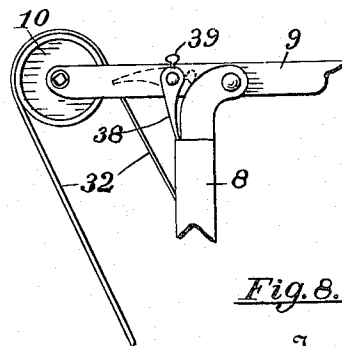
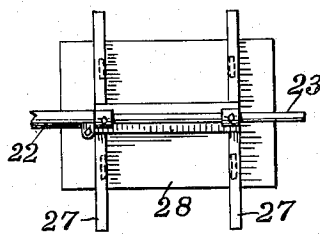
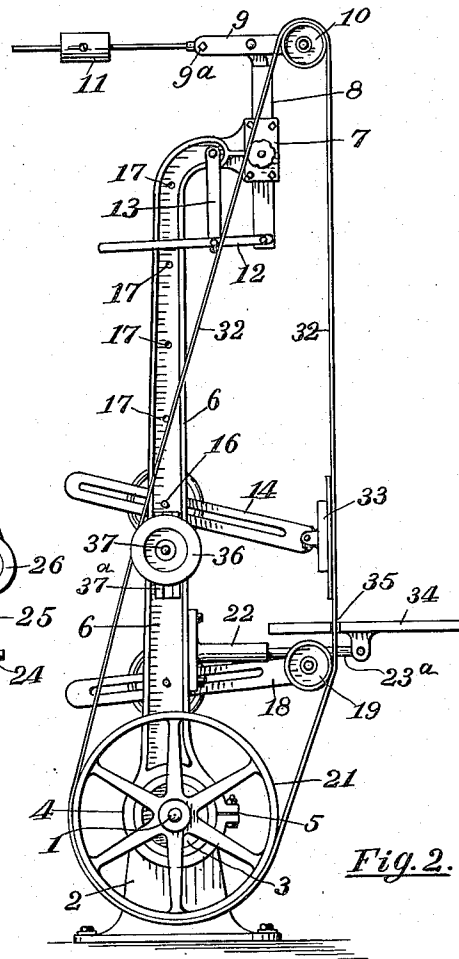
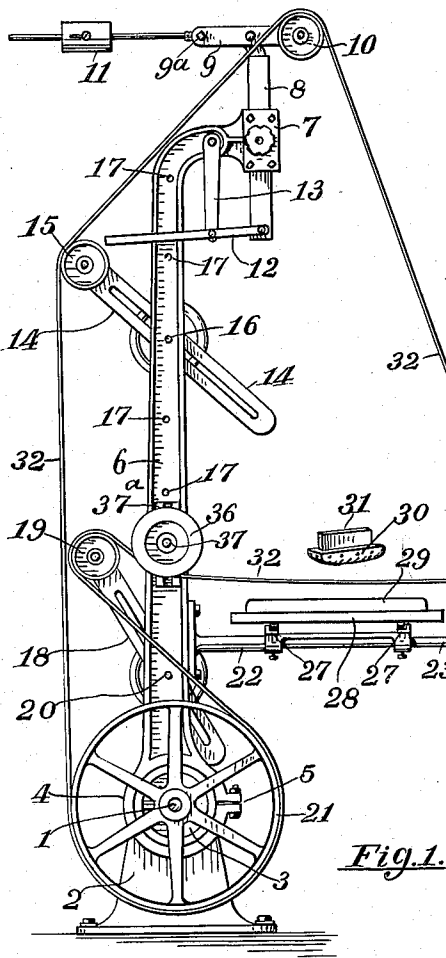


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APPLICATION FILED MAY 4, 1908.

933,305.

Patented Sept. 7, 1909.
2 SHEETS—SHEET 1.



