No. 885,275. PATENTED APR. 21, 1908.

W. MUNCH.

ATTACHMENT FOR SANDING MACHINES.

APPLICATION FILED AUG. 13, 1907.

Fig. 1.

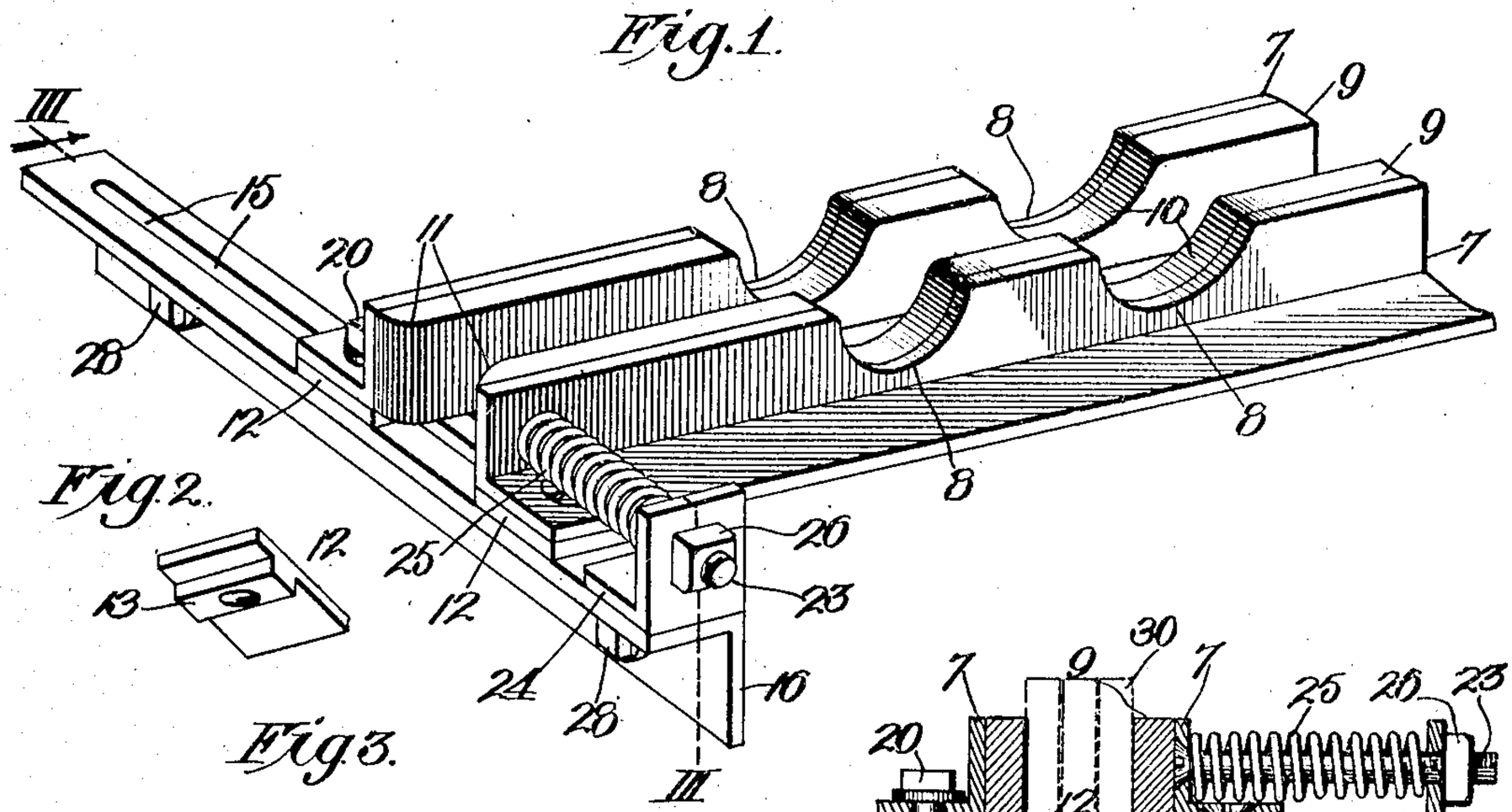

Fig. 2.

Fig. 3.

