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A. P. LONGDON.

DEVICE FOR ASSEMBLING BROOMS INTO BUNDLES.

APPLICATION FILED JULY 13, 1904.

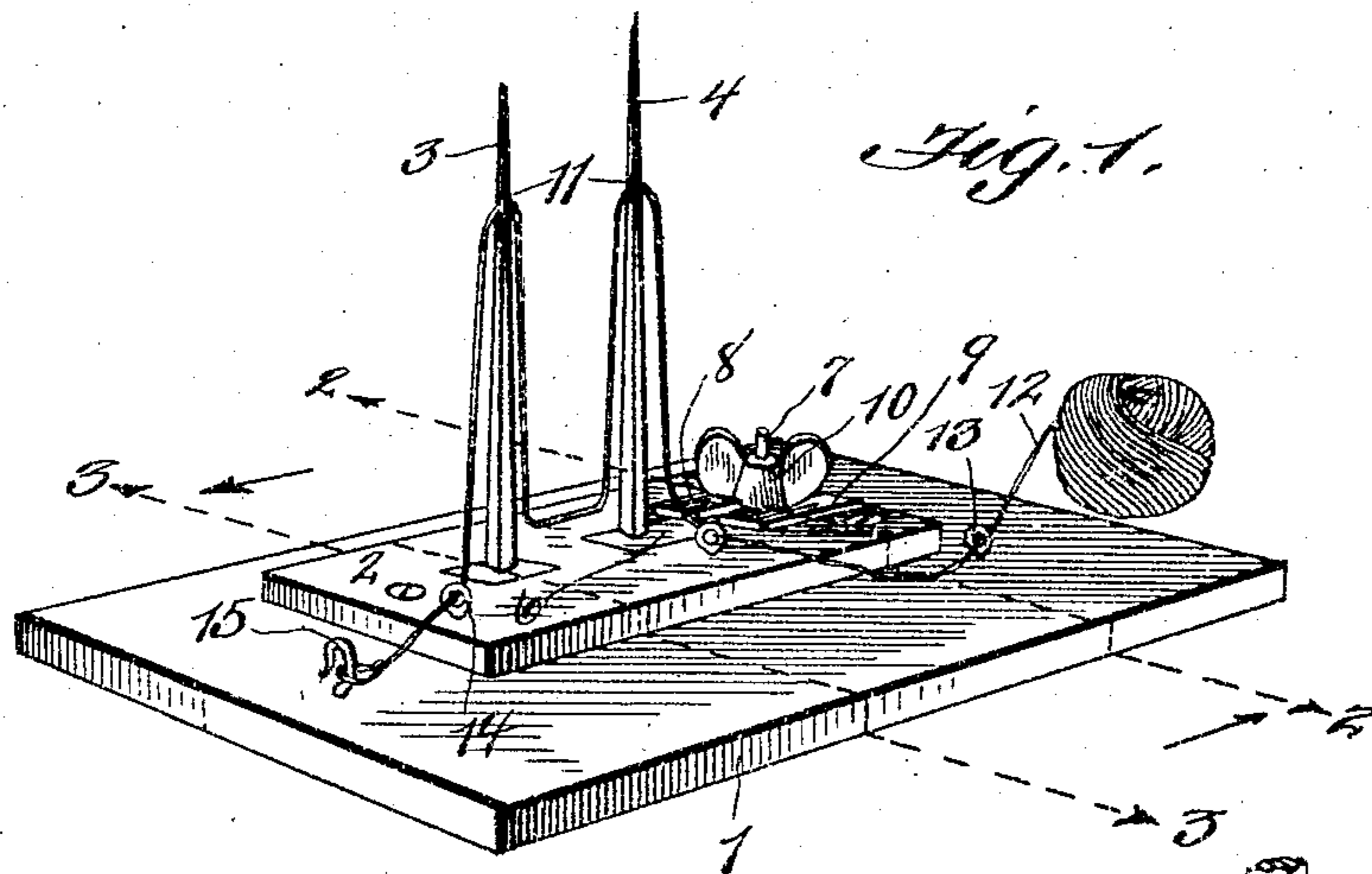


Fig. 1.

