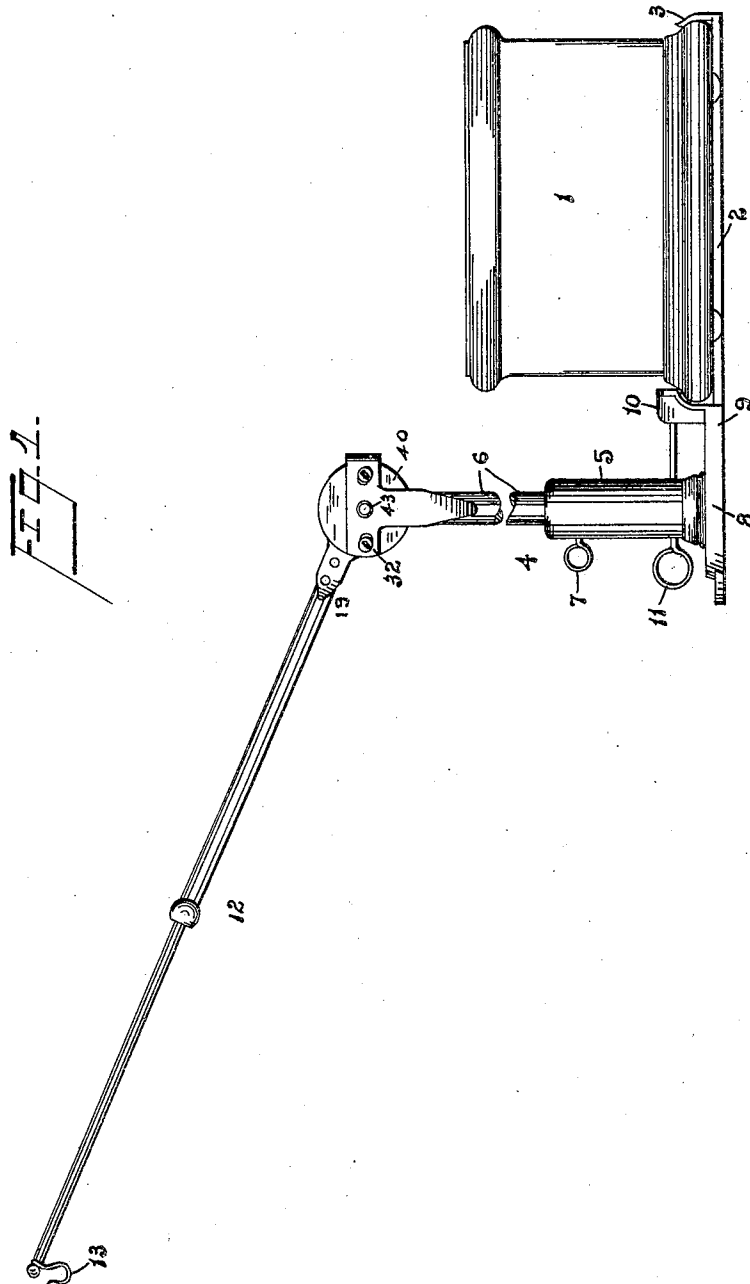


T. J. BEETHAM.
HORN CRANE.
APPLICATION FILED JAN. 17, 1907.

938,739.

Patented Nov. 2, 1909.
3 SHEETS—SHEET 1.



WITNESSES
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Alice M. Burns.

