June 4, 1929. B. D. PINKNEY 1,715,385

BRAKE FOR SANDERS

Filed Jan. 6, 1927

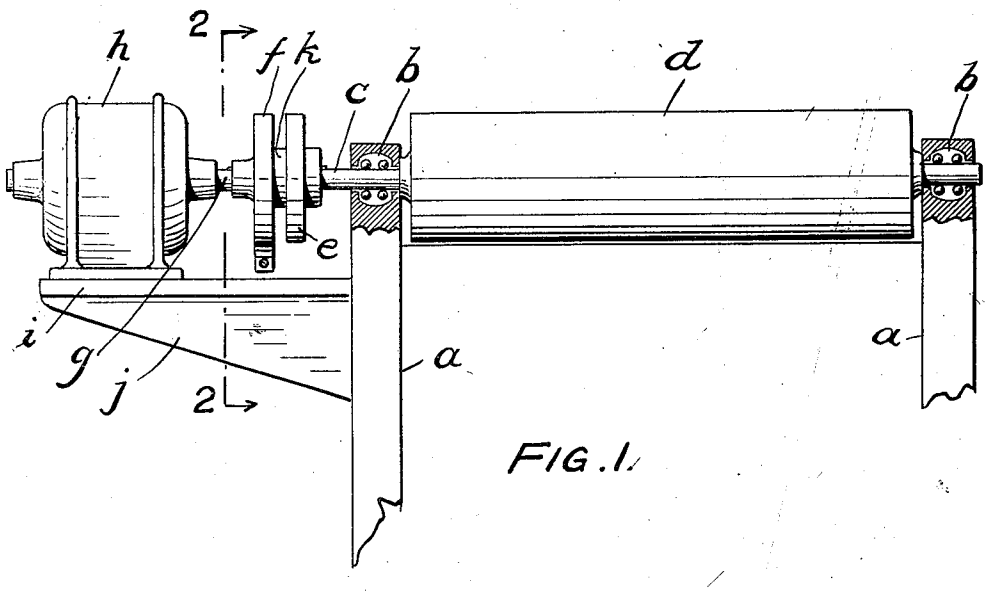


FIG. 1.

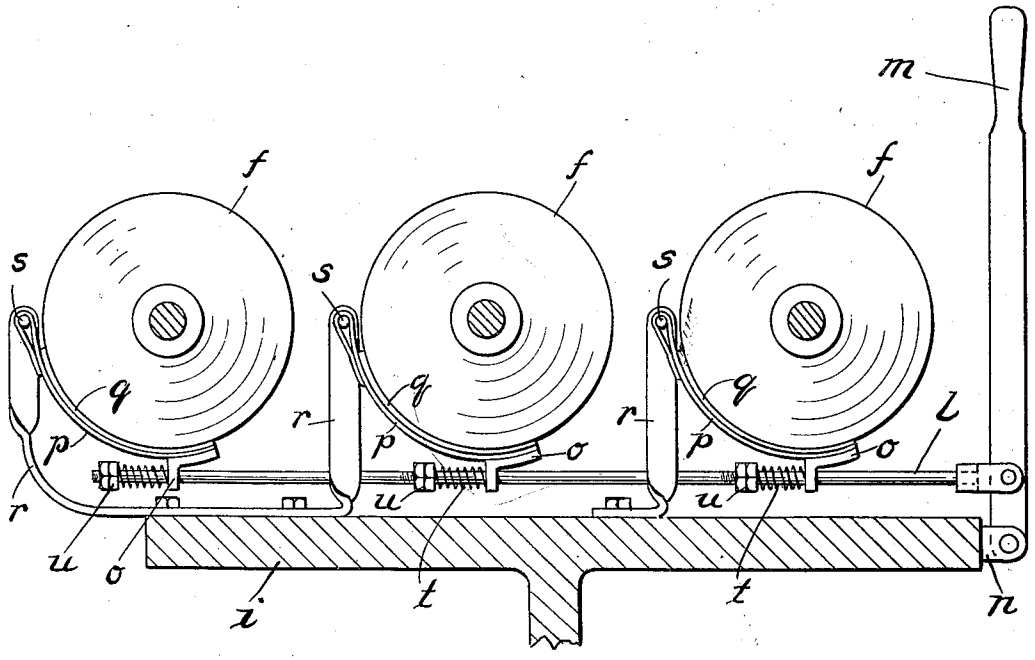


FIG. 2.

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UNITED STATES PATENT OFFICE.

BRYAN D. PINKNEY, OF SMITHVILLE, NEW JERSEY, ASSIGNOR TO H. B. SMITH MACHINE COMPANY, OF SMITHVILLE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

BRAKE FOR SANDERS.