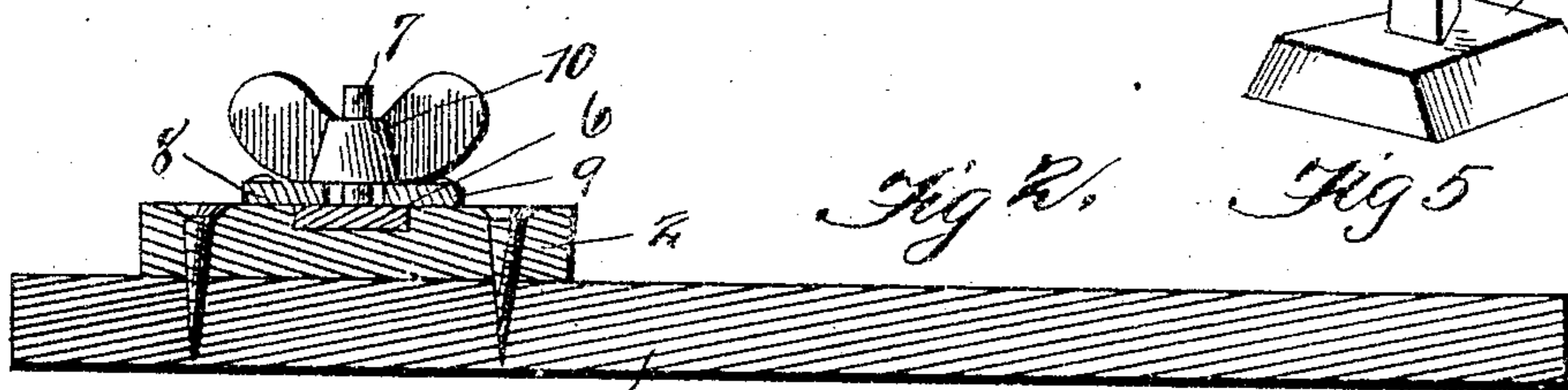


Fig. 2.

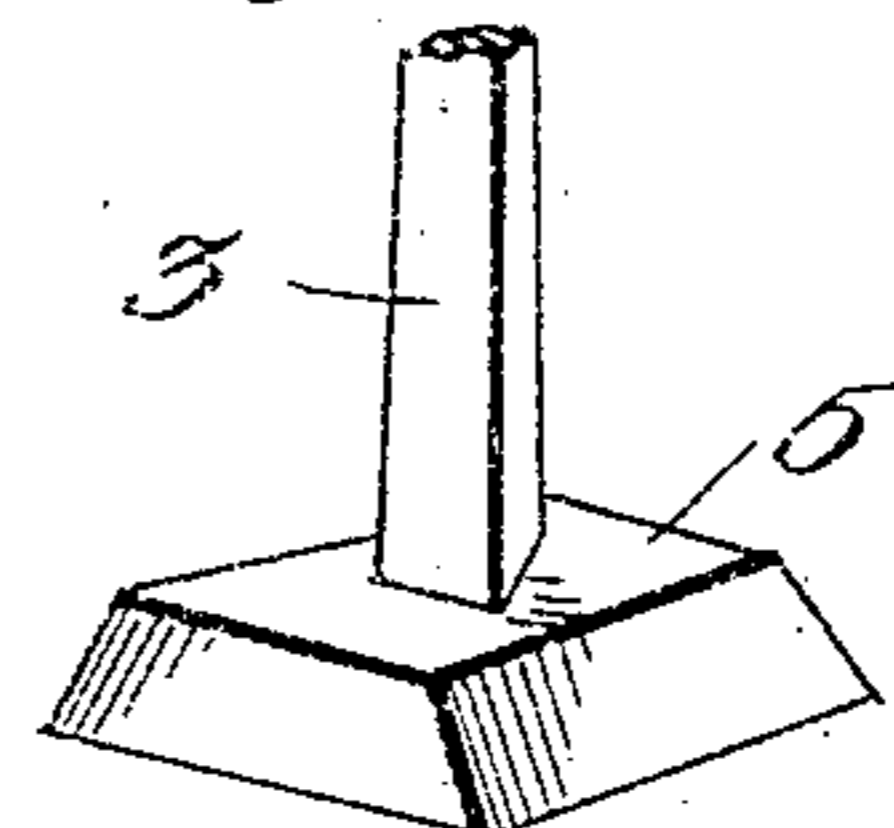


Fig. 5.

