

(No Model.)

J. R. BAKER.
LID FOR CAR AXLE BOXES.

No. 283,691.

Patented Aug. 21, 1883.

Fig: 1

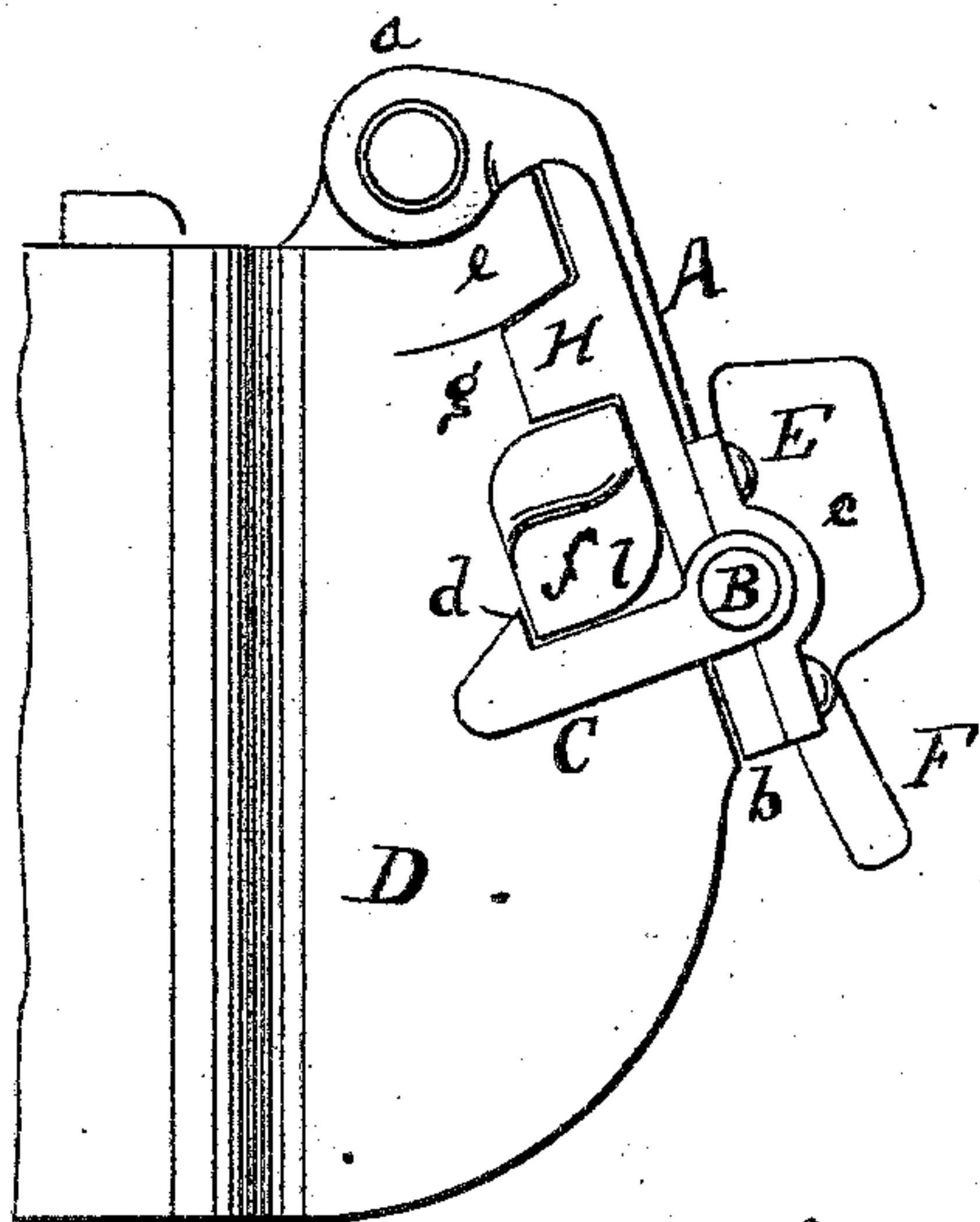


Fig: 2

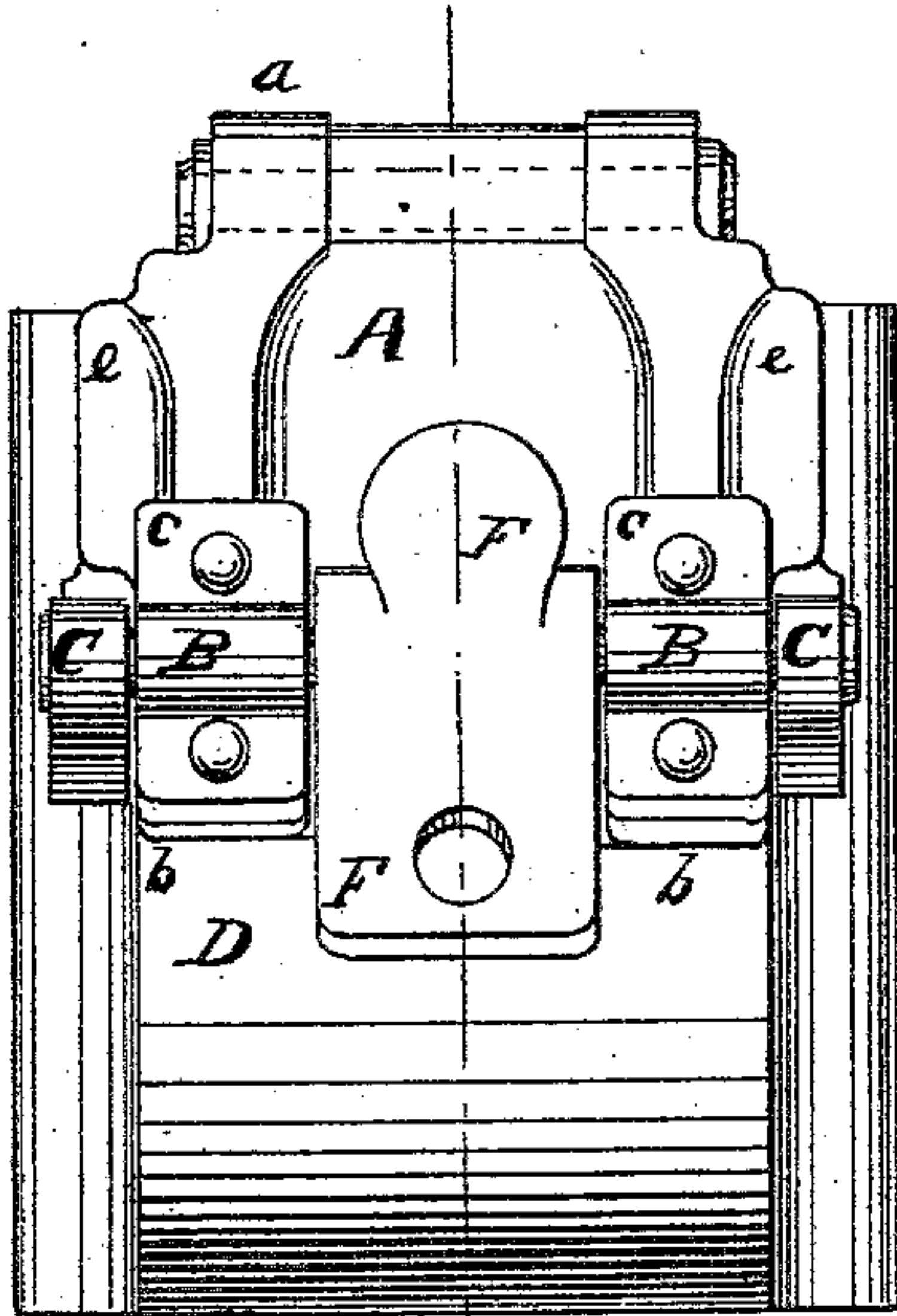


Fig: 4.

Fig: 3.

