

I. WALKER.
Railway Car Brake.

No. 94,530.

Patented Sept. 7, 1869.

Fig. 1.

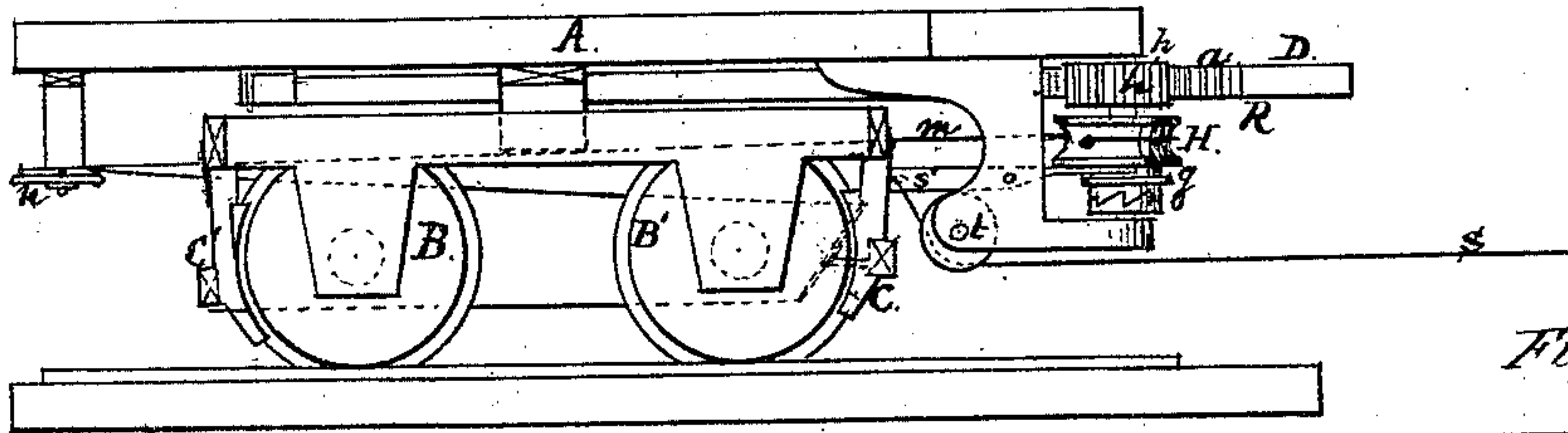


Fig. 3.

