

(No Model.)

C. L. WESER.

PIANO TRUCK.

No. 395,371.

Patented Jan. 1, 1889.

Fig. 1.

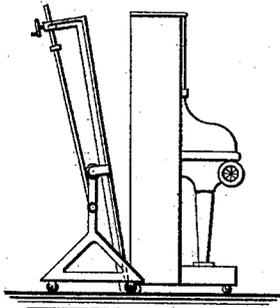


Fig. 2.

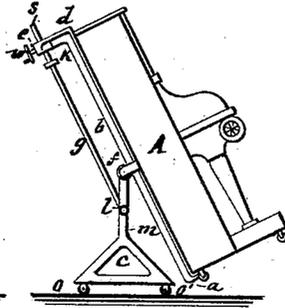


Fig. 3.

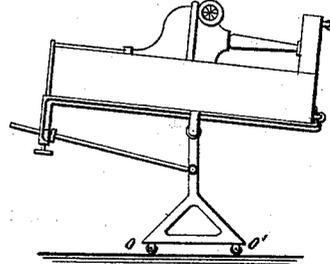


Fig. 5.

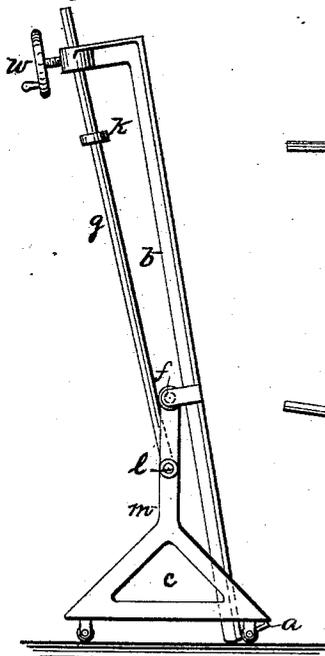


Fig. 4.

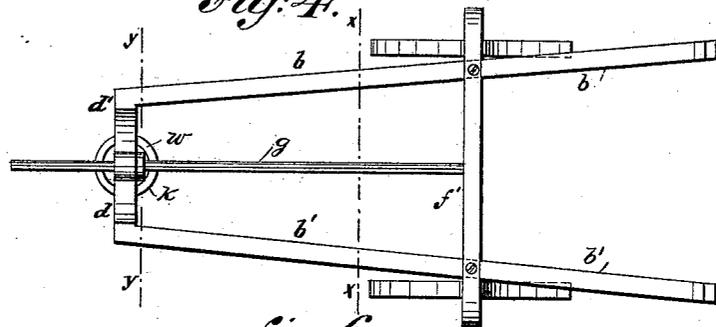


Fig. 6.

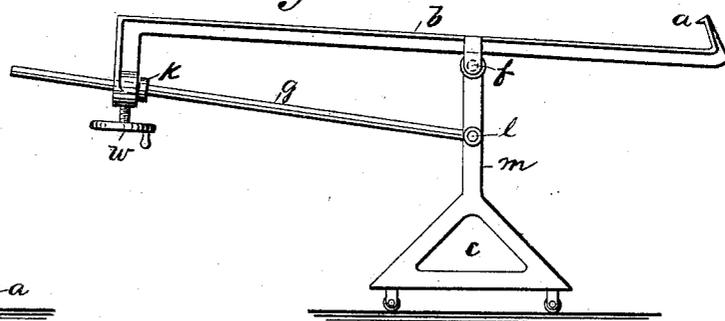
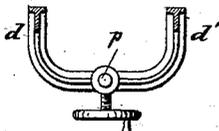


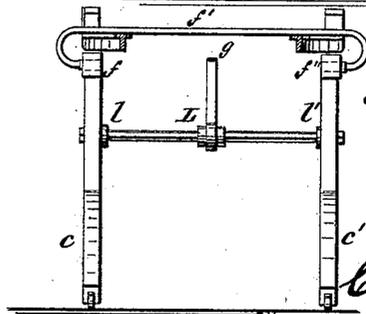
Fig. 8.



WITNESSES:

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Fig. 7.



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UNITED STATES PATENT OFFICE.

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PIANO-TRUCK.

SPECIFICATION forming part of Letters Patent No. 395,371, dated January 1, 1889.

Application filed April 28, 1888. Serial No. 272,196. (No model.)

To all whom it may concern:

Be it known that I, CALVIN LEWIS WESER, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Piano-Trucks, of which the following is a specification.

