

No. 652,847.

Patented July 3, 1900.

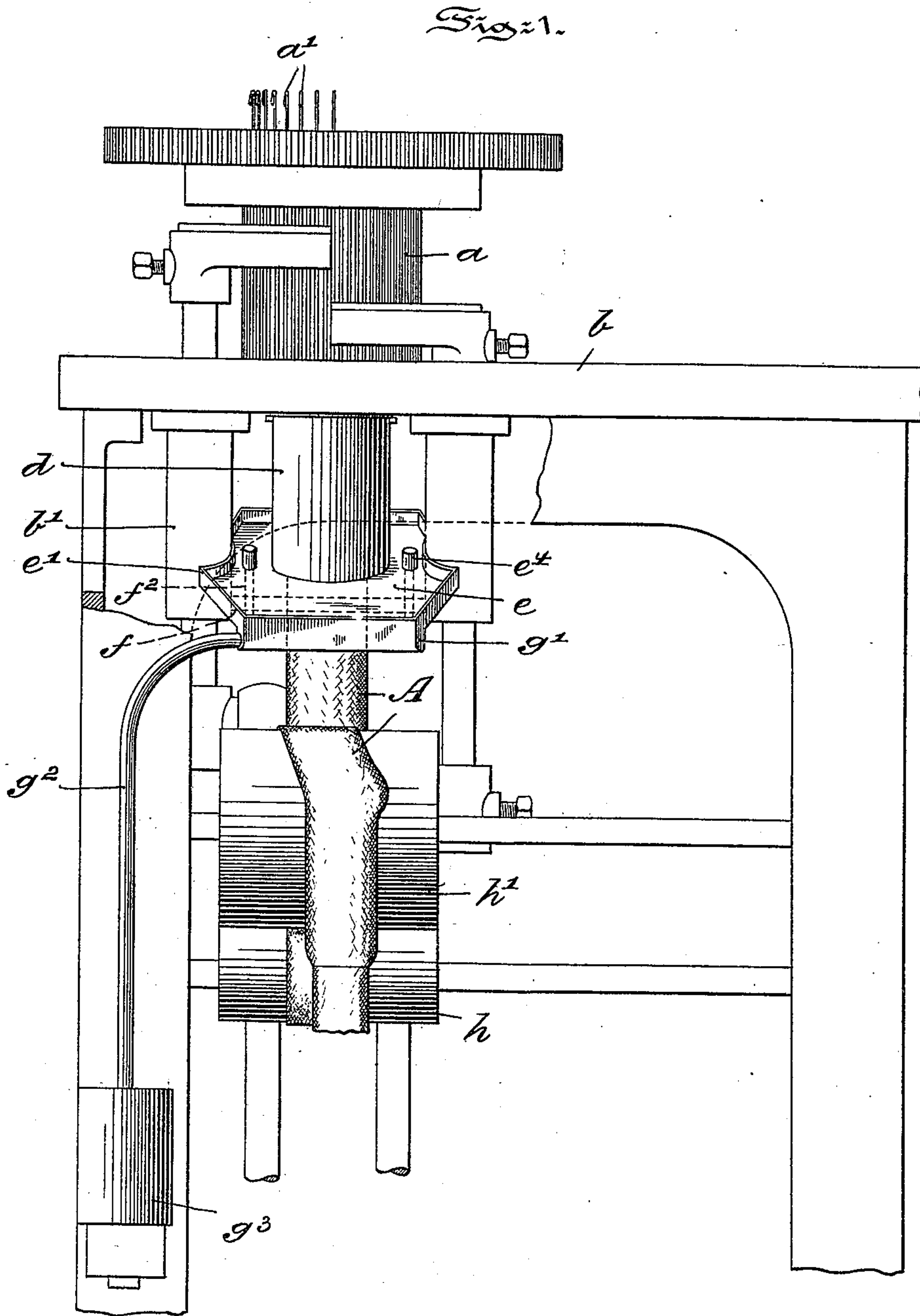
T. HENRY, JR.

ATTACHMENT FOR CIRCULAR KNITTING MACHINES.

(Application filed Apr. 13, 1900.)

(No Model.)

