

No. 723,053.

PATENTED MAR. 17, 1903.

H. D. SISSON.
GUMMING MACHINE.

APPLICATION FILED NOV. 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

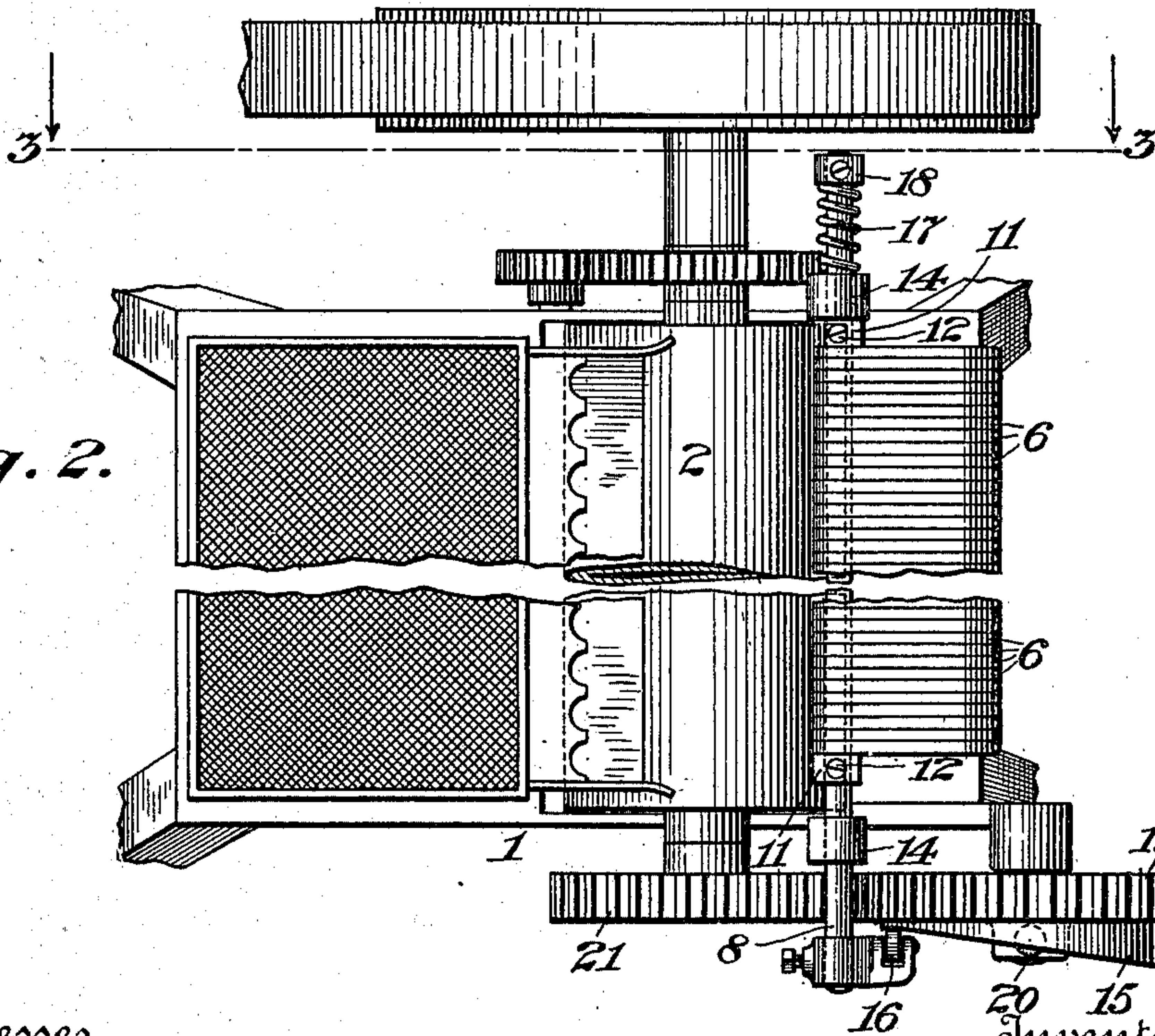
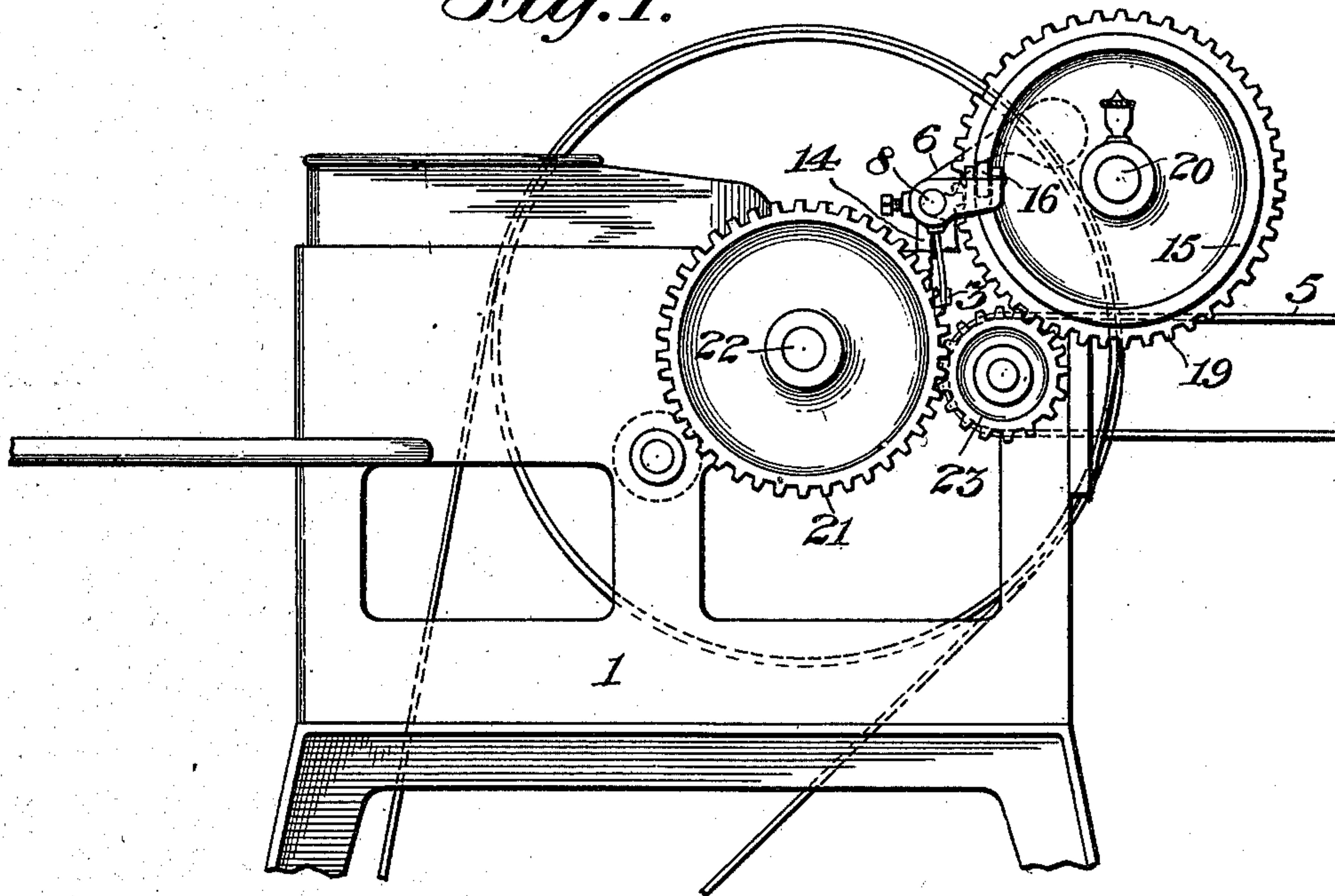


