Dec. 23, 1952 T. W. MARSICO ET AL 2,622,511

POWER PRESS

Filed July 2, 1946 2 SHEETS—SHEET 1

Fig. 1.

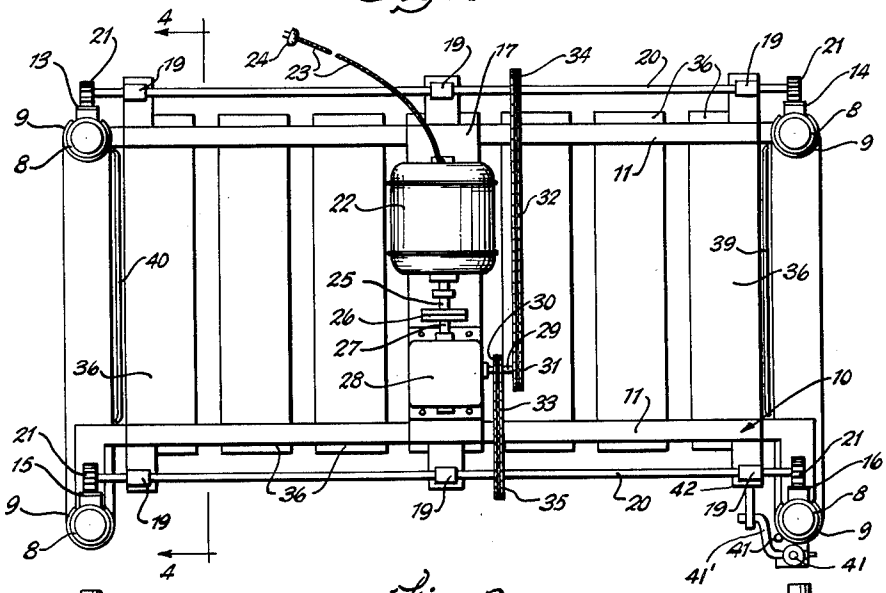
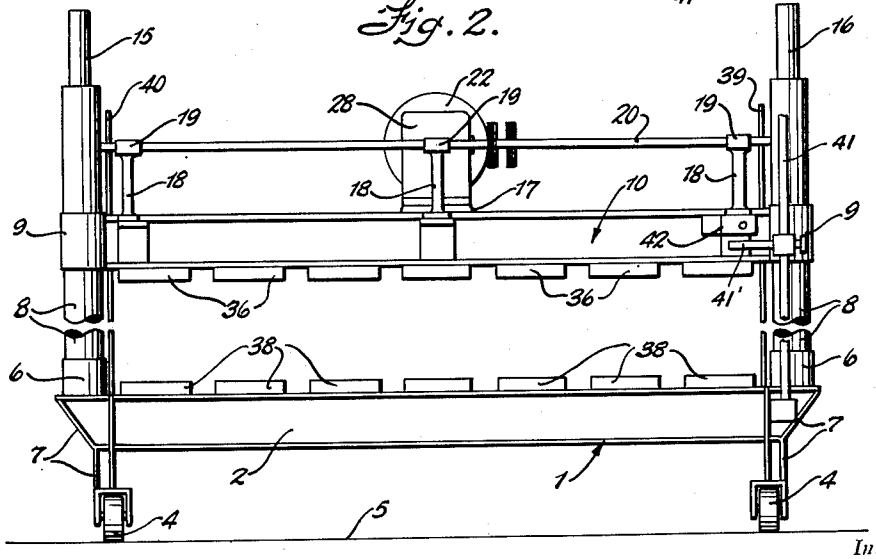


Fig. 2.



