

R. A. GALLY.

PITMAN.

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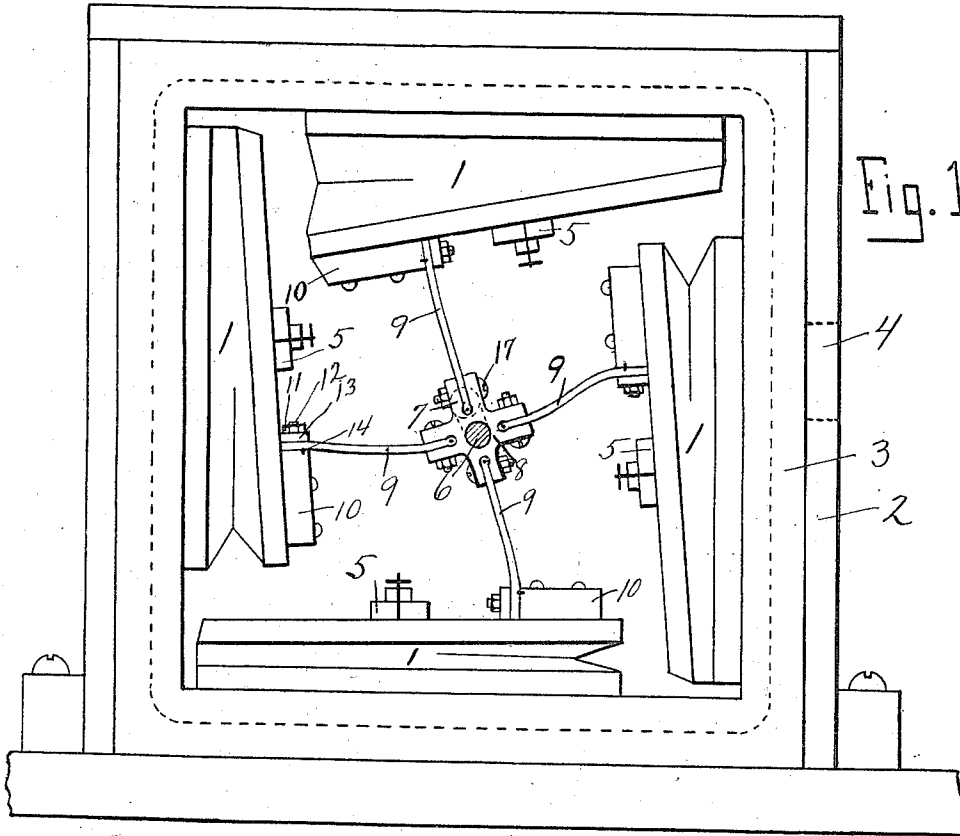


Fig. 1.

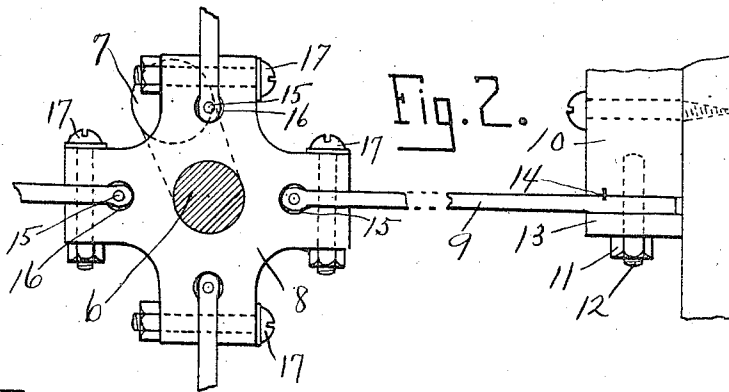


Fig. 2.

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PITMAN.

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To all whom it may concern:

Be it known that I, ROBERT A. GALLY, a citizen of the United States, and residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Pitmen, of which the following is a specification.

In the present application there is set forth an improved detail of attaching flexible pitmen to the crank block and pumper blocks.

In the drawings, Figure 1, is a reduced size front view of an air pump such as is used for a player piano, the front bearing and front end of the crank shaft removed to allow a clear view of the crank and crank block; and Fig. 2, is a full size view of the crank block and one pumper block showing detail of the attachment of the flexible pitmen.

Four pumpers 1 are shown attached to the four inner faces of a rectangular frame or box 2 which has wind ways 3 leading from all four of said pumpers to a common service port 4 adapted to be connected to any suitable apparatus to be affected by the air service to or from this motor or pump, the apparatus being usable as either a motor or pump, suitable valves being provided to each pumper of the present structure hereof, only the outer valves 5 being shown.

