No. 837,132. PATENTED NOV. 27, 1906.

G. S. SERGEANT.

SAWMILL DOG.

APPLICATION FILED JUNE 8, 1906.

2 SHEETS—SHEET 1.

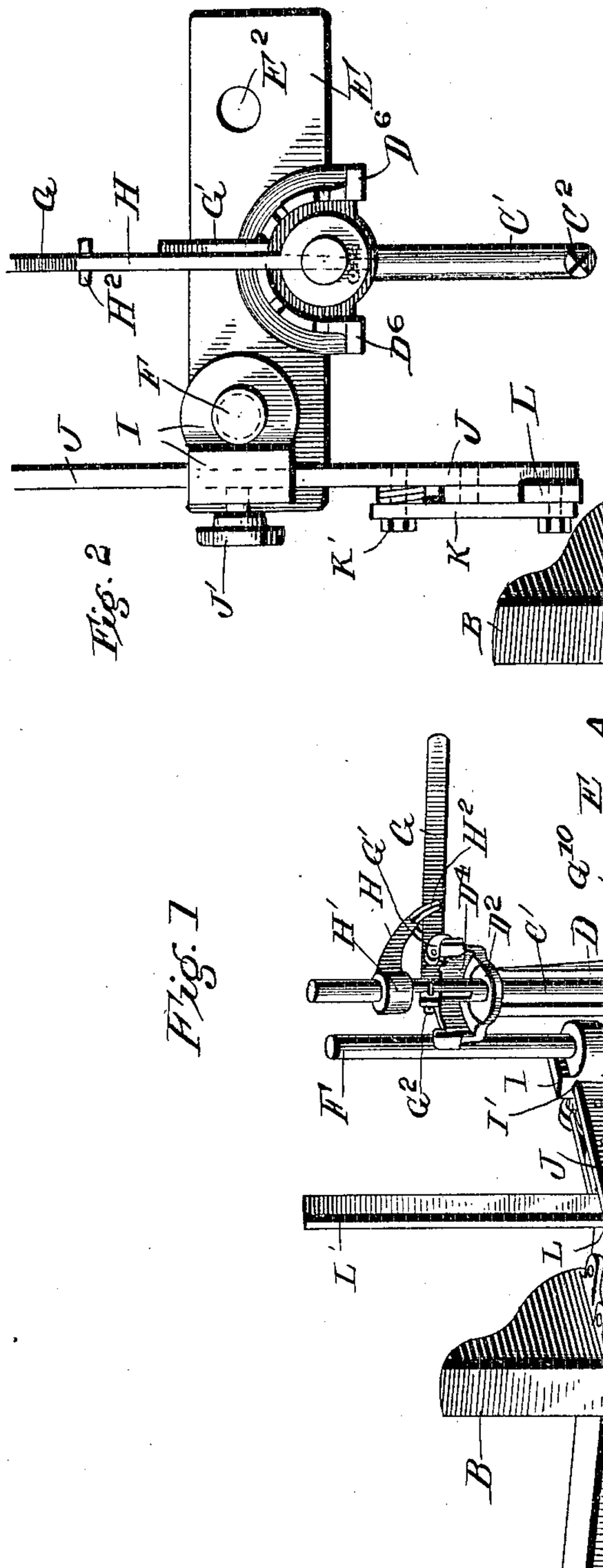

