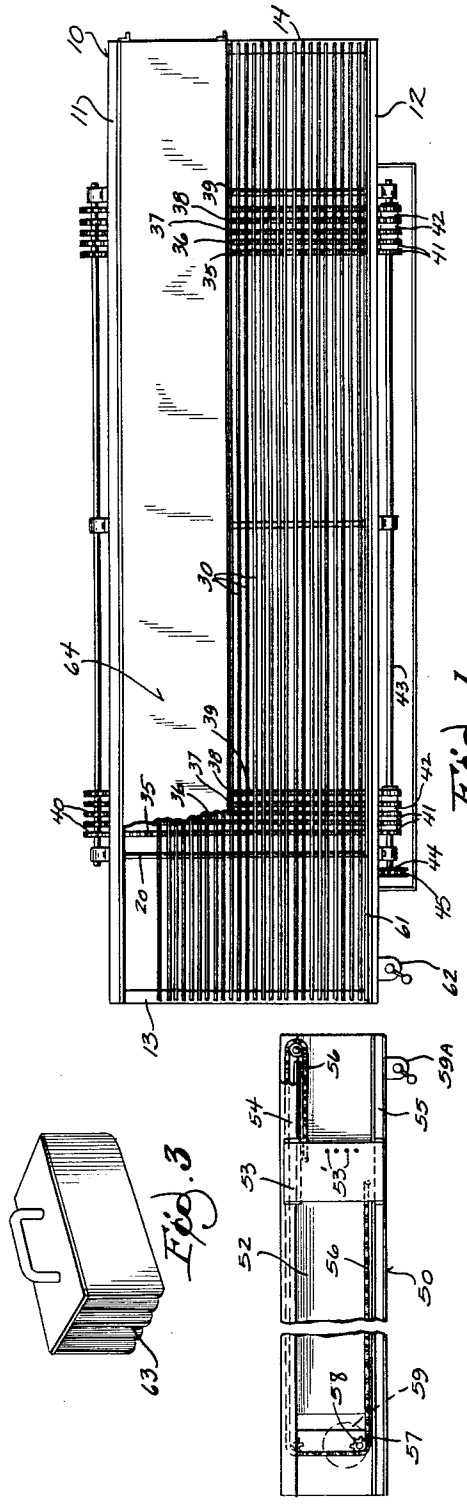


Fig. 1

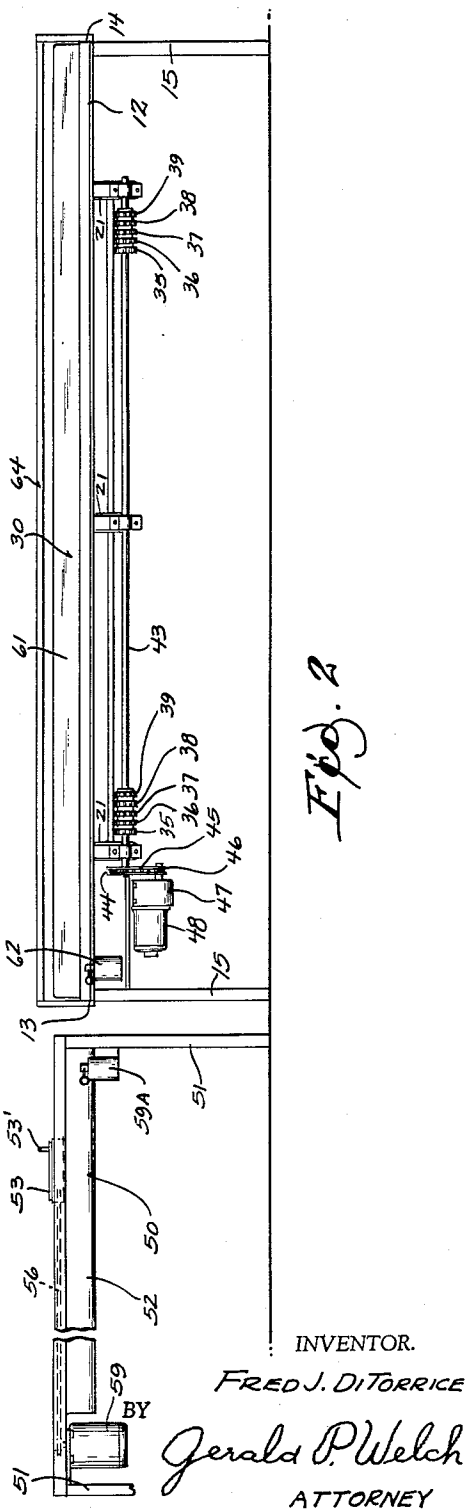


Fig. 2

Fig. 3

INVENTOR.
FRED J. DITORRICE
BY
Gerald P. Welch
ATTORNEY

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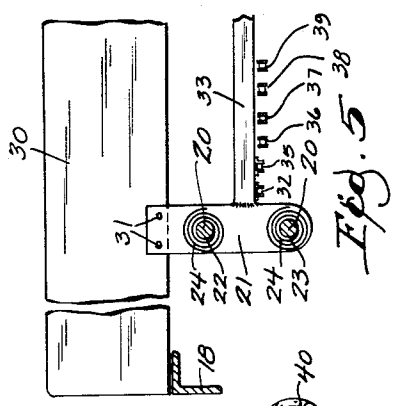


