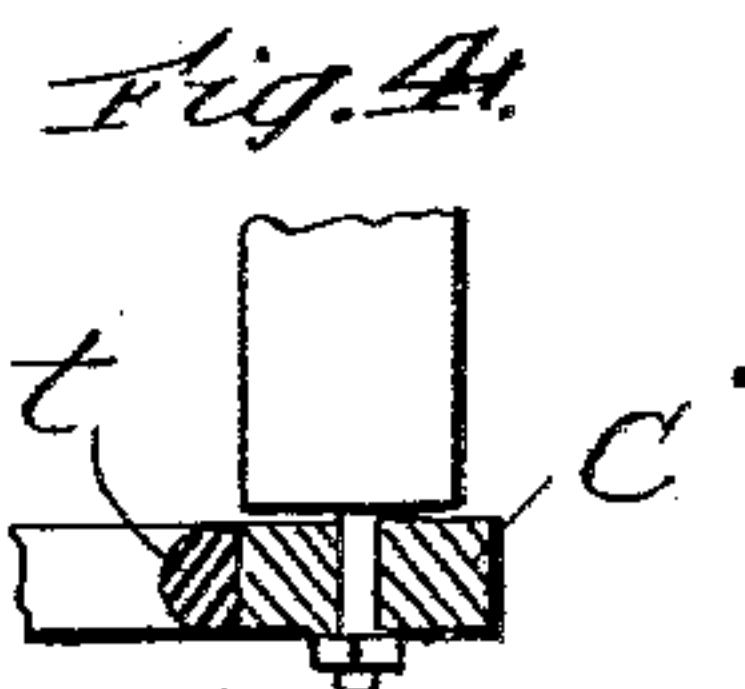
