

C. H. DRURY.
 ABRASIVE BELT MACHINE.
 APPLICATION FILED MAY 15, 1912.

1,049,214.

Patented Dec. 31, 1912.

4 SHEETS—SHEET 1.

Fig. 2.

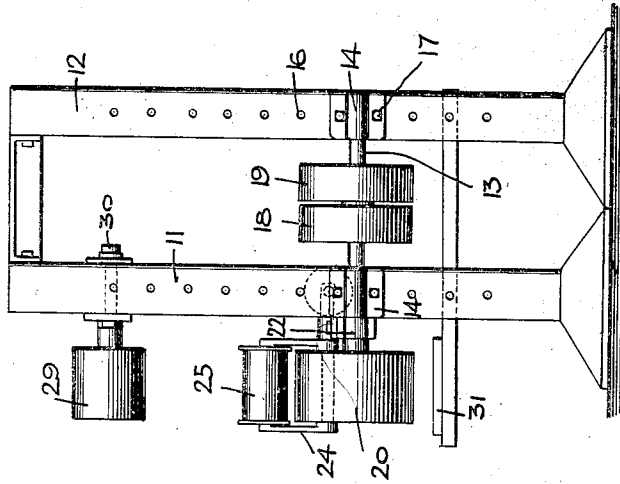
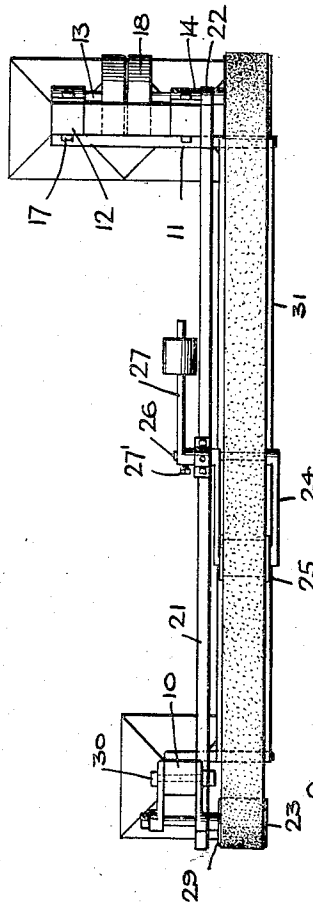


Fig. 1.



WITNESSES
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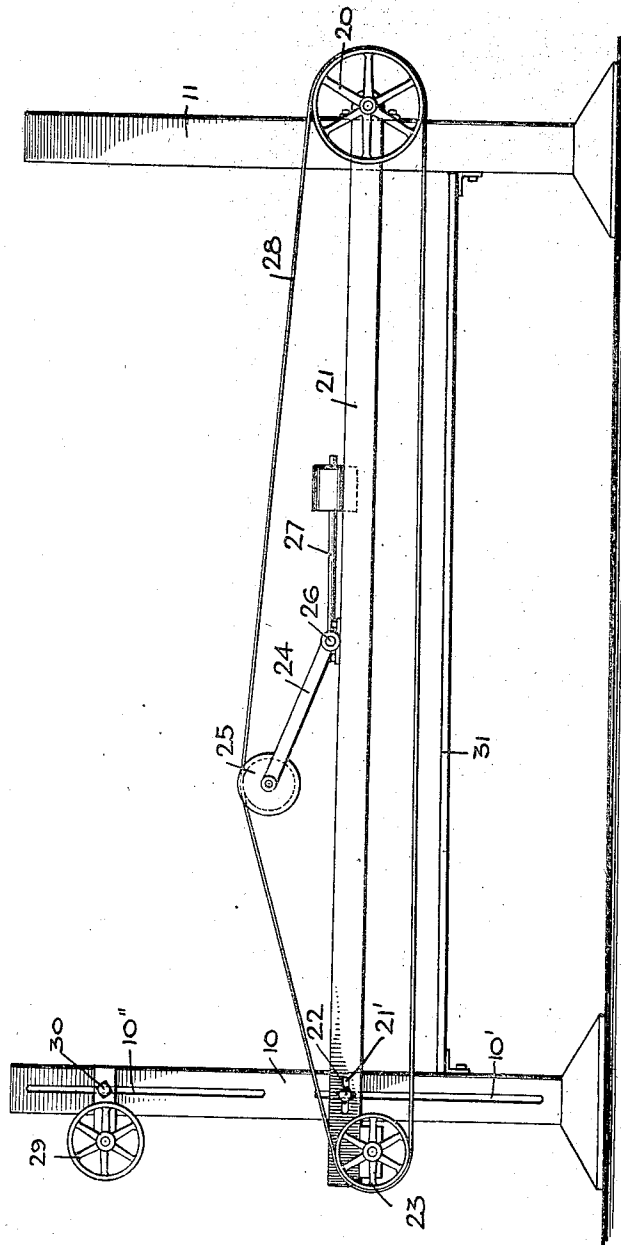
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4 SHEETS—SHEET 2.

