No. 891,457. PATENTED JUNE 23, 1908.

J. BOUSCAL.

MOVABLE PLATFORM AND ELEVATING MEANS THEREFOR.

APPLICATION FILED DEC. 3, 1906.

2 SHEETS—SHEET 1.

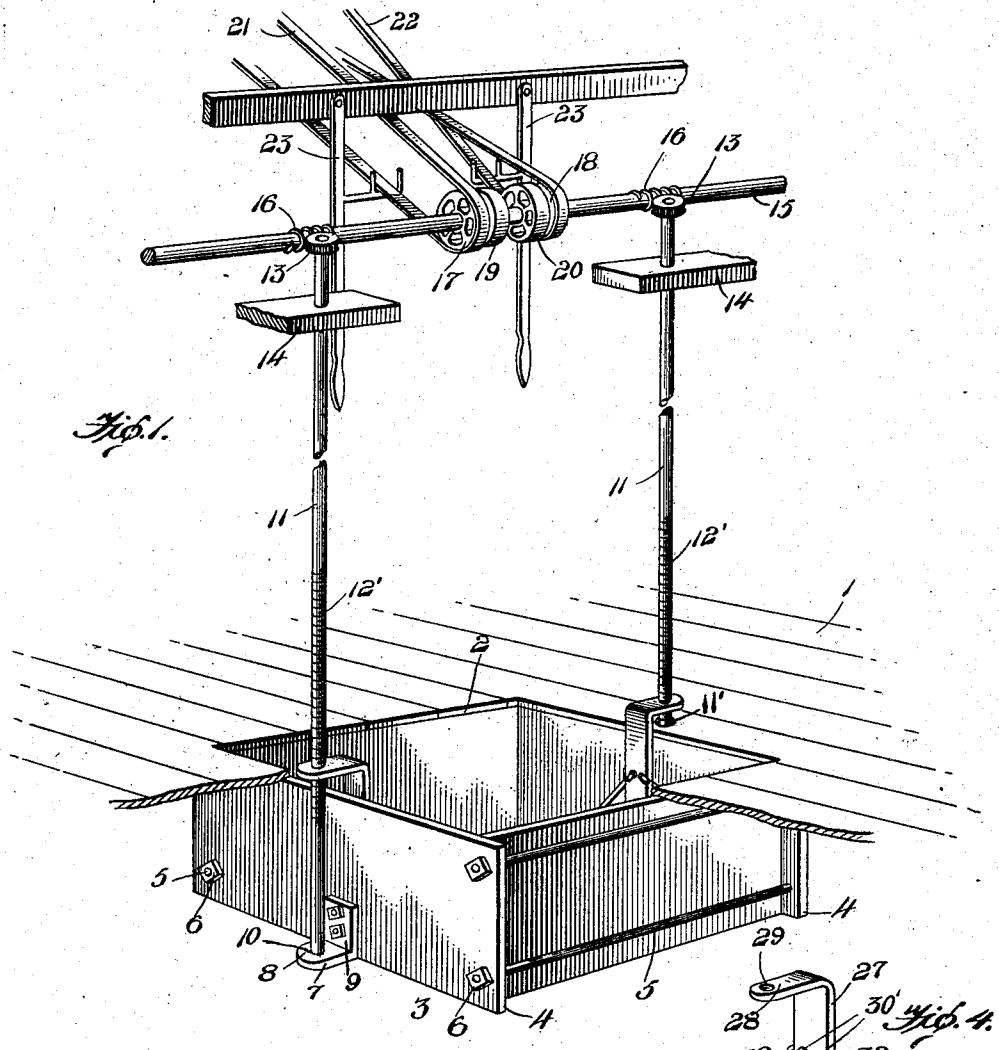


Fig. 1.

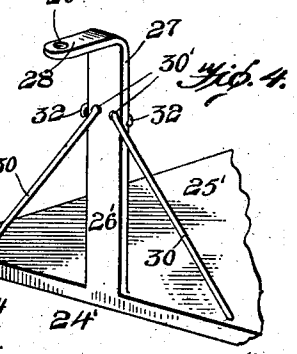


Fig. 4.