Fig. 2.

Witnesses
Chas. W. Smith
M. C. Forrest.

By *his* Attorney

Harry D. Sisson
Inventor
Chas. A. Dane

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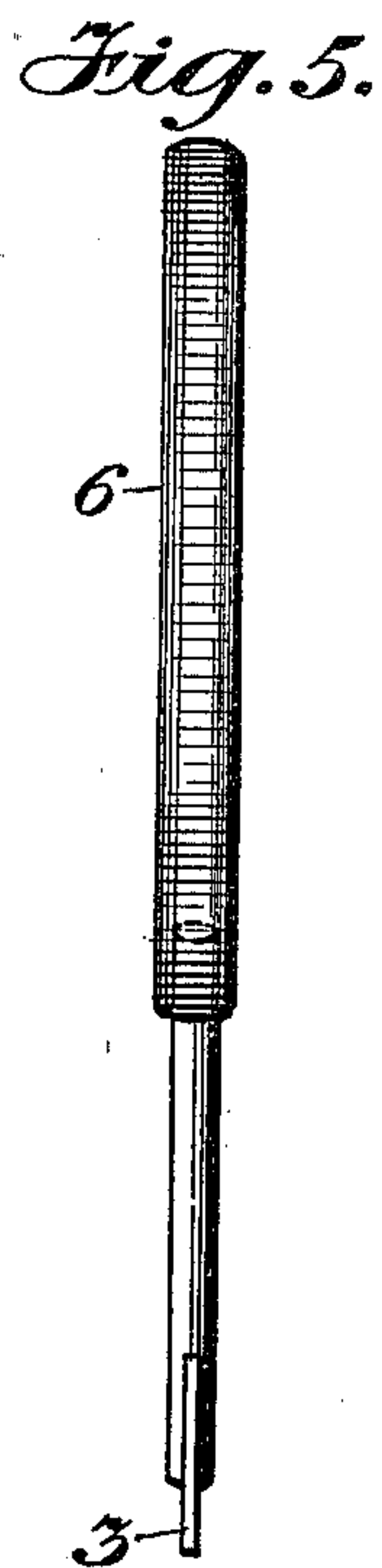