Fig. 3.



WITNESSES

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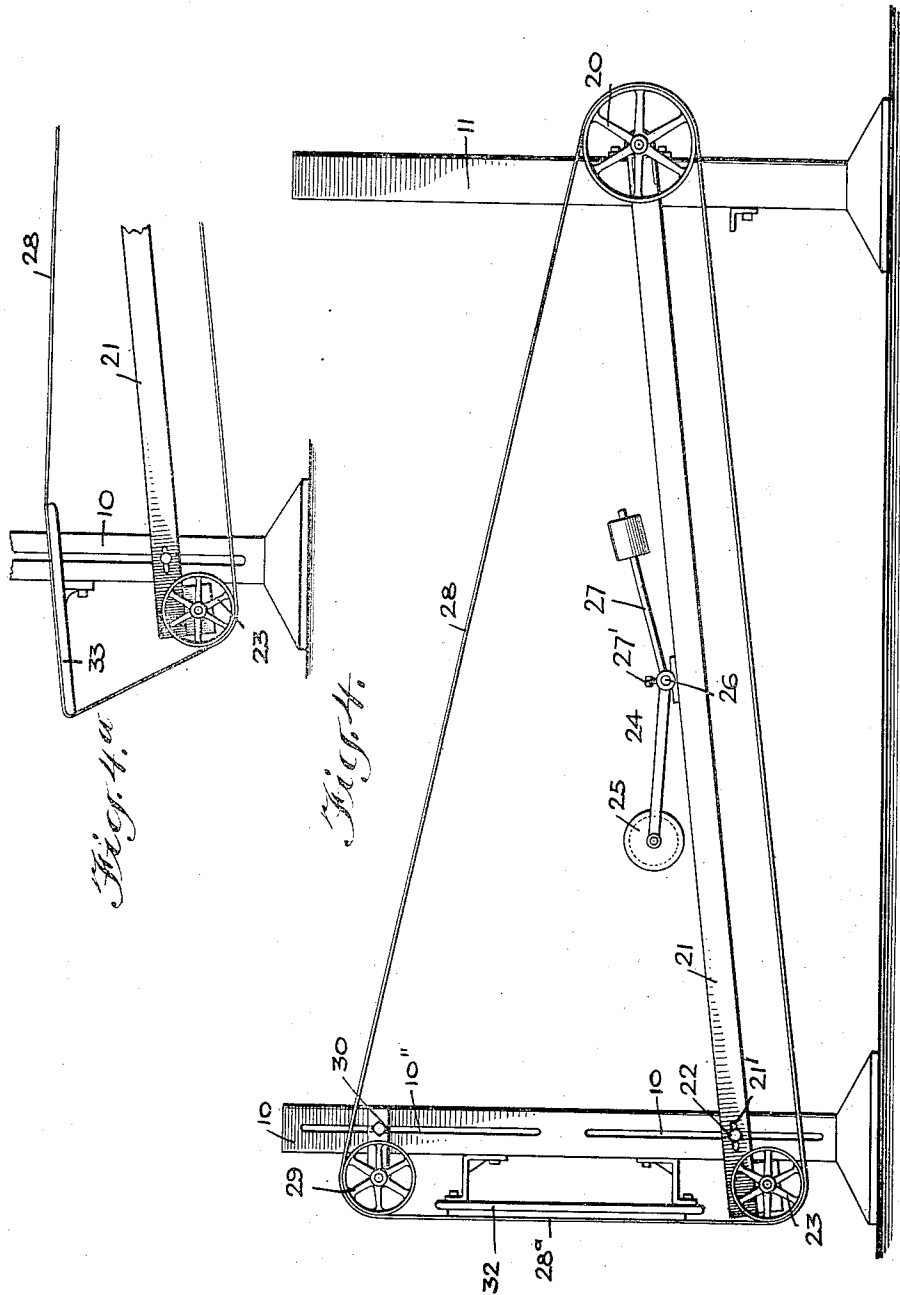
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4 SHEETS—SHEET 3.