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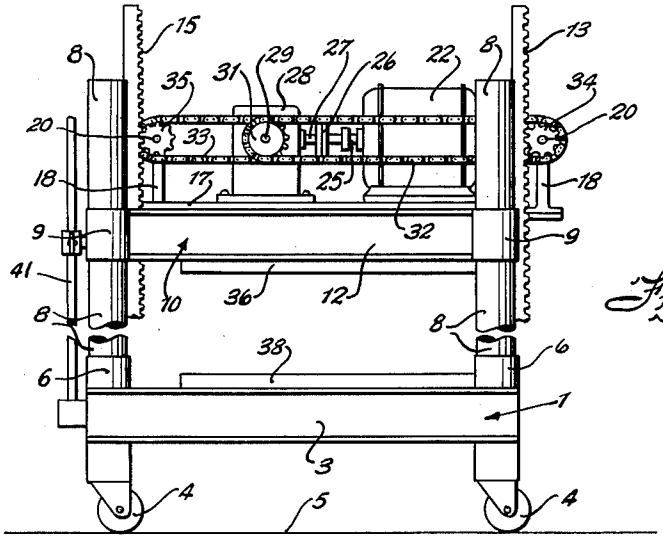



Fig. 3.

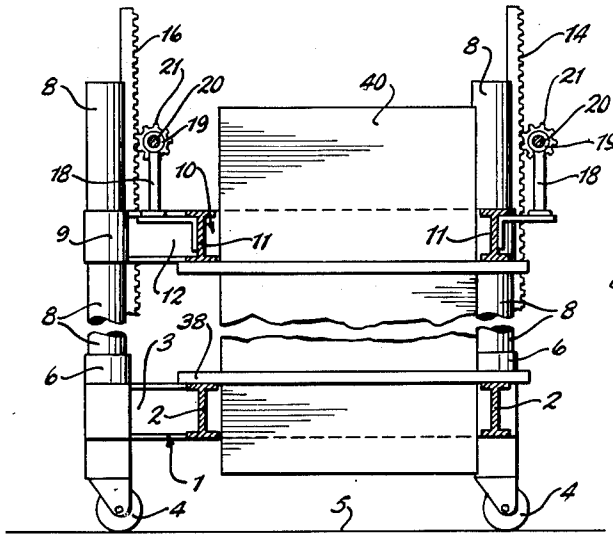



Fig. 4.

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2,622,511

# UNITED STATES PATENT OFFICE

2,622,511

## POWER PRESS

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Application July 2, 1946, Serial No. 681,006

3 Claims. (Cl. 100—100)

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This invention relates to improvements in power presses.

An object of the invention is to provide an improved power press for mattress factories which will compress the mattress filling material to the proper thickness for placing in mattress casings or covers.

Another object of the invention is to provide an improved power operated press for compressing mattress filling material, and an adjustable stop associated therewith for automatically stopping the operation of the press when the press has moved downwardly the desired distance.

A further object of the invention is to provide a portable power operated press for compressing mattress filling fibers of various kinds to the desired thickness or for compressing any commodity that is compressible, said press having an electric motor and connected gear reduction mechanism for operating the same.

Another object of the invention is to provide an improved portable electrically operated gear reduction power press for compressing mattress filling material, together with a height regulator and an adjustable stop mechanism therefor.

Another object of the invention is to provide an improved motor operated gear reduction mechanism for a power press, the same being highly efficient in operation, and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application:

Figure 1 is a plan view of the improved power press;

Figure 2 is a side elevation of the improved power press;

Figure 3 is an end view of the improved power press, and

Figure 4 is a partial sectional view taken on the line 4—4 of Figure 1.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is provided an improved power press for compressing mattress filling material comprising a substantially rectangular base frame generally denoted by the reference numeral 1, the same being formed of five and one-half inch steel beams and including the parallel spaced side members 2 and parallel spaced end members 3.

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The four casters 4 will be suitably mounted at the corners of the base frame 1 to support the same in spaced relation above the floor 5.

The internally threaded socket fittings 6 will be supported at the corners of the base frame 1, and will be reinforced by the welded steel bracing strips 7. Four vertically extending three inch tubes 8 will be screwed into the socket fittings 6, and will guide the split sliding collars 9 secured to the corners of the upper or compressing frame generally indicated by the reference numeral 10.

The compressing frame 10 is substantially rectangular shaped, and includes the opposite spaced side members 11 and the opposite spaced end members 12, preferably formed of five and one-half inch steel beams.

The four vertically disposed rack bars 13, 14, 15 and 16 are secured to the four tubes 8, and have their teeth facing in the same direction.

