No. 804,723. PATENTED NOV. 14, 1905.

G. C. HORST.

CHAIN.

APPLICATION FILED MAR. 5, 1903.

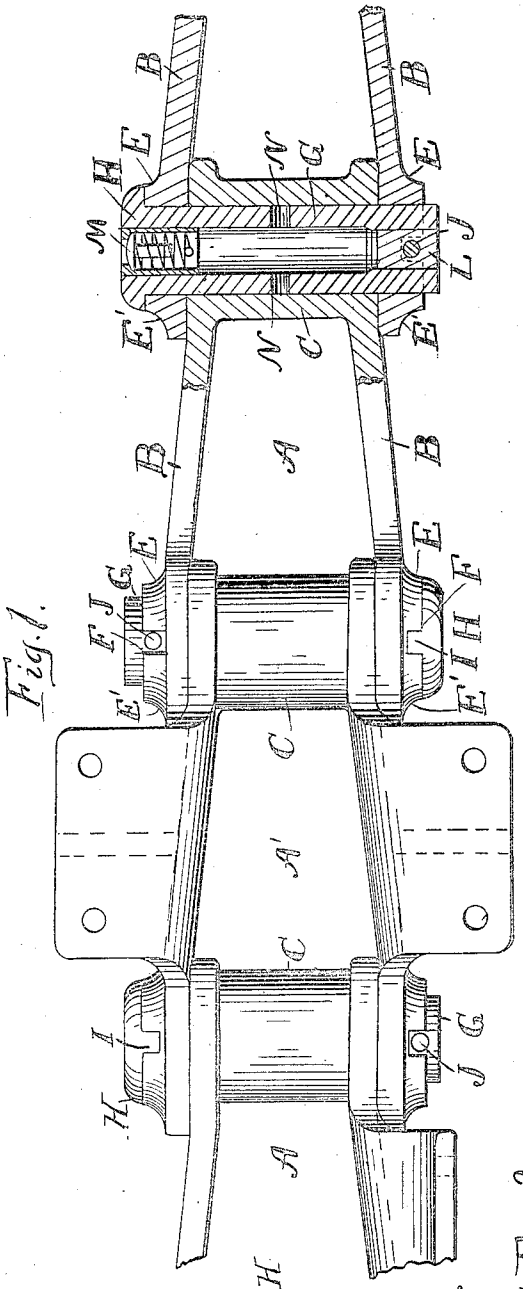


Fig. 1.

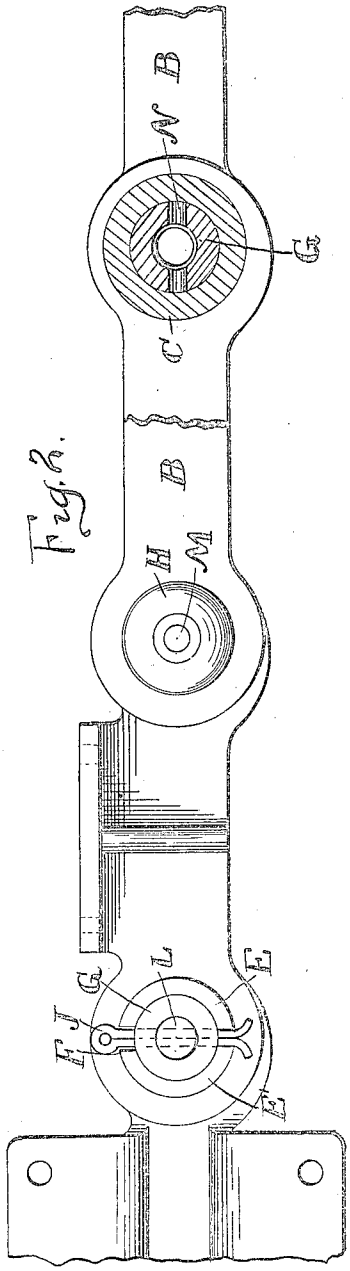


Fig. 2.

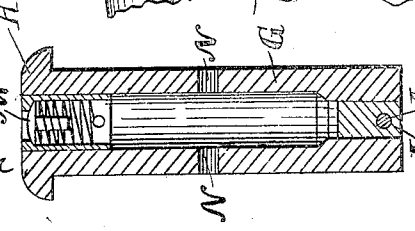


Fig. 3.

Witnesses.
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CHAIN.

