March 7, 1933. F. W. LINDEMANN 1,900,720

BUCK STRUCTURE FOR LAUNDRY PRESSES

Filed Oct. 27, 1928 2 Sheets-Sheet 1

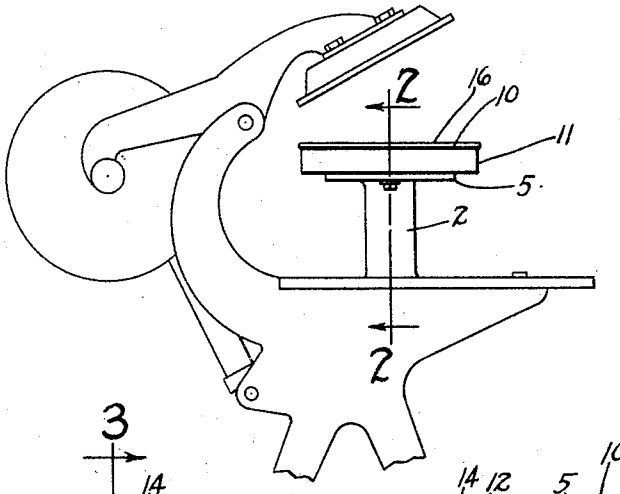


FIG. 1

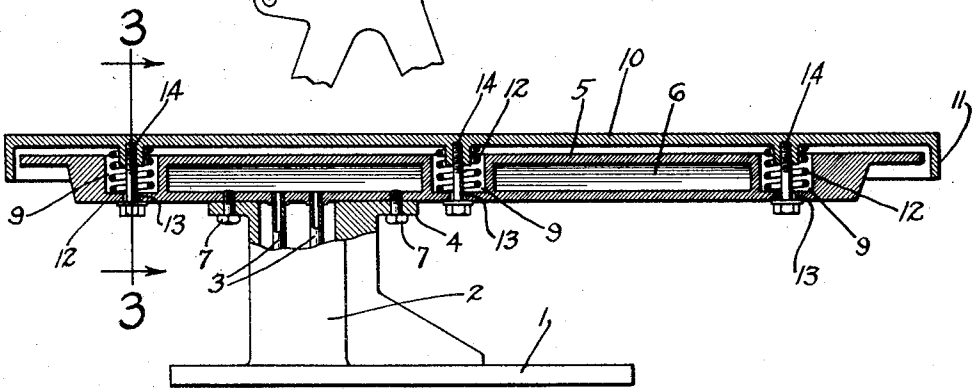


FIG. 2

FIG. 7

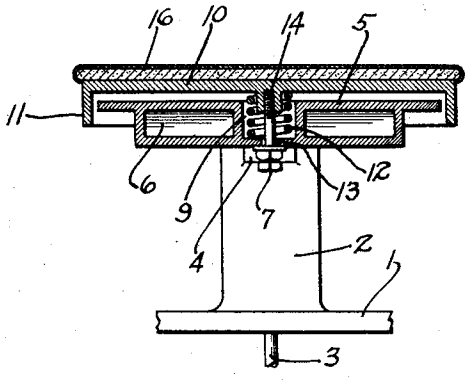
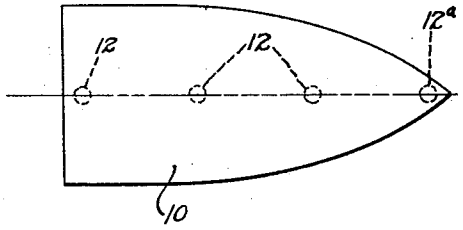