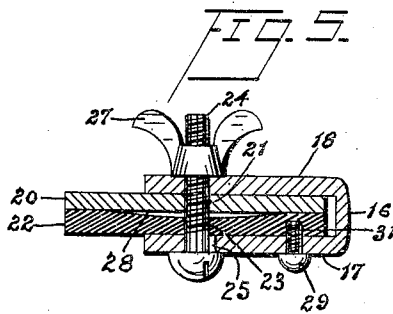
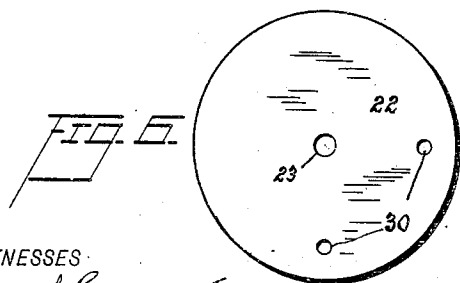
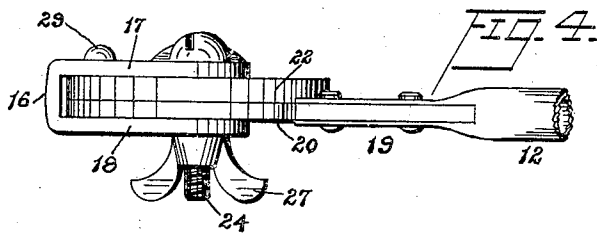
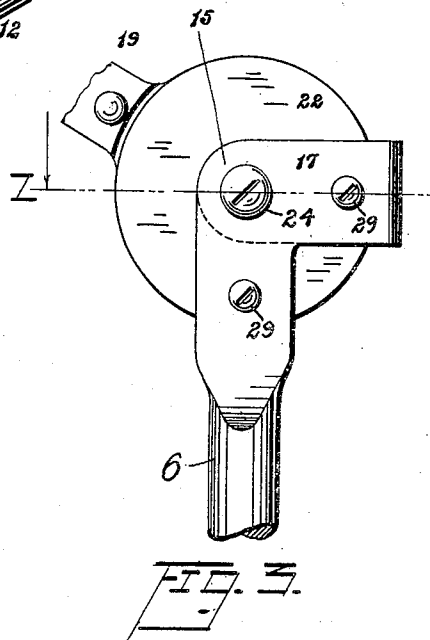
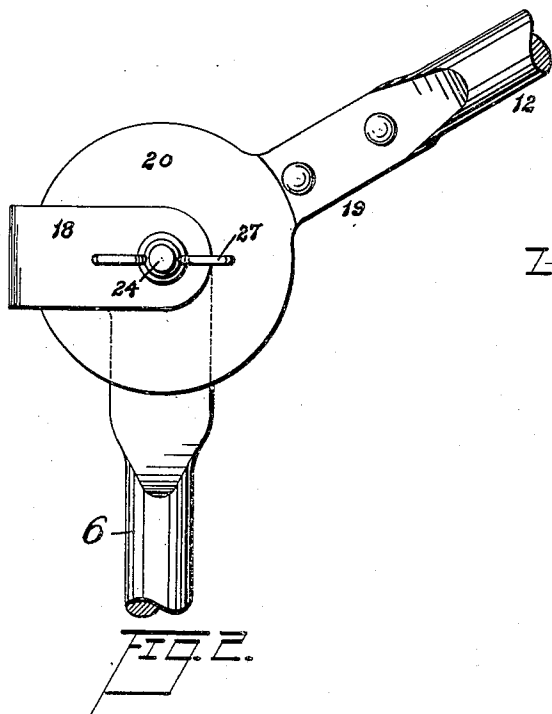
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3 SHEETS—SHEET 2.



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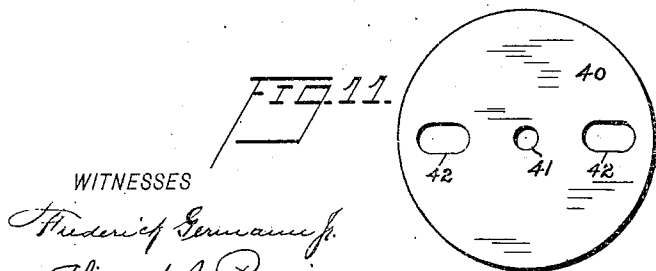
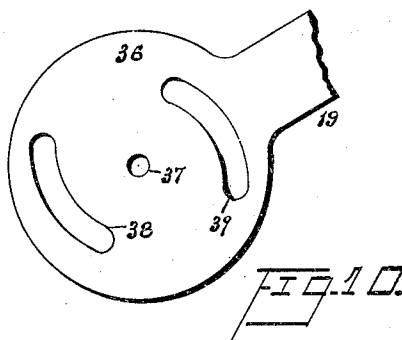
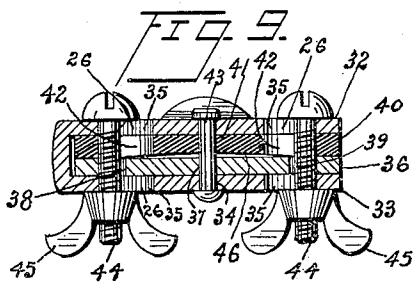
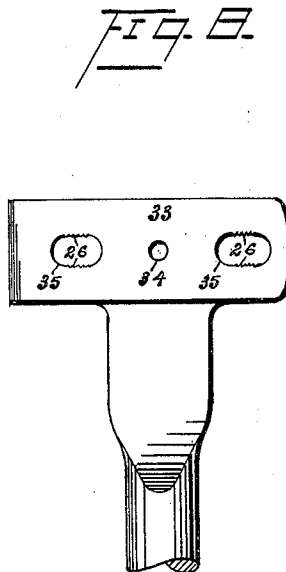
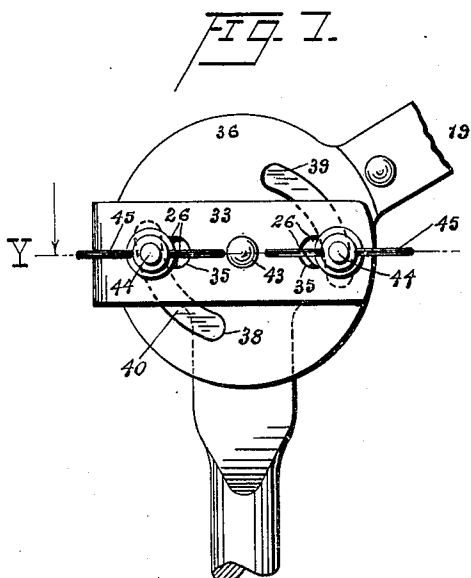
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3 SHEETS—SHEET 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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HORN-CRANE.

