A. MUSCH.

MANGLE.

APPLICATION FILED MAY 26, 1908.

912,872.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 1.

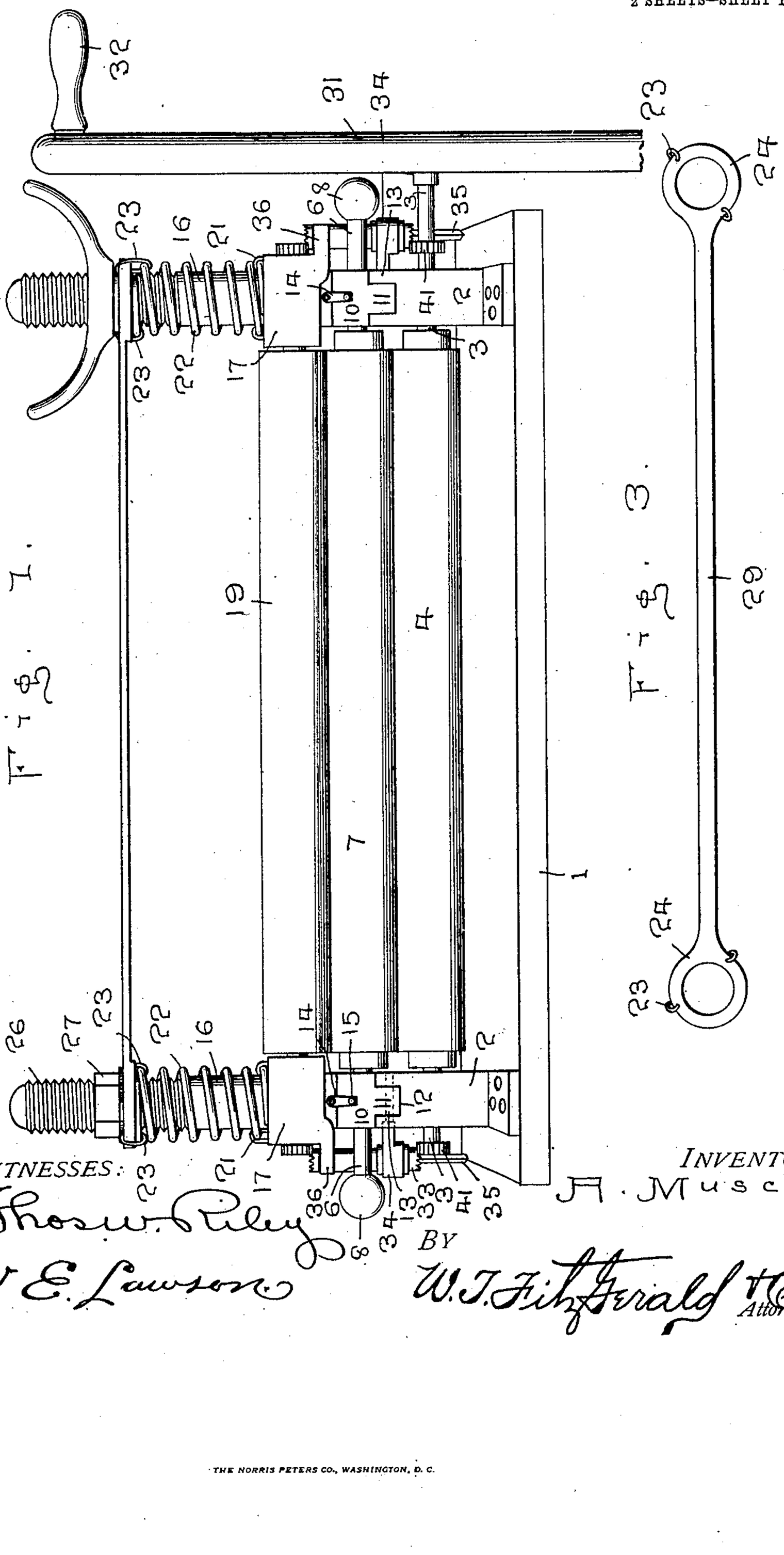

Fig. 1.

Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 4.

