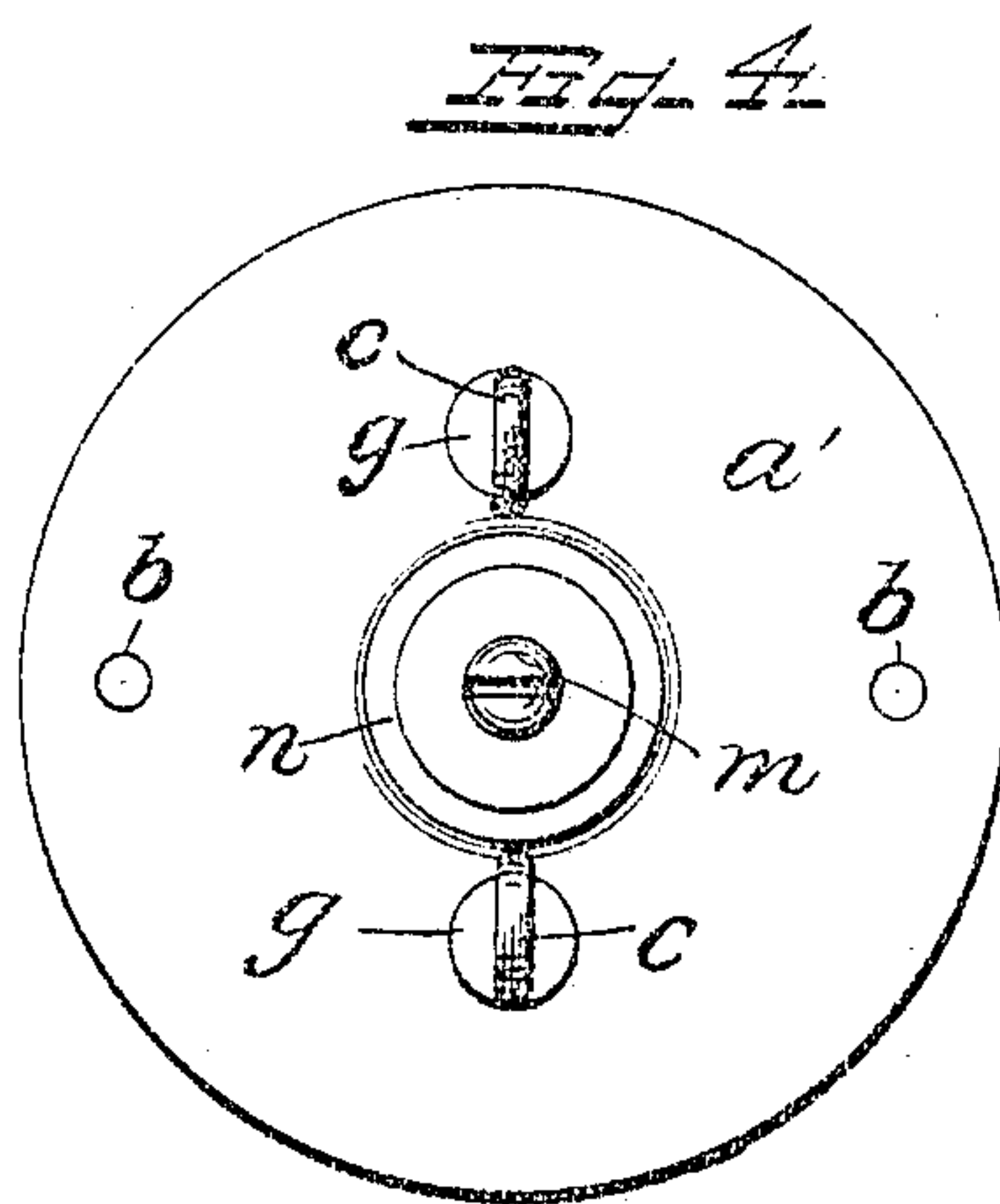