Fig. 2

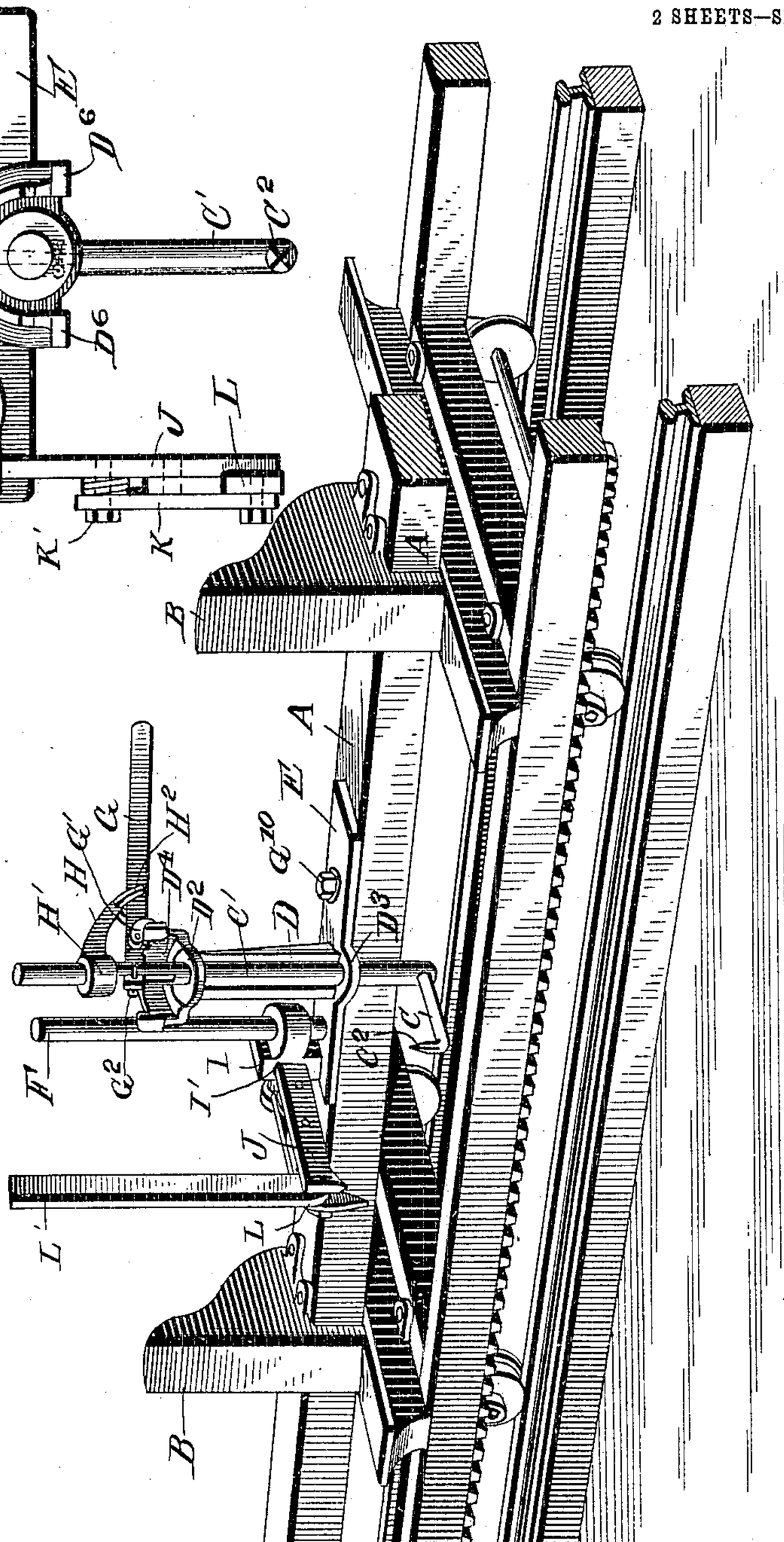

Fig. 1

WITNESSES

E. E. Duffey

Perry B. Turpin.

INVENTOR

GEORGE S. SERGEANT

BY Munn & Co.

ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 3

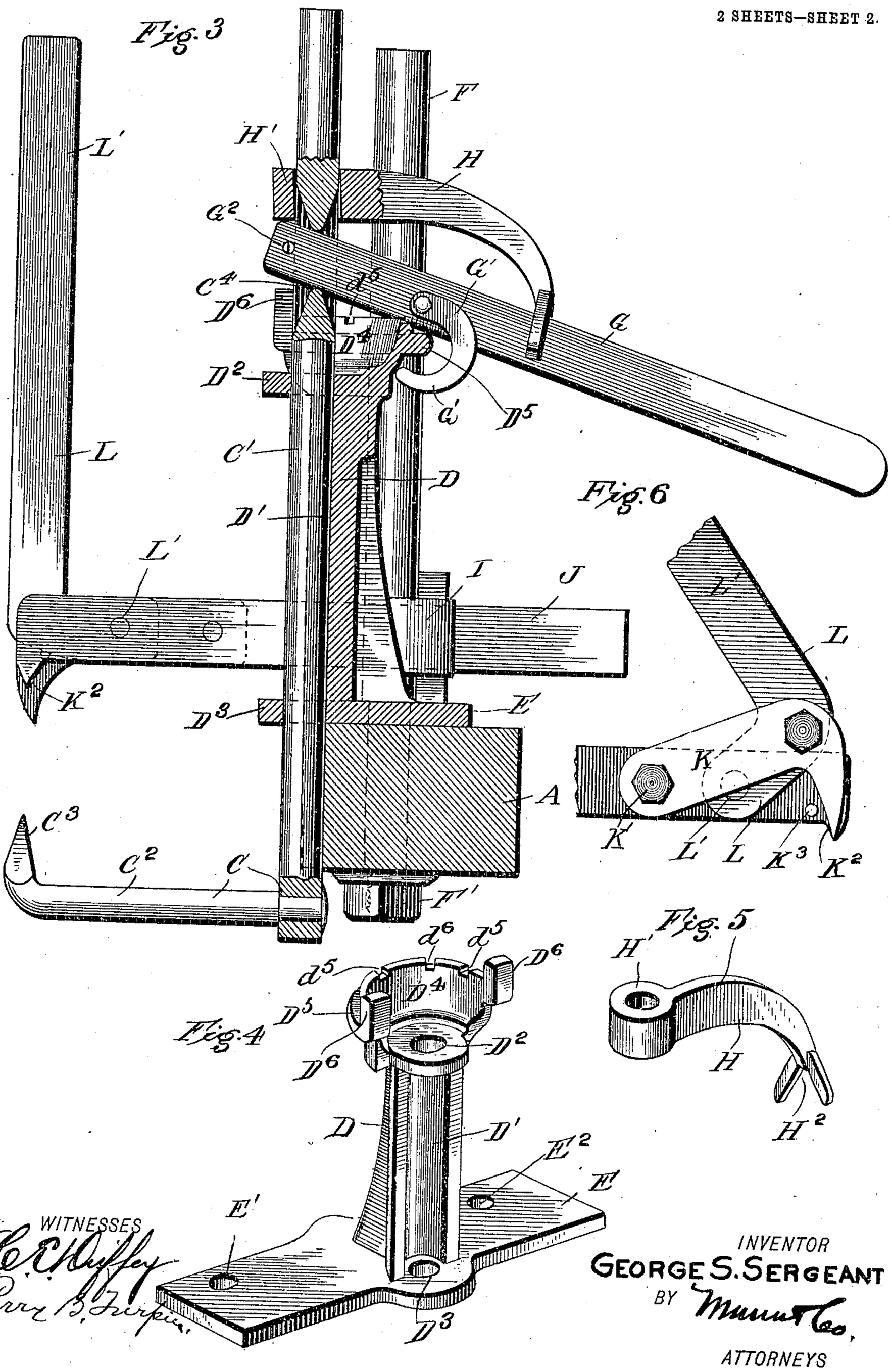

Fig. 6

Fig. 4

Fig. 5

WITNESSES

C. C. Duffey

Perry B. Turpin

INVENTOR

GEORGE S. SERGEANT

BY Munn & Co.,

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE S. SERGEANT, OF GREENSBORO, NORTH CAROLINA.

SAWMILL-DOG.

No. 837,132. Specification of Letters Patent. Patented Nov. 27, 1906.

Application filed June 8, 1906. Serial No. 320,729.

