

(Model.)

I. C. BURGETT.
THILL COUPLING.

No. 246,287.

Patented Aug. 30, 1881.

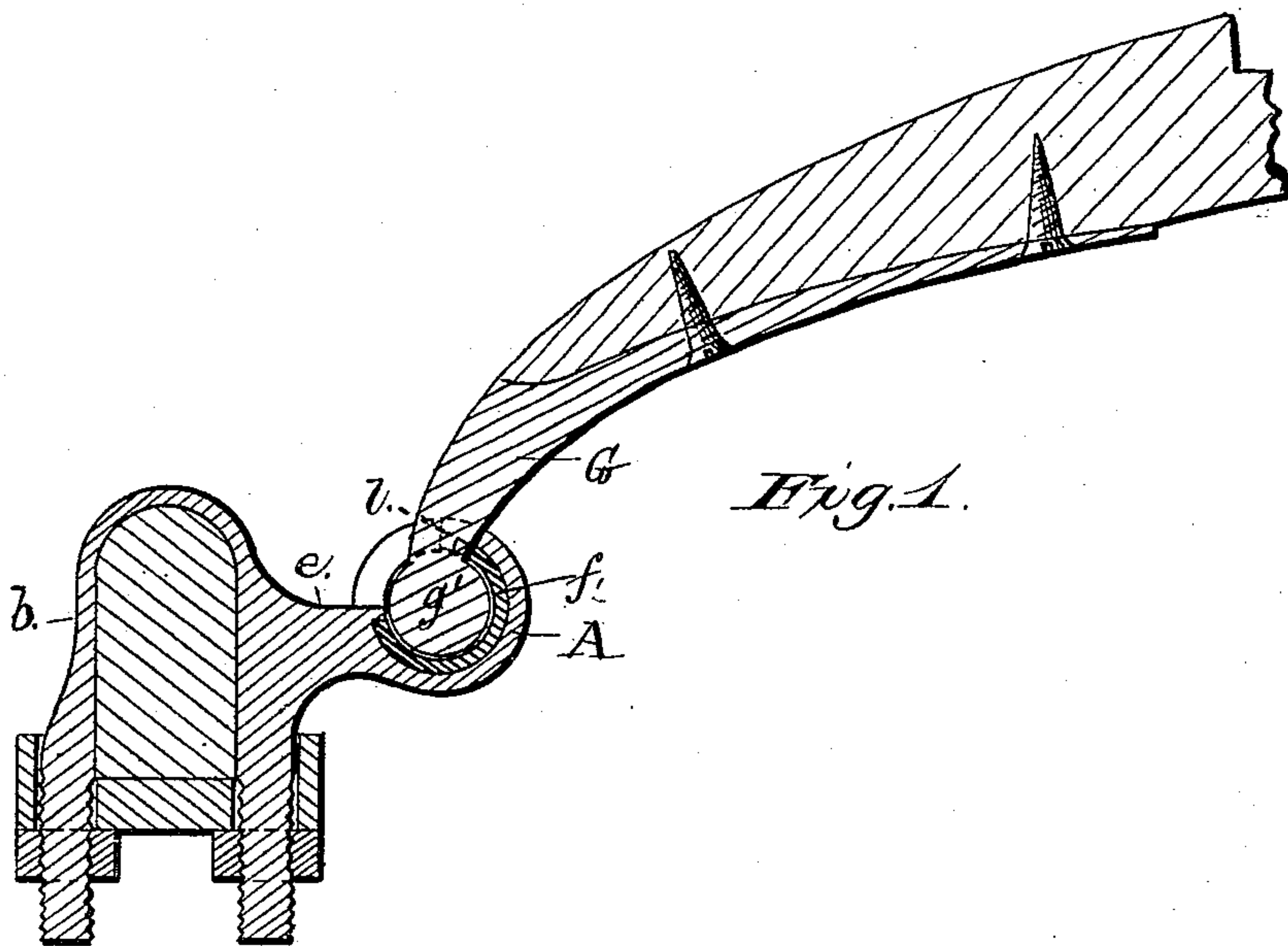


Fig. 1.