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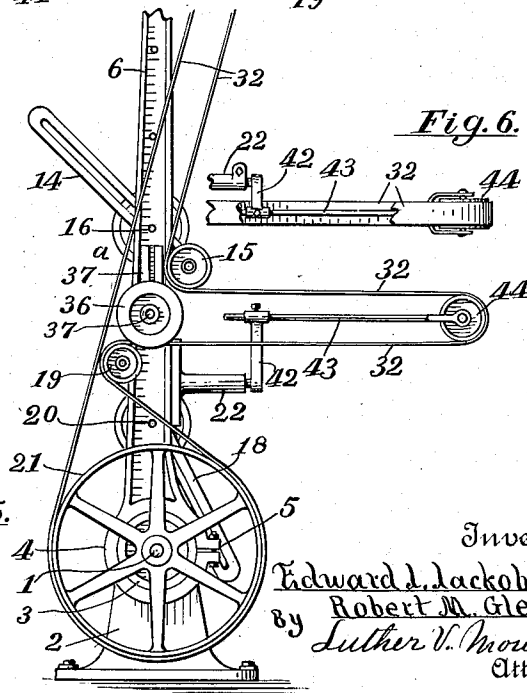
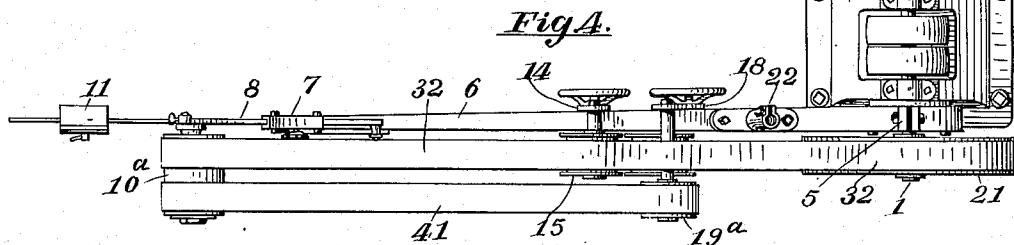
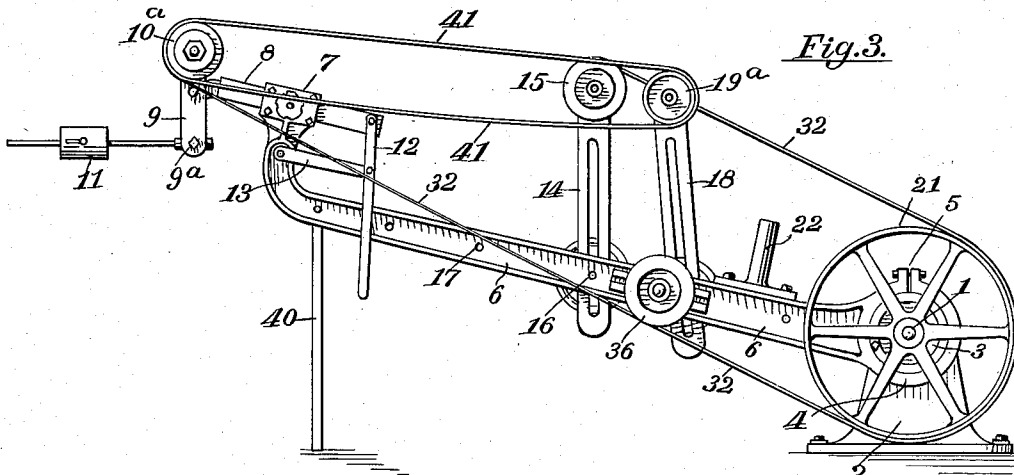
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UNITED STATES PATENT OFFICE.

EDWARD J. JACKOBOICE AND ROBERT M. GLEASON, OF GRAND RAPIDS, MICHIGAN.

SAND-BELT MACHINE.

933,305.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 4, 1908. Serial No. 430,813.

To all whom it may concern:

Be it known that we, EDWARD J. JACKOBOICE and ROBERT M. GLEASON, citizens of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Sand-Belt Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in sand belt machines, and its object is to provide improved means whereby the device may be variously adjusted to a great variety of work, and to provide the same with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:

Figure 1. is a side elevation of our device adjusted for operating upon irregular curved surfaces, such as chair seats or the like; Fig. 2. the same arranged for operating upon plane or irregular vertical curved surfaces; Fig. 3. the device adjusted for horizontally applying the belts and operating two belts preferably of different grades of fineness; Fig. 4. a plan view of the same; Fig. 5. a device adjusted for applying the belt to the inside of hollow or tubular work; Fig. 6. a detail in plan view of a part of Fig. 5; Fig. 7. an inverted detail of the table of Fig. 1; and Fig. 8. an enlarged detail of the upper end of the machine in side elevation.

Like numbers refer to like parts in all of the figures.