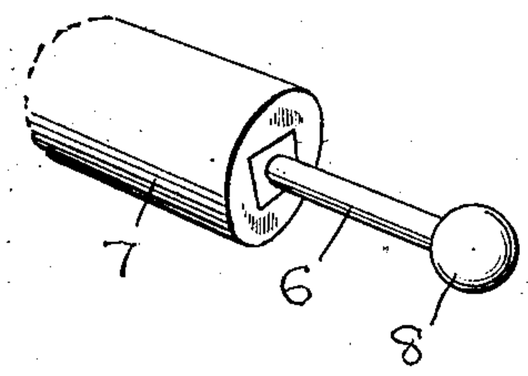

Fig. 5.

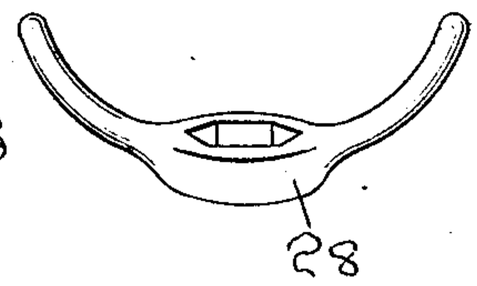

Fig. 6.

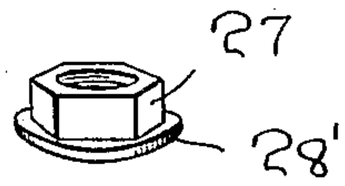

Fig. 7.

Fig. 2.

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UNITED STATES PATENT OFFICE.

AUGUST MUSCH, OF DALLAS, TEXAS.

MANGLE.

No. 912,872. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed May 26, 1908. Serial No. 435,010.

To all whom it may concern:

Be it known that I, AUGUST MUSCH, a subject of the German Empire, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Mangles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in mangles and has relation more particularly to a device of this character which can be employed within the household.

It is an object of the invention to provide a novel device of this character employing a multiplicity of rollers, one of said rollers being removably mounted within the supporting frame.

It is also an object of the invention to provide a novel device of this character wherein the rotation of one of the outer rollers positively operates the second outer roller.

It is also an object of the invention to provide a novel device of this character employing adjustable spring means for assuring proper contact of the rollers so that the articles engaged thereby may be properly smoothed.

It is also an object of the invention to provide a novel device of this character which will be simple in construction, efficient and advantageous in practice and comparatively inexpensive to manufacture.

With the above and other objects in view, the invention consists in the details of construction and in the novel arrangement and combination of parts to be hereinafter more particularly referred to.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a front view of the invention. Fig. 2 is an enlarged end view thereof. Fig. 3 is a plan view of the connecting rod employed in the invention. Fig. 4 is a fragmentary view in perspective of an end of the removable roller. Fig. 5 is a perspective view of a tool employed in adjusting the spring tension of the device. Fig. 6 is a view in perspective of the member engaged by the tool illustrated in Fig. 5, and, Fig. 7 illustrates in side elevation, one of the clamps for securing the device to a support.

In the drawings, 1 denotes a base of any desired material and of any pre-determined configuration preferably however, of rectangular form. Adjacent each end of the base 1 is securely affixed a standard 2. In the base portions of the standards 2 are mounted the shaft 3 of the lower mangle roller 4 and said standards 2 above the shaft 3 are each provided with an elongated transverse opening 5 through which project the end portions of the shaft 6 of the intermediate or removable roller 7. The ends of this shaft are provided with the knobs or balls 8 for the proper gripping or handling when it is desired to remove the roller 7. In order that the roller 7 may be removed, each of the openings 5 is in communication with a front edge opening 9. To keep the roller 7 in operative position, the opening 9 is closed by a block 10 snugly fitting therein which has a depending portion or tongue 11 projecting within a groove 12 in the face of the opening 9 and said tongue is engaged by a bolt 13 passing transversely of the standards 2 and forming a pivot whereby the block 10 may be swung out of or into the opening 9. To retain the block 10 within the opening 9, each of the standards 2 has pivoted above said opening 9, a swinging latch 14 provided adjacent its lower end with a manipulating finger 15.