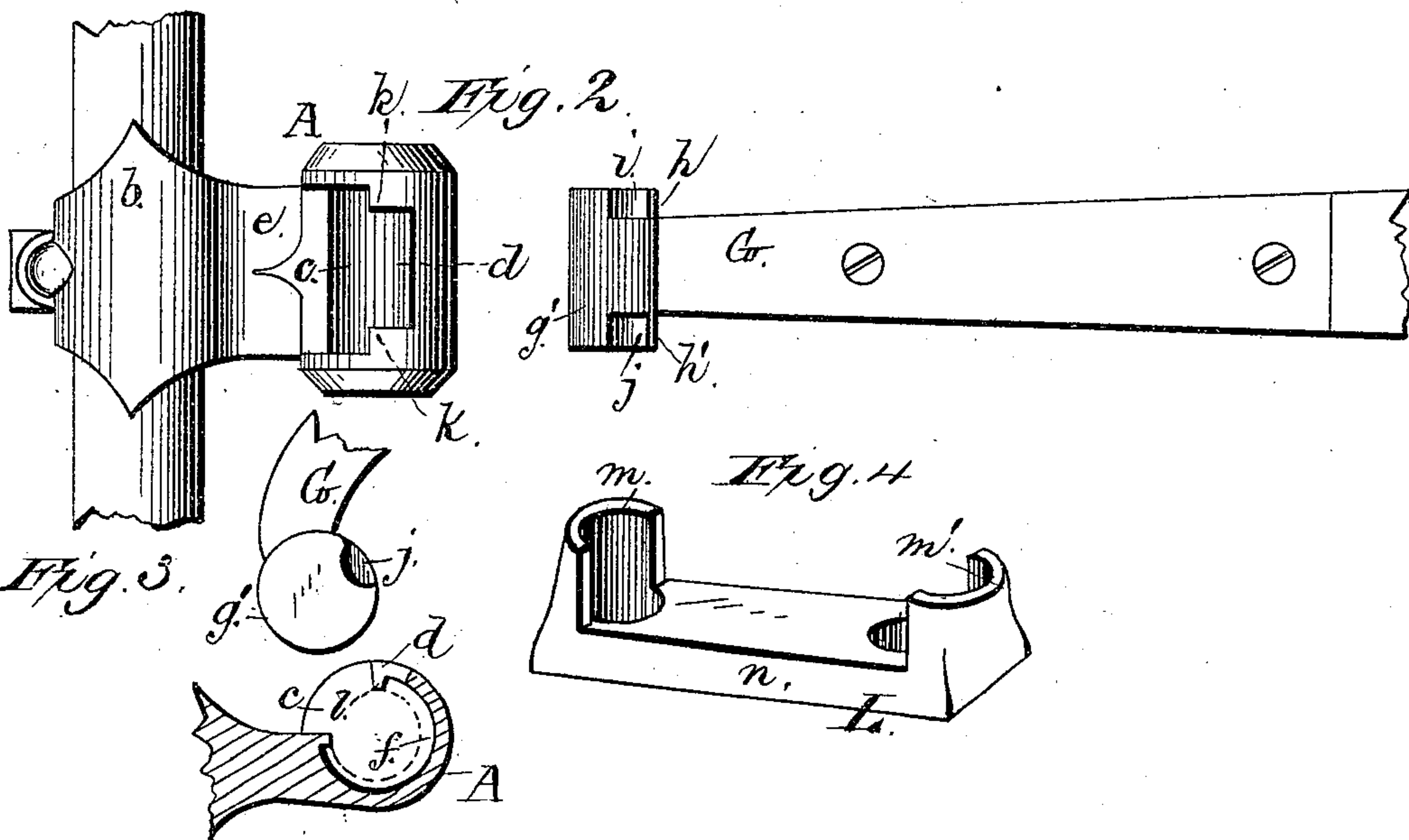


Fig. 2.

Fig. 3.

