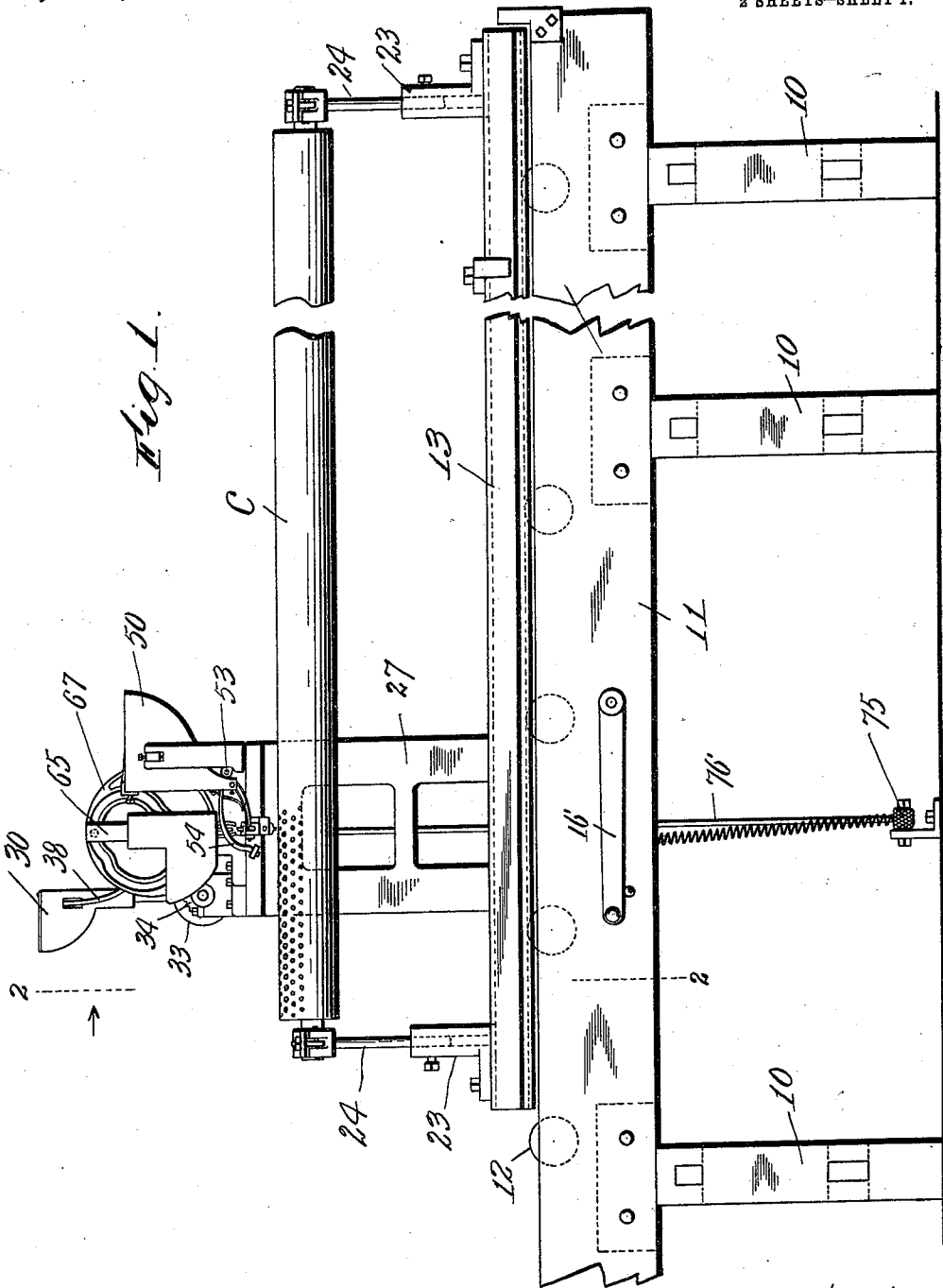


1,000,422.

S. R. MASON.
BRUSH MAKING MACHINE.
APPLICATION FILED JULY 7, 1904.

Patented Aug. 15, 1911.
2 SHEETS—SHEET 1.



Witnesses:
S. F. Mason.
M. E. Regan.