1 represents the driving shaft journaled in a base 2, surrounding the axis of which shaft is a large circular projection 3 on the side of the said base. Surrounding this projection and adjustable thereon is a band 4, carrying the arm 6, which arm constitutes the adjustable main frame of the device. This band is rotative on the projection being divided and bolted as at 5, the projection and band being of sufficient size so that the band may be rigidly clamped in adjusted position about the axis of the projection to adjust the frame vertical, horizontal, or inclined as occasion may require, and to securely hold the frame in position. The upper end of this frame is curved toward one side in a plane at right angles to the axis of the driving shaft and provided with

a head 7 in which is a vertically adjustable support 8, on the upper end of which support is pivoted a lever 9, on the short end of which lever is mounted a pulley 10 to engage the sand belt 32, and on the other end of said lever is an adjustable weight 11 to automatically and yieldingly tighten said belt. In this lever is a joint 9^a, whereby the lever may be adjusted either in alinement or at right angles to form a bell crank lever, as occasion requires.

12 is a lever pivoted to the lower end of the support, which lever is pivoted to a hanger 13 intermediate its ends whereby the support 8 may be manually adjusted in the head 7 to take up the slack of the belt.

15 is a pulley mounted on one side of and near the end of a longitudinally slotted arm 14 adjustably attached to the frame 6 by a clamping bolt 16 the frame 6 being provided with various openings 17 at intervals to variously adjust said bolt and arm on the frame. A similar pulley 19 and slotted arm 18 are provided, and in like manner adjustably secured to the frame 20, these arms and pulleys being variously adjusted, as hereafter described, to properly direct the belt for various kinds of work.

21 is a driving pulley mounted on the shaft 1 and rotating close to the side of the frame 6.

On the frame 6 and projecting at right-angles thereto is a socket 22 in which may be inserted means for supporting various devices as hereafter described.

23 is a support inserted in the socket 22 on which are transverse horizontal ways 27, on which ways is movably mounted a horizontal table 28 adjustable transversely of the sand belt 32. On this table is supported the work 29, which may have any convenient irregular curved surface, (such as a chair seat) and to properly direct the belt in contact with the surface of the same, we prefer to provide a pulley 36 on the side of the frame mounted on a stud 37 vertically adjustable in ways 37^a on the frame. We also provide a pulley 26 supported at the opposite side of the table 28 by means of a standard 25 held by a clamp 24 mounted on the support 23. The pulleys 15 and 19 are also adjusted as shown in Fig. 1. and the belt engaged with the various pulleys as shown, these pulleys all being arranged in substantially the same plane with each other and with the driving pulley 21. Obviously the

pulley 36 may be dispensed with and the pulley 19, adjusted to guide the belt horizontally over the table and work.

To properly engage the belt with the curved surface of the work 29, we provide a convex elastic pad 30 to slidably engage the belt opposite the work and manually press the same in contact therewith, by means of a suitable handle 31 on the pad.

To adjust the machine for applying the belt to either plane or curved vertical surfaces, we provide a support 23^a, shorter than the support 23 and insert this in the socket 22 at the outer end of which support is adjustably supported a table 34, pivoted thereto on a horizontal axis and having a slot 35 to receive the belt 32. The pulley 19 is then adjusted below the table 34 to properly guide the belt in the slot 35. The arm 14 is also adjusted as shown in Fig. 2, the pulley removed therefrom and a belt support 33 attached in place of the pulley, said support engaging the belt and having a surface configuration to fit the belt to the vertical curved or plane surface of the work, as the case may be. The work (not shown) is supported upon the table 34 and engaged with the belt opposite the support 33. To adapt the device for applying horizontal belts to manually supported work and also to operate two belts of different grades, the device is adjusted as in Fig. 3. and provided with a support 40 for the frame 6 at its upper end. The lever 9 is adjusted at right-angles by the joint 9^a to enable the weight 11 to operate the tightener pulley 10^a. To operate two belts, said pulley is of sufficient face to carry two belts, the extra belt 41 being alongside of the belt 32 and supported by a pulley 19^a on a suitable elongated stud on the arm 18, which arm is properly adjusted to tension the belt 41. By this adjustment two horizontally disposed belts are available and the work may be passed in succession first over the belt 32 and then over the belt 41, which latter is preferably of finer grade. To apply the belt 32 to the interior of tubular or other hollow work, we provide a laterally projecting arm 42 (see Figs. 5 and 6) adapted to be supported by the socket 22 and carrying a rod 43 horizontally extending therefrom, on the outer end of which rod is a yoke in which is journaled a pulley 44 to engage the belt 32. The pulleys 19 and 15 are then adjusted to bring the belt substantially parallel where it extends horizontally outward around the pulley 44, which pulley is small enough to pass inside of or through tubular work, or hollow work of various kinds. In all of these various positions, the tightener pulley 10 yieldingly takes up the slack of the belt by means of the lever 9 and weight 11.