FIG. 3



Inventor
FREDERICK W. LINDEMANN
By Paul, Paul & Woodcock
ATTORNEYS

March 7, 1933. F. W. LINDEMANN 1,900,720

BUCK STRUCTURE FOR LAUNDRY PRESSES

Filed Oct. 27, 1928 2 Sheets-Sheet 2

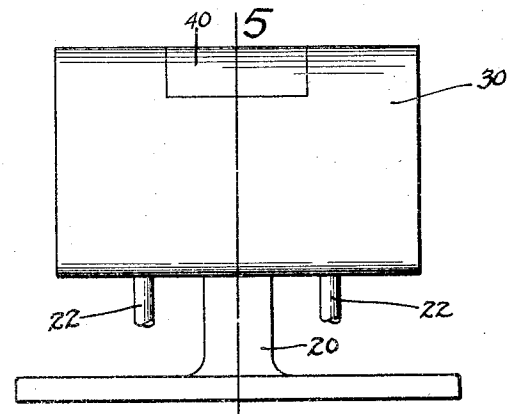


FIG. 4

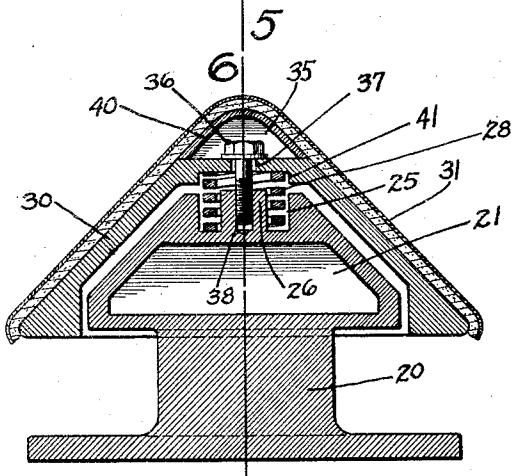


FIG. 5

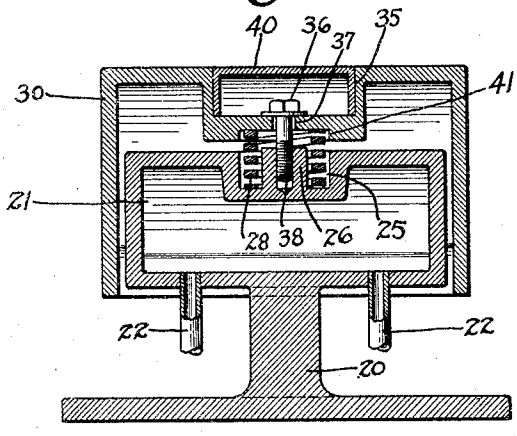


FIG. 6

Inventor
FREDERICK W. LINDEMANN

By Paul, Paul & Woodard

ATTORNEYS

Patented Mar. 7, 1933 1,900,720

UNITED STATES PATENT OFFICE

FREDERICK W. LINDEMANN, OF ST. PAUL, MINNESOTA, ASSIGNOR TO THE UNIPRESS COMPANY, INCORPORATED, OF MINNEAPOLIS, MINNESOTA, A CORPORATION OF MINNESOTA

BUCK STRUCTURE FOR LAUNDRY PRESSES

Application filed October 27, 1928. Serial No. 315,542.

This invention relates to improvements in bucks, used on pressing machines and has for an object to provide a simple, efficient, and cheap cushion structure which is capable of universal leveling adjustments during the pressing operation. Objects are to provide a two part type of buck comprising a base portion, and a cap portion resiliently connected with the base portion in a simple manner, so that the cap portion is capable of universal leveling adjustments.

Features include the broad idea of using a coil spring centrally arranged to permit floating adjustments of the movable portion of the buck; the provision of means for micrometrically adjusting the spring tension; the arrangement of a plurality of springs in a line centrally and longitudinally of the buck; and all details of construction.

Objects, advantages and features of the invention will appear from the description of the drawings forming a part of this application, and in said drawings:

Figure 1 is an end view of a press equipped with a buck constructed according to the present invention.

Figure 2 is a longitudinal section of a buck on line 2—2 of Figure 1;

Figure 3 is a transverse section of the buck on line 3—3 of Figure 2;

Figure 4 shows a side view of a modification;

Figure 5 is a transverse section on line 5—5 of Figure 4;

Figure 6 is a longitudinal section on line 6—6 of Figure 5; and

Figure 7 is a plan, illustrating the advantage of a central arrangement of the springs in a buck cap of tapered form.

The buck comprises a base 1, a hollow pedestal 2, upwardly through which steam pipes 3 project. The pedestal is flanged at the top as at 4, and upon the flange is secured the lower portion 5 of the buck, which is formed to provide a steam chamber 6. The element 5 is connected by bolts 7 which traverse the flange 4.

A feature of this invention is the construction of the base portion 5 to provide sockets for receiving the springs. Another feature is the arrangement of the springs centrally longitudinally of the buck, or as shown in the modifications, centrally only, to allow universal leveling or adjusting motions during pressing. Another feature is the simple construction by which the springs are secured, and by which the buck cap is secured in a manner to adjust itself.

Referring to Figure 2, three vertically arranged upwardly faced sockets are indicated at 9. The cap member of the buck is indicated at 10 and has a marginal depending flange 11 which extends downwardly below, but in spaced relation to the margin of portion 5. Into each socket is dropped a coil spring 12. A bolt passes loosely through an opening 13 and upwardly through the socket and has a threaded engagement as at 14 with the cap element 10. The diameter of openings 13 is substantially larger than the diameter of the bolt, so that a loose lateral and vertical adjustment is permitted. These screws are capable of adjustment to vary the tension of the springs 12, and it will be seen that by this construction the cap base is capable of universal movement that is horizontal movement in all directions resting on the springs as centers, and downward movement to compress the springs. By loosening the bolts, the springs raise the cap section 10 and by turning the bolts in opposite direction the cap piece is lowered and the springs put under greater tension. By an inspection of Figure 3, it will be noted that the springs are aligned centrally longitudinally of the buck and thus a rocking motion transversely is provided for, as well as a rocking motion longitudinally. By inspection of Figure 3, it will also be noted that the sockets 9 traverse the chamber 6, particularly the central socket. However this does not interfere with the circulation of steam in the steam chest. The pad is indicated at 16, in Figures 1 and 3.