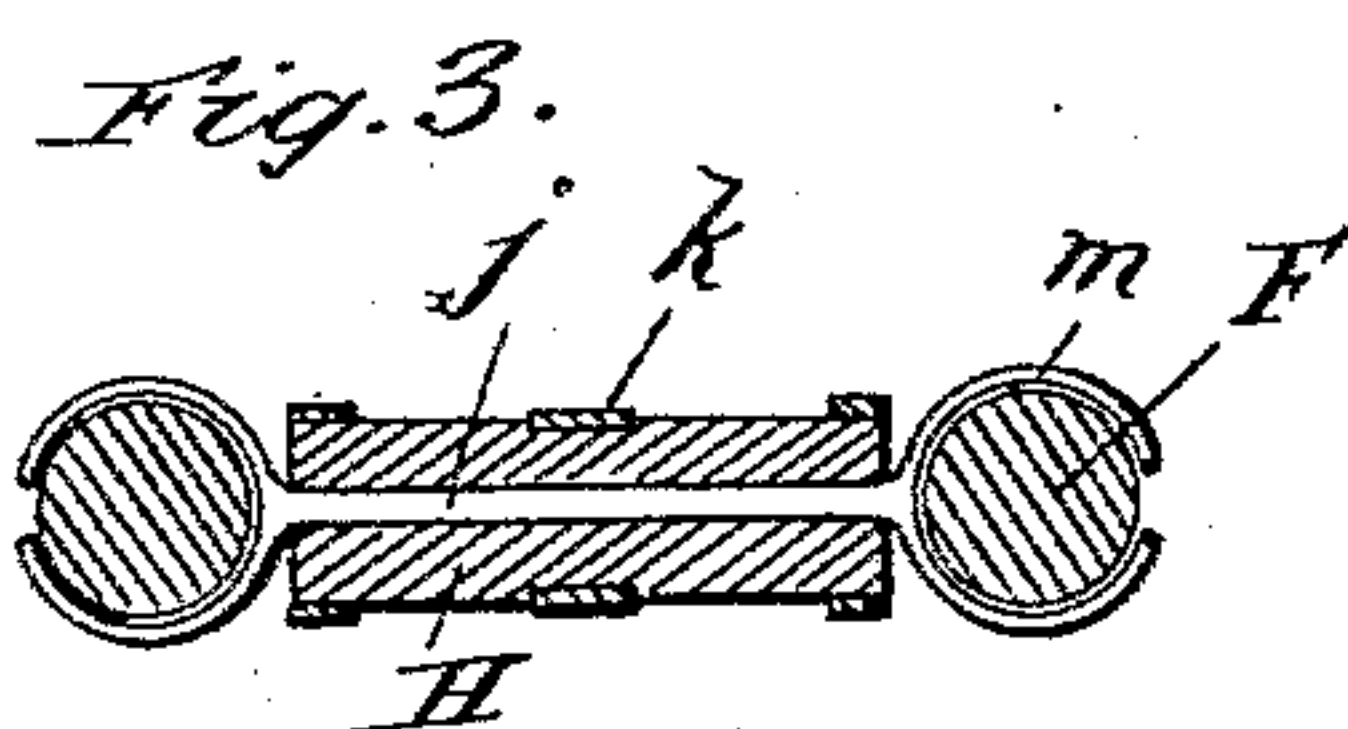
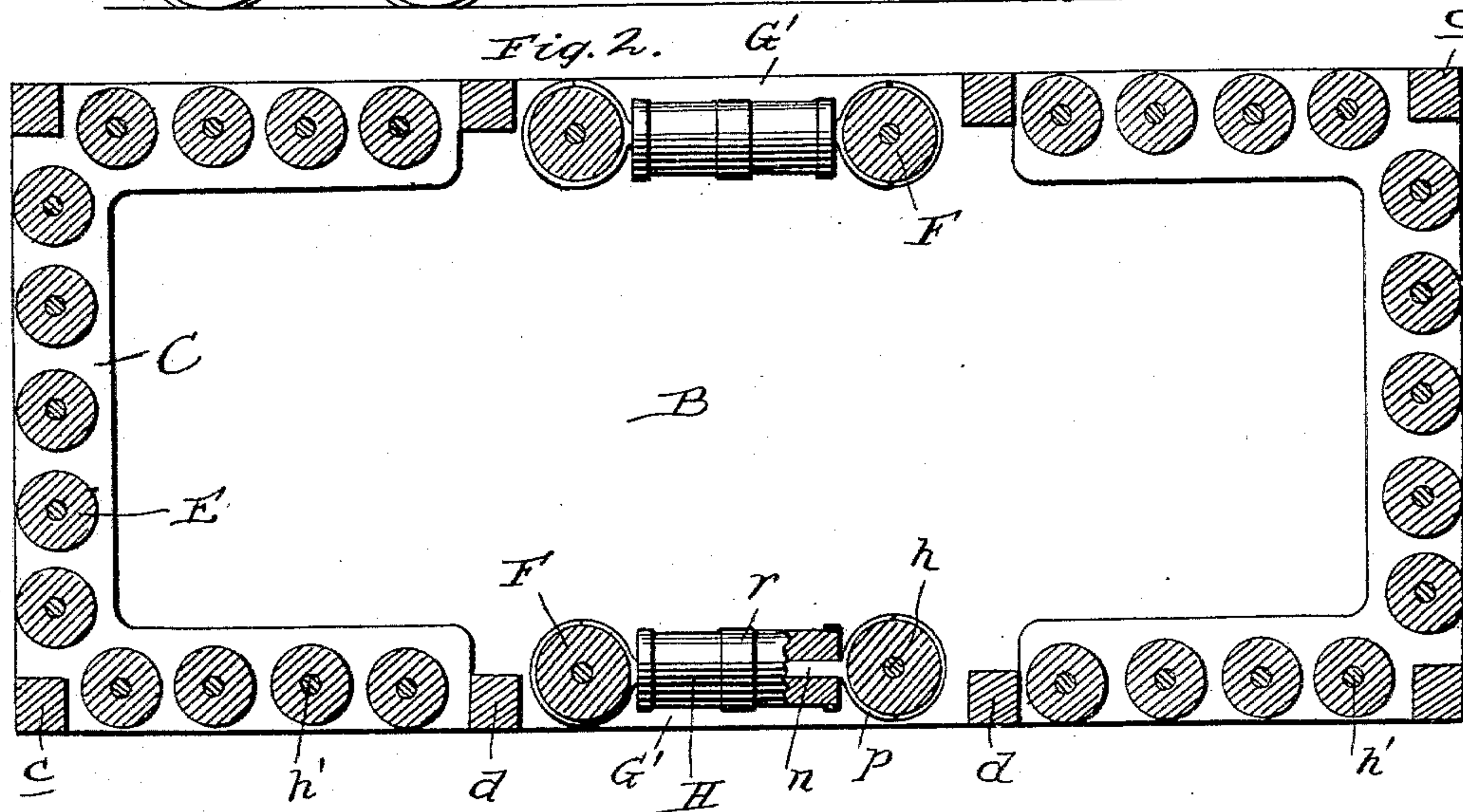
