

O. C. WYSONG.
 BELT SANDPAPERING MACHINE.
 APPLICATION FILED MAR. 11, 1909.

1,013,980.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

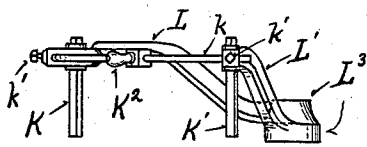
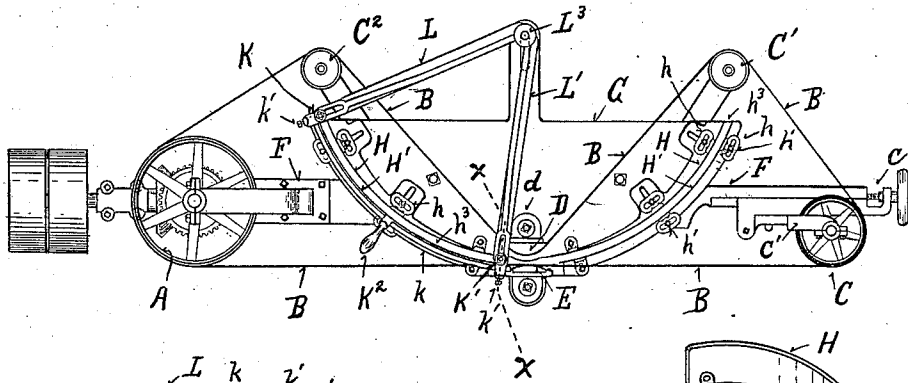


Fig. 5.

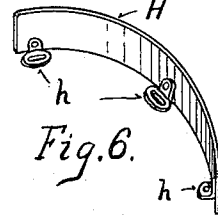


Fig. 6.

Fig. 2.

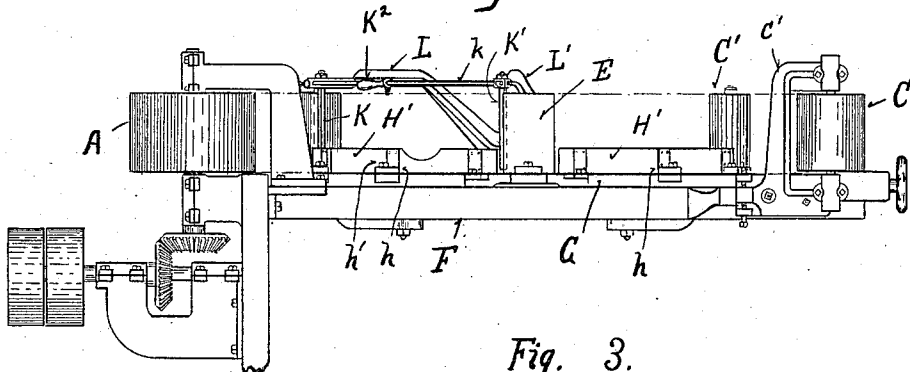


Fig. 3.

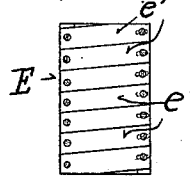


Fig. 4.

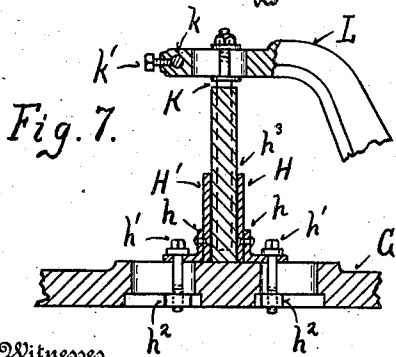
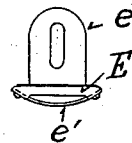


Fig. 7.