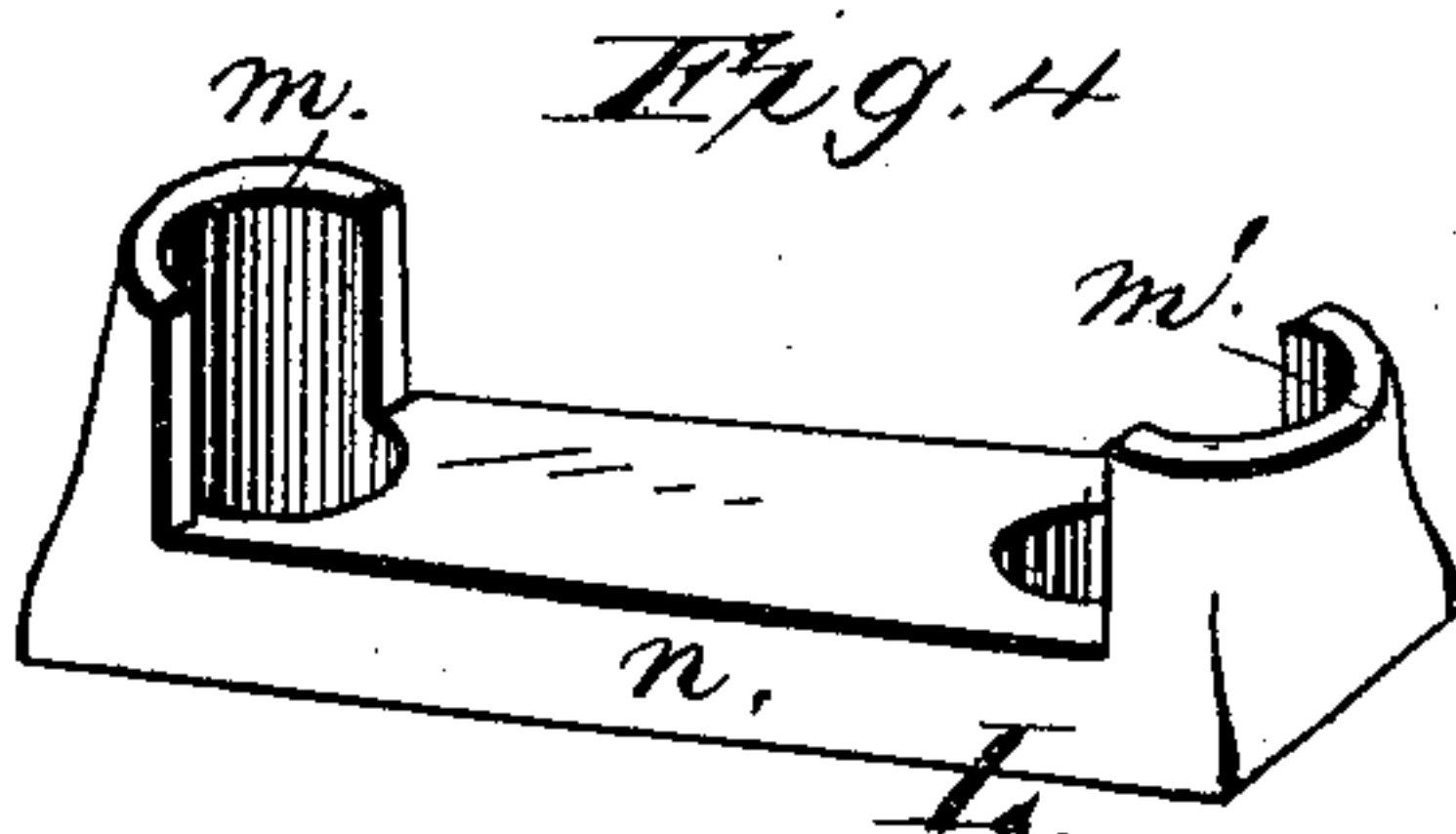