3 Sheets—Sheet 1.



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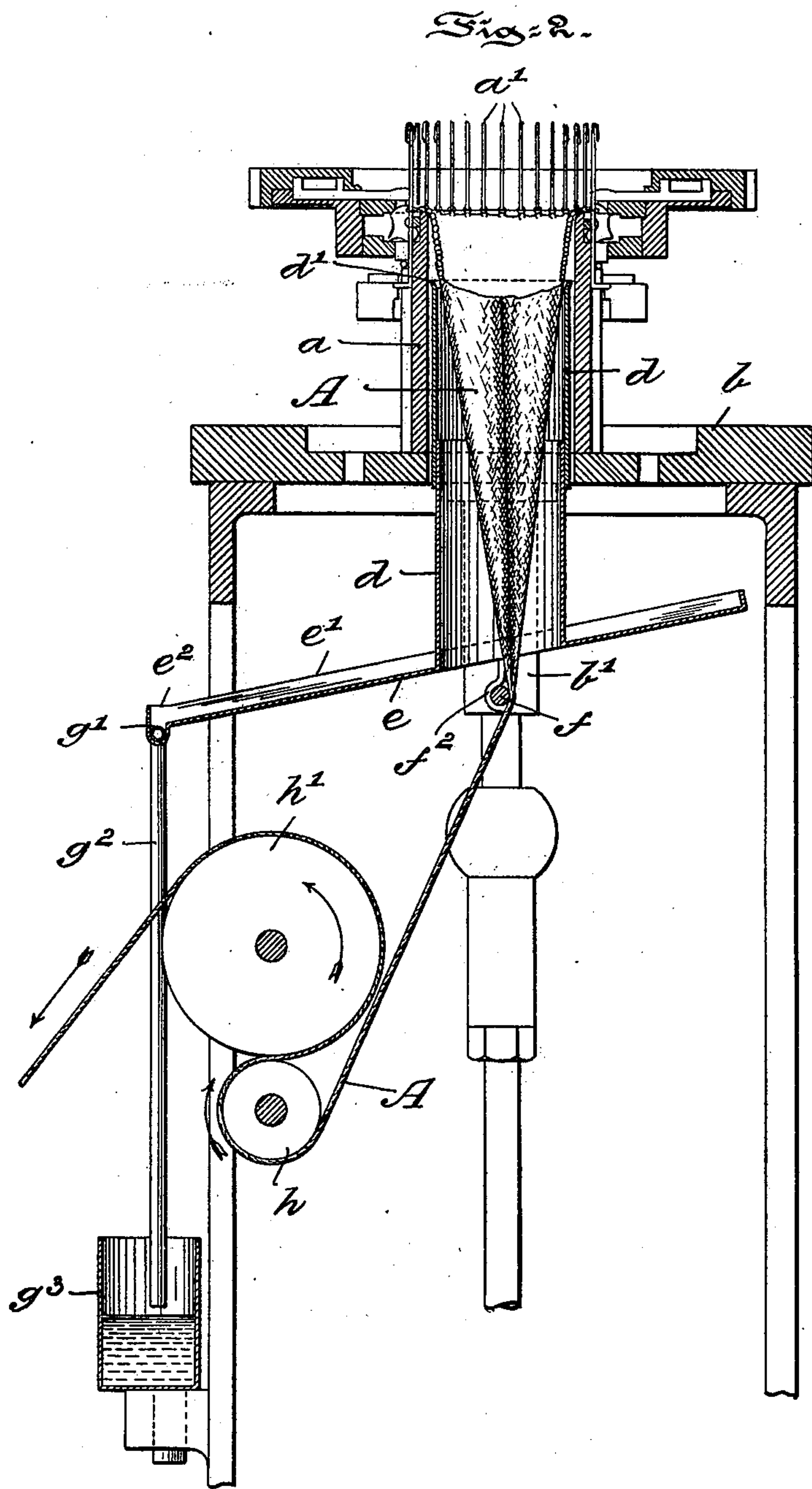
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