To all whom it may concern:

Be it known that I, GEORGE S. SERGEANT, a citizen of the United States, and a resident of Greensboro, in the county of Guilford and State of North Carolina, have made certain new and useful Improvements in Sawmill-Dogs, of which the following is a specification.

My invention is an improvement in sawmill-dogs; and it consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my invention in connection with a sawmill-carriage and the supporting-rails therefor. Fig. 2 is a top plan view of the improved dogging device. Fig. 3 is a detail cross-section drawn through the guide-frame for the lower dog. Fig. 4 is a detail perspective view of the guide-frame. Fig. 5 is a detail perspective view of the detent for the lever which operates the lower dog, and Fig. 6 is a detail side view of the upper dog and the parts immediately connected therewith.

In carrying out my invention I provide a lower dog, means for forcing said dog upwardly into the under side of the log and for forcibly releasing it from engagement with the log, and arrange the said means and devices for convenient operation, as will be more fully described.

In the accompanying drawings the carriage, with its log-beam A and knees B, may be of any suitable construction. On the log-beam I mount the guide-frame for the upright rod C′ of the lower dog C, said dog having at its lower end a lateral arm C^2, supplied at its outer end with the tooth C^3 to bite into the under side of the log.

The guide-frame D is mounted on a base-plate E and is in semitubular form, (see Fig. 4,) having the vertical channel D′, in which the rod C′ moves longitudinally and turns in the operation of the invention and provided at the upper and lower ends of said channel D′ with bearings D^2 and D^3, in which the rod C′ is held, so that it may move longitudinally and turn in the manner presently described. The base-plate E has the openings E′ and E^2 on the opposite sides of the upright guide-frame, and either of these openings may be utilized to receive the upright rod F for guiding the upper dog, so that the said dog may be placed to the right or left of the lower dog, as may be desired in the use of the invention.

The rod F may extend through the plate E and thence through the beam A and be secured by a nut F′ at its lower end, and a bolt G^{10} may be arranged in the opening at the opposite side of the upright D′ from the rod F to aid in securing the plate E firmly to the log-beam A.

At the upper end of the upright portion D of the guide-frame I provide the upright curved portion D^4, notched in its upper edge at d^5 and d^6 to form a rack, and along its outer side with a lateral curved flange D^5, which forms a bearing for the fulcrum-hook presently described, and at the ends of the rack D^4 lugs D^6 project upwardly and form stops for limiting the swinging movement of the lever which operates the lower dog, as presently described.

The rod C′ of the lower dog is movable vertically in the bearings D^2 D^3 and may be turned therein, and this rod C′ is provided with a vertically-elongated slot C^4, in which projects one end of the lever G, which fulcrums upon the upper edge of the rack D^4 in raising the dog C, as will be understood from Fig. 3 of the drawings, and also fulcrums, by means of its pivoted hook G′, beneath the lateral flange D^5 of the guide-frame in forcibly depressing the lower dog for the purpose of releasing it from engagement with the log.

The notches d^5 and d^6 may be utilized for locking the lever G in position to hold the dog C in any desired position beneath the log, and when the lever G is turned against either of the lugs the tooth C^3 of the lower dog will be adjusted clear of the log and will be retained in such position, as will be understood by those skilled in the art. For locking the dog C when operated by the lever G into engagement with the latter I provide the detent H, having at one end a sleeve H′, fitting loosely upon the upright rod C′ of the dog C and forked at its other end at H^2 to bear upon the lever G, the sleeve H′ canting into a biting engagement with the rod C′ when a lifting strain is exerted against the forked end of the detent-bracket H, as will be readily understood. By this construction as the handle end of the lever G is depressed the detent will follow it down and will lock it in any suitable position to which it may be adjusted.