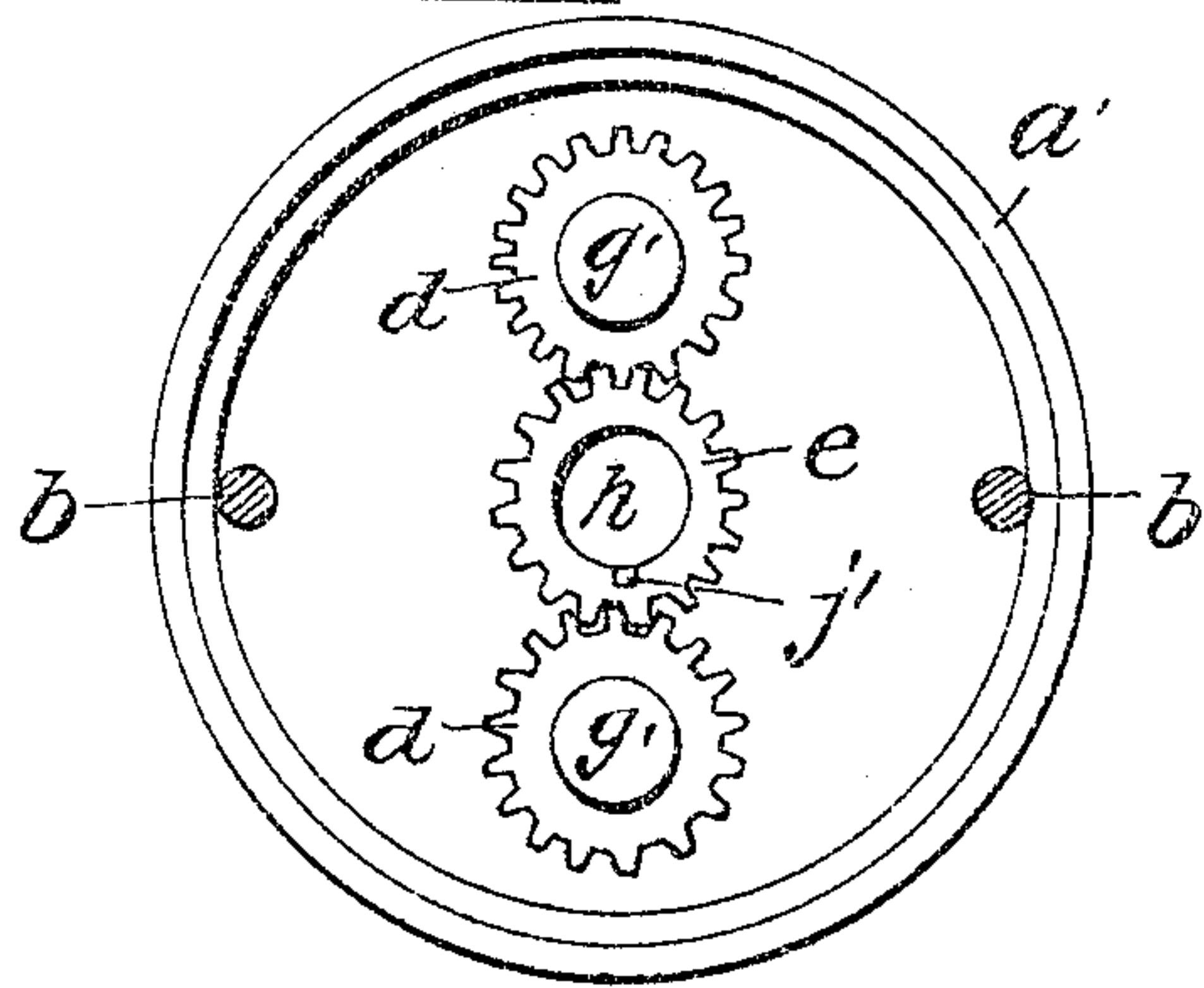