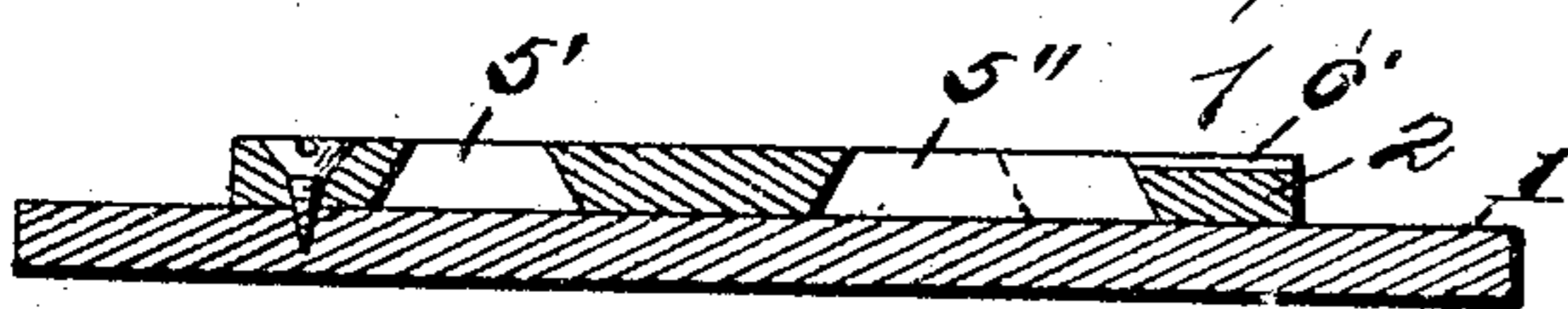
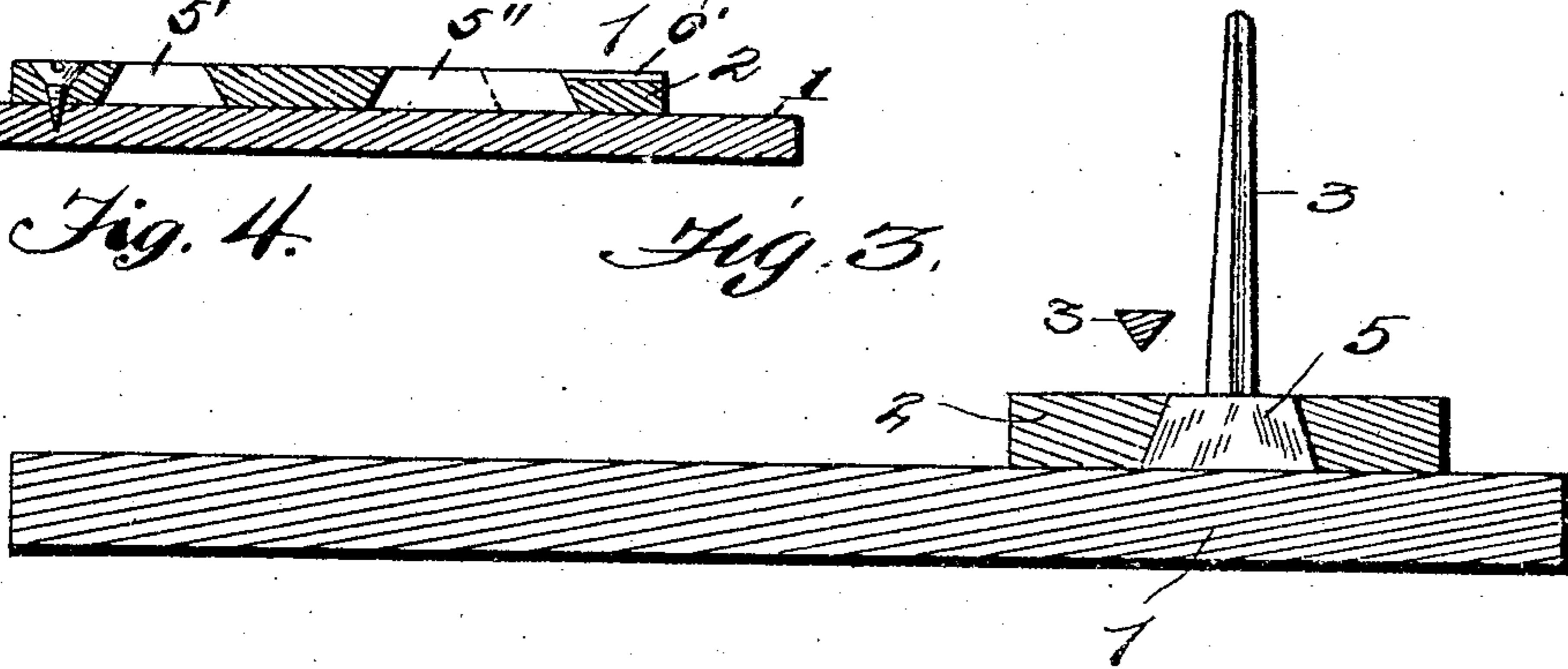