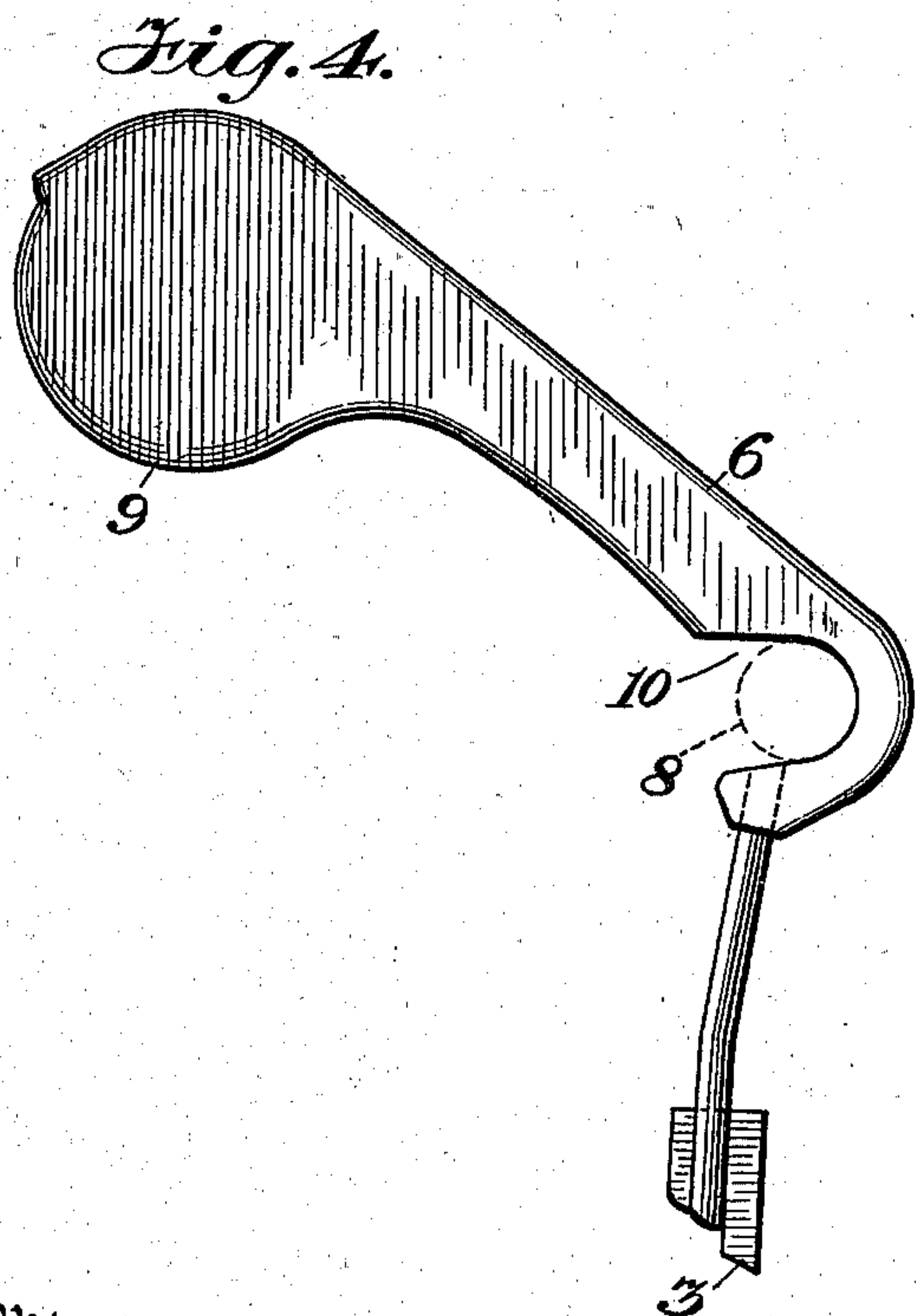
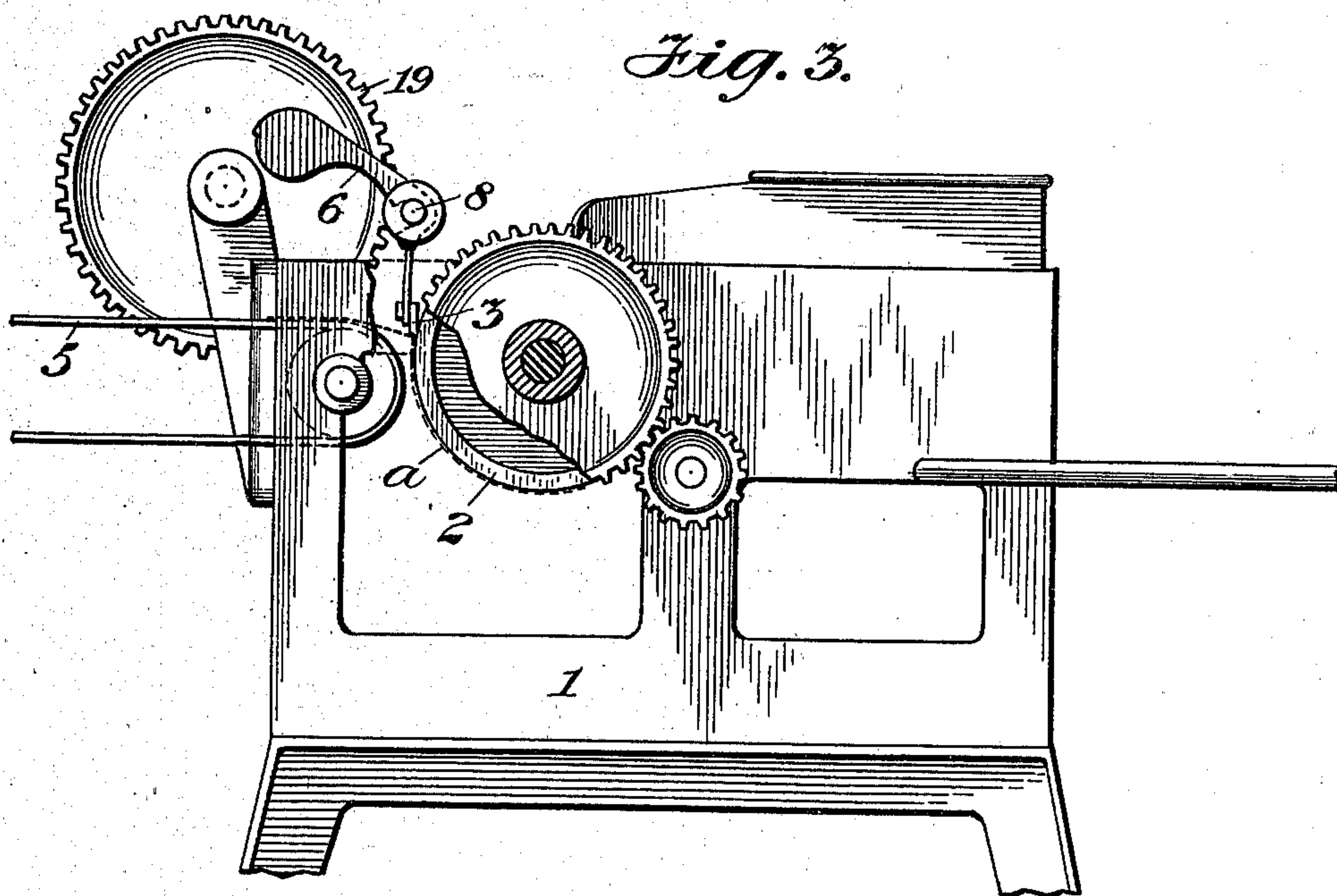
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C. W. Smith
M. C. Forrest.