938,739.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed January 17, 1907. Serial No. 352,780.

To all whom it may concern:

Be it known that I, THOMAS J. BEETHAM, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Horn-Cranes, of which the following is a specification.

The invention relates more particularly to the connection between the upright standard or post of the horn crane and the inclined horn-supporting arm, whereby said parts are made adjustable with respect to one another to support the horn in different positions.

The objects of the invention are to secure a simplified and inexpensive construction of such connection or joint; to enable the inclined horn-holding arm to be held or clamped firmly in any position into which it may be adjusted; to at the same time enable the members to be so clamped that they can be adjusted to different positions and retain any given position frictionally; to provide means for regulating or increasing such friction, and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawings in which like numerals of reference indicate corresponding parts in each of the several drawings, Figure 1 is a side elevation of a horn crane of my improved construction applied to a talking-machine cabinet; Figs. 2 and 3 are views from opposite sides thereof of the improved connection or joint in which my invention particularly inheres; Fig. 4 is a plan of the joint or connection; Fig. 5 is a cross section on line *z*, Fig. 3, and Fig. 6 shows in detail side view, a certain friction disk; Fig. 7 shows in side elevation a joint or connection of slightly modified construction, and Fig. 8 is a view of the bracket upon the post or standard detached from the rest of the parts; Fig. 9 is a cross section on line *y*, Fig. 7; Fig. 10 shows in detail the inner end of the inclined horn-holding arm, and Fig. 11 is a face view of the friction disk employed in the modified construction.

In said drawings, 1 indicates a talking-machine cabinet beneath which extends the base piece 2 of the horn crane, its rear end being bent upward, as at 3, to engage the

back of the cabinet. Upon the front end of said base piece which projects out from the machine, is arranged the upright standard 4 55 of the horn crane, said standard comprising a lower socket 5 and upper post 6 adapted to be clamped in said socket by the set screw 7. The said socket 5 is secured to the base piece 2, and forms therewith a slide way for the foot 8 of a clamping piece 9, whose head 10 60 is adapted to be forced against the base molding of the cabinet 1, by means of the screw 11 working through the base of the socket 5, all as in the co-pending application 65 of J. H. B. Conger, Serial Number 319,041, allowed November 17, 1908. At the top of the post 6 is connected or hinged an inclined horn supporting arm 12, which has at its outer end a hook 13 to receive the 70 usual ring on a horn. It is particularly to this connection or hinging that my invention relates, and which will next be described in detail.

Referring more particularly to Sheet 2 75 of the drawings, the post 6 of the upright standard of the horn crane is flattened at its upper portion to form a strap-like part which is first bent edgewise at right angles, as at 15, and then at a distance from said 80 bend, as at 16, doubled flatwise to form in plan a U-shaped clamp with equal arms 17, 18. This clamp thus lies in horizontal position, as will be understood, and its closed end is in use toward the talking machine, 85 or away from the extending arm 12, as shown in Fig. 1. The purpose of this is so that the arm 12 can be folded downward into superposition with the post 6 for packing, or swung open through 180 degrees or 90 90 more into alinement with said post. Great freedom and range of adjustment is thus obtained.

The inner end 19 of the said horn supporting arm 12 is preferably provided with 95 an enlargement or disk 20 centrally apertured as at 21. The said disk 20 and a friction disk 22 of fiber or other material centrally apertured as at 23 are mounted between the arms 17 and 18 by means of a bolt 100 24 keyed as at 25 and provided at its end with a wing nut 27. The said disk 22 is slightly concaved as at 28 to insure friction at its periphery and contact surface and is

prevented from turning by means of screws 29, 29, which enter perforations 30, 30 in the friction disk 22 as shown at 31 Fig. 5.

It is obvious that by tightening the wing nut 27 the arms 17 and 18 will clamp the disks 20 and 22. By the construction thus described the supporting arm 12 can be adjusted up or down in a vertical direction and set at any desired point frictionally.