Fig. 4.

Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## DEVICE FOR ASSEMBLING BROOMS INTO BUNDLES.

SPECIFICATION forming part of Letters Patent No. 786,228, dated March 28, 1905.

Application filed July 13, 1904. Serial No. 216,402.

*To all whom it may concern:*

Be it known that I, ALEXANDER POWER LONGDON, a citizen of the United States of America, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Devices for Assembling Brooms into Bundles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in devices for assembling brooms into bundles, and contemplates the provision of a device which shall save labor and time in the above operation and one which shall at the same time be strong, durable, and capable of being used in connection with any size of broom-head by an adjustment of certain elements of the device, the said elements and the particular manner of adjusting the same with respect to the various sizes of broom-heads being more fully described hereinafter.

To this end the invention consists in the novel construction and arrangement of parts to be more fully described and claimed, reference being had to the accompanying drawings, forming a part of this specification, like numerals indicating like parts throughout the several views, and in which—

Figure 1 is a perspective view showing the device ready for use. Fig. 2 is an enlarged sectional view on the line 2 2 of Fig. 1, showing in detail the means for adjusting the distance between the needles to accommodate the relative sizes of broom-heads to be bundled together; and Fig. 3 is an enlarged sectional view on the line 3 3 of Fig. 1, showing the manner of mounting the needles upon the base of the device. Fig. 4 is a reduced central vertical section of the device with the needles removed, showing in detail the relative arrangement and contour of the recesses in which the said needles are mounted. Fig. 5 is a detailed perspective view, partly broken away, showing the form of needle employed with a base of the contour of the frustum of a pyramid.

In the accompanying drawings, 1 indicates a suitable base, having a plate 2 removably secured thereon, preferably by screws. Needles 3 and 4, preferably bayonet-shaped, as illustrated, are mounted at a distance from each other upon the plate 2, each needle having a base 5 of the contour of the frustum of a pyramid seated in a recess 5' of corresponding contour in the plate 2. As shown in the drawings, only two needles are employed; but this number may be varied if it is desired to have several hands bundling the brooms at one time, in which case the number of needles will correspond to the number of brooms to be bundled. The form of the base carried by each needle is another feature in which I do not wish to limit myself to the construction illustrated, which is the preferred method of mounting the needles upon the plate 2. The recess 5', within which the needle 4 is seated, is of somewhat greater width than the base 5 of the said needle, so as to permit of a lateral adjustment thereof, this being effected by a plate 6, carried thereby or integral therewith, as the case may be, either construction being equally effective, the said plate 6 carrying a vertical screw-threaded stud 7. The plate 6 slides in a recess 6' in the plate 2 between guides 8 and 9, arranged on each side thereof, and is locked in any desired position by a thumb-nut 10, mounted upon the threaded stud 11 of the said plate 6. Each needle is provided with the usual eye 11, and through these eyes the twine 12 is fed, being first passed through an eye-screw 13, from thence through the eyes of the needles 11, from thence through an eye-screw 14, and the end is secured to a screw-hook 15. The eye-screws 13 and 14 merely serve as guides, and their arrangement and number are important and are wholly at the option of the operator.

