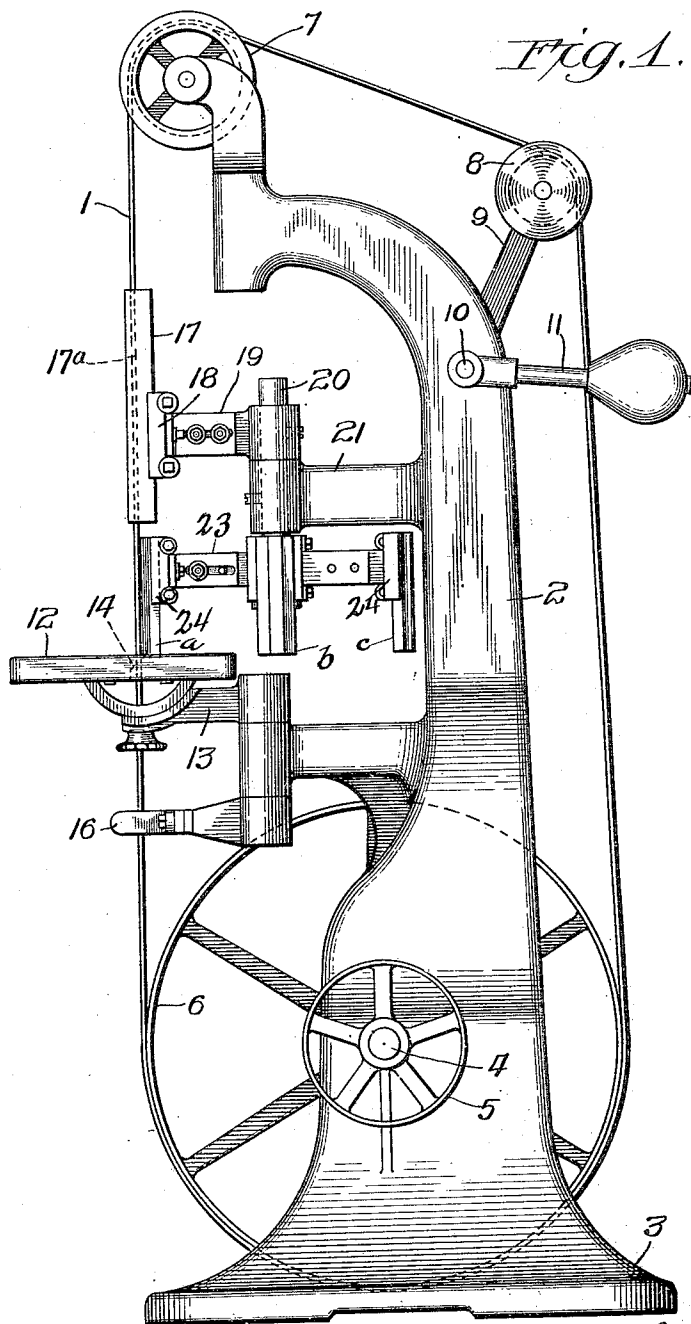


C. L. MATTISON.
 BELT SANDING MACHINE.
 APPLICATION FILED OCT. 17, 1914.

1,124,311.

Patented Jan. 12, 1915.

3 SHEETS—SHEET 1.



Witnesses:
A. S. Gaither
W. G. Neilman.