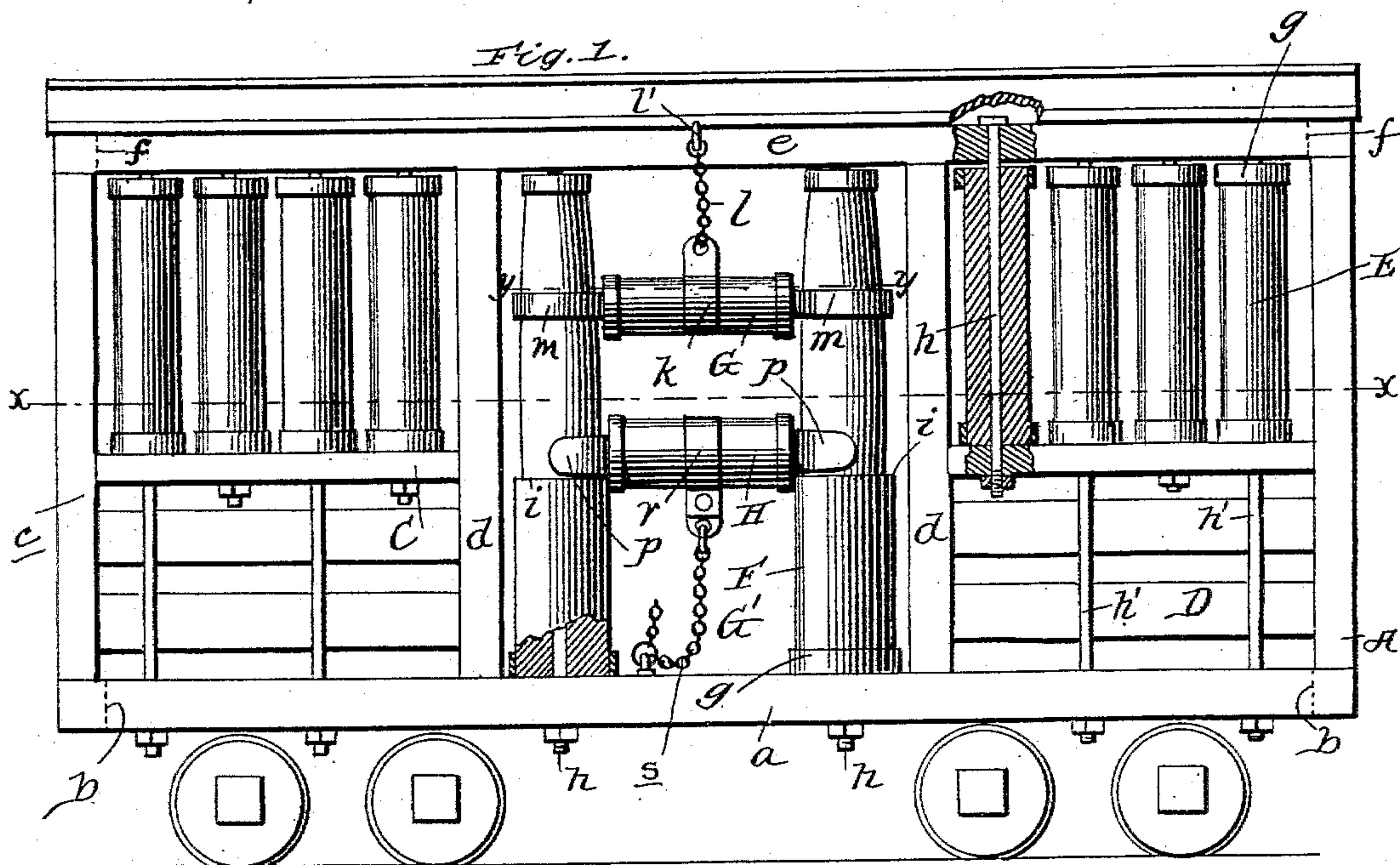