The object of my invention is a new labor-saving truck and bench combined for lifting, holding, and moving upright piano-fortes.

The following specifications will enable any mechanic skilled in the art to construct and operate it.

The said truck and bench combined is shown in the accompanying drawings.

Figure 1 shows the machine in position just prior to receiving the piano-forte A upon its bed-frame. Fig. 2 shows the same just after the piano has been drawn over upon the bed-frame. Fig. 3 shows it in its position as a bench, holding the piano-forte in a nearly-horizontal position. It is obvious that these figures are merely illustrative of some of the positions in which the piano can be held, and that the regulating-rod *g* permits the piano to be held at any desired angle with the floor. Fig. 4 is a plan view of the machine proper when in nearly the same position as in Fig. 3. Fig. 5 is an end view of the machine alone when in the same position as in Fig. 1. Fig. 6 is an end view of the machine alone when in about the same position as in Fig. 3. Fig. 7 shows the machine bisected by a vertical plane through the line *x x'*, Fig. 4. Fig. 8 shows the machine bisected similarly through the line *y y'*, Fig. 4.

This new truck of my invention is primarily intended for use in the repairing and manufacturing of upright piano-fortes. Incidentally it will also be found useful in the transportation of a piano-forte short distances—for example, between different points in the shop, factory, or store, or between a depot or store and a vehicle upon which it is to be loaded.

Under the present system of manufacturing, upright pianos are constantly being lifted bodily by two or more men whenever it is necessary to place a piano upon its back. This necessity arises in the "bellying," "stringing," "fly-finishing," "varnish-rub-

bing," and "fitting up." As the average upright piano weighs seven hundred (700) pounds, the special workman is obliged to call upon his neighboring shopmate to leave his work and assist him in turning the piano upon its back by mere muscular force. The aggregate of time lost in this way in a large shop is very considerable.

In my new machine the laws of gravitation and leverage are so employed that a boy of ten years having it as an ally can put the upright in any desired position more easily than two or three men could accomplish it.

Cumbersome contrivances have been devised and are somewhat in use for carrying piano-fortes up a flight of stairs; but these machines are utterly unlike my improvements both in principle and operation.

In the accompanying drawings the same elements are represented by identical letters in each of the figures.

A represents an upright piano-forte of the usual form; *b b'*, the side pieces of the bed-frame *b b' d d'*, upon which the back of the piano-forte is to rest, and each terminated at its lower extremity by the dogs *a a'*; and *f f' f''* is a swiveled cross-bar uniting the sides *b b'* of the bed-frame. This cross-bar is hinged into the two standards *m m'* at the points *f f''*, as shown.

g is a regulating-rod attached firmly at its lower extremity to the straight cross-bar *l l'*, (which cross-bar is also attached to the standards *m m'*.) The upper extremity of the cross-bar plays through the circular opening *p* in the upper cross-bar *d d'*, which unites the upper part of the two side bars *d d'*.

l l l' is a bar extending between standards *m m'*, and firmly attached thereto at points below the swiveled bar *f f' f''*. Around the bar *l l l'* at *L*, the center thereof, the regulating-rod *g* is hinged by means of a close-fitting eye at the end thereof, or by any equivalent method of hinging.

k is a stop-button firmly attached, as shown, to the rod *g*, and at any desired point along its length, depending upon the extent to which the especial employment of the truck finds it most convenient to revolve the piano-forte upon the bed-frame around the centers *f f'*. Instead of having the stop *k* rigidly fixed,

it may readily be adjustable if bored out to slide along the rod *g*, and supplemented by a set-screw, which will firmly bind it against the rod at any desired point.

5 *e* is a set-screw or clamp operating through a female screw tapped opposite the opening *p* in the upper cross-bar *d d'*, and for the purpose of clamping the regulating-rod *g* at that point, and thus holding it at any point between the upper extremity *s* and the stop *k*.

10 *W* is a wheel attached to the set-screw *e* for the purpose of turning and unturning the screw.

15 *c* shows one of the two bases (one at each side of the truck) to which the standard, as *m m'*, is attached. These bases are furnished with casters, as *o o'*, upon which the truck and its load can be readily rolled from one point to another. The points *f f''*, where the swiveled cross-bar *f f' f''* is centered, are placed at such height from the plane of the floor as will make the weight of the average upright piano-forte most nearly balance when resting upon the bed of the truck. The cross-bar *f f' f''* may be somewhat raised above the level of the bed-frame side pieces, *b b'*, and, as shown in the drawings, is bent upward for that purpose. The extent of the elevation of this cross-bar above the plane of the bed-frame can be varied in different machines, according to the height at which the piano-forte may be required to be held for either mechanical work in the shop or loading into vehicles, &c.

