## WEB OF STEEL By CYRUS TOWNSEND BRADY FATHER AND SON

Copyright by Fleming H. Revell Co.

## YOUNG MEADE MAKES A DISCOVERY WHICH TERRIFIES HIM AND HE TRIES TO SAVE MANY LIVES

The Martlet Construction company is putting up a great international bridge planned by Bertram Meade, Sr., a famous engineer. His son, Bertram Meade, Jr., resident engineer at the bridge, is in love with Helen Illingworth, daughter of Colonel Illingworth, president of the construction company, and they will marry as soon as the bridge is complete. The young engineer questioned his father's judgment on the strength of certain important girders, but was laughed at. His doubts are verified, however, and he makes desperate efforts to stop construction, fearing great loss of life.

## CHAPTER IV-Continued. -3-

But Meade was out of the house. It was summer and the sun had set, but pleaded Mende in desperation. "Draw the long twilight of the high latitude back the traveler and put no more men still lingered. Before him rose the gigantic structure of the bridge. For all get word to-" its airiness it looked as substantial as the man, seizing a lantern and, for- enough to hold up the world." getting his weakness, ran down beneath the overarching steel to the pier- against?" Meade asked, and for the head, climbed up to the shoe, and first time a little of Abbott's contempt crawled out on the lower chord as rapidly as he could.

the deflection from the right line in for jacks and said rather grudgingly, the important member. For all his for it seemed like a concession to the years of inexperience he was a better trained engineer than rough-and-ready Abbott. What appeared to the latter as a slight deflection, Meade saw in its true relation. There was a variation inch and a half at least, although unnoticeable to an untrained eye. It had extended the suspended span far out with the heavy traveler at the end, the downward pressure on the great lower chord members had greatly increased.

It was a terribly heavy bridge at best. It had to be to sustain so long a span, the longest in the world. And the load, continuous and increasing, had brought about this, to the layman trifling, to the engineer mighty, bend. If it bent that way under that much of a load, what would it do when the whole great span was completed and it had to carry its transitory loads of traffic beside?

When two different views meet it is

way. The corresponding member in the other truss is perfectly straight." "Abbott, for God's sake, hear me," on the bridge. Stop work until we can

"Don't talk to me, boy. I know my the Rock of Gibraltar, and it looked business. I tell you I can jack it back. even more substantial if possible, as That member's big enough and strong

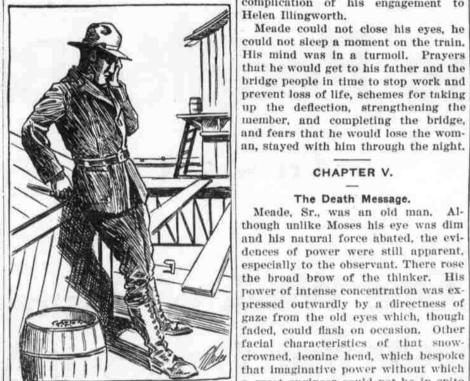
"What are you going to jack appeared in the younger man's voice. Abbott reflected that there was noth-

Meade needed but one glance to see ing firm enough to serve as a support younger and junior engineer:

> "Well, I can hook on to the opposite truss and pull it back with turn buckles."

"That will damage the other truss in the center of the member of an too much, Abbott," Meade retorted promptly. "It isn't possible."

"Then I'll thick up some other all come in the last week. They had scheme," returned Abbott indifferently, as if humoring the other. "We can't beyond the edge of the cantilever and, wait, we've got to hurry it along.



thing which to Abbott seemed useless | greatest of rivers and to bring nation and unnecessary, and the fact that into touch with nation. He ought to subsequent events had more often than do something, but what was there to not proved Meade's suggestions to be do? Presently, doubtless, his mind worth while, had not put Abbott in altogether the best mood toward his could think of was the impending ruin. young colleague. Abbott never forgot that Meade had really no official connection with the building of the bridge, and that he was only there as a special representative of his father, and although he could not help liking the the hall and, therefore, he heard disyounger man, Abbott would have been better pleased if he had been left alone. then the sound of rapid footsteps along

Meade had not gone about it in the right way to move a man of Abbott's They stopped before the outer door of temperament. He realized that as he the suite which bore his name. Inlay awake on the sleeper speeding to New York. Abbott was a man who disaster. The door was opened, the ofcould not be driven. He was a tremendous driver himself and naturally inner door. He sank back almost as he could not take his own medicine. If one dead waiting the shock, the blow. Meade had received the announcement more quietly and if he had by some subtle suggestion put the idea of dan-

ger into Abbott's mind all would have been well, for when he was not blinded by prejudice, or his authority or his

ability questioned, Abbott was a sensible man thoroughly to be depended upon. But the news had come to Meade with such suddenness, Abbott had only

casually mentioned it at the close of a lengthy conversation regarding the progress of the work as if it were a matter of no special moment, that the sudden shock had thrown Meade off his balance.

