

No. 750,291.

PATENTED JAN. 26, 1904.

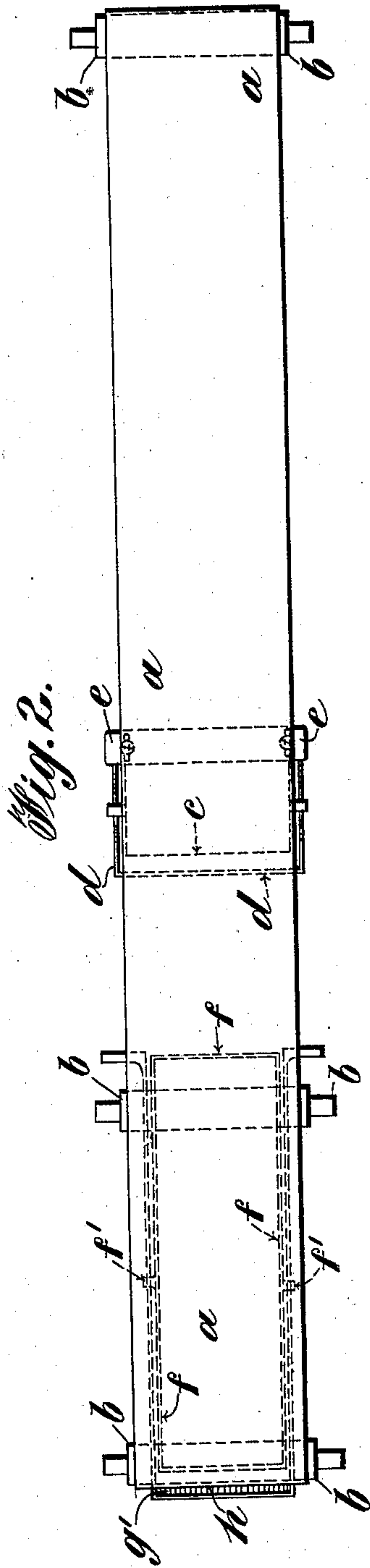
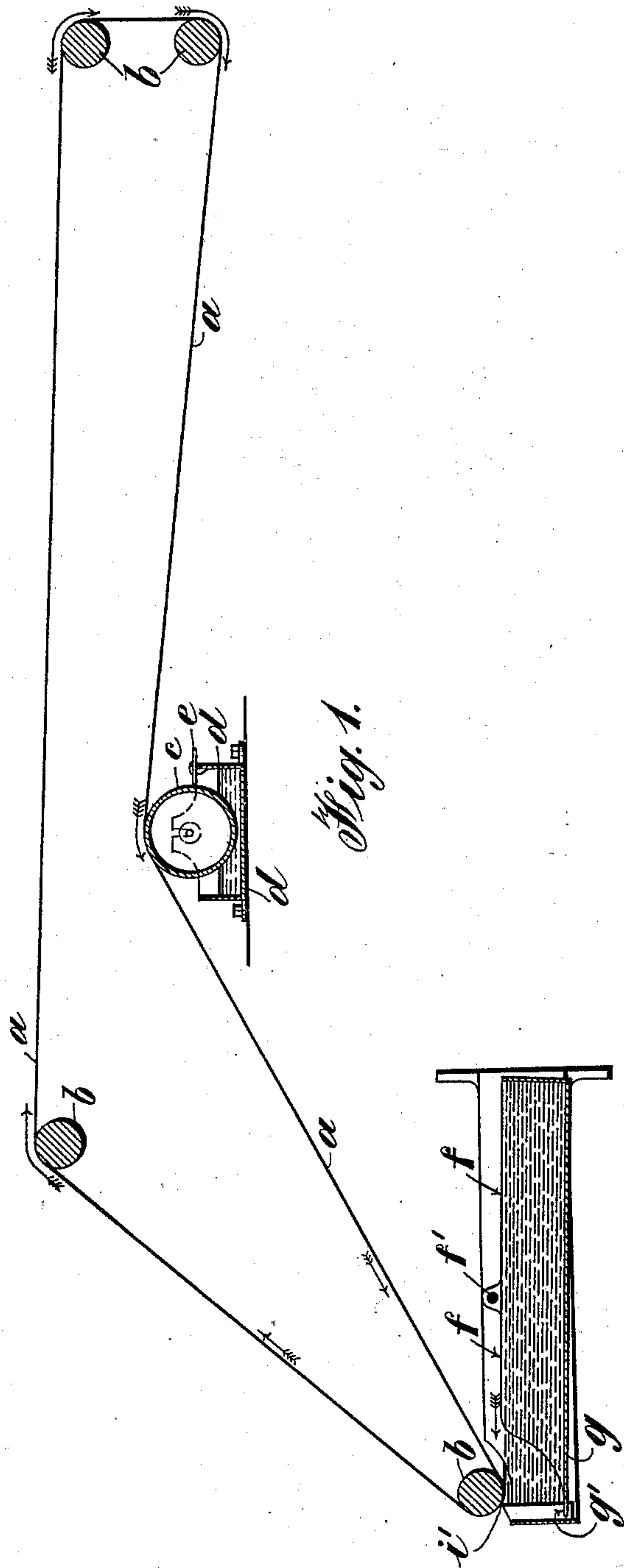
F. MAGINN.