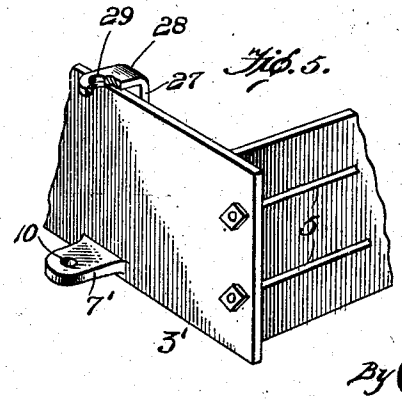


Fig. 5.

Witnesses
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G. M. Spring.

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2 SHEETS—SHEET 2.

Fig. 2.

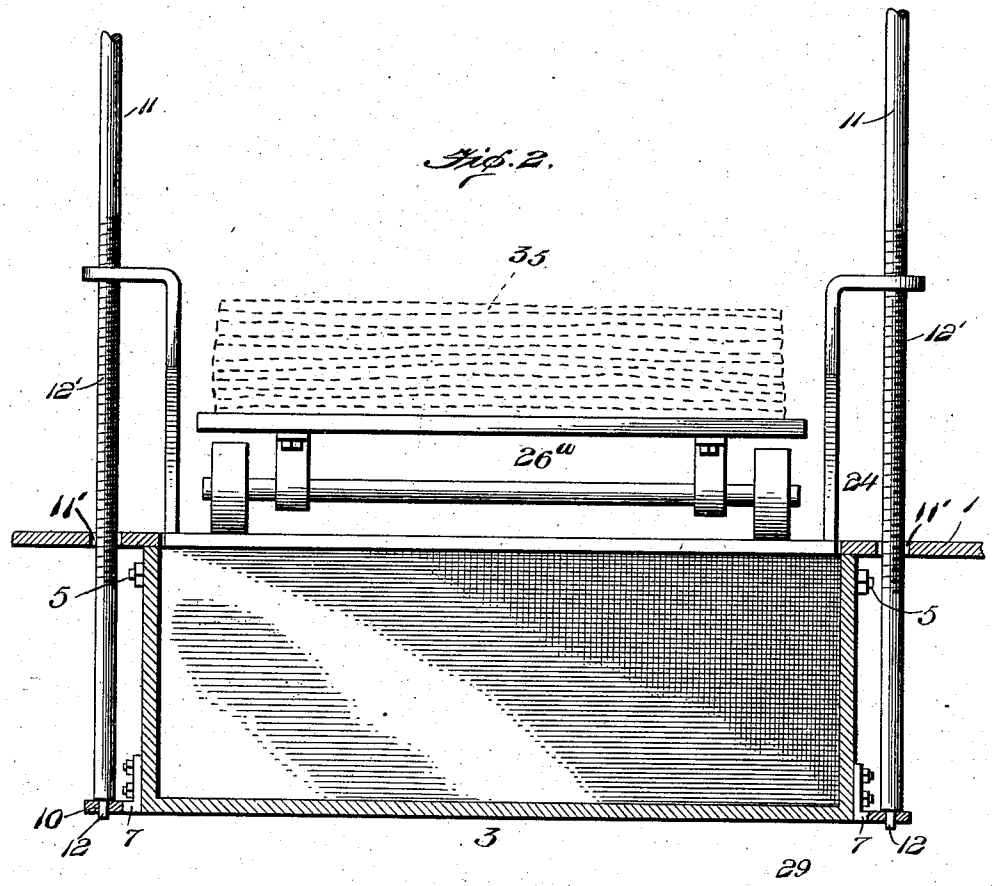
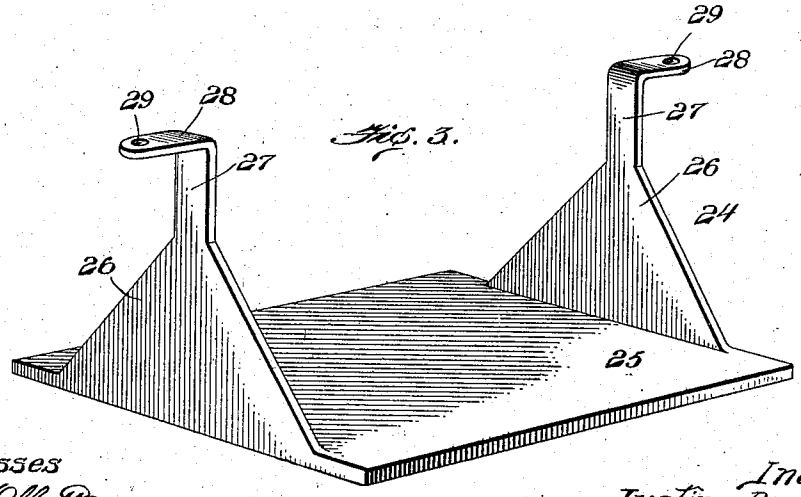