A cross-pin G^2 is passed through the lever G in front of the rod C′ and prevents the accidental displacement of the lever. It will be understood from the foregoing that the lever G fulcrums upon the upright flange of the guide-frame in raising the rod C′ to cause the

dog to bite into the log and that on the reverse movement when it is desired to release the dog the handle end of the lever G may be slightly depressed to release the detent, which may then be raised by hand, and the lever may be raised at its handle end, fulcruming on the hook G′ engaging below the lateral flange D^5 in depressing the lower dog to release the same from its biting engagement with the log.

It is desirable to employ an upper dog in connection with my improved lower dog, and in the construction shown the upper dog comprises a carrier I, movable up and down on the rod F and having a horizontal opening I′ in which the horizontal bar J may be moved longitudinally to any desired position and may be secured by a clamping-screw J′. The dog K is pivoted at K′ at its inner end to the horizontal bar J and is provided near its outer or toothed end K^2 with a pin K^3, which may be engaged by the lever L, pivoted at L′ to the horizontal bar J and having its upper or handle arm L′ arranged to be operated to forcibly press the tooth K^2 into the upper side of the log.

I claim—

1. The combination substantially as herein described, of the guide-frame having a base-plate, an upright portion channeled in its inner face and provided at the upper and lower ends thereof with bearings and in rear of the upper bearings with an upright rack toothed in its upper edge, and in rear of said upright rack with a lateral flange, a lower dog movable longitudinally and adapted to be turned in the bearings of the guide-frame and having a slot for the passage of an operating-lever, an operating-lever projecting at one end through a slot in the dog-rod, and bearing upon the upright rack of the guide-frame and adapted to engage the notches therein, and provided with a depending hook arranged to bear beneath the horizontal flange of the guide-frame and form a fulcrum for the said lever in forcibly depressing the lower dog, and a detent sliding upon the upright rod of the dog above the operating-lever and having means for engagement with said lever for securing the same when operated to force the lower dog into a log, substantially as and for the purposes set forth.

2. The combination in a sawmill-dog, of a lower dog having an upright guide-rod, a guide-frame having bearings in which said rod may be moved longitudinally and turned, and also provided with an upright curved rack in rear of said bearings, and provided with notches, and an operating-lever to engage with said rod and bearing upon the upright rack of the guide-frame and adapted to engage with the notches thereof, substantially as set forth.

3. The combination in a sawmil dog, with the lower dog having an upright rod and a guide-frame having bearings in which said rod may be moved longitudinally and turned, an operating-lever engaged with the said rod and fulcruming upon the guide-frame, and a detent sliding upon the dog-rod above the operating-lever and having means for engagement with said lever, substantially as set forth.

4. The combination in a sawmill-dog, with the lower dog having an upright rod, and a guide-frame in which said rod may be moved longitudinally and turned, of a lever fulcruming loosely upon the guide-frame whereby it may be operated to force the dog into engagement with the log, and a hook pivoted to the lever and engaging with the guide-frame whereby to form a fulcrum for the lever in forcibly depressing the lever-dog to release the same from engagement with the log, substantially as set forth.

5. The combination in a sawmill-dog, with the lower dog having an upright rod, of a guide-frame in which said rod may be moved longitudinally and turned, said guide-frame having a curved portion forming a fulcrum for an operating-lever, and a horizontal flange forming a bearing for a fulcrum-hook, and an operating-lever fulcruming on the guide-frame and engaged with the upright rod of the dog, and a hook pivoted to the operating-lever and engaging beneath the horizontal flange of the guide-frame, substantially as set forth.

6. The combination in a sawmill-dog, with the lower dog having an upright rod, of a guide-frame having bearings in which said rod may be turned and moved longitudinally and provided in rear of said bearings with a curved upright portion forming a fulcrum for the operating-lever, and in rear of said portion with a lateral flange forming a bearing for a fulcrum-hook, and an operating-lever engaged with the upright rod of the lower dog and fulcruming upon the upright portion of the guide-frame and having a pivoted dog to bear beneath the lateral flange of the guide-frame, substantially as and for the purposes set forth.

GEORGE S. SERGEANT.

Witnesses:
W. E. ALLEN,
J. W. FRY.