APPARATUS FOR COATING PAPER OR THE LIKE WITH ADHESIVES.

APPLICATION FILED JUNE 24, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.  
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2 SHEETS—SHEET 2.

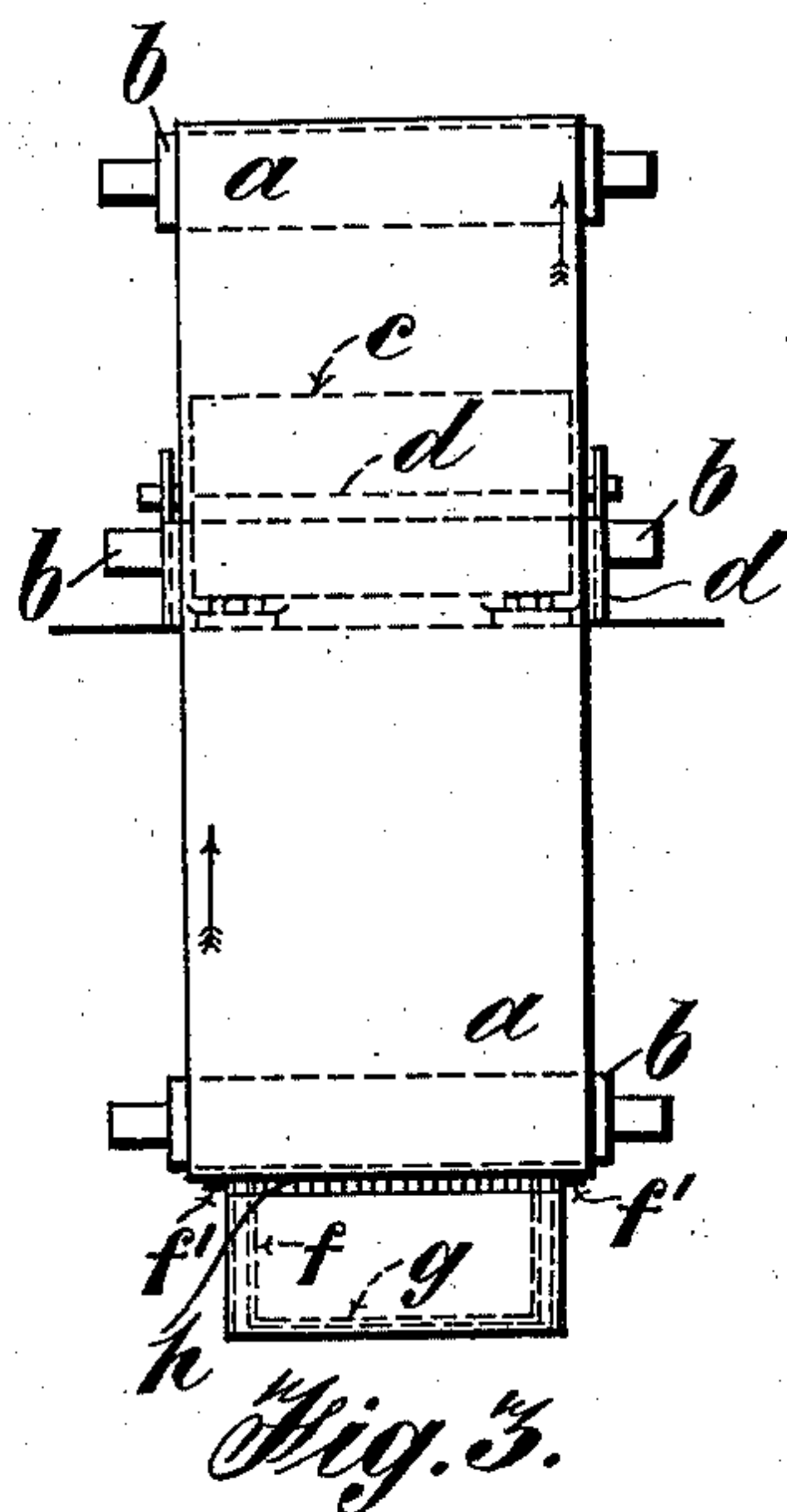


Fig. 3.