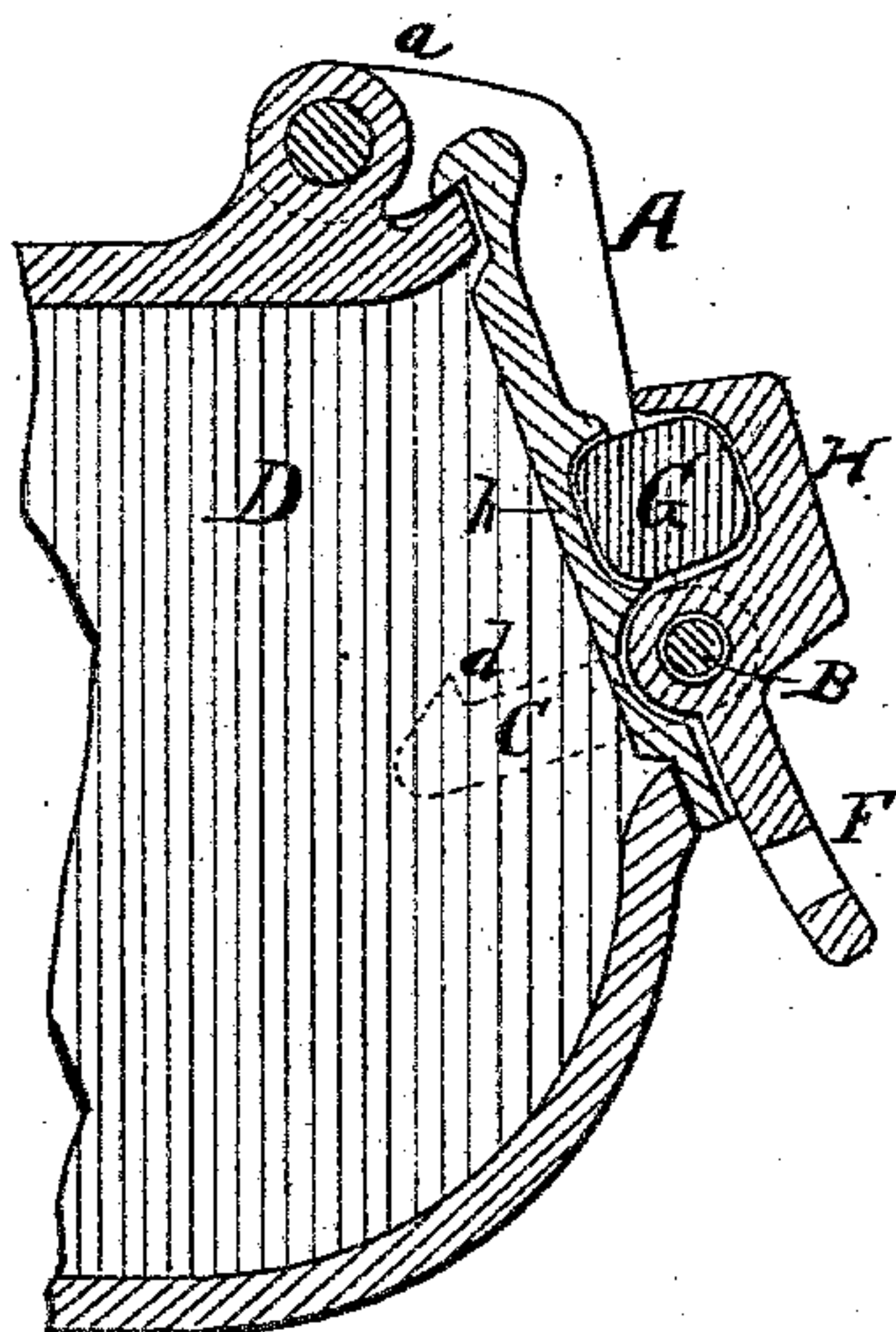
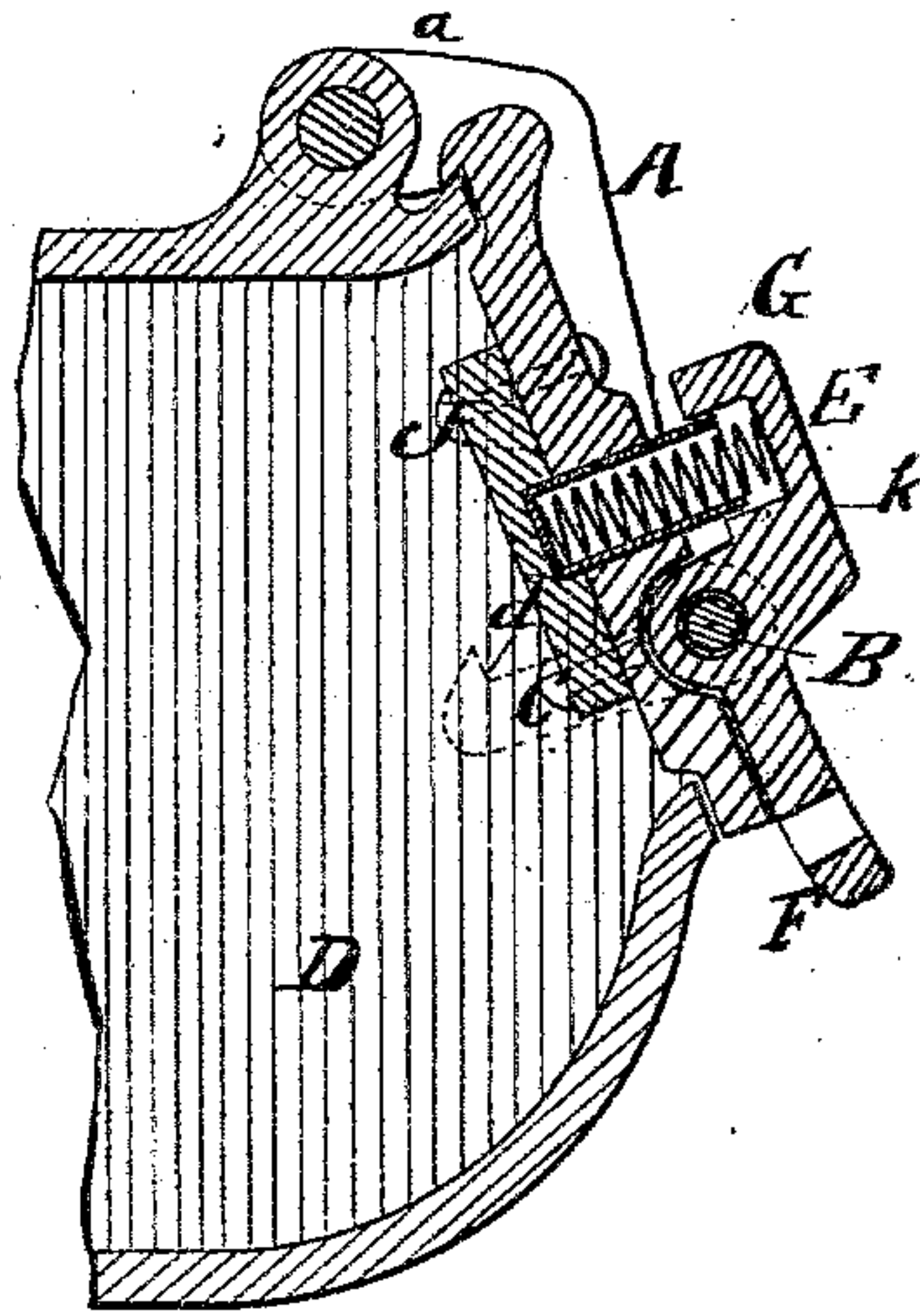