(No Model.)

E. J. BELL & G. F. MORGAN.
CAR FOR TRANSPORTING LIVE STOCK.

No. 556,800.

Patented Mar. 24, 1896.



witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN J. BELL AND GEORGE F. MORGAN, OF LARAMIE, WYOMING.

CAR FOR TRANSPORTING LIVE STOCK.

SPECIFICATION forming part of Letters Patent No. 556,800, dated March 24, 1896.

Application filed June 17, 1895. Serial No. 553,101. (No model.)

To all whom it may concern:

Be it known that we, EDWIN J. BELL and GEORGE F. MORGAN, citizens of the United States, residing at Laramie, in the county of Albany and State of Wyoming, have invented certain new and useful Improvements in Cars for Transporting Live Stock; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in cars for transporting live stock, and it has for its general object to provide such a car embodying a construction which will effectually prevent the stock from being injured while being loaded and unloaded and while in transit from one point to another.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a stock-car embodying our invention with parts in section. Fig. 2 is a horizontal section taken in the plane indicated by the line *x x* of Fig. 1. Fig. 3 is a detail horizontal section taken in the plane indicated by the line *y y* of Fig. 1, and Fig. 4 is a detail view of a modification.

Referring by letter to said drawings, A indicates the main frame of our improved car, which may comprise the longitudinal and transverse floor-beams *a b*, the end and intermediate uprights *c d*, and the longitudinal and transverse top beams *e f*, all connected together in the ordinary or any approved manner.

B indicates the floor of the car, which may be of the ordinary construction.

C indicates longitudinal and transverse bars, which are arranged at about the elevation illustrated and are connected to and extend inwardly from the frame-uprights *c d*, and have their inner edges rounded, as illustrated, to present smooth surfaces to the cattle, so as not to injure the same.

D indicates boarding, which may be employed to close the space between the bars C and the bottom or floor of the car, and E indicates vertical rollers, which are interposed between the side and end bars C and the side and end frame-beams *e f*, and are designed to

turn freely so as to give when the cattle rub or are thrown against them and thereby avoid bruising, scraping and otherwise injuring them. These rollers may be formed of any suitable material, although wood is preferred, and they are provided for the sake of strength and durability with metallic bands *g* at their ends and are loosely mounted upon metal rods *h*, which are connected to the bars C and the top beams *e f* of the frame A, as shown. Some of these rods *h* may be and preferably are extended below the bars C, as indicated by *h'*, and are connected, as illustrated, to the lower frame-beams *a b*, so as to strengthen the connection of the frame-beams and consequently increase the strength and durability of the car.

In order to prevent the cattle from being injured while they are being loaded on and unloaded from a car, we provide the rollers F, which are arranged in the door-openings G', adjacent to the intermediate frame-uprights *d*, and are designed to present smooth surfaces to the sides of the cattle, and are also designed to turn freely in case the cattle are thrown or rub against them, so as to avoid bruising, cutting, scraping, or otherwise injuring the cattle. These rollers F are loosely mounted on rods *h*, and are provided at their ends with metallic bands *g*, similar to those of the rollers E, and they are shouldered at an intermediate point of their length, as indicated by *i*, and are preferably tapered from such shoulders to their upper ends for a purpose presently to be described.

G indicates rollers, which are designed in conjunction with rollers H, presently described, to normally close the door-openings between the rollers F, so as to prevent the cattle from escaping from the car. These rollers G are loosely mounted on rods *j*, so as to turn freely thereon, and they are provided at their ends with strengthening-bands similar to those before described, and are also provided with loose collars *k* at their middles having chains *l* or the like, through the medium of which they may be suspended from hooks *l'* at the top of the car when the car is to be loaded or unloaded. The rods *j* on which the rollers G are mounted, as stated, are provided at their ends with almost complete rings or solid rings *m*, which loosely embrace the tapered portion of the rollers F, as illustrated, so as

to permit of the roller G moving freely up and down.