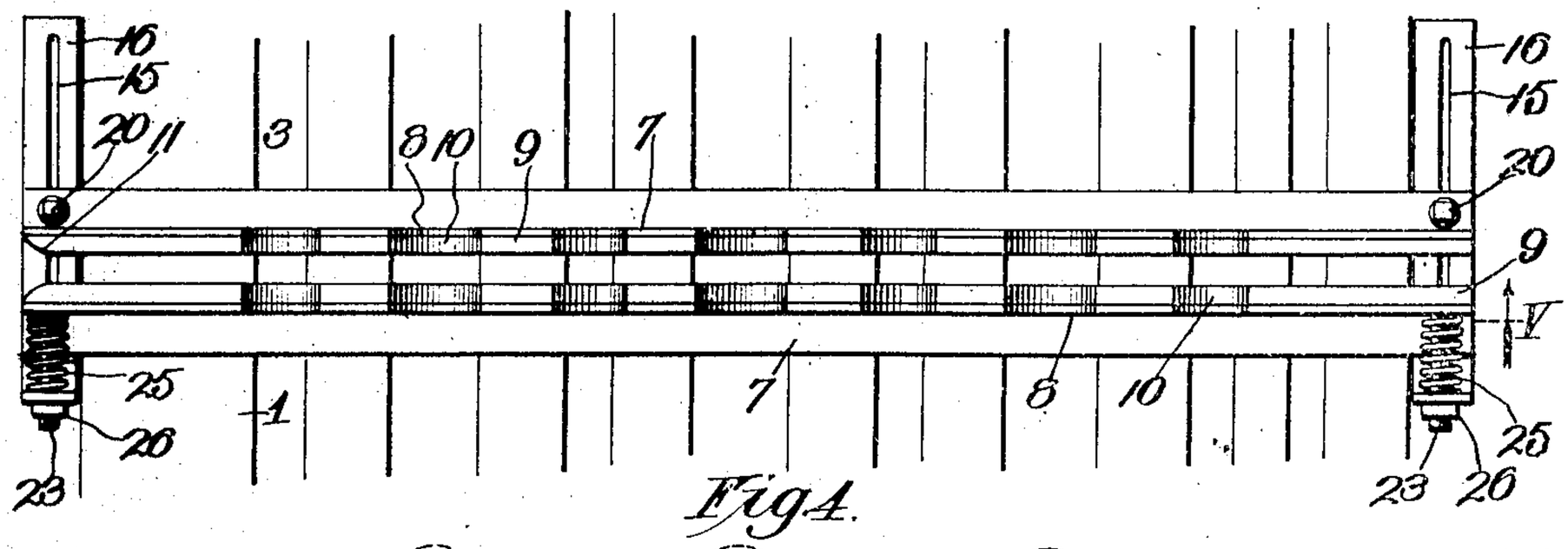

Fig. 4.