A crank 6 is revoluble about a central shaft 7, and on this crank 6 is mounted a single floating crank block 8 to which are attached four flexible pitmen 9 made of strong leather or other suitable material, each of which pitmen 9 is attached to its corresponding one of the pumpers 1 on a block 10 attached to said pump; a nut 11 on each bolt 12 holding a cap 13 clamped against each pitman 9 and holding each said pitman against its block 10. A sharp clip 14 of thin steel as saw blade or spring stock is set into the end of each block 10 so that the pitman placed therewith has this sharp clip 14 screwed into it to prevent any chance of the pitman slipping when under strain from the crank motion, and this clip 14 also allows a pitman to be slightly shortened at any time by reclamping it to another position of grip for the clip 14.

The end of each pitman 9 where attached to the crank block 8 has a small hole drilled widthwise through it near its end, and parallel to its faces, and a pin 15 is driven into

this hole to swell the end of the pitman as better shown in Fig. 2. The crank block 8 has four arms of a cross arrangement, each such arm having a slot for receiving a pitman 9, the inner end of each such slot having an enlargement or hole 16 into which the swelled end of the pitman 9 is inserted and the remainder of that end of such pitman is held closely in the straight part of the slot. A screw 17 may be run through each arm of the crank block 8 and thus add to the hold of the block to the pitman, but such screw without aid of the swelled form of the end of each pitman 9 would be insufficient grip, but such swelled end alone is sufficient to hold the pitman as to end pull; its screw being an added security, but principally used to preserve the strength of the split arms of the crank block 8, and to prevent any side splitting of the pitman.

Either of the foregoing attachment means of the pitmen 9 can be employed at the crank thereof, or at the pumper end although it is more convenient to have the adjustable style 10, 11, 12, 13, 14, at the pumper end of a pitman, and is specially desirable where a floating crank block as 8 is used and is of such small size as to make difficult the use or access to the adjustable attachment if it were at the crank end of the pitman. It is also apparent that those means of attachment may be employed for pitmen that are inflexible, as well as for those that are flexible, and that the pitmen may be used for any other purpose as well as for pumpers.

What I claim as my invention is:—

1. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being enlarged at its inner end, the said attached end of said pitman having an expansion at its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, and a compression means extended through said element and its said slot.

2. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being enlarged at its inner end, the said attached end of said pitman having an expansion at its extreme end, and the said expanded part of said pitman inserted in the said enlarged

part of the said slot of the said element, and a compression means extended through said element and its said slot and through the said end of the said pitman.

5 3. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being enlarged at its inner end, the said attached end of said pitman having an expansion at
10 its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, and a compression means extended through said element and its said slot, said compression
15 means being adjacent to the said enlarged part of said slot.

4. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being
20 enlarged at its inner end, the said attached end of said pitman having an expansion at its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, and
25 a compression means extended through said element and its said slot and through the said end of the said pitman, said compression means being adjacent to the said enlarged part of said slot.

30 5. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being enlarged at its inner end, the said attached end of said pitman having an expansion at
35 its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, and a compression means extended through said element and its said slot, said compression
40 means being outward from the said enlarged part of said slot.

6. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being
45 enlarged at its inner end, the said attached end of said pitman having an expansion at

its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, and a compression means extended through said element and its said slot and through the
50 said end of the said pitman, said compression means being outward from the said enlarged part of said slot.

7. A strap form pitman and an element 55 attached to an end of said pitman, said element having a slot therein, said slot being enlarged at its inner end, the said attached end of said pitman having an expansion at its extreme end, and the said expanded part
60 of said pitman inserted in the said enlarged part of the said slot of the said element, and a compression means extended through said element and its said slot, the main dimension of said compression means in direction
65 transverse to the main dimension of said enlarged part of said slot.

8. A strap form pitman and an element attached to an end of said pitman, said element having a slot therein, said slot being
70 enlarged at its inner end, the said attached end of said pitman having an expansion at its extreme end, and the said expanded part of said pitman inserted in the said enlarged part of the said slot of the said element, the
75 said expanded part of said pitman comprising an inserted element forced into the body of said pitman at its said enlarged part.

9. A strap form pitman and an element attached to an end of said pitman, said element comprising two parts between which
80 the said end of the said pitman is held, and a compression means binding the two said parts and the said end of the said pitman together, and a sharp clip in a face of one
85 of said parts of said element and extended part way through the body of the said end of the said pitman.

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Witnesses:

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