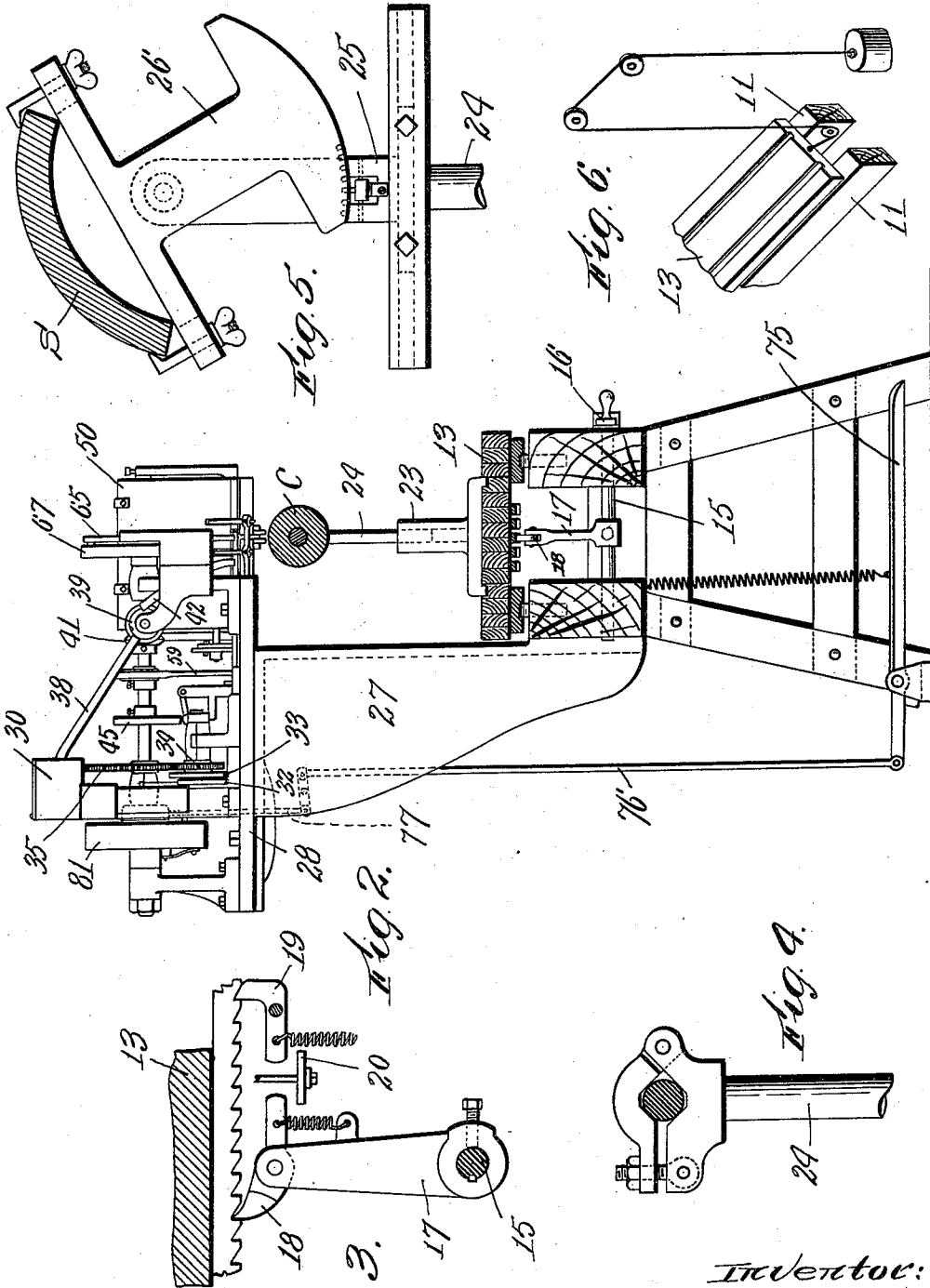
Inventor:
S. R. Mason.
 By his Attorneys,
Southgate and Southgate

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UNITED STATES PATENT OFFICE.

SYDNEY R. MASON, OF WORCESTER, MASSACHUSETTS.

BRUSH-MAKING MACHINE.

1,000,422.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed July 7, 1904. Serial No. 215,567.

To all whom it may concern:

Be it known that I, SYDNEY R. MASON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Brush-Making Machine, of which the following is a specification.

This invention relates to that class of machines which are used for setting bristles into the backs or body portions of brushes.

The especial object of this invention is to provide a simple, efficient and inexpensive brush making machine which is especially adapted to be operated by power to fasten bristles into curved or segmental back-pieces, such, for example, as are employed in cloth-finishing machinery.