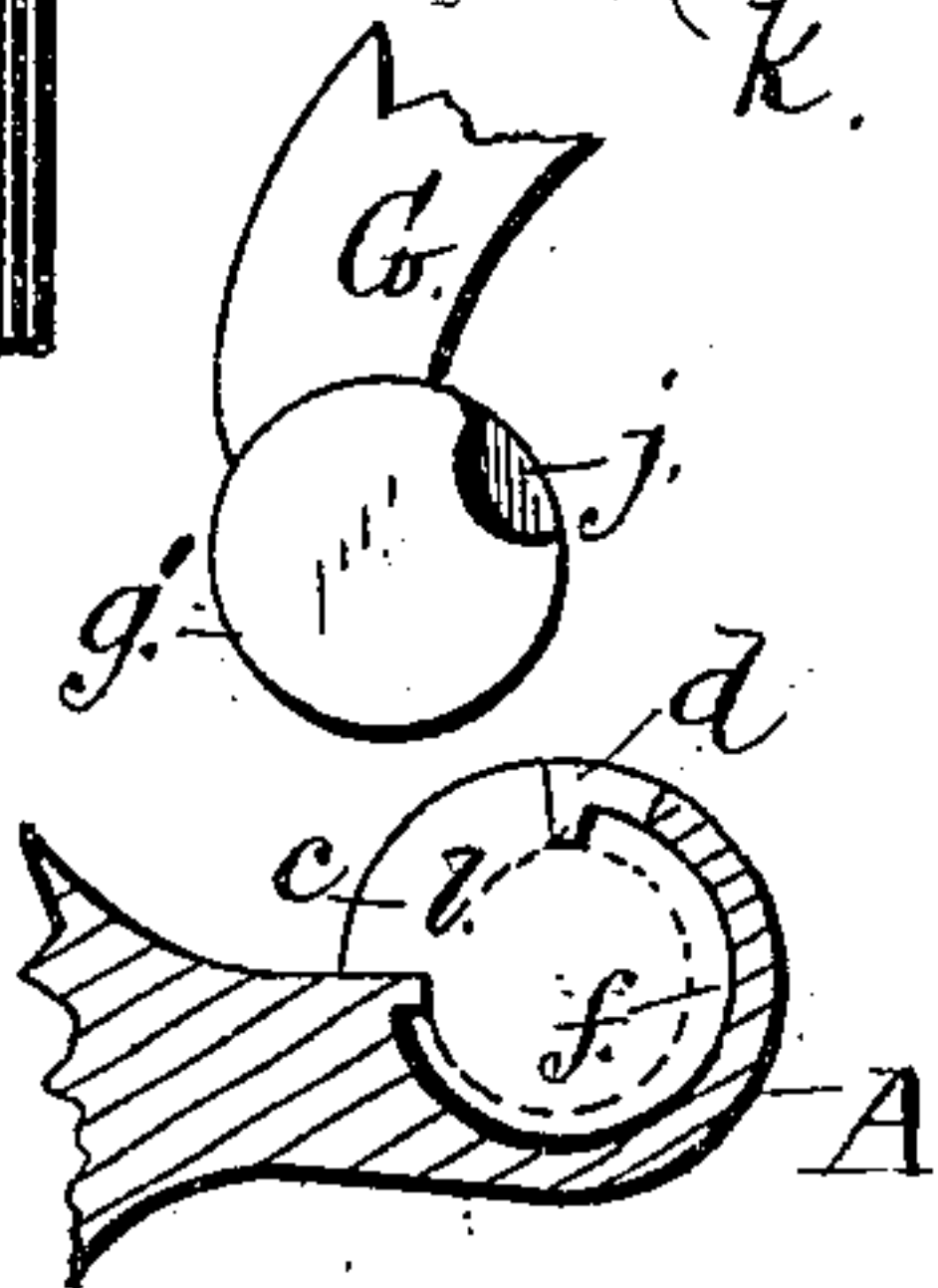