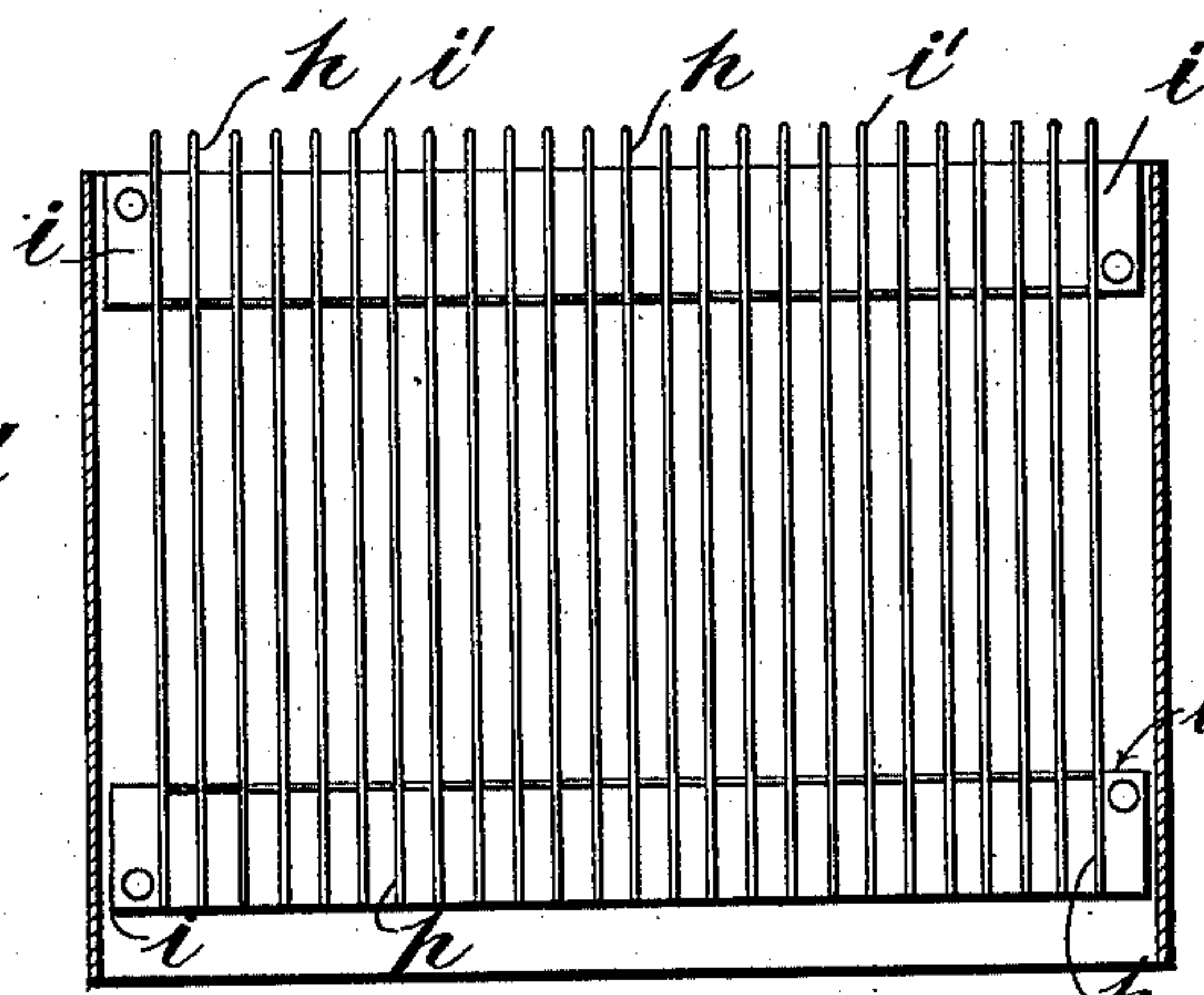


Fig. 6.

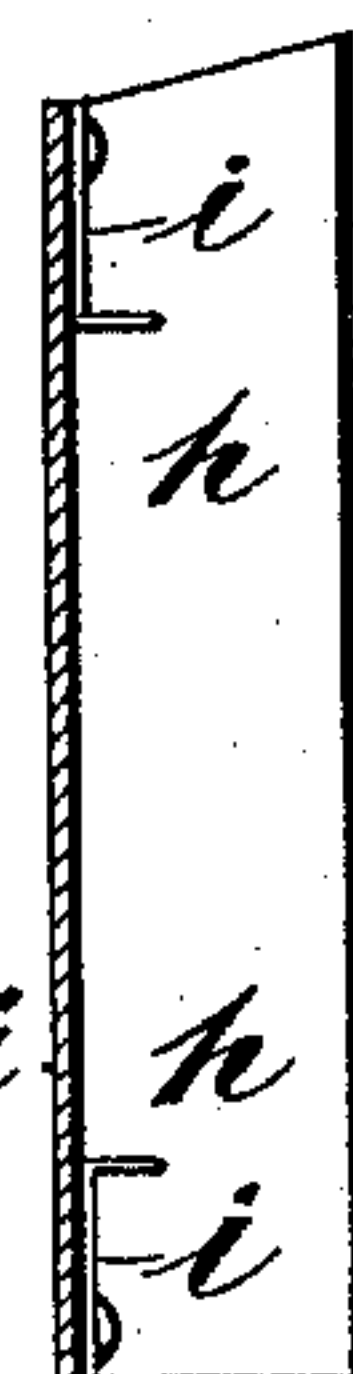


Fig. 7.