No. 804,723. Specification of Letters Patent. Patented Nov. 14, 1905.

Application filed March 5, 1903. Serial No. 146,317.

To all whom it may concern:

Be it known that I, GEORGE C. HORST, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Chains, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a view, partly in top plan and partly in section, of a portion of a chain embodying my improvements. Fig. 2 is a view partly in side elevation and partly in section. Fig. 3 shows one of the pintles detached.

In the drawings I have shown a chain made up of links, indicated by A A, and intermediate links A′, the latter being adapted to have attached thereto flights, buckets, or other devices for carrying or transporting material. The links, however, are similar to each other with respect to the features of construction by which they are connected or articulated together. Each link is formed with a pair of side bars B B and a tubular cross-connecting bar C, the links being counterparts of each other in construction as concerns these parts. The separate ends of the side bars B B diverge somewhat from the end bar tube or sleeve C, so that at said ends the link can be fitted to the outside of the end bar or sleeve of the next link.

The separated ends are provided on their outer faces with locks E E′, having recesses or sockets F between them. Each link is connected to the next by means of a pintle, (indicated as a whole by G.) At one end this pintle has a flattened or widened head H, and adjacent thereto are locks I, which are adapted to fit in the sockets or recesses F on the outer face of a side bar B. At the opposite end the pintle is provided with an aperture to receive a locking pin or cotter J, this aperture also being in line with two of the sockets F. The pintle G is cast hollow with an opening or passage-way extending longitudinally entirely through it. This provides an oil-chamber adapted to hold lubricant for supplying the wearing-surface of the pintle and of the sleeve or end bar which holds it with lubricant.

One end of the aperture is tightly closed by means of a plug L, which is held in place by the aforesaid pin or cotter-key J. At the opposite end of the oil-chamber there is a spring-held valve or stopper M, which is adapted to be pushed inward to permit the nozzle of an oil-can to enter far enough for the introduction of oil when desired, but which normally tightly closes the end of the oil-chamber to prevent escape of oil. At N N there are apertures or ducts for the oil leading out laterally toward the surface of the tubular end bar C, within which the pintle lies.

By fitting the locks I and the fastening-pins F in the sockets on the side bars the pintle is caused to rock within the sleeve and not allowed to become stationary therein, and consequently the oil is distributed over the surface of the tubular end bar or sleeve to better advantage than would be the case if the pintle were not thus positively locked to the outer bars. This locking of the pintle insures that the oil-surfaces shall be those having the greatest area and that the oil shall be thoroughly and continually distributed, as above set forth.

The oil may be retained by means of cotton or other absorbent material introduced into the oil-chambers and held there by the closing devices.

While in the drawings I have shown U-shaped links of a well-known type, it will be understood that my invention is not limited in its use to the connecting of such links, but may be used wherever a pintle is needed for connecting the adjacent ends of adjoining links in a chain.

What I claim is—

1. In a chain, the combination with the side bars and tubular end bar of a pintle having a central aperture extending longitudinally through it, closed to form an oil-chamber at one end by a plug and at the other by a spring-controlled closing device and having oil-ducts leading from said chamber to the interior surface of the tubular end bar, and means for positively locking the pintle to the side bars of the overlapping link, whereby the oil-ducts are caused to rotate in the tubular end bar to distribute the lubricant, substantially as set forth.

2. In a chain having counterpart U-shaped links, the separate ends of the side bars of one link overlapping the tubular end bar or sleeve of the next link, the combination with the side bars and tubular end bar of a pintle having a central aperture extending through it, means for closing the ends of the apertures to provide an oil-chamber at the center and having oil-ducts leading from said cham-

ber to the interior surface of the tubular end bar, and means for positively locking the pintle to the side bars of the overlapping link whereby the oil-ducts are caused to rotate in the tubular end bar to distribute the lubricant, substantially as set forth.

3. In a chain, the combination with the side bars of a link and the adjacent end of an adjoining link, of a pintle connecting the links together having a central aperture extending longitudinally therethrough, closed to form an oil-chamber at one end by a plug and at the other end by a spring-controlled closing device and having oil-ducts leading from said chamber to the exterior surface of said pintle, and means for positively locking the pintle to the said side bars of the overlapping link, whereby the oil-ducts are caused to rotate in the end of the said adjoining link to distribute the lubricant, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE C. HORST.

Witnesses:

HARRY C. FREEMAN,

C. H. ANTHONY.