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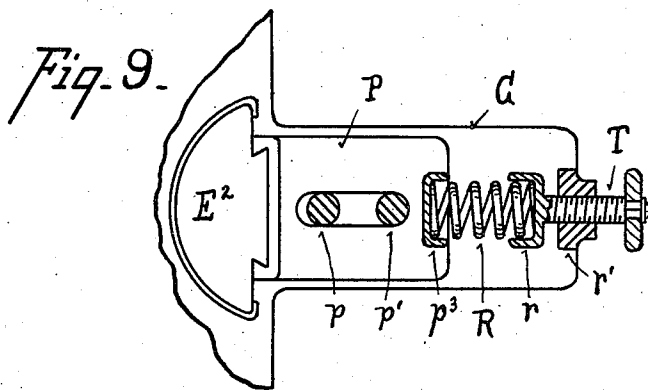
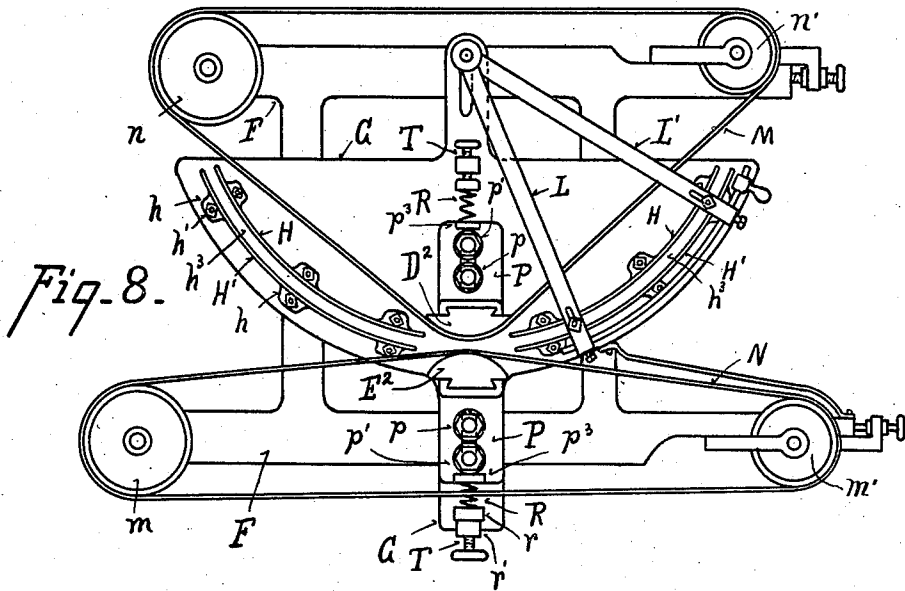
Attorney

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

OLMEDO CORTEZ WYSONG, OF GREENSBORO, NORTH CAROLINA.

BELT SANDPAPERING-MACHINE.

1,013,980.

Specification of Letters Patent.

Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, OLMEDO CORTEZ WYSONG, a citizen of the United States, residing at Greensboro, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Belt Sandpapering-Machines, of which the following is a specification.

My invention relates to improvements in abrasive apparatus.

One of its objects is to provide improved apparatus by means of which opposite sides of curved or irregular work may be simultaneously acted upon by different reaches of the same or separate belts.

Another object is to provide in combination with one or more abrasive belts, a channel or guideway to guide the work and a plurality of forms, one or both of which are yielding, to press the abrasive face of the belt or belts into contact with the face or opposite faces of the work.

Another object is to provide in combination with such forms, mechanism adapted to feed the work between the forms.

Another object is to provide in combination with one or more abrasive belts, a plurality of forms, of which one or both are yielding, arranged opposite each other, a curved guideway adjustable to varying curvatures and diameter to guide the work between said forms.

It further consists in certain details of form, combination, and arrangement, all of which will be more fully set forth in the description of the accompanying drawings, in which:

Figure 1 is a top plan view of the preferred form of my improved mechanism. Fig. 2 is a front elevation of the same. Fig. 3 is a face view of one modification of flexible form. Fig. 4 is a top or end view of the same. Fig. 5 is a perspective view of the work feeding mechanism detached. Fig. 6 is a perspective view of one section of the work guideway detached. Fig. 7 is a detail sectional view through the guideway on line $x-x$ of Fig. 1. Fig. 8 is a view similar to Fig. 1, of a modification. Fig. 9 is a top plan view, partly in section of a modification of the form.