By *his*

Attorney

Inventor
Harry D. Sisson
Chas. F. Dane

UNITED STATES PATENT OFFICE.

HARRY D. SISSON, OF PITTSFIELD, MASSACHUSETTS, ASSIGNOR TO MARK D. KNOWLTON AND FRED H. BEACH, OF ROCHESTER, NEW YORK.

GUMMING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 723,053, dated March 17, 1903.

Application filed November 10, 1902. Serial No. 130,667. (No model.)

To all whom it may concern:

Be it known that I, HARRY D. SISSON, a citizen of the United States, and a resident of Pittsfield, Berkshire county, State of Massachusetts, have invented certain new and useful Improvements in Gumming-Machines, of which the following is a specification.

This invention relates to that class of machines adapted for applying an adhesive substance, such as paste or glue, to sheets of paper or other material. A machine of this class, an example of which is shown in Letters Patent No. 676,237, granted to Mark D. Knowlton June 11, 1901, usually embodies as its essential or desirable features a revolving pasting or gluing roller, to the surface of which the glue or other adhesive substance is applied, means for feeding or carrying the sheets to be coated from a suitable supporting-table into contact with the said roller, to which they will adhere and receive a coating of the glue or adhesive substance thereon, and means for subsequently stripping or deflecting outwardly from the surface of the roller the sheets adhering thereto and causing them to be transferred to a suitable carrier belt or apron, from which they are taken by the operators. The means employed for so stripping or deflecting the sheets from the pasting or gluing roller usually comprises a series of stripping or so-called "pick-off" fingers which normally rest in a stationary position in contact with the roller and are formed with their lower or working ends inclined upwardly and outwardly in such manner as to deflect or guide the edges of the sheets, striking the same outwardly and away from the roller. It has been found in practice, however, that a number of objectionable features result in the use of these stripping or pick-off fingers as heretofore employed. For instance, the advancing edge of a sheet instead of being properly deflected from the roller by the engaging fingers sometimes catches on the points of the same and causes a tearing and wrinkling of the sheet, which results in a considerable waste of material and also in a clogging of the machine. Another objectionable feature also results from the fact that the end of each of the fingers pressing against the revolving roller on

one peripheral or circumferential line tends to produce a series of scores or grooves in the surface of the roller, which cause a streaked or ununiform coating or gumming of the sheets rather than a uniform coating, as is desirable. Again, in some instances, as when the fingers are of softer material than the roller and before the latter has become grooved, the fingers operate to burnish the roller on the lines of their contact therewith to such an extent as to prevent the roller taking on a coating of the adhesive substance on such lines, and consequently causing a correspondingly-streaked coating of the sheets.

Having in mind the above-mentioned objectionable features and others incidental thereto resulting from the use of the stationary stripping or pick-off fingers in a machine of the class described, it has been the object of my invention to provide a simple and effective means for avoiding the same, and this object I secure by causing a constant reciprocatory movement of the said fingers in a direction across the line of their contact with the roller.

Referring to the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a gumming-machine embodying my invention with the lower portion of the supporting frame or stand broken away. Fig. 2 is a top-plan view of the same. Fig. 3 is an elevation looking from the side opposite that shown in Fig. 1 with the driving-shaft in section on line 3 3 of Fig. 2 and with one of the gears partly broken away to show the pasting or gluing roller behind it. Figs. 4 and 5 are side and edge views, respectively, of one of the stripping or pick-off fingers.