Fig: 5.



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JACKSON R. BAKER, OF JERSEY CITY, NEW JERSEY.

LID FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 283,691, dated August 21, 1883.

Application filed January 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, JACKSON R. BAKER, of Jersey City, county of Hudson, State of New Jersey, have invented a new and useful improvement in Fastenings for the Lids of Railway Axle Housings or Boxes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, forming part of this specification.

This invention is in the nature of an improvement in fastenings for railway axle housings or boxes; and the invention consists in a railway axle box or housing combined with a turning shaft or bolt having latches fixed to the ends thereof, a fulcrumed spring-seat and operating lip, and a spring, whereby the latches are retained in their locked positions; and the invention also consists in an axle-housing lid with lugs cast thereon and fitting into corresponding seats formed in the sides of the housing.

In the accompanying sheet of drawings, Figure 1 is a side view of my axle-box with its lid closed. Fig. 2 is a front view of same, with its lid closed. Fig. 3 is a longitudinal section of same. Fig. 4 is a front view of same with lid open. Fig. 5 is a longitudinal section of modification, showing application of coil-spring.

Similar letters of reference indicate like parts in the several figures.

The difficulty of keeping the lids of axle boxes or housings of rail-cars closed without the use of screw nuts and bolts is well known, and the time consumed in unscrewing these nuts and screwing them up again with a wrench each time that it is necessary to pack or oil the journal of the axles is a matter of no little loss and expense to the many railway companies where such devices are employed; hence, contrivances of various kinds have been adopted for the purpose of avoiding the use of screws, nuts, and bolts on the lids of the housings; but such devices either work loose from the constant jarring of the cars when in motion, or they require as much time for their adjustment as is required for the screwing or unscrewing of the nuts before named. It is important, therefore, that a good fastening for the lids of axle-housings shall be positive in