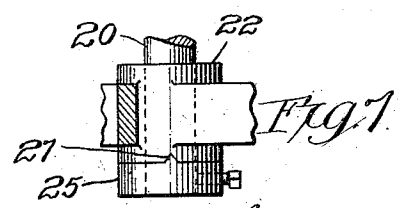
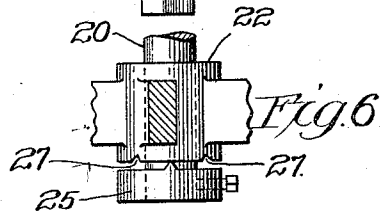
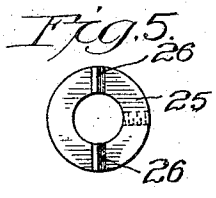
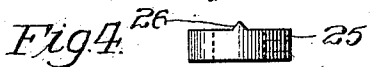
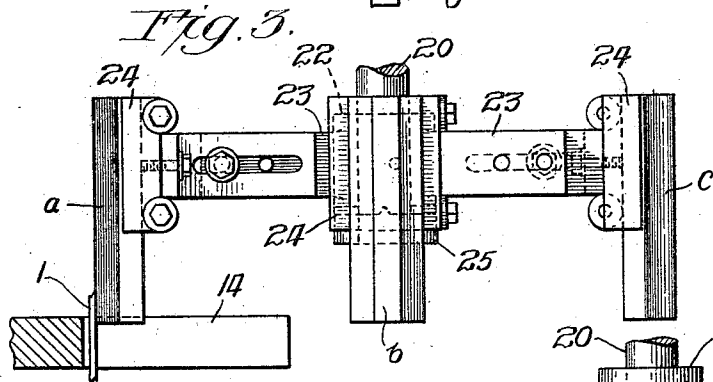
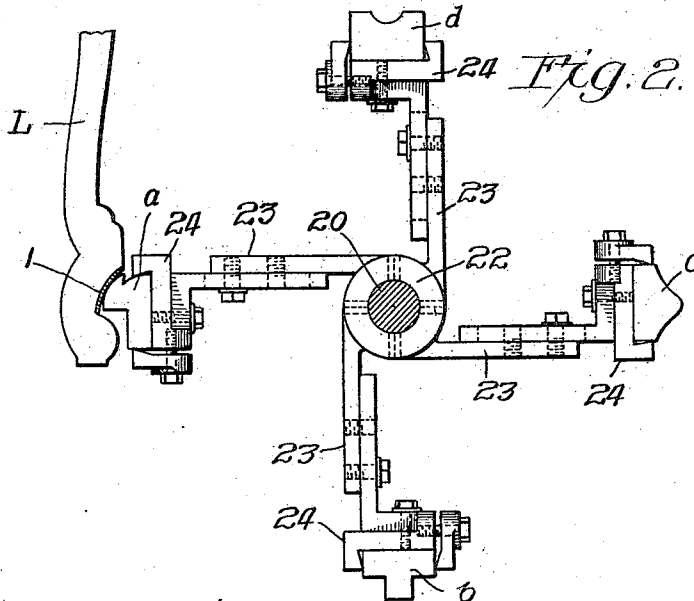
Inventor:
C. L. Mattison
 By *Miller & Chindahl atty*

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3 SHEETS-SHEET 2.



Witnesses:
 A. S. Gaither
 W. G. Neilman.

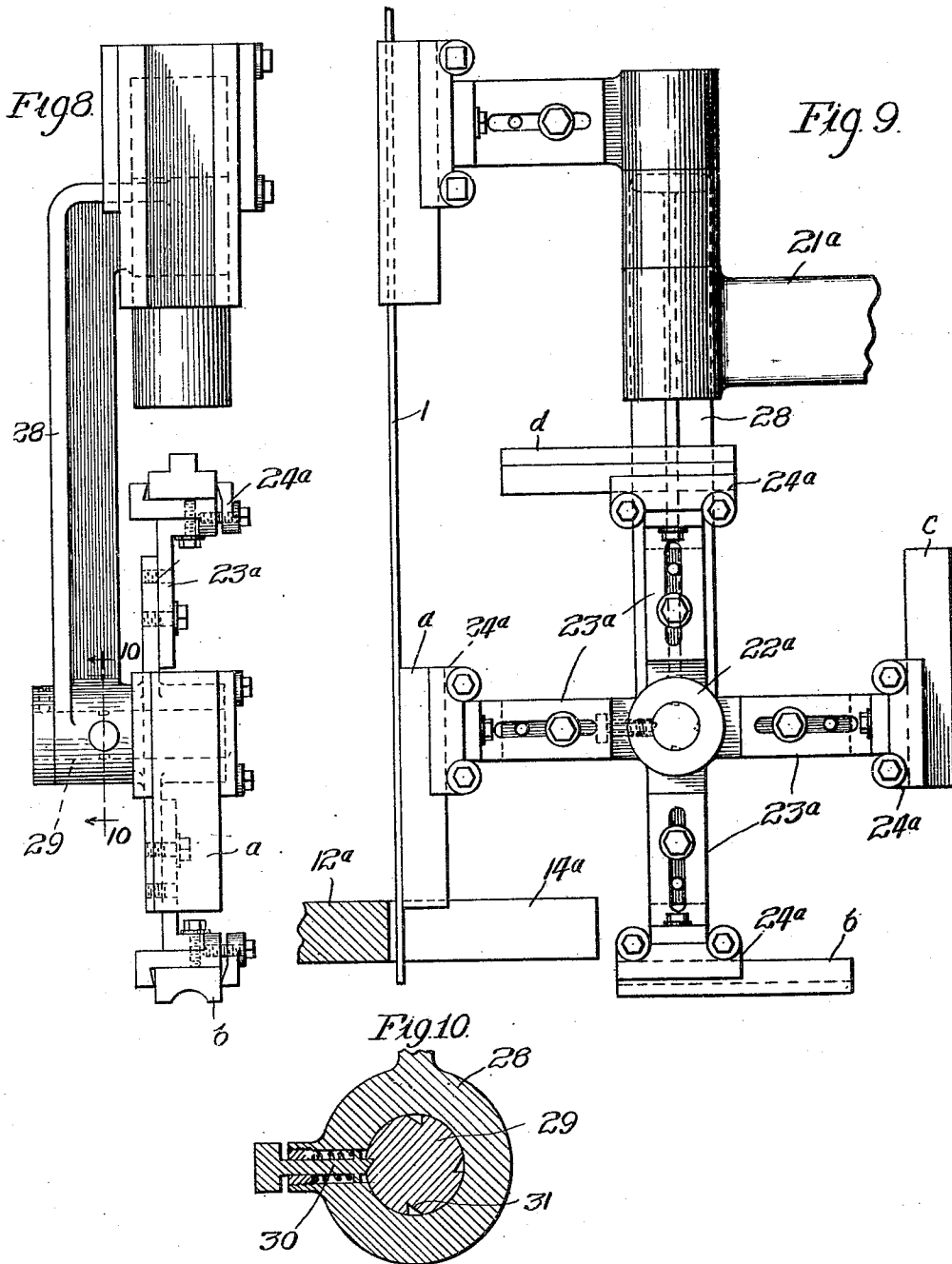
Inventor:
 C. L. Mattison
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3 SHEETS—SHEET 3.