In the operation of the invention, the roller 7 is removed and the articles to be smoothed are wrapped therearound and the opening 5 permits a proper compensation for the various thicknesses wrapped around the roller 7. The major part 16 of the upper portion of the standards 2 are rounded and on the rounded portion of each of the standards is loosely arranged a sliding block 17. In this block 17 is mounted the shaft 18 of the upper roller 19. The end portions of this shaft pass through an elongated opening 20 positioned above the opening 5 hereinbefore referred to. This roller 19 may be termed the pressure roller. The upper surface of each of the blocks 17 adjacent the edges thereof are provided with eyes 21 through which pass the lower fakes of a coil spring 22 while the upper fakes of the spring pass through loops 23 depending

from a collar 24 loosely embracing the standards 2. Those portions of the standards 2 over which the collars 24 move are threaded as at 26 and these threaded portions are engaged by the nuts 27 which contact with the upper faces of the collars 24 in order that their position on the standards 2 may be adjusted. This adjustment of the collars 24 varies or regulates the tension of the springs 22 and consequently the pressure of the roller 19. The nut 27 is angular in cross section and is engaged by the winged wrench 28 when it is desired to rotate or adjust the nut 27. It is believed to be within the province of the invention to state that in lieu of the wrench 28, any form of tool may be employed that will act with equal facility. In order that the wrench 28 may not contact with the collars 24 and cause possible injury thereto or to the loops 23 carried thereby, the lower faces of the nuts 27 are provided with the flanges 28′ as is more particularly shown in Fig. 6. The collars 24 are each formed on the opposed ends of a connecting rod 29 which acts as a brace for the upper portion of the standards 2 and, further, prevents undue variance between the tensions of each of the springs. It is thought that this latter function is obvious but it is well to state that undue movement of one of the collars 24 will cause the opposite collar to bind on its standard.

Each of the end portions of the shaft 3 projects beyond the adjacent standard 2 and fixed to each of these projected portions is a pinion 41 while one of the projecting portions has secured thereto, a fly wheel 31 provided with an operating hand grasp 32. The pinion 41 meshes with a second pinion 30 mounted on the stub-shaft 42. Each of the pinions 30 meshes with the gear 33 rotatably held by a flange 34 projecting outwardly from the standard 2. This gear 33 is provided with an angular bore through which passes the shaft 35 angular in cross section, the form of the shaft 35 in cross section being co-incident to the bore of the gear 33. The upper end portion of the shaft 35 passes through a flange 36 projecting outwardly from the lower portion of the block 17. The portion of the shaft 35 above the flange 36 has fixed thereto, the gear 37 which meshes with a pinion 38 mounted on the stub-shaft 39. This pinion 38 meshes with a second pinion 40 on the projected end portion of the shaft 18 of the upper roller 19. From the foregoing, it is thought to be obvious that when the shaft 3 is rotated, the shaft 18 will be positively rotated simultaneously therewith and the rotation of each of the rollers 4 and 19 will be in the desired direction and by having the shaft 35 pass loosely through the gear 33, the movement of the roller 19 with relation to the roller 7 will in no way interfere with the rotation of the roller 19.

In mounting the gear 33, it has been found best to provide the gear with the flanges 43 which contact with the upper and lower surfaces of the flange 34. It has also been further found of advantage to surround the shaft 35 between the flanges 34 and 36 with a sleeve 44. This sleeve acts as a stop for limiting the downward movement of the block 17. In practice, the device can be secured to any desired supporting member and in order that it may be held to such supporting member, it has been found best to employ the form of clamping members 45 shown in Fig. 7 as the structure and operation of this form of clamp is so well known and obvious that a detail thereof is believed unnecessary.

I claim:

In a device of the character described, the combination of a base, standards carried by the base, a roller mounted in the standards adjacent the base, a second roller removably mounted in the standards above the first-named roller, said second-named roller being movable longitudinally of the standards, sliding blocks embracing the standards above the second-named roller, a roller mounted in the sliding blocks, a connecting rod terminating in collars, said collars embracing the standards above the sliding blocks, springs embracing the standards, the lower fakes of the springs being secured to the blocks, the upper fakes being secured to the collars, adjustable means engaging the standards contacting with the collars for holding the collars against movement in one direction and means for positively rotating the first-named and third-named rollers.

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

AUGUST MUSCH.

Witnesses:
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