Fig. 3.



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UNITED STATES PATENT OFFICE.

JUSTIN BOUSCAL, OF SAN FRANCISCO, CALIFORNIA.

MOVABLE PLATFORM AND ELEVATING MEANS THEREFOR.

No. 891,457. Specification of Letters Patent. Patented June 23, 1908.

Application filed December 3, 1906. Serial No. 346,147.

To all whom it may concern:

Be it known that I, JUSTIN BOUSCAL, a citizen of France, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Movable Platforms and Elevating Means Therefor, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention has relation to improvements in elevating means for tanning apparatus, and it consists in the construction and arrangement of parts, as will be hereinafter described and particularly pointed out in the claims.

In the drawings: Figure 1 is a perspective view of the apparatus, the platform being in its lowermost position within the receptacle. Fig. 2 is a fragmentary, transverse, sectional view of the apparatus; the platform having its base or bottom on a level with the floor. Fig. 3 is a perspective view of my improved platform. Fig. 4 is a fragmentary, perspective view of a modification of the platform. Fig. 5 is a fragmentary, perspective view of the apparatus, showing an embodiment of the revoluble-shaft supporting lugs.

Referring to the drawings, 1 designates the floor having a primary aperture or opening 2. A receptacle 3 is secured by any suitable means contiguous to the floor and at the opening 2 thereof. The receptacle 3 has its sides preferably extended at 4, for receiving horizontal, reinforcing bolts or rods 5. These bolts or rods 5 materially increase the strength of the receptacle as they fixedly secure the sides and ends together, when the nuts 6 are threaded upon the ends of the bolts 5.

Preferably upon opposite sides of the receptacle 3, there are secured revoluble-shaft supporting lugs 7. Each of these lugs 7 comprises a horizontal base 8 and a right-angled extension 9. Any ordinary fastening means, as bolts and nuts, may be employed for removably securing the lugs 7 to the sides of the receptacle 3. I preferably form the lugs 7′ integral with the sides of the receptacle 3′, as in Fig. 5. Each of the lugs 7 and 7′ has its base apertured, as at 10, for receiving the lower end of a vertical, revoluble shaft 11. These shafts 11 extend through auxiliary apertures 11′ formed in the floor 1 above the lugs 7 or 7′. The lower ends of the shafts 11 may be reduced, as at 12, Fig. 2, and these reduced portions 12 are positioned within the apertures 10 of the lugs. The lugs constitute a bearing for the lower end of the rotatable shafts 11. The lugs 7′ may be cast with the receptacle 3′ if it is of an integral structure.