One of the advantages in the central placement of the springs, is that a balanced arrangement can be had when the cap is of the tapered form shown in Figure 7. In this case a terminal spring 12ª can be placed

substantially at the apex, and directly at the end of the cap, whereas if plural rows of springs are used sensitiveness of adjustment is sacrificed as well as balance, because more springs are used, and they cannot be as evenly distributed at the pointed end as in other areas.

Figures 4, 5 and 6 illustrate a modification in which the resilient means is also centrally disposed differing only in that a single spring is used, and that the adjusting screw is arranged to be manipulated from above rather than from below. The pedestal is indicated at 20, the hollow lower section or steam chest at 21, and the steam pipes at 22. In this case the pipes do not pass through the pedestal. The socket 25 in the portion 21 is formed as shown by extending it downwardly into but not crossing the steam space. In this instance a single socket centrally arranged, is used. The socket is provided with a central upstanding boss 26. Loosely surrounding this boss is a coil spring 28 which extends upwardly beyond the upper face of the steam chest. The cap is indicated at 30, and is triangular in transverse vertical section as shown in Figure 5. The pad is indicated at 31. The upper part of the cap 30 is centrally recessed as shown at 35 to receive the bolt 36 which passes loosely through an opening 37 in the bottom of the recessed portion, and has threaded connection as at 38 with the boss 26, to adjust the tension of the spring 28. A closure cap 40 fits within the recess 35 and its upper surface is co-planar with the slanting surfaces of the cap as well as with the apex thereof.

As will be seen, the pad 31 overlies the cover 40. The element 30 is thus arranged for universal adjustments substantially in the manner shown for the first described form of the invention. In this instance the movable element 30 is also recessed as at 41 to receive the upper end of the spring 38.

The centrally located single or multiple spring construction provides a simple inexpensive means for attaching the movable portion of the buck for universal adjustment during pressing operations, and the centrally aligned arrangement of a plurality of the spring elements is particularly applicable to use on a buck of tapered form diagrammatically shown in Figure 7. It will be seen here that by centrally locating the spring that terminal spring nearest the pointed end of the buck can be placed substantially immediately at the pointed end, so that the movable portion of the buck is balanced for longitudinal rocking motions. If the springs are non-centrally arranged then they cannot be properly placed to facilitate adjustment in the direction just mentioned.

I claim as my invention:

1. A buck providing a steam chamber, a pad-cap having a pad-supporting wall normally closely spaced relatively to a heat transmitting wall of the buck, compression springs between the cap and the buck, said buck having spring-receiving sockets and said springs being seated therein, and linkage means connecting the cap to the buck to limit its upward motion, said means passing loosely through openings in the base of the sockets and provided with enlargements engageable with the socket bases.

2. A buck providing a steam chamber, a pad cap having a pad-supporting wall normally spaced from the heat-transmitting wall of the buck, said buck having sockets therein, compression springs arranged in the sockets and supporting the cap in spaced relation and linkage means acting counter to the springs to positively limit cap movement in a direction away from the buck and permit universal adjusting motions of the cap laterally in the plane of its working surface.

3. A buck providing a steam chamber, a pad cap having a pad-supporting wall normally spaced from the heat-transmitting wall of the buck, said buck having sockets therein, compression springs arranged in the sockets and supporting the cap in spaced relation and linkage means acting counter to to the springs to positively limit cap movement in a direction away from the buck and permit universal adjusting motions of the cap laterally in the plane of its working surface, and means by which the linkage means are adjustable to vary the spacing between the working walls of the cap and buck.

4. A buck providing a steam chamber, a pad cap having a pad-supporting wall normally spaced from the heat-transmitting wall of the buck, said buck having sockets therein, compression springs arranged in the sockets and supporting the cap in spaced relation and linkage means passing through the springs and acting counter to the springs to positively limit cap movement in a direction away from the buck and permit universal adjusting motions of the cap laterally in the plane of its working surface.

5. A buck providing a steam chamber, a pad cap having a pad-supporting wall normally closely spaced from the heat-transmitting wall of the buck, said buck having sockets therein, compression springs arranged in the sockets and supporting the cap in spaced relation and linkage means acting counter to the springs to positively limit cap movement in a direction away from the buck and permit universal adjusting motions of the cap laterally in the plane of its working surface.

6. A buck providing a steam chamber, a pad cap having a pad-supporting wall normally spaced from the heat-transmitting wall of the buck, said buck having sockets therein, compression springs arranged in the sockets and supporting the cap in spaced re-

lation and linkage means acting counter to the springs to positively limit cap movement in a direction away from the buck and permit universal adjusting motions of the cap laterally in the plane of its working surface, said cap having a continuous skirt portion which lies in guarding opposition to the lateral walls of the buck, all wall portions of the skirt being spaced from the corresponding wall portions of the heated buck to permit said lateral adjusting motions in the plane of the working surface of the cap.

In witness whereof, I have hereunto set my hand this 23rd day of October, 1928.

FREDERICK W. LINDEMANN.