30 The material from which my improved truck is constructed is not essential, provided it has sufficient strength and rigidity for the work. Hard wood, cast or wrought metal, or a combination of these, are among the best materials to be used in the construction of this truck.

40 The regulating-rod *g* is prevented from moving through the opening *p* of the upper cross-bar *d d'* both by the stop *k* and the set-screw *e*. It therefore acts as a brake (when so stopped) upon the revolution of the bed of the truck around the centers *f f'*. The cross-bar *l l'* may be modified by being so constructed as to permit it to revolve in the standards *m m'* instead of being fixed thereto, as shown. In this method of construction the rod *g* would then be firmly attached to the bar at *L*, and would be revolved by the motion of the bar, instead of itself revolving the bar, as in the construction shown in the drawings.

55 I do not confine myself to any particular method of imparting to the regulating-rod its motion through the upper part of the bed-frame at *p*, the essential point being merely that it shall move coincidentally with the motion of the swiveled cross-bar *f f' f''*.

60 It will be observed that the dogs *a a'* are bent at an acute angle with the bed-frame. The object of this is to permit such leverage, when they are inserted below the piano-forte, that they will easily embed themselves

in the bottom of the piano, and thus prevent it from slipping off the truck.

The operation of this improved truck will be readily understood from the drawings 70 and the foregoing description of parts by any one skilled in the art. The dogs *a a'*, being provided with sharp points, as shown, are easily inserted into the bottom framing of the piano-forte. The upper part of the piano-forte 75 is then drawn over upon the bed-frame *f' b d' b'* until its weight can be removed from the floor. The truck and its load are then revolved around the centers *f f''*. This motion necessarily revolves the regulating-rod, 80 which is connected to the bar *l l'*, and moves it through the opening *p* in the upper cross-bar *d d'*. When the piano has been brought to the desired position or angle, the set-screw *e* is clamped against the regulating-rod *g* and binds the entire truck from further revolution, holding the piano forte firmly and rigidly upon it by means of the dogs *a a'* and its own weight.

85 The great weight of the piano restrains the casters from moving while it is being placed upon the truck. By the usual application of force the truck and its load may then be rolled upon the casters, as described. The function and operation of the stop *k* has been 95 fully explained in the foregoing description of the drawings.

The unloading of the piano from the truck is of course the reverse of the above operation, and so easily understood as to preclude 100 the necessity for specific description. In addition to the advantage in the economy of labor and force by the use of my improved truck is the further one, that it saves the frequent dropping of the piano-forte upon the 105 saw-horses, the jar of which tends to throw the piano out of tune. This truck permits the slow and gentle handling of the piano on all occasions.

I do not broadly claim in a truck a swiveled 110 bed-frame, combined with standards in which it revolves.

What I claim, and desire to have secured by Letters Patent of the United States, is—

1. In a piano-forte truck, the bed-frame *b b'* 115 *d d'*, united to the standards *m m'* in such manner that the bed-frame may revolve in the standards at points approximately opposite the balancing plane of an upright piano-forte, substantially as and for the purposes described. 120

2. In combination with the swiveled bed-frame of a piano-forte truck, as described in claim 1, a regulating-rod, *g*, connected with the cross-bar *l l'* and revolving coincidentally 125 with the revolution of the swiveled bed-frame by means of its insertion through the opening *p* in the upper cross-bar *d d'*, substantially as and for the purposes described.

3. In combination with the swiveled bed-frame and the regulating-rod *g* of a piano-forte truck, a stop or button, *k*, attached to 130

the regulating-rod *g*, for the purpose of limiting the revolution of the truck around its centers *f f''*.

4. In combination with the swiveled bed-frame and the regulating-rod *g*, a set-screw, *e*, inserted into the upper cross-bar *b b'*, opposite the opening *p*, to bind or clamp the regulating-rod *g* in the opening *p*, substantially as described.

10 5. In combination with the regulating-rod

g, the side pieces of the bed-frame *b b'*, terminated at their lower extremities by the dogs *a a'*, substantially as described.

Signed at New York, in the county of New York and State of New York, this 24th day of 15 April, A. D. 1888.

CALVIN LEWIS WESER.

Witnesses:

WM. B. KRUG,

HENRY V. PARSELL.