Referring to Sheet 3, 32 and 33 indicate the arms of the said U-shaped clamp perforated at 34 and longitudinally slotted as at 35, 35, and notched as at 26. The enlargement or disk 36 at the inner end of the rod 19 is centrally perforated as at 37 and eccentrically slotted as at 38 and 39. The friction disk 40 is centrally perforated as at 41, longitudinally slotted as at 42, 42, and concaved as at 46. The said enlargement or disk 36 and the friction disk 40 are mounted between the arms 32 and 33 upon a shaft 43. The slots 42, 42, in the fiber disk 40 are brought in alinement with the slots 35, 35, and the clamping bolts 44, 44 are inserted through the said slots 35, 42, and the eccentric slots 38 and 39, and are provided at their ends with wing nuts 45, 45. This construction enables me to clamp the disk 36 and the friction disk 40 between the arms 32 and 33 by means of the bolts 44, 44 and wing nuts 45, 45, and to secure and to prevent the said friction disk from rotating. Furthermore this construction obviously provides friction adjustment, for in operating the supporting arm 12, the eccentric slots 38, and 39 move the bolts 44, 44 back and forth in the slots 35 and 42, and the said bolts create a certain amount of friction in their travel. I have provided notches 26 in the slots 35, 35 to produce additional friction upon the periphery of the bolts 44. By the combined friction of the disk, nuts, bolts and notched slots I can obtain an absolute positive adjustment of the projecting arm 12 at any angle.

Having thus described my invention, what I claim as new is;

1. In a horn crane, the combination with a standard having a portion provided with a slot, of a horn-supporting arm having an end pivoted flatwise against said standard eccentric to the slot therein, said end of the arm having an eccentric slot crossing the slot in the standard top, and a clamping bolt through said slots.

2. In a horn crane, the combination with a standard having a flattened top portion, of a horn-supporting arm having a flattened end pivoted flatwise against said flattened portion of the standard, said two flattened parts having slots, the slot in one part being at an angle to the slot in the other and crossing the same, and a clamping bolt through said slots.

3. In a horn crane, the combination with

a standard, of a horn-supporting arm having an end pivoted flatwise against the side of said standard, said pivoted parts having slots the slot in one part being at an angle to the slot in the other and crossing the same, friction-increasing means upon a wall of one slot, and a clamping bolt through said slots.

4. In a horn crane for talking machines, the combination with a standard, a U-shaped clamp carried thereby, and means for forcing the clamp-arms toward each other, of a horn-supporting arm having a disk centrally pivoted between the arms of said clamp, a friction disk mounted between the arms of the clamp adjacent the disk of the horn-supporting arm, and means for limiting the rotation of said friction disk.

5. The combination of two rods or bars, a U-shaped clamp having one arm fixed to the extremity of one of said rods and holding the clamp at one side of the rod with a plane through its arms transverse to said rod, the other rod having its extremity between the arms of the said U-shaped clamp, and a pivot through said clamp-arms and last mentioned rod at substantially the point of attachment of the clamp to the rod which supports it, whereby said rods are hinged together, and yet free to fold into parallel relation to each other.

6. In a horn crane for talking machines, the combination with a standard having a U-shaped clamp provided with a perforation and with longitudinal slots at either side thereof, of a horn-supporting arm having a centrally perforated disk standing between the arms of said clamp and provided with eccentric slots, a pivot through the perforations of the clamp-arms and disk, and clamping bolts through the slots.

7. In a horn crane for talking machines, the combination with a standard having a U-shaped clamp provided with a perforation and with longitudinal slots at either side thereof, their edges being notched, of a horn-supporting arm having a centrally perforated disk standing between the arms of said clamp and provided with eccentric slots, a pivot through the perforations of the clamp-arms and disk, and clamping bolts through said slots.

8. In a horn crane for talking machines, the combination with a standard having a U-shaped clamp provided with a perforation and with longitudinal slots at either side thereof, of a horn supporting arm having a centrally perforated disk standing between the arms of said clamp and provided with eccentric slots, a friction disk also centrally perforated and standing between said clamp-arms, a pivot through the perforations of the clamp-arms and the disks, and clamping bolts through said slots.

9. In a horn crane for talking machines,

the combination with a standard having a U-shaped clamp whose arms are provided with a central perforation and with horizontal slots at either side thereof, of a horizontal supporting arm having a centrally perforated disk provided with opposite eccentric slots, a centrally perforated friction disk having opposite radial slots, said disks standing in contact between said clamp-arms, a pivot through said central perforations, and adjustable clamping bolts through said slots. 10

THOMAS J. BEETHAM.

In the presence of—

HOWARD G. HULL,

FREDERICK GERMANN, Jr.