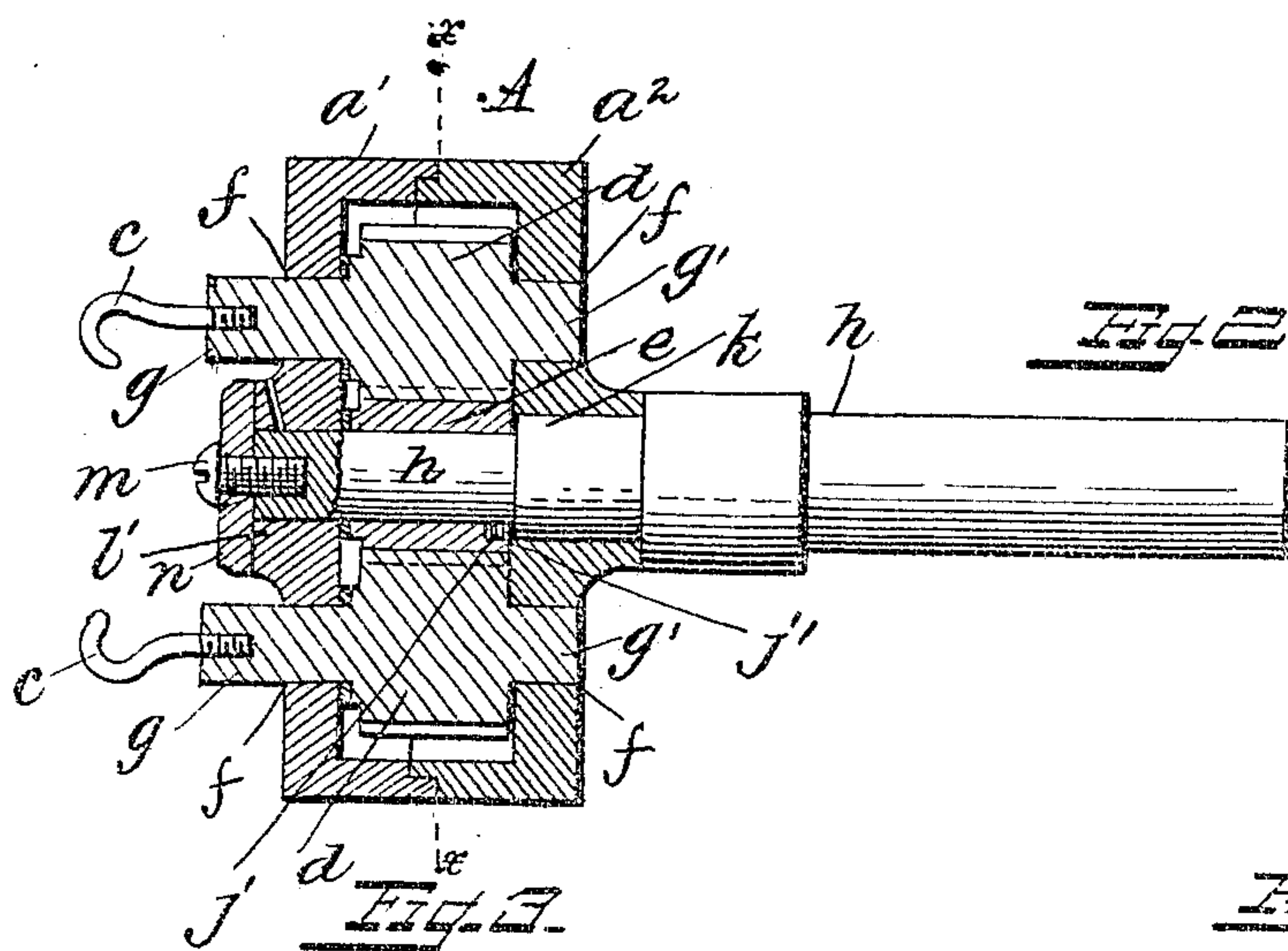