In the accompanying drawings, Figs. 1 to 7, A, represents a power driven pulley. B, represents an abrasive belt driven by pulley A, and passing around the idler pulleys C, C', C², and drawn across the faces of the

forms D, E. The several pulleys supporting the abrasive belt are faced with canvas, so that the abrasive face of the belt may be toward the pulleys without injury to either. Pulley C, is adjustable to and from pulley A, to tension the belt by means of an adjusting screw c , which adjusts the journal box, c' , of pulley, C, relative to the machine frame, F. A table, G, is supported upon the frame, F. The table carries a metal bracket, d , to which is preferably fitted a wooden form, D, to stationarily support the rear face of the belt. The form D, may be varied as required to suit the work in hand. As shown, the table is fitted for sanding curved chair backs, but may be employed to sand other articles of similar nature.

H, H', represent flexible metal guides which are provided with brackets, h , by which they may be attached to the table by means of bolts, h' , fitted to nuts, h^2 , sliding in slotted openings in the table, whereby the guides may be adjustable upon the table to varying curvatures to provide channels h^3 , of varying curvatures and width between the guides to receive and guide the work.

The form, E, is set opposite the form, D, and is composed of a slotted metal frame, e , adapted to be adjusted to and from the form D, and clamped to the adjusted position. The face of form, E, is composed preferably of a series of strips or plates of spring sheet metal, e' , which are rigidly attached to frame, e , at one end, and loosely held at the opposite end by screws passing through slotted openings in plates, e' , so that the plates, e' , may yieldingly support the rear face of the belt. Plates, e' , are preferably arranged diagonally on the frame, e , so that any unevenness at the joints between plates, e' , will not form ridges and cause the belt to mar the work. The guides, H, H', terminate a short distance from the forms, D, E, at opposite sides thereof.

The work may be fed by hand but is preferably fed in either direction between the forms by means of vertical bars, K, K', projecting downwardly into channels, h^3 , from the arms, L, L', which are both pivotally supported at L², with their free ends adjustable to and from each other, so that the bars, K, K', will engage opposite ends of either short or long pieces of work. The arms, L, L', are locked to various adjusted positions by means of a rod, k , and set screws, k' , in the ends of said arms. The free ends of

arms, L, L', are slotted so that bars K, K', can be adjusted to and from the pivot L³, and the pivots L³, are adjustable toward and from the form, D, to cause the bars K, K', to travel centrally in channel, h³, and to adjust the parts to varying curvatures of the channel, h³. In practice the work is dropped into the channel h³, between the bars, K, K', and a handle, K², carried by rod, h, enables the operator to shift the bars, K, K', in either direction one or more times to sand the work simultaneously on the front and back after which the work is removed and another piece is inserted.

As illustrated in Fig. 8, two abrasive belts, M, N, are employed with their abrasive faces away from their supporting pulleys. The respective belts, M, and N, are driven by pulleys, m, and n, and supported by adjustable idlers, m', n', to tension the belts.

In Figs. 8 and 9, is illustrated a modification in which each of the forms, D², E², are adapted to yieldingly support the belt or belts, and in which the mechanism for yieldingly supporting the forms is modified, and is adjustable to support the forms with varying degrees of tension. In this modification the forms D², E² are secured to metal frames P, which are slotted and held slidably to the table by two bolts p, p', which limit the movements of the form. Cups, p³, on the rear end of frames P support springs R, at one end. The opposite end of springs R are seated in cups r, carried by screws T which are threaded in collars r' carried by table G. The forms are thus permitted to yield to a limited extent, and by adjusting the screws, T, the tension of springs R may be varied as desired.

The mechanism herein illustrated and described is capable of considerable modification without departing from the principle of my invention.