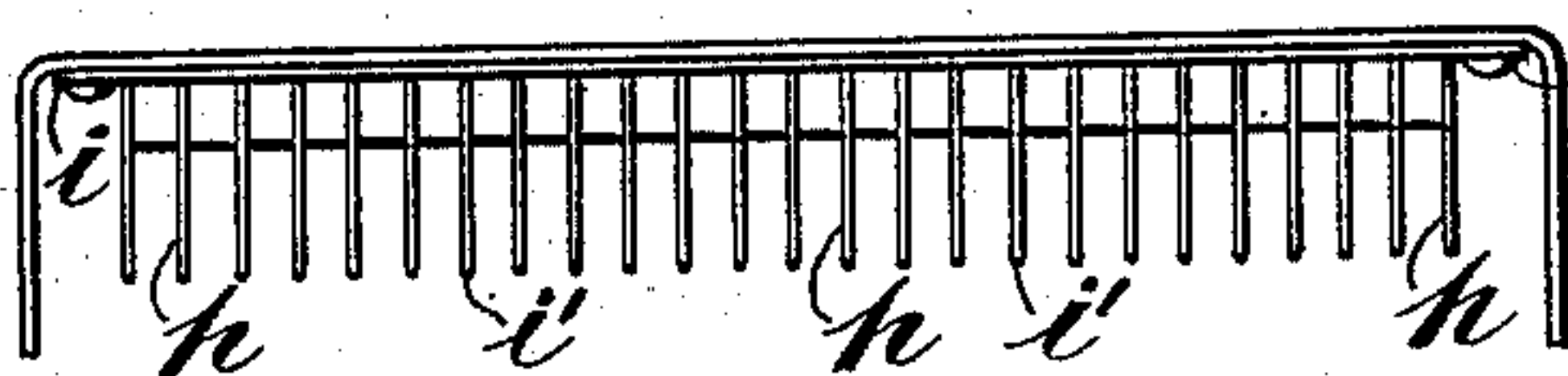


Fig. 8.

