C. BROWN.

CORNER ROUNDING MACHINE.

APPLICATION FILED MAY 18, 1918.

1,365,583. Patented Jan. 11, 1921.

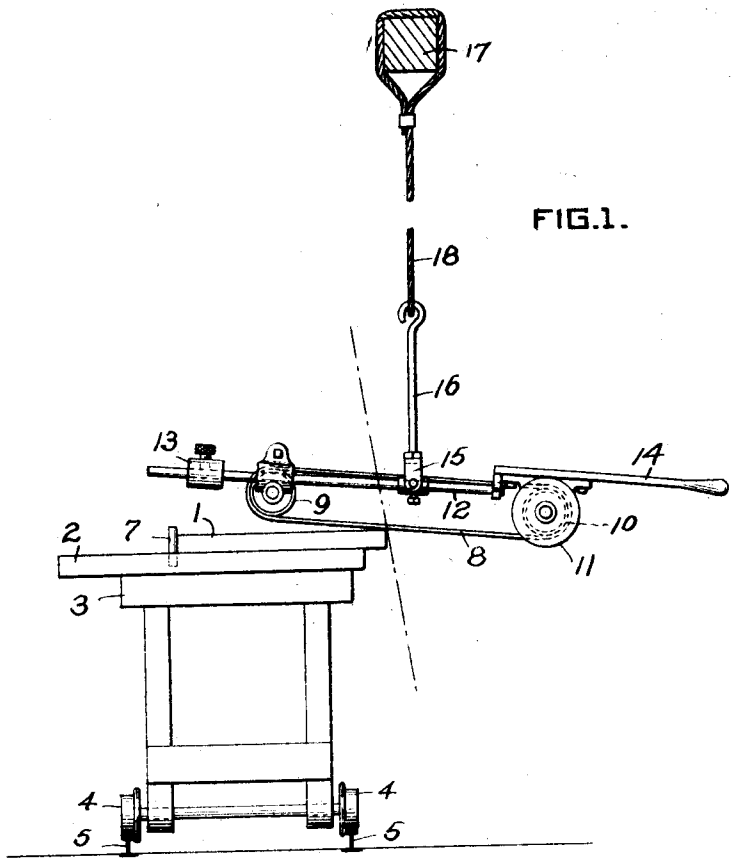



FIG. 1.

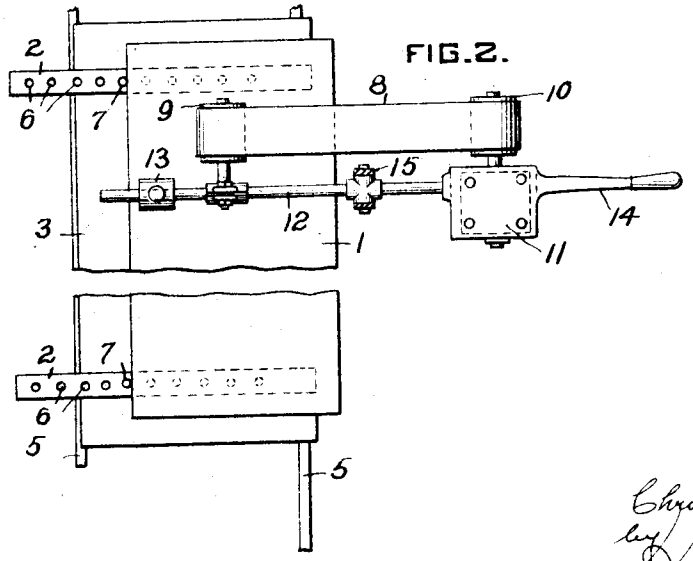



FIG. 2.

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# UNITED STATES PATENT OFFICE.

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## CORNER-ROUNDING MACHINE.

1,365,583. Specification of Letters Patent. Patented Jan. 11, 1921.

Application filed May 18, 1918. Serial No. 235,264.