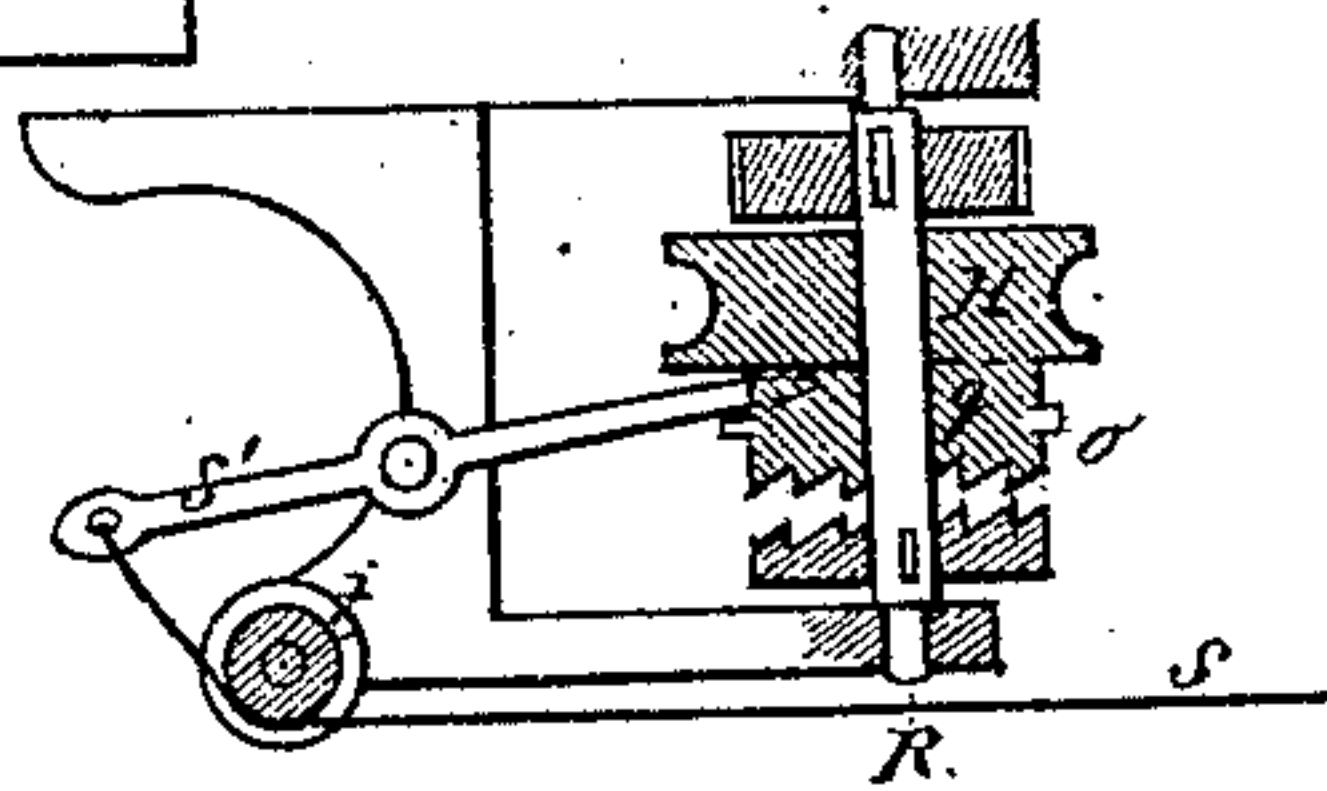
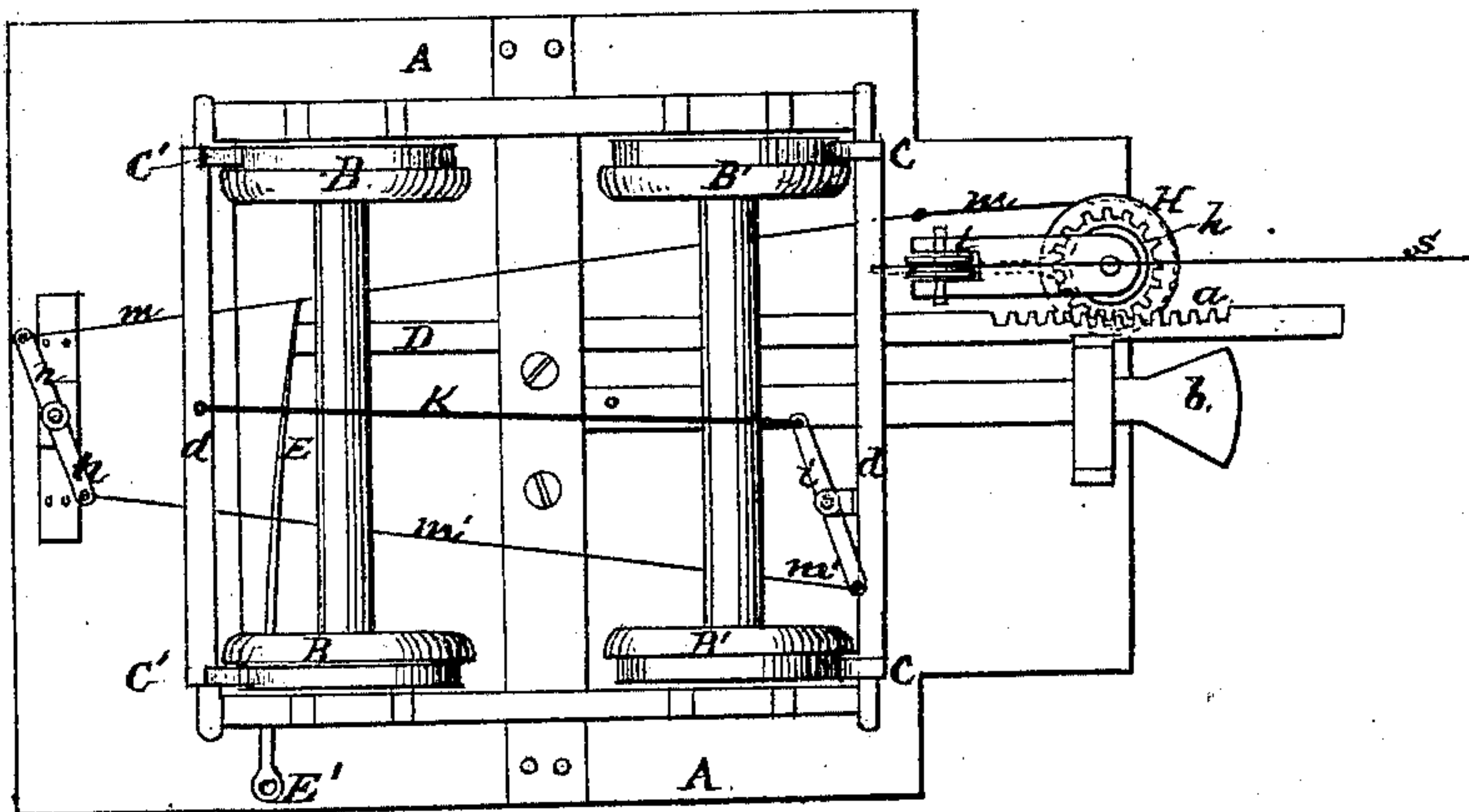