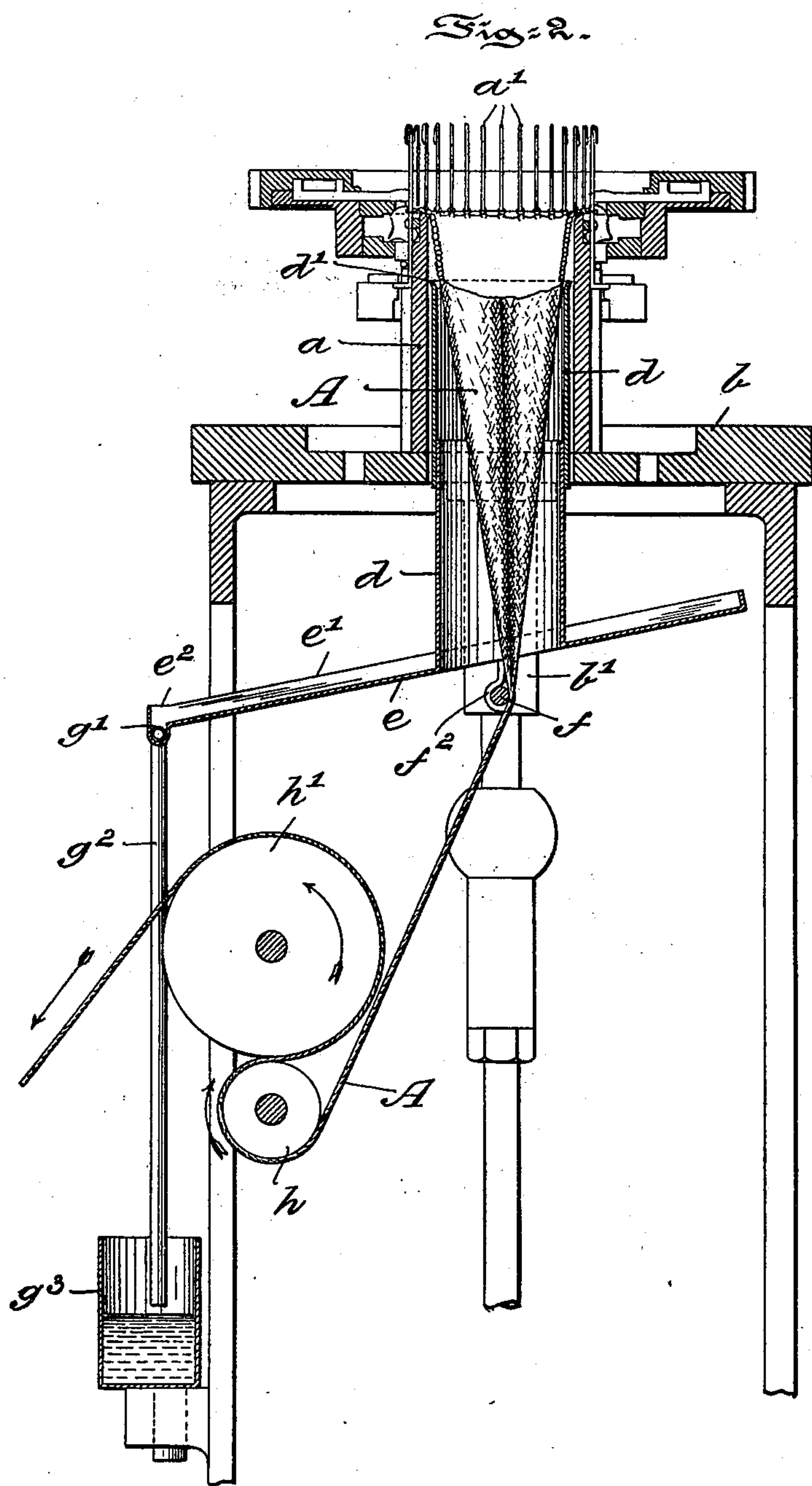
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# UNITED STATES PATENT OFFICE.

