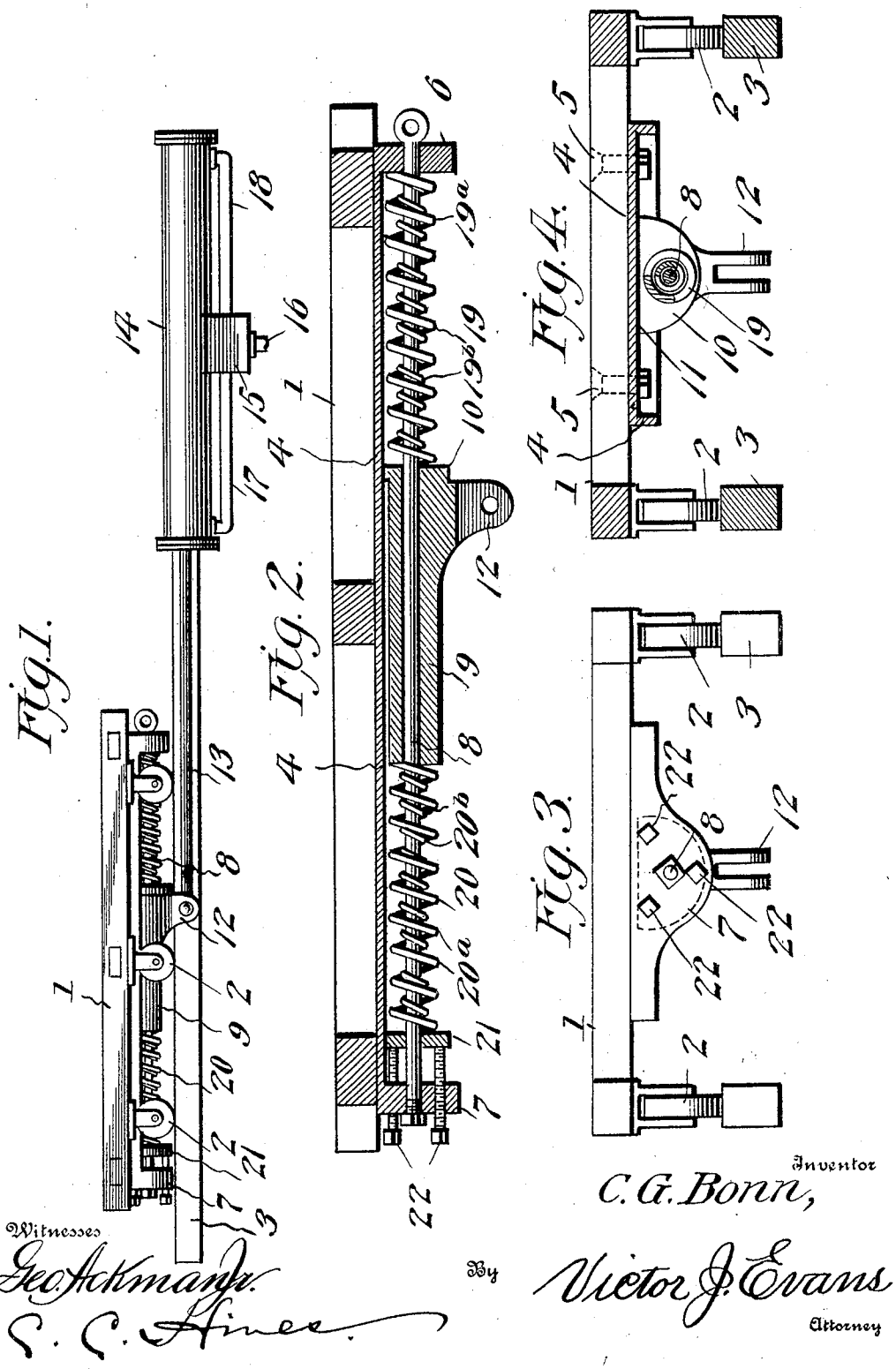
No. 810,320. PATENTED JAN. 16, 1906.

C. G. BONN.

SAWMILL CARRIAGE.

APPLICATION FILED JUNE 7, 1905.



Witnesses
Geo. Ackmann Jr.
C. C. Hines

Inventor
C. G. Bonn,
By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

CLYDE G. BONN, OF PINE BLUFF, ARKANSAS.

SAWMILL-CARRIAGE.

No. 810,320. Specification of Letters Patent. Patented Jan. 16, 1906.

Application filed June 7, 1905. Serial No. 264,186.

To all whom it may concern:

Be it known that I, CLYDE G. BONN, a citizen of the United States of America, residing at Pine Bluff, in the county of Jefferson and State of Arkansas, have invented new and useful Improvements in Sawmill-Carriages, of which the following is a specification.

This invention relates generally to improvements in sawmill-carriages, and more particularly to feeding and cushioning means therefor, one of the objects of the invention being to provide simple and effective mechanism applicable to carriages in common use for feeding the same toward and from the saw by the direct action of a piston operated by steam or other fluid motive power in such manner as to provide for an effective cushioning of the carriage when the motion of the same is suddenly reversed or when the carriage is brought from a state of motion to one of rest.