Fig. 2.



Witnesses.
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Inventor;
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United States Patent Office.

INGLIS WALKER, OF LYNN, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WILLIAM R. BARNARD, OF SAME PLACE.

Letters Patent No. 94,530, dated September 7, 1869.

IMPROVED RAILWAY-CAR BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, INGLIS WALKER, of Lynn, county of Essex, and State of Massachusetts, have invented a new and improved Car-Brake; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a platform-car, with my improvements.

Figure 2 is a bottom plan view of a platform-car, with my improvements.

The object of my invention is to produce means by which cars can be stopped, by the brakes being set, without the employment of brakemen; and

The nature of my invention consists in devices for setting the brakes by the reverse action of the engine, thus making the whole train controlled by the engineer. This is accomplished by the check-movement of the engine acting as a partial check to the cars, which causes all the cars to run close together, and this movement furnishes the power for automatically setting the brakes;

Also, in devices for releasing the brake when set.

In the drawings—

A is the platform of a car.

B B and B' B', the trucks;

c c and c' c' are brake-shoes, constructed and operated in the usual manner, too well known to need description.

D is a rod or bar running under the car and lengthwise with it. This bar is provided with cogs *a*.

E is a heavy spring attached at E', and set against inner end of bar D.

H is a drum on shaft R, which is perpendicular to the bar D.

Over drum H and on the shaft R is cogged wheel *h*.

The drum H is loose on the shaft.

Below drum H is toothed gear *g*. This gear is attached to and a part of the drum H.

o is a toothed gear, fast on the lower end of shaft R.

S is a cord, running under and back of pulley *t*, and operates to raise drum H, thus disengaging the teeth of gear *g* from teeth of gear *o*, which allows of the shaft R turning without turning drum H.

m m' and *k* are rods or chains, which, in connection with levers *n* and *i*, form the usual devices for setting brake-shoes.

The bar D projects, at one end of the car, beyond the draw-head *b* of the coupling.

Now, what is the operation of my improvements, which consists in the means for furnishing power to set the brakes automatically?

The train being in motion, and it being desirable to stop, the engine is reversed; this action causes the cars to bump together, the bar D striking against a bumper on the preceding car; the teeth of gear *g* are engaged with toothed gear *o*; the bar D is pushed back, the cogs *a* being engaged with cogged wheel *h*, turning shaft R, and with it drum H; this movement winds up chain *m*, operates levers *n* and *i*, by assistance of rods or chains *k* and *m'*, and sets the brake-shoes *c c* and *c' c'*; the brakes remain set till the train stops, and as long as the cars are up close together, but as soon as the cars are started, or the pressure removed from bar D, the brakes are thrown off, and the action of spring E throws bar D back to its former position.

If it is desirable to back the train, it can be done without setting the brakes, by the engineer drawing cord S, which extends the length of the train, from rear car to engineer, and disengaging gear *g* from gear *o*, thus the bar D may be pushed back without turning shaft R and drum H. This cord S can be operated from either end of the train, as it is often desired to attach the engine to either end of the train; one leading cord is used, with others running to wheel *t* and drum H, on each car of the train.

By the means described a train can be stopped very quickly, without the aid of a corps of brakemen, the train being under the complete control of the engineer at all times, and the benefits arising from having a train under the immediate control of the engineer, are too apparent to require comment.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The bar D, in combination with shaft R, having drum H, toothed gears *g* and *o*, and wheel *h*, and spring E, as means for setting the brakes of a car, operating substantially as set forth.

2. The combination of the above devices with cord S, pulley *t*, and the brakes of a car, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

Witnesses:

INGLIS WALKER.

CARROLL D. WRIGHT,
AUSTIN S. HOWARTH.