The rollers H, which in operation rest below the rollers G, as shown in Fig. 1, are similar to said rollers G, and are loosely mounted on rods *n*, which are provided at their ends with approximately semicircular embracing portions *p*, which engage the tapered portions of the rollers F and bear upon the shoulders *i* thereof. The rollers H may be disengaged from the rollers F by raising one of their ends, so as to disengage its embracing portion *p* from the adjacent roller F, and then lifting them out from between said rollers F, and said rollers H therefore have their loose collars *r* permanently connected by loose chains *s* with the car-frame, as shown, so as to prevent them from being lost.

In the practice of the invention, when the car is to be loaded or unloaded, the roller H on one side of the car is removed from between the upright rollers F, and the roller G on the same side of the car is raised and suspended from the hook *l'* at the top of the car by its chain *l*. The cattle are then driven on or off the car, after which the roller G is released and allowed to fall down to the shoulders *i* of rollers F, so as to bar the door-opening. In this way when the cattle are unloaded the door-opening may be quickly and easily barred after a certain desired number have passed off of the car, so as to prevent the others from escaping.

The bars C may if desired be faced with rubber or other soft material, as indicated by *t*, in Fig. 4, to increase their efficiency, and as the said bars extend inwardly a sufficient distance they may be used to support a floor when two decks of stock are to be transported in a car.

It is well known to those engaged in the cattle business that cattle transported long distances in ordinary stock-cars are greatly depreciated in value on account of the bruises and injuries which they are certain to incur by being thrown and rubbed against the rough framework, boarding, and sharp corners of the cars usually employed. This is not true of our improved car, as the rollers E, F, G, and H, being smooth and adapted to freely turn, will effectually prevent the cattle from being bruised, scratched, rubbed or otherwise injured while being loaded, transported, and unloaded, and will therefore permit of cattle being carried a long distance without in any way depreciating the value thereof, which is a highly important desideratum, as is obvious.

When desired the rollers E may be made to extend the full height of the car, and rollers similar to E may also be used to form partitions and other parts of the car.

In practice, if desired, the car constructed as described may be incased in planking and may be provided with ordinary doors, so that it will present the appearance of an ordinary stock-car.

We have in some respects specifically described the construction and relative arrangement of the parts of our improved car in order to impart a full, clear, and exact understanding of the same, but we do not desire to be understood as confining ourselves to such construction and arrangement, as such changes or modifications may be made in practice as fairly fall within the scope of the invention.

Having described our invention, what we claim is—

1. A stock-car comprising a frame made up of upper and lower beams and uprights connecting the same, bars C, connected to the inside of the frame-uprights at an intermediate point in the height thereof and having their inner edges rounded, vertical rods *h*, connecting the upper frame-beams and the bars C, vertical rods *h'*, connecting the upper and lower frame-beams and extending through the bars C, and rollers loosely mounted on said rods *h*, *h'*, and forming walls substantially as and for the purpose set forth.

2. A stock-car having a door-opening and comprising a frame made up of upper and lower beams and uprights connecting the same, bars C, connected to the inside of the frame-uprights at an intermediate point in the height thereof and having their inner edges rounded, upright, loosely-mounted rollers interposed between the bars C, and the upper frame-beams and forming walls and mounted so as to enable them to freely turn, vertically-disposed rollers arranged within the door-opening and mounted so as to enable them to freely turn and having shoulders at an intermediate point of their length, a vertically-movable, horizontal rod provided with means at its ends for engaging the vertical rollers and the shoulders thereof and a roller loosely mounted on said rod, so as to enable it to freely turn, substantially as specified.

3. A stock-car having a door-opening, a hook at the upper end thereof, vertically-disposed rollers arranged within said opening and having shoulders at an intermediate point of their length and tapered from said shoulders to their upper ends, vertically-movable, horizontal rods provided at their ends with means for engaging the rollers, rollers loosely mounted on said rods so as to enable them to freely turn, collars loosely mounted on the rollers, a chain connected to the collar of one roller and adapted to be placed in engagement with the hook at the top of the car, and a chain connected to the collar of the other roller and permanently connected to the car, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWIN J. BELL.

GEORGE F. MORGAN.

Witnesses:

ELI CRUMIENE,

E. PERCY PALMER.