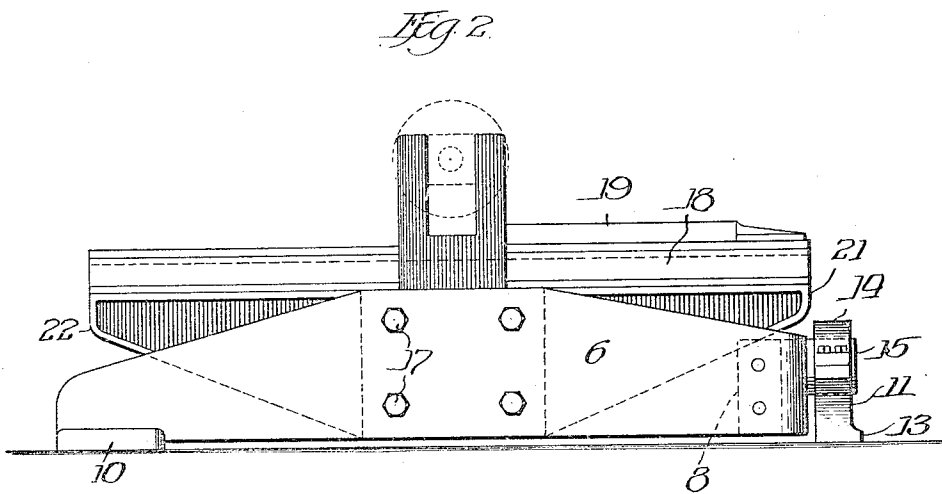
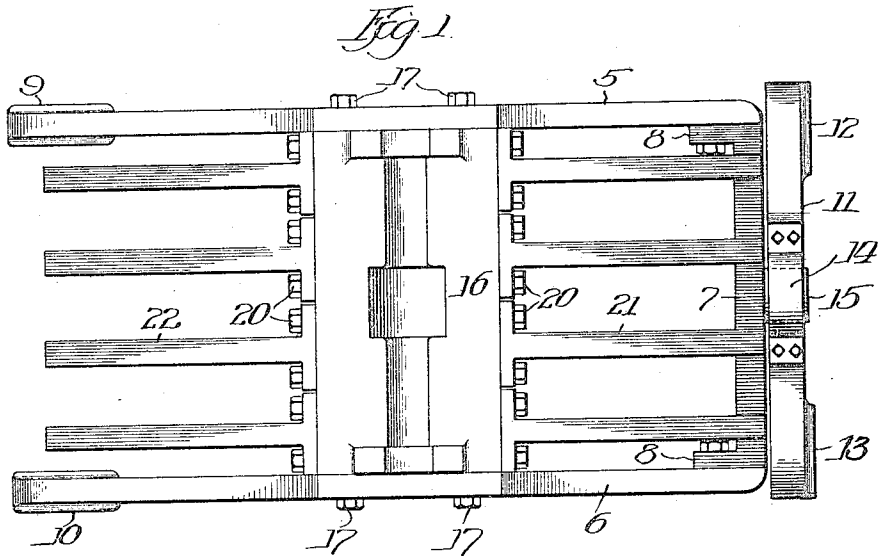


B. D. STEVENS.
MACHINE FRAME.
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1,225,282.

Patented May 8, 1917.



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UNITED STATES PATENT OFFICE.

BURT D. STEVENS, OF RIVERSIDE, ILLINOIS, ASSIGNOR TO MIEHLE PRINTING PRESS & MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

MACHINE-FRAME.

1,225,282.

Specification of Letters Patent.

Patented May 8, 1917.

Application filed January 30, 1914. Serial No. 815,463.

To all whom it may concern:

Be it known that I, BURT D. STEVENS, a citizen of the United States, residing at Riverside, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machine-Frames, of which the following is a specification.

One of the salient features of this invention is the provision of a base or frame for a machine supported on the foundation or floor in such a manner as to eliminate or reduce to a minimum the distortions, strains and twistings which might otherwise occur in the frame or machine proper by reason of uneven settling of the support, or possibly because of vibrations set up in the machine itself. In printing presses of the reciprocatory bed type, for example, comparatively slight mal-alinements or uneven supporting results in the production of defective printing, as, for instance, what is known in the trade as "slurring," and also in unnecessary and detrimental wear and tear on the machine parts. One of the main features of the present invention is to so support the machine frame on the floor, and also to so carry the main parts of the mechanism of the machine proper on such frame, that the objectionable effects of bending, distortion, twisting, warping and the like are overcome in such a way that the machine itself is not only saved from excessive wear, but is also rendered capable of producing work of a higher grade or character. The importance of this will be particularly apparent in reciprocatory bed printing-presses, in which the relatively heavy bed is reciprocated rapidly and the register or printing is required to be accomplished to within extremely small fractions of an inch.