Fig. 5

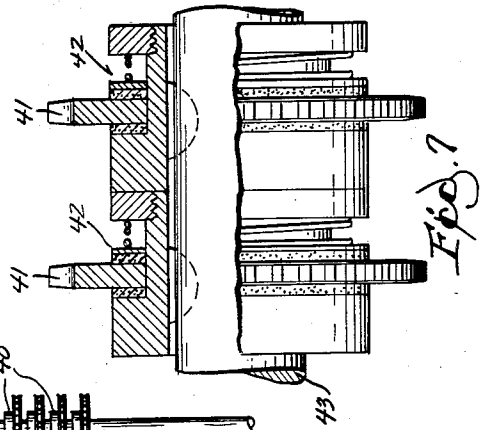


Fig. 7

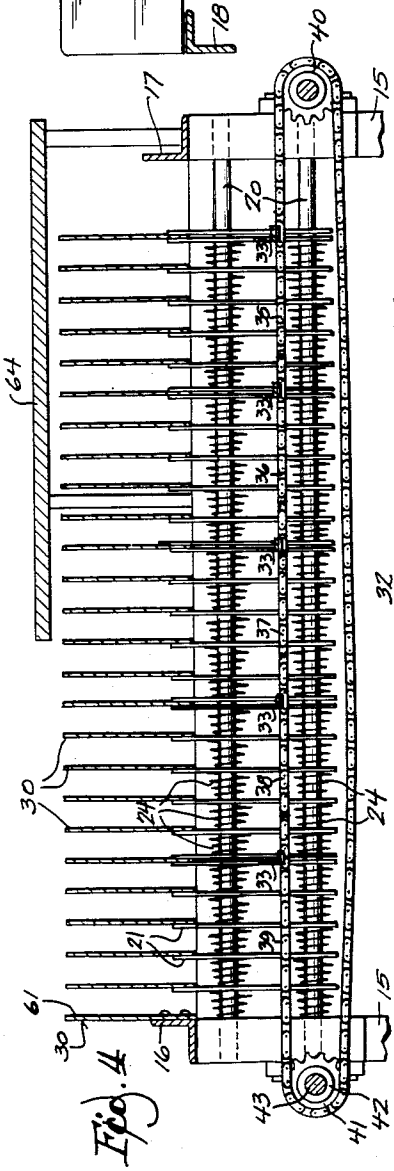


Fig. 4

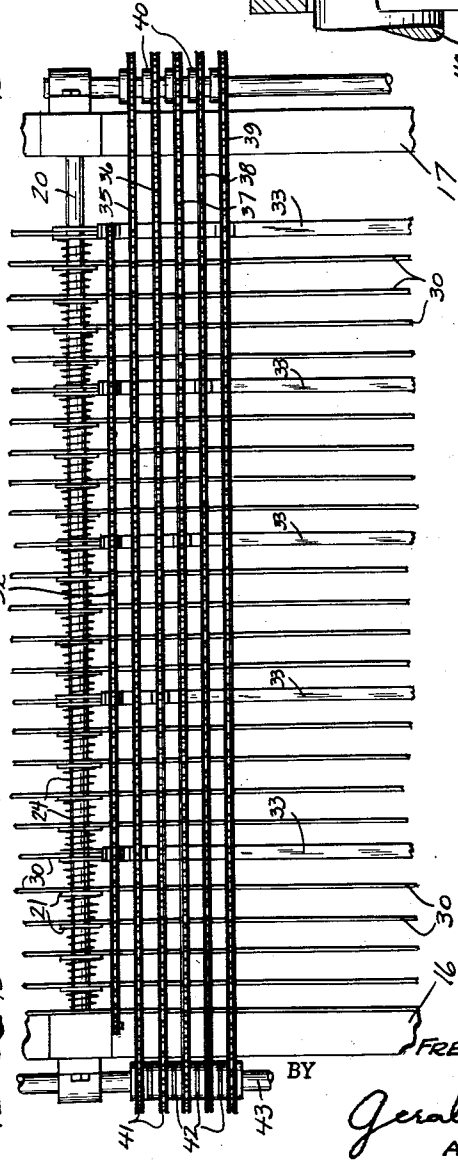


Fig. 6

INVENTOR.
FRED J. DI TORRICE
BY
Gerald P. Welch
ATTORNEY

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DRAPE FOLDING MACHINES

Fred J. Di Torrice, Milwaukee, Wis.