In the event that a rigid support for the pulley 10 is desired, we provide a dog 38 on

the lever 9, located between the pivot of the lever and the pulley 10 and engaging a shoulder on the support 8 to rigidly support the pulley 10 in engagement with the belt 32. This dog is held out of action by a thumb screw 39 inserted therein and engaging its pivot.

It will thus be seen that we are able to adapt the described device to a great variety of work and to operate in a great variety of positions, while at the same time it is convenient and simple, also easily and quickly adjusted for a great variety of work.

What we claim is:

1. A sand belt machine, comprising a frame having one end curved to one side, a head on the end of the frame, a longitudinally adjustable support in the head, a lever pivoted to one end of the support to manually adjust the same in the head, a lever pivoted to the other end of the support, a pulley and a weight on said last named lever, and a sand belt engaging the said pulley and yieldingly tightened thereby.

2. A sand belt machine, comprising a frame curved to one side at the upper end and pivotally and adjustably supported at the lower end to adjust either vertical or horizontal, a pivoted lever carried at the upper end of the frame and having a joint adjustable in line or at right-angles, a weight on one end of the lever, a pulley on the other end of the lever, a sand belt engaged and tightened by the pulley, a driving shaft in the axis of the pivot of the frame, and a driving pulley on said shaft and engaging the sand belt to drive the same.

3. A sand belt machine, comprising a frame pivotally and adjustably supported at the lower end and having a laterally projecting head at the upper end, a support longitudinally adjustable in said head, a lever pivoted to one end of the support and to a hanger on the frame to manually adjust the support, a lever pivoted to the other end of the support and having a joint near the middle to adjust the lever in alinement or at right-angles, a weight adjustable on one end of said lever, a pulley on the other end of said lever, a driving shaft in the axis of the pivot of the frame, a driving pulley on the said shaft, and a sand belt engaging both of said pulleys.

4. A sand belt machine, comprising a vertically disposed frame, a vertically adjustable pulley near the top of the frame and at one side thereof, a driving pulley near the base of the frame, arms attached to the frame and adjustable at opposite sides of the frame and also vertically adjustable on the frame, a pulley journaled on one end of each arm, a socket attached to the frame, a support detachably inserted in the socket, a table pivotally attached to the support, pulleys supported at opposite sides of the table and

above the plane thereof, and a sand belt engaging all of said pulleys and carried thereby.

5 5. A sand belt machine, comprising a vertically disposed frame, a driving pulley near the base of the frame, a vertically movable pulley near the top of the frame, a support extending horizontally from the frame, a table on the support, a pulley mounted on the frame at one side of the table, a pulley mounted on the support at the other side of the table, and a sand belt engaging all of said pulleys and extending above the table, and also extending parallel therewith.

10 6. A sand belt machine, comprising a vertically disposed frame having a laterally extended head, a vertically adjustable support in said head, a lever pivoted on said support, a pulley and a weight on the respective ends of said lever, a driving pulley near the base of the frame, a laterally projecting support on the frame, ways transversely arranged on said support, a table adjustable on the ways, a pulley at one side of the table and

adjustable on the frame, a pulley at the other side of the table and mounted on a vertically adjustable support attached to the table support, and a belt engaging all of said pulleys and extending above the table, and also extending parallel therewith. 25 30

7. A sand belt machine comprising a vertically disposed frame, a horizontally disposed support on the frame, ways mounted on the support, a table movable on the ways, a vertically adjustable pulley above the table and at the top of the frame, a driving pulley near the base of the frame, pulleys supported at the respective sides of the table and above the plane thereof, and a sand belt engaging all of said pulleys and extending above the table. 35 40

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD J. JACKOBOICE.

ROBERT M. GLEASON.

Witnesses:

GEORGIANA CHACE,

LUTHER V. MOULTON.