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My invention relates to an improvement in sanders and more particularly to the provision of novel means for braking the sanding drums.

Heretofore in the use of sanders of the type including one or more rotating drums to which my invention more particularly relates, considerable difficulty has arisen from the fact that the drums which are rotated at relatively high speed are difficult to stop when it is desired to stop them, since they have considerable momentum and no practical device in the nature of a brake has heretofore been provided.

Now, it is the object of my invention to provide braking means which when applied to a sander will be efficient to stop the drums and which may be operated by a single lever to brake a plurality of drums, the braking means for each drum being so arranged and actuated as to conform to the characteristics of the drums respectively, so that none of the drums will be excessively braked and all will be quickly and evenly brought to rest.

Having now indicated, in a general way, the nature and purpose of my invention, I will proceed to a detailed description thereof with reference to the accompanying drawings in which there is illustrated a preferred embodiment and in which:—

Fig. 1 is a cross sectional view, partly broken away, of a sander embodying my invention.

Fig. 2 is a sectional view on line 2—2, Fig. 1.

In the drawing *a* indicates the frame of the sander, which may be of any usual construction, supported in ball bearings *b*. Mounted in the frame, are shafts *c*, upon which are mounted sanding drums *d*.

On one end of each of the shafts *c* is a disc *e*, opposite to which is a disc *f* mounted on the end of the shaft *g* of a motor *h*, mounted on a base *i* supported by means of brackets *j* extending from frame *a*. The discs *f* and *e*, secured to the motor shaft and the sanding drum shaft respectively, are connected by means of a flexible driving connection of any desirable type positioned within a casing *k*.

Extending lengthwise beneath the discs *f* is a rod *l*, one end of which is pivotally connected to a hand lever *m* pivotally secured to a bracket *n* at one end of the motor base *i*. The rod *l* passes through holes in brackets *o* secured to the ends of brake bands *p*, suitably faced with brake lining *q*. The brake bands are supported adjacent the surfaces of discs *f* by means of brackets *r* secured to the motor base *i* and provided with pins *s*, which extend into eyes formed at the ends of the bands.

The rod *l* is threaded for a distance adjacent the several brackets *o* and carries coil springs *t* which abut against the brackets and are restrained by nuts *u* threaded on the rod, and by which the tension of the springs *t* may be adjusted.

In the operation of the device embodying my invention, if it be desired to stop the drums, the current is cut off from the motors and the lever *m* is pulled by the operator causing, as will be obvious, a longitudinal movement of rod *l*, which results in a compression of springs *t* which react on the brackets *o* and cause the bands *p* to be swung on the pins *s* up against the surface of discs *f*.

The distance which lever *m* is moved determines to a certain extent the degree of pressure of the bands on the discs and hence the braking effect, but it will be observed that the movement of lever *m* and rod *l* is transmitted to the bands through springs *t*, which act resiliently to force the bands against the discs. Since the power applied to the bands is applied through resilient means, the springs *t*, any difference in the adjustment of the several bands will be automatically compensated for and sudden stopping of any drum will be avoided, since any tendency of a band to bind will be avoided due to the capacity of the spring not only to transmit power to the band for its application, but to permit the band to slack off it, due to irregularities of a drum or other cause, the power applied by the lever *m* be excessive for any given drum.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:—

1. In combination, a plurality of rotary shafts, brake bands associated with said shafts, a brake rod and resilient means affording connections between said rod and said bands respectively.

2. In combination, a plurality of rotary shafts, discs carried by said shafts, brake bands pivotally supported at one end adjacent the peripheral surfaces of said discs, a brake

rod and springs affording an operative connection between said rod and said bands respectively.

3. In combination, a plurality of rotary shafts, discs carried by said shafts, brake bands pivotally supported at one end adjacent the peripheral surface of said discs respectively, brackets on said bands, a rod extending through apertures in said brackets, springs on said rod adjacent to said brackets and stops carried by said rod and positioned to confine said springs against said brackets whereby said springs will afford a resilient connection between said rod and said bands.

4. In combination, a frame, a plurality of rotary shafts mounted in said frame, brake drums carried by said shafts, brackets secured to said frame adjacent to said drums, brake bands pivotally supported from said brackets, brackets on said brake bands, a rod extending through apertures formed in said brackets on said bands, said rod being threaded for a distance adjacent each of said last mentioned brackets, springs on said rod positioned adjacent said last mentioned brackets, nuts threaded on said rod and adapted to confine said springs against said last mentioned brackets and a lever pivotally supported from said frame and connected to said rod whereby said rod may be actuated for the application of said bands to said brake drums through the medium of said springs.

In testimony of which invention, I have hereunto set my hand, at Smithville, New Jersey, on this third day of January, 1927.

BRYAN D. PINKNEY.