Application March 27, 1958, Serial No. 724,454

2 Claims. (Cl. 223—30)

This invention relates to improvements in drape folding machines, and more particularly to a novel drape folding machine having mechanical means for endwise removal of a folded and pressed drape or the like.

An object of the invention is to provide a device of the type which will compress a drape into folds in multiples of five.

Another object of the invention is to provide means for endwise removal of the drape in easy stages whereby paper wrappings may be applied at intervals on said folded drape while it is being removed from the machine.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

Fig. 1 is a plan view of a drape folding machine embodying the invention.

Fig. 2 is a front view in elevation thereof.

Fig. 3 is a perspective view of the multiple plate iron used in aligning the folds of a drape between the separated plates of the machine.

Fig. 4 is a vertical sectional view of the device.

Fig. 5 is a fragmentary view of the machine partly in section and partly in elevation.

Fig. 6 is an inverted plan view of the machine.

Fig. 7 is a view partly in section and partly in elevation of a pair of slip clutches.

Referring more particularly to the drawings the drape folding table **10** has side elements **11** and **12**, the end portions **13** and **14** and four legs **15**. A pair of angle members **16** and **17** surmount the side elements **11** and **12** and angle members **18** and **19** traverse horizontally the ends of the table **10**. Three pairs of vertically spaced horizontally disposed rods **20** cross the table **10** and are affixed to the side elements **11** and **12**. A plurality of traveler plates **21** are provided with vertically spaced apertures as at **22** and **23** receiving the rods **20**. A plurality of coil springs **24** are placed about the rods **20** to separate all the traveller plates **21**. The coil springs **24** are tapered so that when compressed between neighboring traveller plates they will compress to the thickness of the rod spring material.

The machine has a plurality of narrow elongated press plates **30**, disposed horizontally and riveted as at **31** to the top of the traveller plates **21**. In the form of the invention illustrated in the drawings, the press plates **30** are twenty-six in number, and the first press plate frontally disposed on the table **10** is affixed to the angle iron **16** and is stationary. The remaining press plates **30** are mounted on the traveller plates **21** and every fifth traveller plate is attached to the limiting chain **32** which limits the separating movement of the plates. Each fifth traveller plate **30** has a longitudinally disposed angle iron **33**, the latter being affixed to the related traveller plates **21**. The limiting chain **32** is connected to each of the angle irons **33**. Chains **35**, **36**, **37**, **38** and **39** are each attached to separate angle irons as shown in Fig. 6 of the drawings. The last mentioned five chains pass over the rear sprockets **40** and the front sprockets **41** which are provided with the slip clutches **42** on shaft **43** which latter carries the driven sprocket **44** in mesh with the chain **45** on the driving sprocket **46** of the gear reducer **47** connected with the electric motor **48**.

A channel table **50** mounted on legs **51** carries the metal channel **52** and a sliding platform **53** movable on the tracks **54** and **55** and actuated by the chain **56** operable by the cog **57** on the shaft **58** of the electric motor **59**. The platform **53** has a plurality of pegs **54** mounted on its top surface **55**.

A wooden shelf **56** surmounts the rear portion of the table **10**.

In use, a drape **60** is laid over the top of the table **10** and the edge of the drape closest to the operator is clamped to the stationary press plate **61**. The switch **62** has been utilized to place the press plates **30** in open or spread position. The operator then tucks the drape **60** between the succeeding press plates **30**, and the plate iron **63** is used to make the folds uniform as to depth before the switch **62** is again used to force the press plates together in folding the drape. The operator then attaches a looped element to the left end of the folded drape and connects the loop to one of the pegs **54**. The switch **59A** is utilized to move the platform **53** to the left on the tracks **54** and **55**, thus drawing the drape endwise from the press plates **30** after they have been again placed in spread position.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States is:

1. A drape folding apparatus comprising a rectangular frame, a plurality of vertically spaced pairs of rods disposed transversely in said frame, a plurality of vertically disposed traveller plates having vertically spaced apertures receiving said rods for sliding movement thereon, a plurality of relatively narrow elongated press plates each mounted on edge on at least two of said traveller plates, a plurality of sprocket wheels rotatably mounted on each side of the frame, and endless chain means on said sprocket wheels connected to certain of said traveller plates for movement of the latter during the folding operation.

2. The structure as in claim 1, and conical coil springs on the rods between all adjoining faces of all traveller plates to normally uniformly space the latter.

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