*To all whom it may concern:*

Be it known that I, CHRISTOPHER BROWN, a citizen of the United States, and a resident of Charleroi, in the county of Washington and State of Pennsylvania, have made a new and useful Invention in Corner-Rounding Machines, of which the following is a specification.

The invention relates to a machine for rounding the corners at the edges of plates or sheets of glass, marble, etc., the term "corner" as used herein applying to such corners rather than to corners formed by the intersection of two of the bounding lines of a sheet, although the machine may be used where the rounding of any sort of an edge or angle is required. Such rounded corners are required in certain classes of work where sharp corners or bevel corners are not acceptable, and the work has heretofore been done by hand involving a large amount of labor and expense. The principal objects of the invention are the provision of a machine of simple construction which will accomplish the work of a large number of hand laborers, which is easily kept in repair and which requires no special skill to operate. One embodiment of the invention is illustrated in the accompanying drawings wherein:

Figure 1 is a side elevation of the apparatus and Fig. 2 is a plan view thereof.

Referring to the drawings, 1 is a sheet of material whose corners are to be rounded off, such plate being supported upon a pair of bars 2 secured to the top of the table 3. This table is preferably provided with the wheels 4 running upon the track 5 so that the table may be moved back and forth during the smoothing operation. The bars 2 are provided with a plurality of holes 6 adapted to receive the pins 7 so that the plate or sheet whose edges are to be rounded may be held in any desired position of adjustment depending upon the size of the plate.

The smoothing or abrading element comprises a band 8 working over the pulleys 9 and 10, the latter being preferably driven from an electric motor 11, and both pulleys preferably having their faces covered with leather to increase the frictional engagement of the band 8. The bank is preferably of cloth having its outer face provided with an abrading coating of carborundum or some other material suitable for the purpose.

The pulleys 9 and 10 are mounted upon a frame 12, which frame is provided at one end with a counterweight 13, to counterbalance the weight of the motor and at the other end with a handle 14 by means of which the device may be moved. The frame is supported near its central portion by means of a yoke 15 carried at the lower end of a bar 16. The bar 16 is suspended in the embodiment of the invention illustrated from the beam 17 by means of the cable 18.

It will be seen that the mounting of the abrading means above described permits of two movements with respect to the table for supporting the sheet. One of these movements is a tilting movement about the pivot in the yoke 15 and the other is a movement transversely of the table. This permits of the keeping of the abrading band in contact with the edge of the sheet to be rounded through a wide range of tilting, the machine as illustrated in Fig. 1 indicating one extreme of movement and the dotted line indicating the other extreme of movement. In rounding off the corner of the plate it is necessary to swing the machine through substantially the arc indicated, the table being moved along the track so that the edge is rounded from one end of the plate to the other. As indicated in Fig. 2 the belt or band 8 is preferably made relatively wide in order to give a large cutting or smoothing area and thus speed up the rounding operation.

It would be understood that the particular embodiment of the invention illustrated is only one of a number and that the invention is not limited to the particular apparatus shown and described. The relative tilting movement between the plate and the abrading means, is best accomplished by tilting the abrading means rather than the table or sheet but the operation might be reversed if desired, and this is also true with respect to the relative longitudinal movement of the table with respect to the abrading device, this being most conveniently accomplished by making the table movable in a horizontal plane rather than the abrading device. The invention, however, broadly contemplates any and all arrangements wherein an endless abrading band has a relative tilting and longitudinal movement with respect to the edge of the plate of material which it is desired to round.

What I claim is:

1. In combination in a corner rounding machine, a plate supporting means mounted

for horizontal movement, a frame extending transversely of said means and carrying an endless abrading belt, and a pivotal support for the frame mounted to move toward and away from the table, whereby the frame may be tilted to present the belt at different angles to the work on the table and may be moved bodily toward and from the table.

2. In combination in a corner rounding machine, a plate supporting means mounted for horizontal movement, a frame extending transversely of said means and carrying an endless abrading belt, and a swinging overhead support to which said frame is pivoted intermediate its ends.

CHRISTOPHER BROWN