A transversely extending motor supporting platform 17 is secured between the spaced side members 11 of the compressing frame 10. The outwardly extending bearing supporting brackets 18 are secured to the outer sides of the side members 11 of the compressing frame 10, and support the spaced bearings 19 in which the shafts 20 are rotatably mounted. The cogs or gears 21 will be secured to the opposite ends of the shafts 20 and will intermesh with the rack bars 13, 14, 15 and 16 to cause the raising of the compressing frame 10 when said shafts 20 are rotated in unison in one direction and lowering of the same when the shafts 20 are rotated in unison in the opposite direction.

A two to five horse power electric motor 22 is mounted upon the platform 17 and is connected by the conductor 23 and plug 24 to a suitable source of electric current supply (not shown). The motor shaft 25 is connected by means of the friction clutch 26 to the shaft 27 of a gear reduction mechanism 28 mounted on the platform 17. The driving shaft 29 from the gear reduction mechanism 28 supports the spaced sprocket gears 30 and 31. Sprocket chains 32 and 33 are connected between the sprocket gears 30 and 31 and sprocket gears 34 and 35 on said shafts 20 for driving them in the same direction.

Wood facing planks 36 are secured to the lower surface of the compressing frame 10 by means of the fasteners (not shown). Similar wood facing planks 38 are also secured to the upper surface of the base frame 1 in any desired manner.

The 9-gauge adjustable steel plates **39** and **40** are mounted at the opposite ends of the press and may be adjusted to varying heights at which the press may operate to support the mattress filling material in position between the facing planks **36** and **38** when the press is in actual operation.

A regulator rod **41** disposed adjacent one of the tubes **8** carries an adjustable trip finger **41'** to cooperate with an electric switch mechanism **42** on the compressing frame **10** to stop the operation of the press at the desired and predetermined point, such switch mechanism being associated with the wiring of the electric motor **22** by means not shown.

Suitable lubricating fittings (not shown) will be provided as well as grease retainers for properly lubricating the press.

From the foregoing description, it will be apparent that there has been devised and provided a highly efficient form of power operated press used in mattress factories for compressing the mattress filling material to the proper thickness for insertion within the mattress covers or casings.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described our invention what we claim as new and desire to secure by Letters Patent of the United States is:

1. A power press comprising a base frame, a compression frame, forward and rear pairs of vertical tubular guides secured to the compression frame, each of said guides having a longitudinal slot in its forward side, guide posts secured to and extending upwardly from the base frame, said tubular guides being slidably received on and embracing the guide posts, each of said guide posts having a longitudinal rack secured thereto which is received in the slot of the corresponding tubular guide which moves relatively to said rack, a pair of horizontal shafts rotatably mounted on the compression frame, one of said shafts being between said pairs of tubular guides and forward of the rear pair thereof with the other of said shafts being forward of the forward pair of tubular guides, pinions carried at the opposite ends of said shafts in mesh with said racks, a drive shaft disposed between and parallel to said pair of shafts, a pair of drive sprockets on said drive shaft, a driven sprocket on each of said pair of shafts, and a drive chain entrained over each of said driven sprockets and one of said drive sprockets



whereby all of said sprockets are simultaneously driven in the same direction.

2. In a power press comprising a base frame, a compression frame, upstanding guide posts on the base frame, said compression frame being supported by and guided for vertical movement by the guide posts, said guide posts being cylindrical, a longitudinal rack projecting radially from each of said cylindrical guide posts, all of said racks having their teeth facing in the same direction, tubular guides carried by the compression frame, each of said tubular guides embracing and slidably receiving one of said guide posts and having a longitudinal slot slidably receiving the rack, whereby said tubular guides slidably guide said compression frame relative to the guide posts, pinions carried by the compression frame engaging the racks, and power means simultaneously driving all of said pinions in the same direction.

3. A portable power operated mattress press comprising a brace frame, casters mounted to support the brace frame, socket members supported at the corners of the base frame, tubular guide posts secured in said socket members, a movable guiding collar on each of said guide posts having a longitudinal slot therein, a compression frame mounted on said split collars, a rack bar on each of said guide posts and received in the slot of the corresponding guide collar which moves relative thereto, gear wheels carried by the compression frame and meshing with the rack bars, and motor-driven means for simultaneously driving all of said gear wheels in the same direction for slidably propelling said compression frame along said guide posts.

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