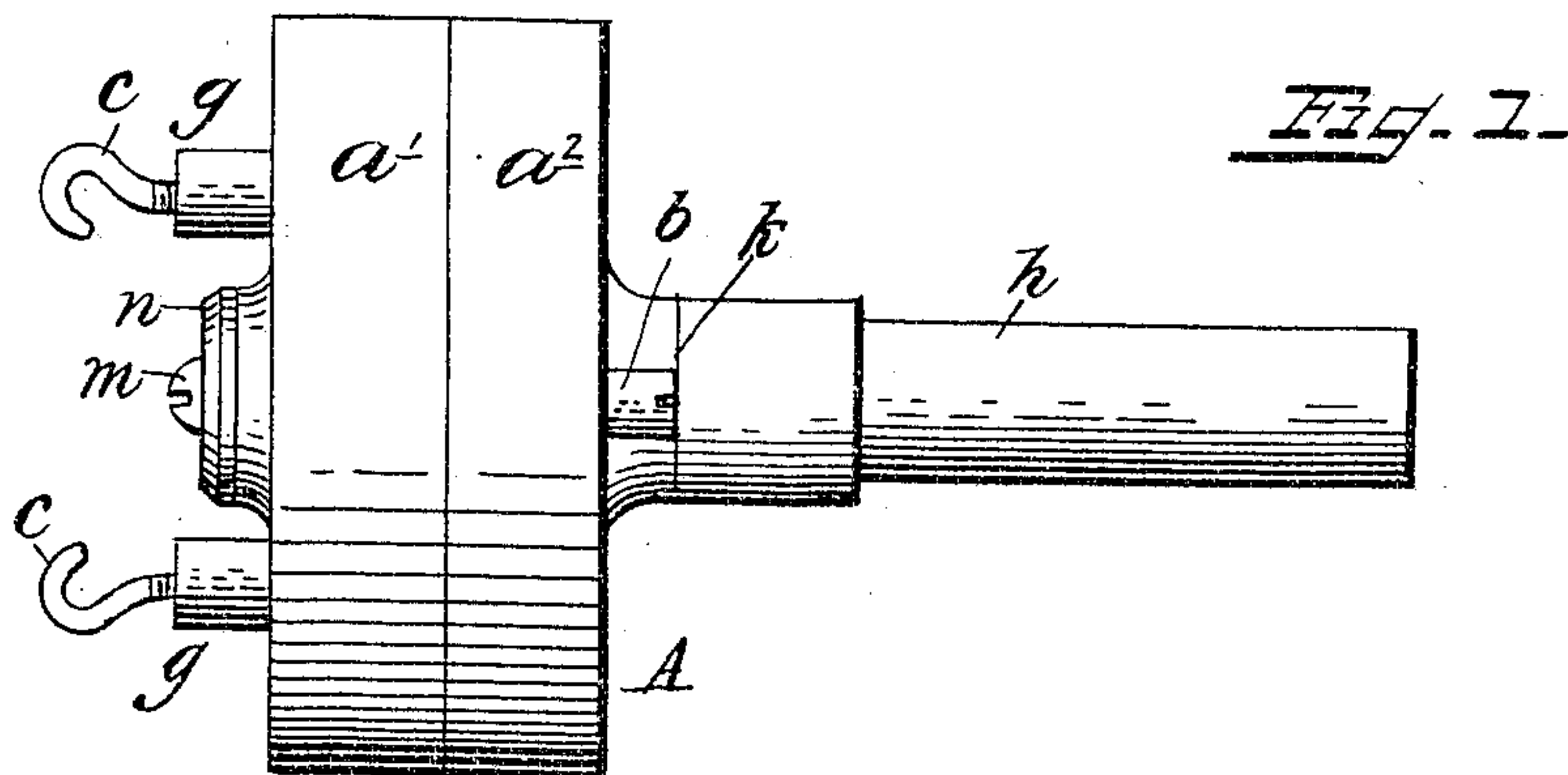