Witnesses:
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Inventor:
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Attys

UNITED STATES PATENT OFFICE.

CARL LAWRENCE MATTISON, OF BELOIT, WISCONSIN, ASSIGNOR TO C. MATTISON
MACHINE WORKS, OF BELOIT, WISCONSIN, A CORPORATION OF WISCONSIN.

BELT SANDING-MACHINE.

1,124,311.

Specification of Letters Patent.

Patented Jan. 12, 1915.

Application filed October 17, 1914. Serial No. 867,081.

To all whom it may concern:

Be it known that I, CARL LAWRENCE MATTISON, a citizen of the United States, residing at Beloit, in the county of Rock and State of Wisconsin, have made certain new and useful Improvements in Belt Sanding-Machines, of which the following is a specification.

The object of this invention is to produce a belt sander adapted to sand relatively small curved surfaces such as those found on scroll work, polygonal turnings and the like.

In the accompanying drawings Figure 1 is a side elevation of a machine embodying the features of my invention. Fig. 2 is a plan view of the turret head carrying a plurality of forms, the sand belt being shown in section and a piece of work being illustrated in operative position. Fig. 3 is a side elevation of the turret head. Figs. 4 and 5 are side and plan views, respectively, of a locking collar for positioning the turret head. Figs. 6 and 7 illustrate the operation of the collar. Figs. 8 and 9 are front and side views, respectively, of an alternative form of turret head. Fig. 10 is a section on line 10—10 of Fig. 8.

In the embodiment herein shown of the invention, the sand belt 1 (which is usually comparatively narrow, say two inches in width) is supported so that the operating portion thereof travels vertically. The framework 2 of the machine is of upright character, its lower portion 3 constituting a base adapted to rest upon the floor. In the lower portion of the frame 2 is mounted the main horizontal shaft 4. Upon one end of the shaft is secured a drive pulley 5 and upon the opposite end of the shaft is fixed the sand-belt driving-wheel 6. At the upper end of the frame 2 is a sand-belt-carrying idler-wheel 7 which may be flanged as shown. The belt 1 is kept under proper tension by suitable means, as, for example, an idler pulley 8 which is rotatably mounted upon an arm 9, said arm being fixed to one end of a short shaft 10 which is journaled in the frame 2. Fixed to the opposite end of the shaft 10 is a weighted arm 11 which keeps the wheel 8 pressed against the belt.

The work may be supported in any suitable way. Herein I have shown a work-

table 12 which is adjustably mounted upon an arm 13 that is carried by the frame 2.

14 is a slot in the table 12 through which the sand belt extends. Located below the table 12 is a guide 16 for the sand belt. Above the table 12 is a guide for the sand belt, said guide comprising a bar 17 of wood or the like, said bar being secured in vertical position in a clamp 18 which is carried by a horizontal extensible arm 19. The arm 19 is fixed upon the upper end of an arbor 20, said arbor being fixed in an arm 21 forming a portion of the frame 2. In the forward side of the bar 17 is a groove 17^a through which the belt 1 travels.