In the accompanying six sheets of drawings, Figure 1 is a side view partly broken away of a brush-making machine constructed according to this invention. Fig. 2 is a sectional view thereof taken on the line 2—2 of Fig. 1. Fig. 3 is a detail view of the feeding pawls for advancing the work. Fig. 4 is a detail view of a form of clamp or holder which may be employed for holding cylindrical work in place. Fig. 5 is a detail view of a form of clamp or holder which may be employed to hold the work in place when the same consists of strips or separate sections of a cylinder, and Fig. 6 is a diagrammatic view illustrating the connections from a weight for returning the carriage.

The especial object of my present invention is to provide a wider range of utility for bristle setting machines by adapting the same to the manufacture of the comparatively large cylindrical brushes, such, for example, as are employed in cloth-finishing machinery.

Further objects of my invention are to provide an improved construction for supporting the work and for feeding the same forward.

Referring to the accompanying drawings and in detail, as shown in Figs. 1 and 2, 10 designate the legs which support the construction. Mounted upon the legs 10 are the side pieces 11 which carry the track-wheels 12. A carriage 13 is provided with grooved ways or tracks running on the wheels 12.

As shown in Fig. 2, a transverse feed-shaft 15 is provided with an operating handle 16. Adjustably mounted upon the feed-shaft 15 is a pawl-arm 17 carrying a

feed-pawl 18. The pawl-arm 17 may be set to different positions to cooperate with either one of a number of racks 170 mounted upon the carriage.

Coöperating with the feed pawl 18 as shown in Fig. 3 is a holding pawl 19, and arranged to engage the tail-pieces of both the feed-pawl 18 and the holding-pawl 19 is a releasing finger 20 which may be operated in any desired manner to release the pawls when the carriage is to be returned to starting position. To draw back the carriage to starting position, I may, if desired, employ a returning weight as shown for example in Fig. 6.

Adjustably mounted on the table or carriage 13 are stands 23, and vertically adjustable in the stands 23 are spindles 24. As shown in Fig. 4, the spindles 24 are provided at their upper ends with clamping devices for holding the shaft or arbor of the cylinder C shown in Fig. 1, when a complete cylindrical brush is to be completed in that form. These clamping devices are shown as each comprising a member 24^a fixed on the spindle, a pivoted jaw 24^b, and means for clamping the jaw shut in the form of a screw 24^c and nut. In some cases, however, as illustrated in Fig. 5, each of the spindles 24 may be provided with an adjustable top-piece 25 carrying a pivoted clamp-plate 26 to which a section or strip S of a cylinder may be secured by means of suitable clamping dogs 26^a which are of well-known construction. The clamp-plate 26 may be locked in different angular positions by a spring-pawl, and the posts 25 may be adjusted laterally so that the bristle setting devices will set the bristles radially with respect to the curvature of a comparatively flat section S of a large cylindrical brush.

In the machine illustrated, it will be noted that a comparatively long work-table is employed, and I consider this to be advantageous, as this adapts the machine to the making of comparatively large cylindrical brushes, such as are employed in cloth-finishing machinery.

Extending up from one of the side-pieces 11 is a supporting bracket 27 which carries the bed-plate 28, which bed-plate 28 forms the support for the bristle-selecting and setting mechanisms, which is not shown herein, as it constitutes the subject of a separate invention. Its location is indicated by the

tack hopper 30. The bristles are contained in a hopper 50.

I am aware that changes may be made in practicing my invention by those who are skilled in the art, and that parts of the mechanisms which I have herein shown and described may be used for manufacturing brushes of a different class from that herein referred to. I do not wish, therefore, to be limited to constructions which I have herein shown and described, but

What I do claim and desire to secure by Letters Patent of the United States is:—

1. A machine for making cylindrical brushes, comprising work-holding devices, means for feeding the same longitudinally, and means for supporting the work holding devices for turning the work on axes concentric with the periphery of the brush to present successive lines of sockets into position to be filled.

2. A machine for making cylindrical brushes, comprising a longitudinally movable table, means for feeding the table, stands adjustably mounted on the table, vertically adjustable spindles mounted in the stands, clamps carried by the spindles for

supporting the work, centers concentric with the periphery of the brush about which the clamps are adapted to turn to bring successive lines of sockets into position to be filled.

3. A machine for making cylindrical brushes, comprising a longitudinally movable table, adjustable stands mounted on the table, vertically adjustable spindles mounted in the stands, clamping devices carried by the spindles, each comprising a transversely adjustable support, and a pivoted clamp-piece upon which the work is carried, said clamping devices being adapted to support the work to turn upon axes concentric with the periphery of the brush to bring successive lines of sockets into position to be filled and permitting a transverse adjustment for setting the work to proper positions.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

SYDNEY R. MASON.

Witnesses:

PHILIP W. SOUTHGATE,
LOUIS W. SOUTHGATE.