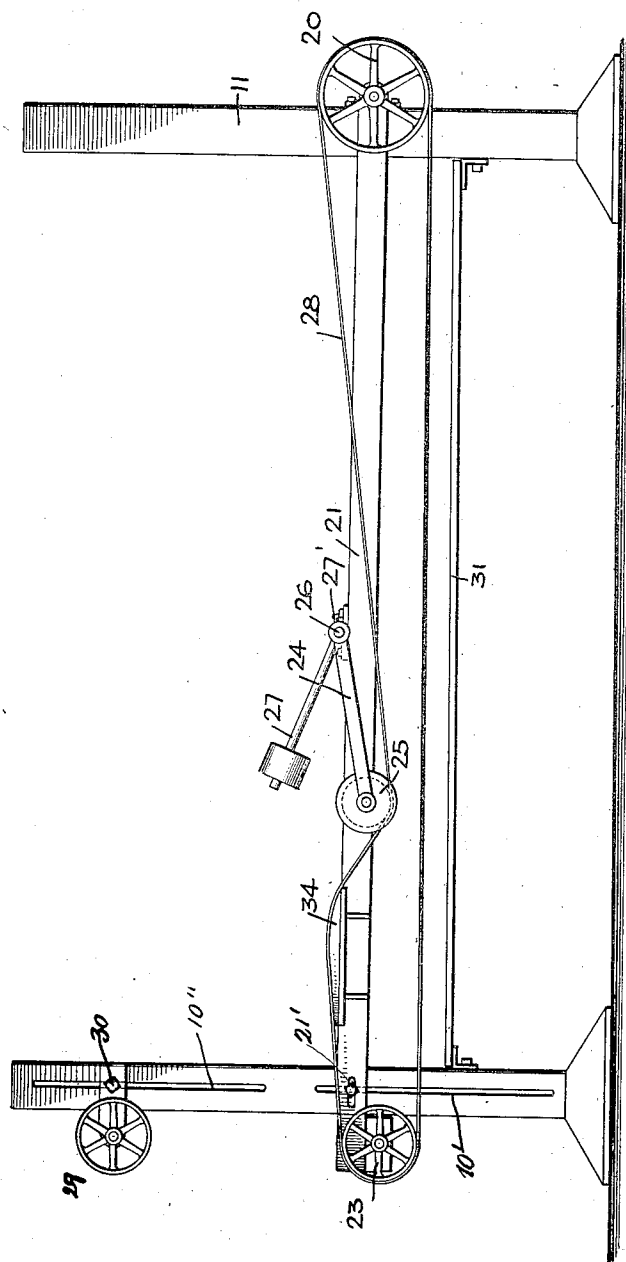


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Fig. 5.



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UNITED STATES PATENT OFFICE.

CLARENCE HOWARD DRURY, OF EVANSVILLE, INDIANA, ASSIGNOR OF ONE-HALF TO
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ABRASIVE-BELT MACHINE.

1,049,214.

Specification of Letters Patent. Patented Dec. 31, 1912.

Application filed May 15, 1912. Serial No. 697,359.

To all whom it may concern:

Be it known that I, CLARENCE HOWARD DRURY, a citizen of the United States, and a resident of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and Improved Abrasive-Belt Machine, of which the following is a full, clear, and exact description.

This invention relates to abrading or polishing machines, and has particular reference to devices of this character adapted for a wider range of adjustment and field of operation than other single machines previously proposed.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of one embodiment of the invention; Fig. 2 is an elevation, the abrasive belt being omitted; Fig. 3 is a side elevation of one arrangement of the device; Fig. 4 is a similar view of another arrangement of the parts; Fig. 4^a is a modified arrangement of the device shown in Fig. 4; and Fig. 5 is a still further arrangement or adaptation.