Another object of the invention is to provide cushioning mechanism which is simple of construction, effective in use, and comparatively inexpensive of manufacture and application and which is adapted to be readily and conveniently adjusted to regulate the cushioning action thereof.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the invention as applied in use to a sawmill-carriage. Fig. 2 is a longitudinal section through the carriage on an enlarged scale. Fig. 3 is a rear end elevation of the carriage, and Fig. 4 is a cross-section taken on the plane indicated by the line 4 4 of Fig. 2.

Referring now more particularly to the drawings, the numeral 1 represents a sawmill-carriage of the ordinary or any approved construction, the same being provided with wheels 2 to run upon guide bars or rails 3.

In accordance with my invention I provide a bracket plate or frame 4, adapted to be mounted upon the under side of the carriage and to be fastened thereto by any suitable securing means, as through the medium of bolts 5. This bracket-plate is provided at its front and rear ends with depending flanges or hangers 6 and 7, apertured for the reception of a guide rod or bolt 8, extending longitudinally beneath the carriage and in the center line thereof. Slidably mounted upon this rod or bolt is a head 9, having a central passage through which the rod or bolt extends and which is in the form of an encompassing sleeve. At its forward end the head 9 is provided with a flange or enlargement 10, having an upper straight edge 11 to bear against the under side of the plate 4 and hold the head from rotation while permitting it to have sliding movement on the guide-rod. Adjacent to the flange the head is also provided with depending ears 12, to which is attached one end of a piston-rod 13, the other end of said rod being connected with a piston (not shown) arranged to operate within a power-cylinder 14. Connected with the cylinder 14 is a chest 15, to which leads a supply-pipe 16, through which the fluid-impelling means, such as air or steam, is conducted thereto from a suitable source of supply. From the chest lead pipes 17 and 18 to conduct the impelling medium to opposite ends of the cylinder, and in practice suitable valve mechanism is provided to control the feed of the steam to effect the reciprocation of the piston within the cylinder to feed the sawmill-carriage backward and forward, as will be readily understood.

In order to operatively connect the head 9 with the carriage and secure a cushioning action to prevent injury to the carriage and operating mechanism when the motion of the carriage is suddenly reversed or when the carriage is brought from a state of motion to one of rest, cushioning-springs generically denoted 19 and 20 and preferably, though not necessarily, arranged in pairs are employed and arranged about the guide-rod 8 in front and in rear of the said head, the springs 19 being arranged to abut at one end against the flange 6 and at the other end against the flange 10 of the head, while the springs 20 are arranged to abut at one end against the rear end of the head and at its opposite end against a pressure-regulating plate 21, arranged adjacent to and in advance of the flange 7, the latter carrying set-screws 22, whereby the plate may be adjusted to directly regulate the pressure of the springs 20 and indirectly therethrough regulate the travel of the head 9 and the pressure of the springs 19. Each pair of springs 19 and 20 is composed of inner and outer spring-coils 19^a 19^b and 20^a 20^b, respectively, of different diameters and arranged one within the other, as shown.

In the operation of the device the piston 13 on its outstroke communicates motion to the

head 9, which is permitted to yield rearwardly by the springs 20 to a slight extent to prevent jarring of the carriage, the motion of the head being communicated by said spring to the carriage, which is thereby moved in one direction. Upon the instroke of the piston motion in the reverse direction is similarly imparted to the head 9, whose movement is resisted and limited by the springs 19, which will transmit the motion to the carriage, thus moving the latter in the opposite direction. It will thus be seen that in both directions of motion the direct thrust of the piston will be transmitted to the head and the springs will yield sufficiently to prevent sudden jar or strain resulting therefrom being transmitted to the carriage, and it will also be seen that the arrangement of the pairs of springs is such as to cushion the shock when the carriage is suddenly reversed or brought to a complete stop, thus obviating liability of damage to the carriage or operating parts. The resistance of the springs may be regulated according to the weight of the carriage and the load through the adjustment of the regulating-plate 21 by the set-screws 22.

The construction of the device is advantageous in that it is not only applicable to new carriages, but to carriages already in use and in that it may be manufactured and applied at a comparatively low cost.

Having thus described the invention, what is claimed as new is—

The combination with a sawmill-carriage, of a supporting-bracket applied thereto and having downwardly-projecting terminal flanges, a guide-rod supported by said flanges, a head slidably mounted on the guide-rod and provided with an angular face to engage the bracket to hold said head from rotation, a regulating-plate on the guide-rod adjacent to one of said flanges, springs upon the guide-rod between the head and the other flange and the head and regulating-plate, means for imparting motion to the head to reciprocate the carriage, and means for adjusting the regulating-plate, the construction being such that the parts of the device are supported by said bracket, whereby the device is adapted for attachment to any ordinary sawmill-carriage.

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

CLYDE G. BONN.

Witnesses:
JOSEPH BERNATH,
W. J. MOORE.