In practical use after the twine 12 has been passed through the needle-eyes 11 in the manner described and has had its end secured to the screw-hook 15 the brooms are ready to be bundled in the following manner: A single broom is pressed down upon the base 1, so as to be pierced by the needles 3 and 4 and to

have the twine 11 and 12 drawn therethrough. The same operation is repeated until the pile consists of the number of brooms desired to be packed in each bundle for shipment—say a dozen. Then the operator places his knee or hands upon the pile of brooms thus assembled and presses them tightly together, at the same time cutting the twine 12 adjacent the eye 11 in each needle 3 and 4 and tying together the ends thus secured. The portion of twine remaining between the needle 3 and the screw-hook 15 is of sufficient length to be tied tightly around the handle of the broom, so that there is no waste. When this last step has been performed, the operation is completed, and the brooms thus assembled in a bundle are lifted off the needles and are ready for shipment. When it is desired to adjust the distance between the needles to accommodate the relative sizes of brooms to be bundled, the thumb-nut 10 is loosened and the plate 6 withdrawn the desired distance, and with it the base 5, carrying the needle 4. The said thumb-nut 10 is then tightened, and the plate 6 and needle 4 are locked or set in position.

It will be readily apparent that in assembling the parts of the device together the needles 3 and 4 will first be secured in the plate 2, being inserted through the recesses from the under side of the said plate until the bases 5 are stopped by the sides of the recesses therefor in the plate 2. Then the plate 2 is secured in position upon the base 1, and when it is desired to remove the needles to replace them with new ones or needles of a different size it is only necessary to remove the plate 2 from the base 1. The peculiar shape of the base 5 prevents the needles from turning or becoming loose in the plate 2. By having the needles bayonet-shaped, as shown, they enter more readily between the straws or corns.

It is obvious that various minor changes may be made in the arrangement, number, and construction of separate elements comprising my invention without departing from the general spirit and scope thereof as defined in the following claims.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A device for assembling brooms into bundles comprising a base, a clamping-plate removably mounted thereon, a plurality of vertically-disposed needles having enlarged bases seated in corresponding recesses in said clamping-plate, said bases and said recesses having corresponding inclined sides.

2. A device for assembling brooms into bundles comprising a base, a clamping-plate removably mounted thereon, a plurality of vertically-disposed needles removably mounted in said clamping-plate, said needles having enlarged bases of the contour of the frustum of a pyramid, said bases being seated in recesses of corresponding contour in said clamping-plate.

3. A device for assembling brooms into bundles comprising a base-plate, a clamping-plate removably mounted thereupon, a plurality of vertically-disposed needles removably mounted in said base-plate, said needles being formed with bases of the contour of the frustum of a pyramid, said base-plate having openings of corresponding contour to accommodate the bases of the needles, one of said openings being of greater length than the needle-base corresponding thereto to permit of a lateral adjustment of the needle-base therein, the said needle-base being formed with a lateral extension, the said base-plate being formed with a slot adjacent said greater opening to receive said extension, a vertical threaded stud mounted upon said extension, a pair of guide-plates mounted upon said base-plate, said guide-plates being oppositely disposed on each side of said stud and overlapping said slot, an extension seated therein and a thumb-nut carried by said stud and bearing upon said guide-plates.

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

ALEXANDER POWER LONGDON.

Witnesses:

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