A further object of the invention is to accomplish the purposes above indicated and at the same time distribute the weight of the comparatively heavy machine over a relatively large floor area by means of suitable breadth of support, in this way avoiding concentration of weight at particular points.

While in this application I have illustrated and described the preferred embodiment of this invention in connection with a printing press, it is to be understood that the invention is in no way limited to this particular type of machine.

In the accompanying drawings, a pre-

ferred embodiment of the invention is illustrated, and in these drawings,—

Figure 1 illustrates in plan view the main frame members of a printing press constructed and associated together in accordance with the principles of this invention; and

Fig. 2 illustrates the same structure in side elevation, the impression cylinder and its bearings being shown in dotted lines.

By referring to these drawings, it will be noticed that the main frame of the machine is of general U-shape, being composed of two side members 5 and 6 connected together at one end by a cross member 7 having ears or lugs 8, 8, bolted to the adjacent ends of the members 5 and 6, each of the latter at their opposite ends being preferably, though not necessarily, provided with feet or suitable supports 9 and 10. At the same end of the machine that the members 5 and 6 are cross-connected by the support 7, I employ a secondary or transverse support 11 equipped at its opposite ends with supporting feet 12 and 13, and at its middle portion with a bearing 14 accommodating a trunnion or stub shaft 15 integral with or secured to the central or middle portion of the transverse frame member 7.

The U-shaped frame 5—7—6 carries and supports a relatively heavy main body 16, which for example may be accommodated between the side members 5 and 6, and bolted thereto by fastening devices 17, 17. This main body constitutes, aside from the frame members referred to, the principal support for the parts of the mechanism superposed thereon and carried thereby. In order to properly support the guides 18 and other parts for the reciprocatory bed 19 adapted to carry the printing form, I fasten, by bolt 20, to the opposite sides of the main body 16, suitable brackets or standards 21 and 22 disposed longitudinally of the machine, as is clearly illustrated in both figures of the drawing.

By supporting this relatively heavy machine on the feet 9, 10, 12 and 13, spread apart over comparatively wide distances, I avoid the concentration of weight on the foundation or floor at any one point; and owing to the rocking or trunnion connection between the U-shaped frame and the transverse or secondary support 11, I re-

tain the advantage of a three-point support. If therefore the floor or foundation settles under any one or more of the four feet, this rocking connection permits the frame to readily accommodate itself to such inequalities, and prevents the transmission of strains to the operative working parts of the machine. Owing to the fact also that the reciprocating bed of the printing press and its associated parts are supported from the central or main body 16 by means of the oppositely extended brackets 21 and 22, any distortion or twisting of the parts of the frame 5, 6, 7, are minimized in their effect on the operative parts of the machine mechanism, so that with this simple construction, the advantages outlined in the preamble to this specification are readily accomplished.

Whereas in this specification and the accompanying drawing, one preferred embodiment of the invention has been set forth, it will be understood that many minor changes may be made in such structure without departure from the substance of the invention and without sacrificing any of its material advantages.

I claim as my invention:

1. In a machine of the character described, the combination of a main frame adapted to rest near one end on the foundation or floor, a secondary support disposed transversely of the main frame, a rocking connection between said secondary support and main frame near the end of the latter opposite its other supports, a main body carried by said main frame and

adapted to carry the operative parts of the machine, and one or more supporting brackets carried by said main body for supporting the operative parts of the mechanism. 40

2. In a machine of the character described, the combination of a main frame adapted to rest near one end on the foundation or floor, a secondary support disposed transversely of said main frame at the opposite end thereof, a rocking connection between said main frame and secondary support, and a main body adapted to carry the operative parts of the machine disposed transversely of and fastened to said main frame near the center thereof. 50

3. In a machine of the character described, the combination of a main frame having near one end a pair of spaced feet adapted to rest on the foundation or floor, a secondary support disposed transversely of the main frame at the opposite end thereof, a rocking connection between said support and main frame, a main body carried by said main frame and disposed transversely thereof approximately midway between the supports for the main frame at its opposite ends, and one or more brackets fastened to said main body to support the operative parts of the mechanism in conjunction with said main body. 65

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."