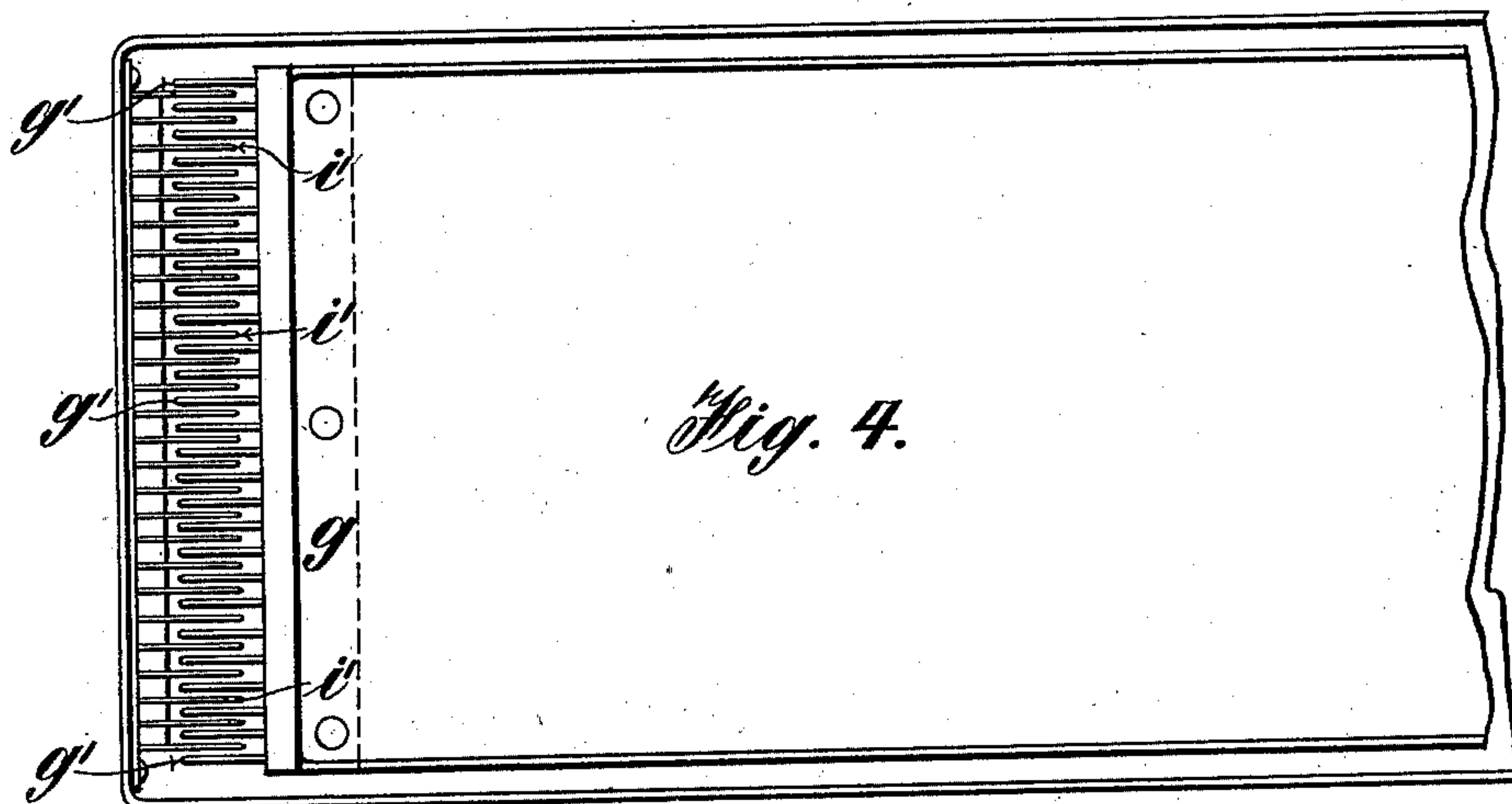


Fig. 4.

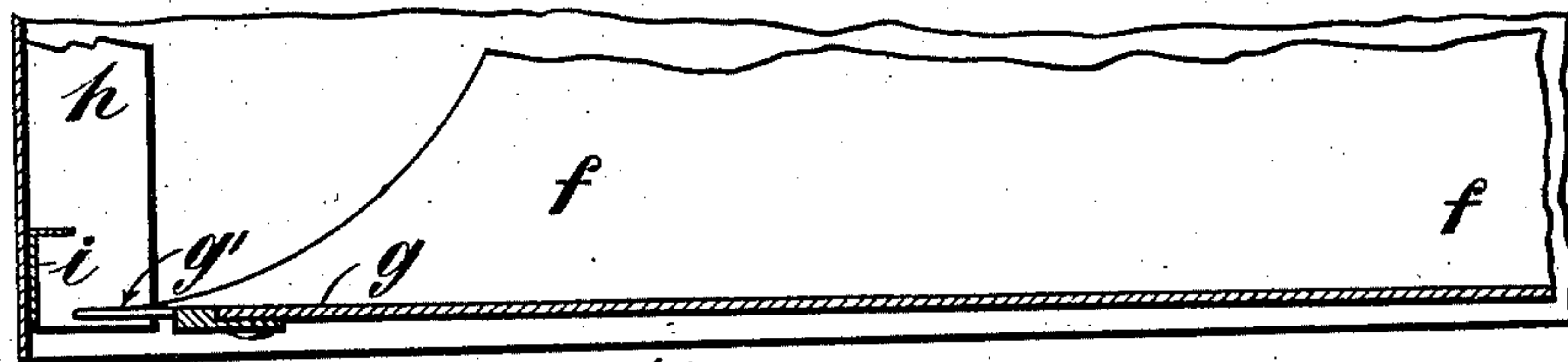


Fig. 5.

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# UNITED STATES PATENT OFFICE.

FELIX MAGINN, OF WARRINGTON, ENGLAND.

APPARATUS FOR COATING PAPER OR THE LIKE WITH ADHESIVES.

SPECIFICATION forming part of Letters Patent No. 750,291, dated January 26, 1904.

Application filed June 24, 1902. Serial No. 113,014. (No model.)