The machine illustrated in the drawings to which I have applied my invention is of the same general construction and operation as that disclosed in the said Patent No. 676,237, before referred to, and comprises a supporting-frame 1, a pasting or gluing roller 2, mounted to revolve upon said frame, a series of stripping or pick-off fingers 3, resting in contact with the said roller and adapted to deflect or throw outwardly from the surface of the same an adhering sheet or strip, and a carrier belt or apron 5, arranged with one end adjacent to the roller and the stripping or

pick-off fingers for receiving the deflected sheets thereon, the deflection of the sheets from the roller to the carrier-belt being clearly shown in Fig. 3, in which the sheet is indicated by the dotted line *a*.

The pick-off fingers 3, as herein shown, are each carried at one end of a weighted lever-arm 6, which is loosely seated at a point between its ends upon a supporting-rod 8, so as to be capable of a rocking movement thereon, whereby the weighted portion 9 at the outer end of the arm will act to normally hold the pick-off finger at its opposite lower end in contact with the pasting-roller, as shown, the said arm being formed with a notch or recess 10 on its under side to receive the rod 8, on which it is seated. These finger-carrying arms when seated upon the rod 8 are held against endwise movement thereon between two collars 11 11, which are secured in an adjustable stationary position on the rod by set-screws 12 12.

The supporting-rod 8 in accordance with the form of my invention herein illustrated is loosely supported in suitable bracket-arms 14 14, so as to be capable of a longitudinal sliding movement therein, and the same is operated by suitable actuating means to have a constant reciprocatory movement, and thereby to communicate a like movement to the supported pick-off fingers in a direction lengthwise of the pasting-roller and across the line of their contact therewith. This movement of the pick-off fingers relative to the pasting-roller obviously prevents grooving or scoring of the latter, and thereby insures a uniform coating of the same by the adhesive substance and a consequent transfer of a uniform coating to the sheets brought into contact therewith. A further and important feature of such movement of the pick-off fingers lies in the fact that it causes the latter to more readily deflect and strip the sheets from the roller, and thereby avoid a large percentage of the waste heretofore caused.

Any suitable means may be employed for causing the described reciprocating movement of the pick-off fingers without affecting the spirit of my invention, the means employed in the machine herein illustrated being as follows: The rod 8, which carries the pick-off fingers, is moved in one direction by means of an operating-cam 15 engaging with a roll 16, carried at one end of the rod, and in the opposite direction by means of a spring 17, which is located on the rod between a collar 18 thereon and the adjacent stationary bracket-arm 14, as clearly shown in Fig. 2. The said operating-cam 15, as herein shown, is formed upon one side of a gear-wheel 19, which is mounted upon a suitable bearing-stud 20 on the supporting-frame and driven from the gear-wheel 21 on the main driving-shaft 22 through the medium of the pinion 23, as most clearly shown in Fig. 1.

Having thus described a practical embodiment of my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a reciprocatory device for deflecting or stripping from said roller a sheet adhering thereto.

2. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a reciprocatory device resting in contact with said roller for deflecting or stripping an adhering sheet therefrom.

3. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of means resting in contact with said roller for deflecting or stripping an adhering sheet therefrom, and means for imparting to said sheet deflecting or stripping means a reciprocating movement in a direction across its line of contact with the roller.

4. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of means resting in contact with said roller for deflecting or stripping an adhering sheet therefrom, and means for imparting to said sheet deflecting or stripping means a constant reciprocating movement in a direction across its line of contact with the roller.

5. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a series of stripping or pick-off fingers resting in contact with said roller, and means for imparting a reciprocating movement to said fingers.

6. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a series of stripping or pick-off fingers resting in contact with said roller, and means for imparting a reciprocating movement to said fingers in a direction lengthwise of the roller.

7. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a series of stripping or pick-off fingers resting in contact with said roller, and means, including a cam, for imparting a reciprocating movement to said fingers.

8. In a machine of the character described, the combination, with a revolving pasting or gluing roller, of a series of stripping or pick-off fingers resting in contact with said roller, a rod carrying said fingers, and means for imparting a reciprocating movement to said rod.

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

HARRY D. SISSON.

Witnesses:

MARY E. O'BRIEN,
FRANK RUSSELL.