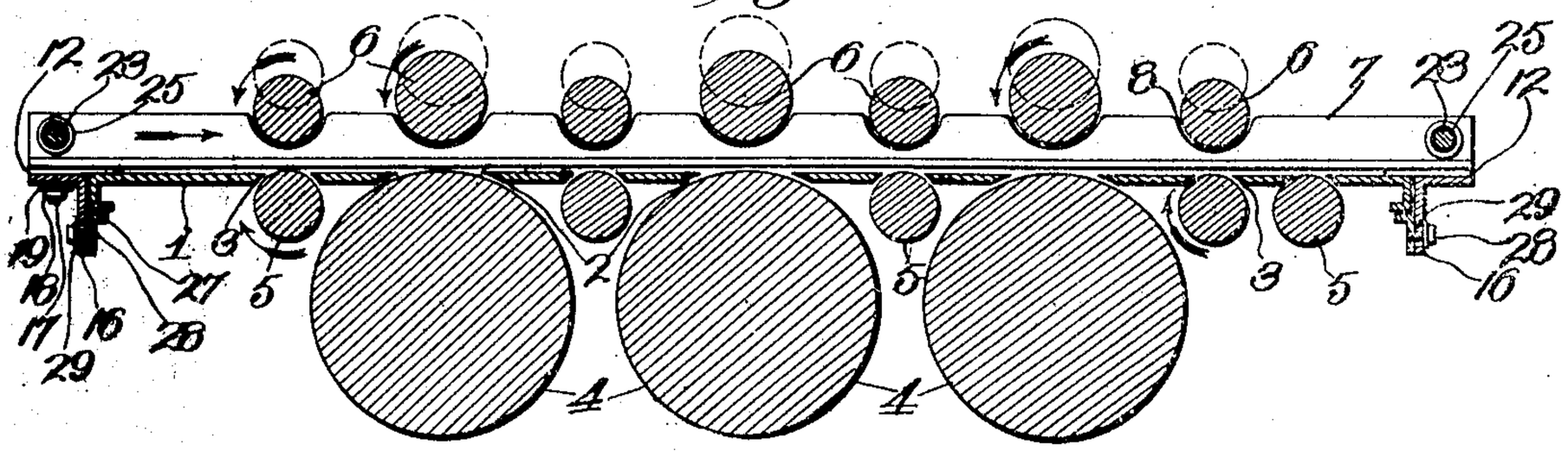

Fig. 5.

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UNITED STATES PATENT OFFICE.

WALTER MUNCH, OF KANSAS CITY, MISSOURI.

ATTACHMENT FOR SANDING-MACHINES.

No. 885,275. Specification of Letters Patent. Patented April 21, 1908.

Application filed August 13, 1907. Serial No. 388,413.

To all whom it may concern:

Be it known that I, WALTER MUNCH, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Attachments for Sanding-Machines, of which the following is a specification.

This invention relates to attachments for sanding machines, and my object is to produce an attachment whereby the edges of planks or strips of wood of varying width and length may be efficiently and accurately smoothed singly or collectively.

A further object is to produce an attachment of this character which can be easily and quickly applied to a sanding machine and which is of simple, strong, durable and inexpensive construction.

To these ends the invention consists in certain novel and peculiar features of construction and organization of parts as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which:

Figure 1, is a perspective view of a portion of a sanding machine attachment embodying my invention. Fig. 2, is a detail perspective view of a part of the attachment. Fig. 3, is a section taken on the line III—III of Fig. 1. Fig. 4, is a plan view on a reduced scale, of the attachment applied in operative position to a sanding machine of which the part above the bed is omitted. Fig. 5, is a vertical section taken on the dotted line of V of Fig. 4, and also shows the upper series of feed-rolls of the sanding machine.

In the said drawing, 1 indicates the bed of a sanding machine of the construction shown or of any other suitable or preferred type, said bed being provided with a plurality of openings or cross slots 2 and a plurality of openings or cross slots 3, the sand-drums 4 projecting up through openings 2 and the feed-rollers 5 up through openings 3, to a plane just above the bed.

6 indicates the upper feed-rollers, the same being disposed above rollers 4 and 5 and capable of being vertically adjusted to accommodate stock to be smoothed or finished, of varying width.

Referring now to the attachment, 7 indicates a pair of parallel angle-bars provided in the upper edges of their upwardly projecting arms with segmental recesses 8 to receive the rollers 6 at times, as hereinafter explained; and 9 are lining strips for the upwardly projecting arms of the angle-bars, these lining strips being preferably of smooth wood and provided with recesses 10 registering with recesses 8 and having their front ends curved or beveled as at 11 to provide a flaring mouth to facilitate the reception of the stock as hereinafter explained.

12 are spacing-plates underlying the ends of the angle-bars, which it should be stated are of length to project beyond each end of the bed of the sanding machine a distance of somewhat less than the width of said spacing-plates so that the latter shall overlie and rest upon the ends of the bed and thus support the angle-bars slightly above the rollers 4 and 5. The spacing-plates are provided with depending ribs 13 engaging the longitudinal slots 14 and 15 in angle-bars 16, these angle-bars extending transversely of the angle-bars 7 and fitting against the front and rear ends of the bed-plate 1 to prevent movement of the attachment in a direction longitudinal of such bed.

Extending through the horizontal flange of one of the angle-bars 7 and through the spacing-plates 12 underlying the same are bolts 17 having their heads countersunk in said angle-bar and engaged at their lower ends by nuts 18, the latter being utilized to clamp washers 19 against the undersides of the horizontal arms of the angle-bars 16 without holding the former so tightly as to prevent movement laterally of the bed, as hereinafter explained. The other angle-bar 7 has bolts 20 extending down through its horizontal arm and the underlying spacing-plates, and said bolts are engaged by the clamping nuts 21 and the washers 22 which are clamped by said nuts against the undersides of the arms of angle-bars 16. The angle-bar 7 last-referred-to is adapted to be clamped rigidly by the bolts 20 and nuts 21 to the angle-bars 16, but is adjustable transversely in order to accommodate the stock to be operated upon.