*To all whom it may concern:*

Be it known that I, FELIX MAGINN, fancy-box manufacturer, a subject of the King of Great Britain and Ireland, residing at Alliance Box Works, Orford Lane, Warrington, in the county of Lancaster, England, have invented certain new and useful Improvements in Apparatus for Coating Paper or the Like with Adhesives, of which the following is a specification.

This invention relates to apparatus for feeding paper to pasting and other machines requiring one or more sheets to be fed consecutively one behind the other or side by side and for applying a coating of paste, gum, or other liquid or semiliquid adhesive to paper and analogous materials, and particularly to such materials as are used in covering or partially covering fancy boxes, (or as fly-leaves therefor,) for card-mounting, bookbinding, and for labels for bottles, boxes, and other packages, newspaper-wrappers and the like, and for conveying the said materials, if required, to a suitable point.

The primary object of the invention is to provide apparatus for feeding paper to pasting and similar machines and to devise means for applying a coating of paste or other adhesive to the whole surface or part only of the surface of separate pieces of paper and analogous materials automatically and for conveying the said pieces to a convenient position, where they will be readily available to the operator for any of the purposes similar to those hereinbefore referred to.

My invention comprises an automatic feeding device, an endless traveling band suitably mounted, and a device for supplying paste or other adhesive thereto and combination with the feeding device and a receptacle or support (forming the feeding device) for a superposed series of separate pieces of paper, which may be continually or intermittently pressed against the traveling band, so that the latter may remove each sheet separately as it travels, retain them on its surface to receive the

adhesive, convey them to a suitable point, and allow them being removed separately, as required, or the said feeding device may deliver the separate sheets to rollers or the like to receive the adhesive, and they in turn may deliver the sheets as required.

My invention will be fully described with reference to the accompanying drawings, which indicate one manner, and at present the best known to me, of apparatus for carrying out my invention.

In the drawings, Figure 1 is a sectional elevation of the apparatus; Fig. 2, a plan of same; Fig. 3, an end elevation; Fig. 4, a partial plan showing in enlarged view the means for supporting the separate sheets of paper; Fig. 5, a partial sectional elevation of same; and Figs. 6, 7, and 8, an end elevation, side elevation, and plan, respectively, of part of the means indicated in Figs. 4 and 5.

In carrying out my invention I use an endless band *a*, of cloth or other suitable material, preferably waterproof, which is suitably mounted and stretched upon two or more rollers *b*, preferably arranged parallel to each other. To any one of these rollers rotary motion is imparted by any ordinary and convenient means, such motion being transmitted to the endless band, whose speed of travel may be varied in accordance with the work to be done, provision being made for altering the speed of the band and for stopping it and starting it again, as required, the said means being under the control of the operator. At a suitable point in the length of the traveling band *a* I provide a device for imparting to the exterior surface of the band a coating of paste or other suitable adhesive. Such device may be of any ordinary or convenient form, but preferably consists of a roller *c*, rotating in a vessel *d*, containing the adhesive. As the band travels, therefore, it receives a coating of adhesive throughout its whole length, the depth of such coating being regulated by a scraper *e*, carried by the adhesive vessel *d*. At another point in the traveling band, and



preferably at one in which the band can make a sharp turn round one of its supporting-rollers, I mount in a position tangential to the path of the traveling band a receptacle or support  $f$  for the separate sheets of paper, which are arranged therein or thereon in a pile. The sides of the support or receptacle  $f$  may be adjusted laterally to conform to the width of the paper or other material to be coated with the adhesive. The receptacle is so placed in relation to the band and is so mounted on its supports that the forward end of the first piece of paper contained in it is in contact with the paste-coated surface of the band where the latter makes the turn round the roller. The effect when the band begins to travel is that the first paper adheres to and travels along with it, being thereby removed and conveyed from its support or receptacle, when the next paper comes in contact with the band and is also withdrawn in a similar manner, each paper being acted upon in the same way until the sheets are all withdrawn. The sheets are thereby conveyed and may be removed at any suitable point in the travel of the band by the operator in charge of the machine.