Each of the revoluble shafts 11 is screw-threaded, as at 12′, preferably intermediate its ends, and it is provided near its upper end with a gear wheel 13. The lugs 7 or 7′ form the bearing for the lower end of the shaft, while the upper portion of the shaft is provided with any suitable bearing, for instance, as shown at 14. The lugs and bearings 14 keep the vertical shafts in true alinement. A horizontal, rotatable shaft 15 is supported in any suitable bearings, and is provided with a pair of worms 16, which worms mesh with the gear wheels 13. Loose pulleys 17 and 18 are journaled upon the shaft 15, and tight pulleys 19 and 20 are fixed to said shaft 15. A straight belt 21 normally runs on loose pulley 17, while a cross belt 22 normally runs on the loose pulley 18. Through the medium of shifters 23 (which shifters are supported in any suitable manner), the belts may be shifted from the loose pulleys onto the tight pulleys for reversing movement of the worm shaft 15. It will be obvious that by shifting one belt upon one of the tight pulleys, the rotatable shafts will be revolved in one direction, while by moving the last mentioned belt back onto a loose pulley and placing the other belt upon a tight pulley, the direction of rotation of the shafts 11 will be reversed. By changing the direction of rotation of the shafts 11, movement of the platform 24 will be reversed. While both of the belts are running upon the loose pulleys, the platform will be stationary.

The platform 24 comprises a bottom or base 25, which base or bottom is provided at its ends with webs 26 that terminate at their upper ends in vertical standards 27. Each of these standards 27 is provided with an integral, right-angled horizontal extension 28. Each horizontal extension or lug 28 is provided with a screw-threaded aperture 29. Through the medium of these screw-threaded apertures 29, the extensions or lugs 28 are permitted to work longitudinally of the shafts upon the screw-threads 12′. The webs 26 materially reinforce the standards 27.

In Fig. 4, I have shown a platform 24′, which is provided with vertical standards 26′ extending from the base or bottom 25′ upwardly, and terminating in the horizontal extensions or lugs 28. The standards 26′ in

this modification are preferably integral with the base 25′. The reinforcing means for the standards in this instance are rods 30. Each of these rods 30 is inclined, and its upper end is preferably positioned in an aperture 30′ and looped around a portion of a standard 26′, as at 32. The lower end of each reinforcing rod 30 is screw-threaded, as at 33, and a nut 34 is threaded thereon for retaining the rod 30 taut, and thereby increasing its efficiency. These rods 30 brace the standards similar to the web portion 26. If the platform 24 is to be employed for supporting hides, the hides (shown in dotted lines 35, Fig. 2) are preferably placed upon the truck 26^a, and after the platform has been positioned level with the floor 1, as shown in Fig. 2, the truck is run upon the platform, and then the platform is lowered into the receptacle 3 through the medium of the driving mechanism for the shafts 11. The platform can be easily lifted out of the receptacle 3 by imparting such rotary movement to the shafts 11, as will cause the extensions or lugs 28 of the platform to be threaded upward on the shafts 11.

What I claim is:

1. An elevator comprising a platform with standards rising from the opposite sides thereof, provided on their upper ends with right angular screw-threaded extensions, a support having lugs on opposite sides with bearing apertures therein arranged in alinement with the screw threads of the extensions, rotatable rods having their lower ends mounted in said apertures and having screw-threads part way of their lengths to engage the screw-threaded extensions, gear wheels on the upper ends of the rods, a horizontal shaft with worm gears thereon for engaging said gear wheels on the rods, a plurality of pairs of pulleys on said shaft, a belt for each pair of pulleys, and means for shifting the belts substantially as specified.

2. An elevator comprising a platform with standards rising from the opposite sides thereof, braces secured to the standards and to the platform, said standards being provided on their upper ends with right angular screw-threaded extensions, a support having lugs on opposite sides with bearing apertures therein, arranged in alinement with the screw-threads of the extensions, screw-threaded rods rotatably mounted in the screw-threaded extensions and apertures of the lugs, gear wheels on the upper ends of the rods, a shaft having worm gears for engaging the gear wheels, a plurality of pairs of pulleys on the worm shaft, a belt for each pair of pulleys, and means for shifting the belts, substantially as specified.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JUSTIN BOUSCAL.

Witnesses:
MAX. LEVILLAIN,
VICTOR BOVET.