23 are bolts countersunk by preference in the upwardly projecting arms of the angle-bars 7 secured in position by bolts 17 and nuts 18, and said bolts 23 extend outward through the parts or shoulders at the corresponding ends of bars 16, the said parts or shoulders being preferably angle-brackets 24 riveted to said bars 16.

25 are expansive coil-springs mounted on bolts 23 and bearing at their opposite ends against the last-referred-to angle-bar 7 and

said brackets, nuts 26 engaging the outer ends of said bolts 23 to tension said springs when desired.

27 indicates plates to underlie and engage the ends of the bed 1 for the purpose of holding the angle-bars 7 in their proper position with relation to the bed, that is, to prevent bars 7 from being lifted or jolted upward while the stock is passing through the attachment, said plates 27 being carried by screw-bolts 28 adjustable vertically in vertical slots 29 in the depending portions of angle-bars 16, as shown clearly in Fig. 5.

Assuming now that the sanding machine is in operation and that the attachment is secured thereto as shown, the machine attendant slips the stock, viz. a strip or bar of wood or a plurality of strips or bars arranged flatwise together as shown by dotted lines at 30 in Fig. 3, into the front end of the attachment, that is slips said bar or bars between the angle-bars 7 or the wood lining strips 9, and shoves the stock forward until its front end projects beyond the first set of rolls 5 and 6 with the lower edge of the stock resting on the front bar 16 and the first roll 5. He then in the usual manner, lowers the upper set of feed-rolls until the first one engages the upper end of the stock, when the latter, under the frictional engagement, of the rolls 5 and 6 which revolve in the direction indicated by the contiguous arrows, Fig. 4, moves in the direction indicated by the longitudinal arrows in said figure, it being understood that the stock fits between the lining bars 9 sufficiently snug to insure synchronous movement of all of the stock strips—if a plurality are being operated upon as explained—this snug fitting of the stock also guarding against any tilting of the stock strip or strips so as to insure their upright position between the bars.

As the stock is drawn through the machine from front to rear by the feed-rolls the revolving sanding drums smooths the lower edge of the stock so that when the strip or strips emerge at the rear end of the machine they shall need no planing or sand papering but are ready for use. As they emerge from the rear end of the machine, as explained, they are grasped by the attendant and carried back to the front end of the machine again and inverted and again fitted in the attachment as previously explained, this second passage through the machine smoothing their opposite edges. By this means it will be seen that the edges of the stock can be smoothed in planes at right-angles to its sides efficiently and with great rapidity, and it will also be apparent that the number of pieces of stock that are thus acted upon simultaneously is only limited by the distance which one of the angle-bars 7 can be set from the other or spring-actuated one, the yielding pressure of the latter being to accommodate any slight irregularity or warpage that may exist in the stock or any strip thereof, and it will also be apparent that through the instrumentality of this attachment an exceedingly thin strip can be properly smoothed or finished at its narrow edges.

If the stock is of greater width than the depth of the bars 7, the upper feed-rolls will of course be disposed above the latter a sufficient distance to accommodate the width of the stock. On the other hand if the width of the stock is less than the depth of bars 7, it can be properly smoothed because the cavities in bars 7 and their lining strips are adapted to receive the upper feed-rolls. In fact any strips can be smoothed through the use of this attachment which exceed in width the vertical distance between the lower feed rolls and the lowest points of said cavities, as will be apparent by reference to Fig. 4.

If desired the lining strips 9 may be dispensed with but the use of such strips is preferred as otherwise the inner faces of the angle-bars 7 would have to be not only exactly parallel but would also have to be perfectly smooth whereas by using smooth wood strips 9, common or rough angle-bars 7 may be employed. It will likewise be understood that any stock may be smoothed in this machine provided its length exceeds the distance from center to center of adjacent feed-rolls 6.