Referring particularly to the drawings for a better understanding of this machine, the numeral 10 indicates what may be regarded as a front standard, and 11 and 12 indicate a pair of rear standards spaced apart and upon which is mounted a power shaft 13. Said shaft is journaled in bearings 14 detachably or adjustably secured to said standards 11 and 12 by means of series of holes 16 in said standards in which the clamping bolts 17 of said bearings may be secured. Upon the shaft 13, between said standards, are arranged tight and loose pulleys 18 and 19 through which power may be applied to said shaft. On the outside of the frame formed by said standards and connected to the same shaft is a drive wheel 20.

A bar 21 is connected pivotally at the rear end and by a stirrup 22 to the shaft 13 and extends thence into adjustable connection with the front standard 10, the front end of the bar being adjustable vertically along the

said front standard by means of a bolt 22 operating in slots 21' and 10' in said bar and standard respectively. Journaled at or near the front end of the bar 21 is a pulley 23 of the same width as the drive wheel 20. Connected to the bar 21 between the front and rear standards is an automatic tightener 24 including an idler 25 carried by a yoke pivoted at 26 on the bar and connected to one end of said pivot is a weighted arm 27 which may be connected to said pivot by means of a set screw 27'. As indicated in Figs. 1 and 3, the tightener is shown applied to the inner surface of the upper run of the belt 28 operating over and around the pulleys 20 and 23. Said belt may have an abrasive outer surface adapted to act upon rough surfaces as well as for polishing, finishing, and buffing, and also provided on its inner surface with a finishing or buffing material for the purpose of polishing or finishing the work operated upon.

At the upper part of the standard 10 is a pulley 29 adjustable vertically by means of a bolt 30 operating along a slot 10''. By adjusting the pulley 29 with respect to the pulley 23, the belt may be operated over the pulley 29, as indicated in Fig. 4, so as to provide a substantially vertical run of the belt, as indicated at 28^a, for certain classes of work. As indicated in Fig. 4, the bolt 22 may be loosened so as to allow the bar 21 to act through the pulley 23 as a tightener for the belt 28, the tightener 24 at such time being held by any suitable means out of operation.

Any suitable number or construction of forms may be employed in the various adaptations of the machine as may be desired, and they may be connected wherever found most expedient. For instance, in Fig. 3 is shown a table 31 extending between the front and rear standards and supported thereon in close proximity to the lower run of the belt 28 and upon which work may be supported for sanding.

In Fig. 4 I have shown a form 32 connected to the front standard and held by it in close proximity to the inner surface of the vertical run 28^a of the belt and whereupon certain classes of work may be dressed or finished.

In Fig. 4^a is shown a form of the invention in which an inclined table 33 is connected to and supported by the front stand-

ard and over which the belt may be operated, instead of over the pulley 29, the front edge of the table acting as a substitute for a spindle sander, and allowing the upper
5 part of the table for straight work, and the slack run of the belt below the front edge for odd-shaped work.

In Fig. 5 is shown a form 34 carried adjustably by the bar 21 and which is adapted
10 for the polishing of irregular surfaces. In this form of the invention the tightener 24 is set so as to act upon the upper surface of the upper run of the belt.

The several parts of this device may be
15 made of any suitable sizes and proportions, and of any materials suited for the purposes indicated.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

20 1. In an abrasive belt machine, the combination of front and rear standards, a power shaft journaled on the rear standard, a drive pulley on the shaft at one side of the adjacent standard, a bar mounted on said shaft
25 between the pulley and the standard, the front end of the bar being movably connected to the front standard, a pair of pulleys adjustable vertically with respect to the
30 front standard, a belt operating over said pulleys and having a portion thereof operat-

ing in a substantially vertical plane, and a work table connected to the front standard and cooperating with said vertical run of the belt.

2. In a device of the character set forth, the combination of front and rear standards, a power shaft connected to the rear standard, a drive pulley mounted on said shaft, a bar pivoted on said shaft and movably connected to the front standard, a belt
4 operating over said drive pulley, means adjacent the front end of the bar to guide the belt adjacent the front standard, work supporting means adjacent the front portion of
4 the machine, and means to tighten the belt.

3. In an abrasive belt machine, the combination of front and rear standards, pulleys adjustably connected to the front and rear standards, a belt operating over said
E pulleys, means to drive said belt, work supporting means associated with the front standard, and means to maintain proper tension of said belt.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLARENCE HOWARD DRURY.

Witnesses:

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JOSEPH HOERNER, Jr.