To support the sand belt 1 against the pressure of the work, I provide one or more forms suitably shaped with reference to the kinds of surface to be sanded. In order that all the surfaces of a piece of work may be sanded before the sanding of another piece is commenced, I provide means for supporting a plurality of forms in such a manner that the operator may readily bring any one of those forms into position for use. In Figs. 1, 2 and 3 I have shown a turret head consisting of a hub 22 mounted for rotation in a horizontal plane upon the lower end of the arbor 20, said hub having fixed thereto a suitable number of arms 23, which arms may, if desired, be made adjustable in length. To the outer end of each arm 23 is fixed a clamp 24 for holding a wooden form. In the drawings the different forms are indicated by the letters *a*, *b*, *c* and *d*.

The turret head is supported against downward displacement by a collar 25 fixed upon the lower end of the arbor 20. Upon the upper side of said collar are V-shaped projections 26 which are adapted to lie in similarly-shaped recess 27 in the lower end of the hub 22 for the purpose of holding said hub in adjusted position. While the projections 26 are sufficient to hold the turret head against casual displacement, the turret head may be easily swung by the operator to bring any one of the forms into position behind the sand belt. When the operator thus turns the turret head, the latter first rises so that the hub 22 rides on the projections 26, the head descending upon the completion of a quarter revolution. The forms are so secured within the clamps 24 that when the

turret head is in its lower position the lower end of the form lies within the slot 14, and when the turret head rises the form is raised out of the slot so that the form can move
5 over the top of the table.

In Figs. 8 and 9 is shown a turret head revolving upon a horizontal axis. To the arm 21^a of the machine frame, is secured a downwardly extending bracket 28 in the lower
10 end of which is rotatably mounted a horizontal arbor 29. Fixed to the arbor 29 is a hub 22^a which carries adjustable arms 23^a. Each arm 23^a is provided with a clamp 24^a for holding a form *a*, *b*, *c* or *d*. The table
15 12^a has a slot 14^a therein, through which the sand belt 1 extends and through which the forms move as the turret head is rotated. The forms are secured in the clamps 24^a in such a manner that the lower portions of the
20 forms extend into the slot 14^a when the forms are in operative position. The turret head is yieldingly locked to hold a given form in operative position by means of a spring-pressed locking plunger 30 carried by
25 the lower end of the bracket 28, said plunger having a wedge-shaped inner end adapted to enter similarly formed recesses 31 in the fixed arbor 29. It will be seen that the turret head may be rotated in one direction by
30 merely taking hold of one of the arms 23^a and turning the head.

In Fig. 2 is shown a portion of a so-called scroll or colonial chair leg *L*, said leg having a variety of curved surfaces. The forms
35 *a*, *b*, *c* and *d* are adapted to properly support the belt 1 in the operation of sanding the various surfaces of the leg. It will be seen that the operator may finish one surface after another, revolving the turret head to
40 bring the desired forms into operative position, and thus completely finish one article before beginning work upon another. By reason of the fact that the forms extend below the top of the work table, the sand belt
45 is completely supported against the pressure of the work. This feature is of especial value in the sanding of thin pieces of work.

I claim as my invention:

1. The combination of an upright frame, a

sand belt, wheels on the frame for supporting
50 said sand belt with a portion of the sand belt extending vertically, a work-supporting table adjacent to the belt, and a turret head revolubly mounted on the frame adjacent to said table, said head comprising form-sup-
55 porting clamps.

2. The combination of a frame, a sand belt, wheels on the frame for supporting said sand belt with a portion of the sand belt extending vertically, a work-supporting table
60 adjacent to the belt, and a turret head revolubly mounted on the frame adjacent to said table, said head comprising form-supporting clamps, said table having a space behind the belt to receive the lower ends of the forms.
65

3. The combination of a frame, a sand belt, wheels on the frame for supporting said sand belt with a portion of the sand belt extending vertically, a work-supporting table
70 adjacent to the belt, a turret head revolubly mounted on the frame adjacent to said table, a guide for the belt above the turret head, and a guide for the belt below the table.

4. The combination of a frame, a sand belt, wheels on the frame for supporting
75 said sand belt, a work-supporting table adjacent to the belt, a turret head revolubly supported adjacent to said table, and means for yieldingly holding the turret head in adjusted position.
80

5. The combination of a frame, a sand belt, means on the frame for supporting and driving the belt, a work-supporting table
85 adjacent to the belt, and a turret head revolubly mounted adjacent to the table, said head being adapted to carry forms, the revolution of the head bringing the forms successively into operative relation to the belt, each form when in operative position extending below the plane of the top of the
90 table.

In testimony whereof, I hereunto set my hand in the presence of two witnesses.

CARL LAWRENCE MATTISON.

In the presence of—
J. W. DOWNING,
E. M. IRISH.