From the above description it will be apparent that I have produced an attachment for sanding machines, embodying the features of advantage enumerated in the statement of the object of the invention, and I wish it to be understood that I reserve the right to make such changes as properly fall within the spirt and scope of the appended claims.

Having thus described the invention what I claim as new and desire to secure by Letters Patent, is:—

1. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and means for holding one of said longitudinal bars pressed yieldingly toward the other.

2. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and provided in their upper edges with recesses to receive the upper rolls of the sanding machine, and means for holding one of said longitudinal bars pressed yieldingly toward the other.

3. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, and provided in their upper edges with recesses to receive the upper rolls of the sanding machine,

means for holding one of said longitudinal bars pressed yieldingly toward the other, and means for guiding said yieldingly-pressed bar to insure its parallelism with the companion longitudinal bar.

4. A sanding machine attachment, comprising a pair of parallel bars, a pair of spacing-plates mounted on each of said bars with one of said spacing-plates of each bar adjustable toward the other spacing-plate on the same bar, means to clamp said adjustable spacing-plates rigidly at the desired points, a longitudinal bar connecting the adjustable spacing-plates, a companion longitudinal bar connecting the other pair of spacing-plates and extending parallel with the first-named longitudinal bar, and means for pressing the second longitudinal bar yieldingly toward the first.

5. A sanding machine attachment, comprising a pair of parallel bars, a pair of spacing-plates mounted on each of said bars with one of said spacing-plates of each bar adjustable toward the other spacing-plate on the same bar, means to clamp said adjustable spacing-plates rigidly at the desired points, a longitudinal bar connecting the adjustable spacing-plates, a companion longitudinal bar connecting the other pair of spacing-plates and extending parallel with the first-named longitudinal bar, expansive springs pressing the last-named longitudinal bar toward the companion longitudinal bar and means to tension said springs.

6. A sanding machine attachment, comprising a pair of parallel bars, a pair of spacing-plates mounted on each of said bars with one of said spacing-plates of each bar adjustable toward the other spacing-plate on the same bar, means to clamp said adjustable spacing-plates rigidly at the desired points, a longitudinal bar connecting the adjustable spacing-plates, a companion longitudinal bar connecting the other pair of spacing-plates and extending parallel with the first-named longitudinal bar, expansive springs pressing the last-named longitudinal bar toward the companion longitudinal bar, means to tension said springs, and means for guiding the spring-pressed longitudinal bar to maintain it parallel to its companion bar.

7. A sanding machine attachment, comprising transverse bars, spacing-plates mounted thereon, longitudinal bars mounted on the spacing-plates and bridging the space between the first-named bars, means for holding one of said longitudinal bars pressed yieldingly toward the other, and plates secured to the first-named bars at their inner or adjacent sides.

8. The combination with a sanding machine having superposed series of feed-rolls, sanding drums underlying certain of said rolls with their upper tangents in substantially the same plane as the corresponding tangents of the lower feed-rolls, and a bed-plate provided with openings or slots through which the lower feed-rolls and sanding drums upwardly project, of an attachment, comprising transverse bars fitting against the front and rear ends of the bed-plate and provided with plates underlying and engaging the same, spacing-plates secured upon the transverse bars and overlapping and resting on the contiguous ends of the bed plate, longitudinal bars bridging the space between and supported by the spacing-plates barely above the lower series of feed-rolls and the sanding drums, and means for yieldingly pressing one of said longitudinal bars toward the other.

9. The combination with a sanding machine having superposed series of feed-rolls, sanding drums underlying certain of said rolls with their upper tangents in substantially the same plane as the corresponding tangents of the lower feed-rolls, and a bed-plate provided with openings or slots through which the lower feed-rolls and sanding drums upwardly project, of an attachment, comprising transverse bars fitting against the front and rear ends of the bed-plate and provided with plates underlying and engaging the bed, spacing-plates secured upon the transverse bars and overlapping and resting on the contiguous ends of the bed-plate, longitudinal bars bridging the space between and supported by the spacing-plates barely above the lower series of feed-rolls and the sanding drums, and lining strips secured to the inner sides of the longitudinal bars and having their inner faces parallel and their front ends beveled to provide a flaring mouth for the space between them.

In testimony whereof I affix my signature, in the presence of two witnesses.

WALTER MUNCH.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.