THOMAS HENRY, JR., OF PHILADELPHIA, PENNSYLVANIA.

## ATTACHMENT FOR CIRCULAR-KNITTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 652,847, dated July 3, 1900.

Application filed April 13, 1900. Serial No. 12,664. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HENRY, Jr., a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Circular-Knitting Machines, of which the following is a specification.

My invention has relation to an attachment for a circular-knitting machine by means of which the fabric is protected from oil, grease, dirt, or the like during the operation of knitting; and in such connection it relates to the construction and arrangement of such an attachment.

Hitherto a large portion of knit fabrics produced upon a circular-knitting machine has been spotted and sometimes saturated by oil or grease thrown off by the working parts during the operation of the machine. In the case of the finer and more delicately colored fabrics this spotting and soiling results either in a serious diminution in the value of the finished fabric or else requires that the fabric be bleached, cleaned, and dyed a dark color, with resultant additional expense and also diminished value.

The principal object of my present invention is to provide a simple, readily-adjustable, and efficient attachment for a circular-knitting machine, which attachment is adapted to shield or protect the product of the machine from oil, grease, and dirt necessarily liberated from the machine during the knitting operation.

My invention consists, essentially, of a tube adapted to fit within the needle-cylinder and to receive and protect the fabric from oil or the like escaping down the interior of the cylinder and a base or floor surrounding the bottom of the tube and adapted to project toward the front and rear of the machine to protect the fabric as it is rolled up onto the usual tension-rolls of such a machine.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a front elevational view of a por-

tion of a circular-knitting machine and of the attachment in position therein, the said attachment embodying the main features of my present invention. Fig. 2 is transverse sectional view of Fig. 1. Fig. 3 is a perspective view of the attachment removed from the machine, and Fig. 4 is a rear elevational view of the attachment and of the parts of the machine supporting the same.

In the drawings the attachment is illustrated, for example, when used in conjunction with a circular-knitting machine of the type described and claimed in the Letters Patent No. 536,616, granted to E. J. Franck under date of April 2, 1895. It should, however, be understood that the attachment is capable of use with other types of circular-knitting machines, in which instances suitable changes in the connection of the attachment to the machine only are required.

Referring now to the drawings, *a* represents the needle-cylinder, and *b* the frame supporting the same. In the cylinder *a* is adapted to be fitted a tube *d*, of a diameter slightly less than the interior diameter of the cylinder *a* and preferably having at its upper end an angular edge or rim *d'*. The tube *d* by preference is made in two telescoping sections, so that the length of the tube may be adjusted to meet the varying requirements of the machine. The lower end of the tube *d* is surrounded by a base or floor *e*, the entire outline of which is preferably provided with an upwardly-extending rim *e'*. This floor *e* is preferably inclined, so that its front end *e<sup>2</sup>* is lower than its rear end *e<sup>3</sup>*. The front end *e<sup>2</sup>* also extends a distance more or less beyond the front of the machine, as illustrated in Fig. 2. The floor or base *e* supports the tube *d* and is itself supported, preferably, as follows: Between two stationary portions *b'* of the frame *b* of the machine is arranged a bar *f*, fixed to said portion *b'*, and on the bar *f* are located the prongs or projections *f<sup>2</sup>*, which extend upwardly and are adapted to enter corresponding sockets *e<sup>4</sup>*, formed in the floor *e*, as clearly and fully illustrated in Fig. 4 of the drawings. The floor *e* may, if desired, be provided with indentations *g* and a gutter *g'*, into which the indentations *g* empty, so that all oil falling upon the floor *e*



may be collected in the said gutter  $g'$ . The gutter  $g'$  may be connected by a drain-pipe  $g^2$  with a receptacle  $g^3$ , in which the oil may be collected, if desired, for further use.

5 The fabric A as it is knit by the needles  $a'$  passes downward through the tube  $d$  and the floor  $e$ . It then passes around the bar  $f$  and around the tension or winding rolls  $h$   $h'$ . These rolls  $h$   $h'$  are located below the floor  $e$   
 10 and are shielded by said floor from the oil which may escape from the working parts. The tube  $d$  prevents oil which collects in the interior of the cylinder  $b$  from touching the fabric A, and it also serves to guide the oil  
 15 down onto the floor  $e$ .

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

1. In a circular-knitting machine, the combination of a needle-cylinder, a tube through  
 20 which the fabric is adapted to pass as it leaves the needles of the cylinder, said tube being located within the needle-cylinder, and an extension or floor located at the lower end of  
 25 said tube and extending below the base of the needle-cylinder, substantially as and for the purposes described.

2. An attachment for circular-knitting machines, comprising a tube adapted to fit the  
 30 interior of the needle-cylinder and to receive the knit fabric, and an inclined floor surrounding the base of said tube, said floor projecting downward from the rear to the front

of the machine, substantially as and for the purposes described. 35

3. An attachment for circular-knitting machines, comprising a tube, an inclined floor surrounding the base of said tube, and means for supporting said floor upon the frame of the machine so that the tube is adapted to  
 40 fit into the interior of the needle-cylinder of the machine, substantially as and for the purposes described.

4. In a circular-knitting machine, the combination of a needle-cylinder, a tube through  
 45 which the fabric is adapted to pass as it leaves said cylinder, said tube being located between the cylinder and the fabric, an inclined floor or base surrounding the lower edge of  
 50 said tube, and means for supporting said floor and tube, substantially as and for the purposes described.

5. An attachment for circular-knitting machines, comprising a tube and an inclined floor  
 55 or base surrounding the lower edge of said tube, said floor having its edges surrounded by a rim, and provided with indentations and a gutter into which the indentations lead, substantially as and for the purposes described.

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

THOMAS HENRY, JR.

Witnesses:

J. WALTER DOUGLASS,

THOMAS M. SMITH.