The essential and important feature of the receptacle  $f$  is to pivot it at a point  $f'$ , carried by a suitable supporting-frame, the said pivot being so arranged that there is a greater leverage to the rear to enable the weight of the paper itself to form the medium for pressing the forward end of each sheet against the traveling band. In such an arrangement the pressure in the direction of the band is continuous and automatic and the papers are also removed continuously; but by the employment of a constantly-rotating cam or similar device acting against the paper-containing receptacle  $f$  the delivery of the papers may be accomplished at intervals. Further, I would have it distinctly understood that I may employ two or more receptacles for containing the material to be coated, arranged side by side or at different points tangential to the roller supporting the band at the point of withdrawal, so that I may thus coat different sizes, qualities, or colors of materials in any order which may be found useful or necessary in connection with the utilization of the materials so coated with adhesive. I may also employ two or more pasting devices side by side or a roller provided with spaces between the adhesive-conveying portions, so that parallel strips of paste may be applied to the band.

When the material-containing receptacle  $f$  is pivoted, as indicated, I prefer to form its bottom  $g$  with pins  $g'$ , arranged in the form of a comb at its forward end to work in conjunction with a number of blades  $h$ , carried by the supporting-frame  $i$  at the end, the

pins  $g'$  projecting into the spaces between the latter, and so always keeping the ends of the sheets of paper in proper position for coming into contact with the traveling band. The uppermost points  $i'$  of the blades  $h$  are just clear of the traveling band and prevent more than one sheet being withdrawn at a time. Instead of the material-containing receptacle feeding or delivering the paper to a traveling band it may deliver each sheet in the manner before described to a roller or rollers coated with adhesive to receive the latter. The sheets may then be conveyed from the rollers in any suitable way.

By means of my invention I am enabled to use papers or labels which have been cut, shaped, or otherwise prepared previously, as an alternative to using continuous strips already gummed or provided with adhesive, which require to be cut or severed into the required lengths for use, and it will be found that when the papers are removed from the endless band or rollers a coating of adhesive has been transferred from its or their surface to theirs and that they are then ready for attaching to the boxes or other articles upon which it is desired to stick them. The feeding and coating action of the apparatus is entirely automatic, and therefore a considerable saving in labor and time is effected as against the old methods.

In conclusion I would have it understood that in this specification wherever the expression "paper," "separate papers," or "pieces of paper" is used it is to be taken as meaning not only paper, but such analogous materials as may be efficiently and automatically fed and be coated with adhesive. Further, I would have it understood that I am well aware that liquid adhesive has been applied to separate sheets of paper by bringing them into contact with an endless traveling band coated previously with adhesive by rollers rotating in an adhesive receptacle and that separate pieces of paper have been conveyed with their gummed sides uppermost to certain points by endless traveling bands; but such devices have nothing whatever in common with my invention.

What I claim as my invention, and desire to protect by Letters Patent, is—

1. Apparatus for feeding and pasting paper comprising an endless traveling band; a series of rollers supporting said band; a pasting device in contact with the band and a receptacle to contain a pile of papers to be fed and pasted so pivoted that the weight of the papers or rear end of the receptacle acts to bring each sheet successively against the traveling band substantially as described.

2. In apparatus for feeding and pasting paper, the combination with an endless traveling band supplied with a coating of adhesive of a



stationary frame provided at its front end  
with a series of plates projecting therefrom,  
an overweighted paper-receptacle pivoted  
thereto and a series of pins located on the  
5 front end of said receptacle adapted to pass  
between the plates on the stationary frame sub-  
stantially as described.

In witness whereof I have hereunto set my  
hand in the presence of two witnesses.

FELIX MAGINN.

Witnesses:

WILLIAM W. TAYLOR,  
JAS. STEWART BROADFOOT.