What I claim is:

1. In a mechanism of the character indicated, a traveling abrasive belt supported upon a plurality of pulleys with its abrasive face toward the pulleys, a guideway for the work located within the loop of said belt, and a plurality of forms supporting the rear face of said belt at opposite sides of said guideway.

2. In a mechanism of the character indicated, a traveling abrasive belt supported upon a plurality of pulleys with the abrasive face of said belt toward the pulleys, a plurality of stationary forms oppositely arranged to support the rear face of different reaches of said belt, and means to feed the work between said forms to simultaneously treat opposite faces of the work.

3. In a mechanism of the character indicated, a curved guideway, means for feeding the work along said guideway, oppositely arranged non-rotary forms on oppo-

site sides of said guideway to support sections of a traveling abrasive belt in contact with opposite faces of the work.

4. In a mechanism of the character indicated, a guideway, means for feeding the work along said guideway, a stationary form at one side of said guideway, a non-rotary form located at the opposite side of said guideway, and exerting a yielding pressure upon the rear face of a belt, said forms being adapted to support sections of a traveling abrasive belt in contact with opposite faces of the work.

5. In a mechanism of the character indicated, a curved guideway, a pivotally supported work feeding mechanism adapted to feed the work in either direction in said guideway, a form at one side of said guideway to support a section of traveling abrasive belt in contact with the work, and a form located at the opposite side of said guideway to support a section of traveling abrasive belt in contact with the rear face of the work with a yielding pressure.

6. In a mechanism of the character indicated, a curved guideway, a pivotally supported work feeding mechanism, adjustable to work of varying lengths, and adapted to feed the work along said guideway, a form at one side of said guideway to support a section of traveling abrasive belt in contact with one face of the work, and a form located at the opposite side of said guideway to support a section of traveling abrasive belt in contact with the opposite face of the work.

7. In a mechanism of the character indicated, a traveling abrasive belt supported upon a series of pulleys with the abrasive face of said belt toward the pulleys, a form to support a section of said belt in contact with one face of the work, and a form facing said first mentioned form to support another section of said belt in contact with the opposite face of the work.

8. In a mechanism of the character indicated, a curved guideway adjustable to varying curvatures, means for feeding the work along said guideway, and a plurality of forms at opposite sides of said guideway adapted to support active traveling abrasive belt sections in contact with opposite faces of the work.

9. In a mechanism of the character indicated, a curved guideway, mechanism to feed the work along said guideway, a traveling abrasive belt supported upon and driven by one or more pulleys and a non-rotary form yieldingly supported and adapted to press a section of said belt against the work.

10. In a mechanism of the character indicated, a guideway, means to feed the work along said guideway, a form at one side of said guideway to support a section of

traveling abrasive belt in contact with one face of the work, a form at the opposite side of said guideway to support a section of traveling abrasive belt in contact with the opposite face of the work, a traveling abra-
 5 sive belt supported upon a plurality of pulleys, and mechanism to tension said belt, said forms supporting the rear face of different reaches of said belt in contact with
 10 opposite faces of the work.

11. In a mechanism of the character indicated, a curved guideway adjustable to varying widths, means to feed the work along said guideway, and a plurality of
 15 forms at opposite sides of said guideway adapted to support active traveling abrasive belt sections in contact with opposite faces of the work.

12. In a mechanism of the character indicated, a guideway to guide the work, a form
 20 at one side of said guideway adapted to support a section of abrasive belt in con-

tact with the work, and a non-rotary form yieldingly supported at the opposite side of said guideway to support a section of abra-
 25 sive belt in contact with the opposite face of the work.

13. In a mechanism of the character indicated, a guideway to guide the work, a non-rotary form at one side of said guideway
 30 adapted to support a section of abrasive belt in contact with the work, and a non-rotary form at the opposite side of said guideway, in contact with and adapted to support the opposite face of the work, one of said forms
 35 being yieldingly supported in contact with said work.

In testimony whereof I have affixed my signature in presence of two witnesses.

OLMEDO CORTEZ WYSONG.

Witnesses:

J. A. KLEEMEIER,
 P. D. KERNER.

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