its action, adjustable without loss of time, and effectually close the lid against the admission of dust, and also render it impossible for the lid to work loose and rattle. To that end I construct my lid A of a size which shall correspond with the size of the axle-housing D, which is used, and hinge it at its upper end, *a*, to the top of the axle-housing, so that the lid may be freely moved up and down on this hinge. To the face of the axle-housing and near its lower end, and on each side of the same, are cast two bearings, *b*. Into these bearings is placed a bolt or shaft, B, so that it may turn freely in the bearings *b*. This bolt or shaft is kept in position within the bearings by caps *c*, bolted over the same. To each end of the bolt B, which projects somewhat beyond the width of the lid A, are secured latches C. These latches extend from the bolt B backward on each side of the housing D. The inner ends of the latches are beveled or rounded, having formed on them catches or hooks *d*. To the bolt B, midway between the bearings *b*, is firmly fixed a seat, E, and a projecting lip, F. Within the seat E, which is recessed for that purpose, is fitted a spring, G, either of rubber or metal; also, to the lid A and to the edges of the same, at or near its upper end, are cast two lugs, H. These lugs are at right angles to the face of the lid, and they also extend backward to some extent and lie snugly against the sides of the housing D. To the sides of the housing, and near its upper end or surface, are cast lugs *e* and also lugs *f*, with a space or seat, *g*, between the lugs *e* and *f*. The lugs *f* have their lower ends curved, as at *l*. The seats *g* are corresponding in size and form with the lugs *e*.

Now, when my axle box or housing is constructed substantially as described to open or raise the lid, it is simply necessary to pull outward with a packing-hook or otherwise the lip F. This operation causes the bolt B to turn in its bearings and the spring G to be compressed, and as the bolt is turned the hooks or catches *d* of the latches C are disengaged from the lugs *f*, enabling the lid to be raised and thrown back, exposing the interior of the box that it may be packed and oiled. This being done, the lid A is allowed to fall in the position to close the box, when its weight or grav-

ity will force the rounded ends of the latches C to come in contact with the curved surface *l* of the lugs *f*, thereby forcing the bolt B to turn in its bearings until the hooked ends *d* of the latches C shall receive into them the lower ends of the lugs *f*, in which position they are retained by the elastic action of the spring G, which, bearing upon the seat E, causes that seat to act as a lever, the bolt B being its fulcrum, and keeping the latches engaged or locked with the lugs *f*, thereby locking the lid A tightly against the open mouth of the housing and closing it.

To prevent the lid from jarring to an extent that might ultimately cause the latches C to be disengaged from the lugs *f*, the lugs H, when the lid A is closed, enter into the seats *g* between the lugs *e* and *f* on the side of the housing D. The lugs when in that position act as stops, which will prevent any vertical movement of the lid A in the event of the hinge, which unites the lid to the housing, becoming worn from use. If a rubber spring is employed for the purpose hereinbefore described, it may be spherical in form or otherwise, and a seat, *h*, to receive it may be cast into the face of the lid A.

Instead of a rubber spring, however, a coil metal spring, J, (see Fig. 5,) may be used, in which case it will be best to inclose the spring in a thimble or sleeve, *k*, to keep from it the dust and dirt that would otherwise impair its working.

From the foregoing it is readily seen that the lid of the axle-box can be instantly opened and as quickly closed without the use of a wrench and by the use of but one hand, which is important when it is considered that the other hand of the packer and oiler is usually employed in holding his oil-can and waste.

The bolt or shaft B may be fitted into the bearings *b* by pouring any suitable anti-friction metal around the bolt in the bearings, as described and shown in Letters Patent granted to me January 2, 1882.

The lip F, besides affording a ready means of opening the lid of the box, also acts as a counter-weight, assisting the action of the spring in keeping the latches locked, and should the spring for any reason become inactive, this lip, acting as a counterweight, will, by its gravity, keep the latches closed and prevent their unlocking by the jarring of the train.

It will be observed that the latches C are placed with their hooks *d* upward, instead of downward, so that the jarring motion of the train will have no tendency to unlock the catches, which would be the case if the hooks of the latches were placed downward instead of upward.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A railway axle box or housing with the door thereof hinged to the box and combined with a turning-bolt, B, with latches C fixed to its ends, a spring-seat, E, and a lip, F, and lugs *e* and *f*, seat *g*, and lug H, all constructed and arranged as and for the purpose described.

2. In a railway axle box or housing, the lid thereof provided with a turning-bolt and catches with rounded or beveled ends, in combination with lugs *e* and *f* with curved faces *b*, substantially as shown and described.

3. In a railway axle housing or box, a spring, G, in combination with a seat, E, and a lip, F, fixed to a turning-bolt, B, as and for the purpose described.

4. In a railway axle housing or box, the combination of a hinge with a turning-bolt having latches C fixed to the ends thereof, lugs cast on the sides of the housing, and a spring, and pivoted spring-seat E and lip F, whereby the latches are kept in their locked position, substantially as shown and described.

JACKSON R. BAKER.

Witnesses:

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JNO. N. BRUNS.