Fig. 4.

Witnesses.

J. L. Ouraud.
H. J. Bailey.

Inventor.

Isaiah C. Burgett.
by John J. Halsted

UNITED STATES PATENT OFFICE.

ISAIAH C. BURGETT, OF SOUTH ELGIN, ILLINOIS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 246,287, dated August 30, 1881.

Application filed June 23, 1881. (Model.)

To all whom it may concern:

Be it known that I, ISAIAH C. BURGETT, of South Elgin, in the State of Illinois, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has for its objects simplicity and strength, the dispensing with all screws, nuts, or other loose or separate pieces for connecting and locking together the thill-iron and the clip, and the facility with which these parts may be connected by any inexperienced person, while at the same time they cannot accidentally separate when the vehicle is under travel.

The details of construction will appear from the following description.

Figure 1 is a vertical section, showing my improvements; Fig. 2, a plan with the thill-iron uncoupled from the box; Fig. 3, details, and Fig. 4 the clasp-bar detached.

A is a cylindrically-shaped box projecting forward from the clip, and it and the clip *b*, to which it is connected, may be made of malleable iron and all in one piece. This box is closed at both ends. Its interior is of the form of a hollow cylinder, and the only opening into it is that for the reception of the coupling part of the thill-iron. This opening is marked *c d*, and is in the upper part of the cylinder, and it extends, as shown, from about the top of the neck *e* to about the top of the box, the part *d* of this opening being less in length than the part *c*. There is no need of giving any finish to the inside of this box, inasmuch as its form adapts it to receive and retain a leather or other lining, *f*, which affords a soft bed for and prevents rattling of the thill-iron when applied to it, and also readily absorbs and retains any oil or lubricant which may be used, as there is no outlet from the box for such lubricant, and, as will presently be seen, when the thill-iron is connected with this box the cylindrical cavity becomes so completely filled by it there is but little opportunity for dirt or grit to get in or for the packing or oil to get out.

The thill-iron *G*, which may be of wrought-iron, and made by the drop-forging process, is enlarged at its end into a strong cylinder, *g'*, projecting laterally a little way beyond each side of the iron, as seen at *h h'*. This cylinder is of uniform diameter throughout, with the exception of the small notches *i j*, made for a short distance into each of its ends, respectively, as shown. These notches are adapted to receive the corners *k k* of the opening of the box *A*, and but for these notches the cylinder *g* could not be lodged in the box, because the diameter of the cylinder is greater than the opening *c* which is to admit it into the box. Three motions are required to attach or detach these parts, viz: first, the lodgment of the cylinder so that its notches shall receive the corners *k k*, then a movement of the thill-iron a little upward and backward to enable the cylinder to drop down into the socket or box, and then a turning downward of the thill-iron to permit the notches to pass these corners and lock the cylinder within the case or box. When this connection has been made, it will be seen that it is impossible, by reason of the positions of the corners and notches, to make a disconnection until the thill-iron shall have been purposely turned back on this cylindrical part far enough for the thills to assume a vertical position and then lifted and turned forward to get the cylinder out of the case, and that all the line of draft, when in use, keeps the notches away from the corners; and practically the cylinder *g* is confined in a box whose largest opening is too small to allow the cylinder to pass through except in the one way above described. The construction dispenses with the need of any springs, bolts, nuts, or other appliances to connect these parts or to keep them in their proper working position, and the cylinder practically fills the entire cavity of the box except that part devoted to the packing, and this packing fits snugly upon the larger part of the periphery of the cylinder. The box, having solid closed ends, has none of its strength taken away by any holes through such ends. A few drops of oil dropped into the box, either before or after inserting the thill-iron, soon spreads itself within the box and over the packing and cylinder. The cylinder *g'* also has great strength, because it has no reduced journals to fit in journal bearings, and because it has no

open or cut-away part or neck between itself and the remaining part of the thill-iron, but is solid with it throughout.

The clasp or box L, which connects the ends of the clip-iron, projects upward at both ends, as seen at *m m'*. These ears or projections are concaved on their inner side and fit against the clip above its junction with the screw portion, and thus serve to relieve and assist in holding the clip against severe pull or violent action, the bar portion *n* performing the usual duty, while the projections brace and hold at points above that line, and at the same time add materially to the general strength of the bar, as well as to the strength and security of the clip.

Teeth or projections *l l*, extending into the cavity of the box, serve as stops or detents to prevent the packing from rising out of its place.

I claim—

1. The cylindrical case A, having in its upper part the opening *c d*, made as shown and described, in combination with the thill-iron G, terminating in the cylindrical enlarged end *g'*, of larger diameter than the opening *c*, and having the curved notches *i j* at its ends, respectively, and adapted to be inserted and self-held in the cylindrical cavity of the case, all as and for the purposes set forth. 25

2. In combination with the cylindrical clip-box A, made, as shown and described, with a cylindrical cavity, open only at its top, and provided with the interior projections, *l*, the packing *f*, lodged and self-held to place in the bottom of the box, as set forth. 30 35

ISAIAH C. BURGETT.

Witnesses:

E. T. PRINDLE,
JAMES MURPHY.