No. 775,125.

PATENTED NOV. 15, 1904.

C. A. CLINE.
BAND MACHINE HEAD.
APPLICATION FILED JAN. 4, 1904.

NO MODEL.



WITNESSES:
F. L. Durand,
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Charles A. Cline INVENTOR

BY

Robert H. McKee ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES ALAXANDER CLINE, OF LINCOLNTON, NORTH CAROLINA.

BAND-MACHINE HEAD.

SPECIFICATION forming part of Letters Patent No. 775,125, dated November 15, 1904.

Application filed January 4, 1904. Serial No. 187,627. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ALAXANDER CLINE, a citizen of the United States, residing at Lincolnton, in the county of Lincoln and State of North Carolina, have invented new and useful Improvements in Band-Machine Heads, of which the following is a specification.

My invention has relation to the heads of band-twisting machines used in the practice of the textile art.

The band-twisting machines now in use in the textile art are oblong in shape, with exposed inner gearing; and it is the purpose of my invention to remove the danger to operatives by inclosing the said inner gearing so as to prevent such injury or the clogging of machinery and by devising a cylindrical shield thereby securing a greater increase in rotary speed and a large increase in the number of bands twisted by a single operative within a given time.

One object of the invention is to provide an improved frame for the support of the twisting devices on a band-machine head which will protect the operator against accidental injury from contact with the cogs which actuate the twisting means.

Another object of the invention is to prevent the clogging of the machinery from waste or "flyings" catching in the operative parts of the machinery, and a third object is to attain an increased speed over that of band-machines as now commonly constructed.

I attain these objects by the construction and arrangement or combination of means as hereinafter specified.

Of the drawings, Figure 1 is a side view of my improved band-machine head. Fig. 2 is a central vertical section taken on a plane longitudinally of the shaft, showing the arrangement of the parts supported under the machine frame or head. Fig. 3 is a transverse sectional view running between the parts a' a^2 of the shield on the line xx and cutting through some other part. Fig. 4 is an end view of the invention looking toward the twisting-hooks.

Like characters or symbols indicate similar parts or features, as the case may be, in all the views.

In the drawings, A is the frame or shield,

which is constructed in two parts a' and a^2 , which parts are held together on the shaft h when properly assembled by the screws $b b$, the said screws passing through one part and tapped into the other and the screws being, furthermore, of the "left-hand" kind, so termed, while the motion of the shaft is "right hand"—that is, the screws are constructed to hold the parts of the frame and shield together to operate in the reversed direction of the band-machine head—the said frame or shield being adapted to be rotated by the usual rotary means of shaft, band, and pulley or any other device adapted to accomplish same results. The shaft is turned down at l to form a bearing for the parts a^2 , and the said turning down of the shaft forms a bearing, against which the part a^2 of the frame or shield abuts, so that when placed on the shaft it cannot move farther inward thereon.

e designates a cogged sleeve which is splined on the shaft by means of the common spline and groove $j j'$, so that the said cogged sleeve shall turn with the shaft.

The twisting-hooks ee project forward from the shield or frame A and are provided with cogged wheels $d d$, each of which is provided with journals or gudgeons $g g'$, which have their bearings in the openings $f f$, formed in the parts $a' a^2$ of the shield or frame A. A washer n is placed on the extreme outer end of the shaft and against the part a' of the shield, while a screw m is tapped into the end of the shaft longitudinally of the same to hold the parts in place longitudinally before the screws $b b$ are inserted and screwed into place.

The two-part shield, as stated, is adapted to be rotated, and my invention being cylindrical in form and the inner gearing being inclosed can largely overcome the atmospheric pressure incurred by the exposed inner gearing and frame of oblong shields and by doing so not only secures the operatives from danger and prevents the clogging of the machinery with waste matter, but also secures a greatly-increased speed.

It will now be seen that by the rotation of the shaft the cogged sleeve will be rotated with it and the cogs of the twisting-hooks, which have their bearings in the parts $a' a^2$ of the

shield or frame, will be rotated at an increased speed with respect to the shaft *h*.

The whole is most compact in form, and each part is arranged with respect to the other so
5 that it may perform its functions in the best manner, while all of the actuating parts are inclosed, so that the objects recited at the outset of this specification are fully accomplished.

What I claim is—

10 In a band-twisting head, the combination, with the rotary shaft, of the two-part cylindrical shield or frame adapted to be rotated supported longitudinally on the shaft, the cogged sleeve splined on the shaft, the twist-

ing-hooks provided with cogs and having bearings journaled in the shield, the cogs of the twisting-hooks meshing with the cogs of the cogged sleeve, and left-handed screws passed through one part of the shield and tapped into the other. 15 20

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

CHARLES ALAXANDER CLINE.

Witnesses:

WILLIAM A. DUKER,
HENRY G. J. CRYTZ.