Therefore he could see nothing but I was only a cub." langer and the necessity for action. How he should handle his superior, or rather the bridge's superior, was the complication of his engagement to

Helen Illingworth. Meade could not close his eyes, he could not sleep a moment on the train. His mind was in a turmoil. Prayers that he would get to his father and the

bridge people in time to stop work and prevent loss of life, schemes for taking the son had not the heart. up the deflection, strengthening the member, and completing the bridge, and fears that he would lose the woman, stayed with him through the night.



would clear. But on the instant all he The Uplift building, in which he had his offices, was mainly deserted on account of the holiday. The banks were closed and the offices and most of the shops and stores. It was very still in tinctly the door of the single elevator in service open with an unusual crash,

the corridor as of someone running. stantly he suspected a messenger of fice was crossed, a hand was on the "Father," exclaimed the newcomer.

You got my telegram?" The other silently exhibited the

crumpled paper in his hand. "What have you done?"

"It's a holiday, don't you know? I dow. only got it a few moments ago. The bridge?"

> "Still stands." "But for how long?"

"I can't say. The Martlet's resident engineer is mad. I begged, threatened,

implored. I tried to get him to stop work, to take the men off the bridge, to withdraw the traveler, but he won't

do it. Said you designed it, you knew.

"But the camber?"

"He said, 'I'll jack it into line again." Like every other engineer who sees a last thing in his mind. Aside from his big thing before him it looks to him as natural pride in his father and in the if it would last forever. I tried to get bridge and his fear that lives would be you on the telephone here and at the lost if it failed, unless he could get house last night and failed. I wired the men withdrawn, there was the you. Then I jumped on the midnight

express and-' "What is to be done?" asked the old man.

Meade, Sr., was thankful that the younger man had not said, "I told you so," as well he might. But really his father's condition was so pitiful that

"Telegraph the Martlet Bridge company at once," he answered. "What shall we say?" asked the old

man, uncertainly. The young man shot a quick look at him, that question evidenced the violence of the shock. His father was

anybody? How far away are they? vice president, and Curtiss, the chief Twenty miles! There's no telephone? engineer.

"Meade, what of the bridge?" he Now, listen, Johnson, this is what you must do. Get a car, the strongest and burst out, with a quick nod to his fastest you can rent and the boldest daughter. Colonel Illingworth had not chauffeur, and a couple of men on stopped to hunt for a wayside telehorses too, and send up to that place phone. The automobile driven madly, wherever they are, and tell Colonel Illingworth that he must telephone me the rough roads, had brought him diand come to his office at once. There are telegrams there that mean life or death and the safety of the bridge.

You understand? Good. He says he'll do it, father. We've done all we can," he added. He hung up the receiver, sprang to his feet, looked at his watch, "It's so important that I'll go down there myself. 1 can catch the two o'clock train, and that will get me there in two hours. You stay quietiy here in the office and wait until I get in touch with those people. I mean, I

want to know where I can reach you instantly."

"I'll stay right here, my boy. Go, and God bless you."

As usual when in a great hurry here were unexpected delays and the clock on the tower above the big structural shop was striking five when a rickety station wagon, drawn by an exhausted horse, which had been driven unsparingly, drew up before the office door. Flinging the money at the driver, Meade sprang down from his seat and dashed up the steps. He threw open the door and confronted Johnson.

"Did you get him?" he cried. "He isn't here yet. I sent an automobile and two men on horseback and-'

The next minute the faint note of an automobile horn sounded far down the valley.

"I hope to God that is he," cried the young engineer, running to the win-

"That's the car I sent," said Johnson, peering over his shoulder. "And there are people in it. It's coming this way.

"Johnson," said Mende, "you have acted well in this crisis and I will see that the Bridge company remembers

"Would you mind telling me what the matter is, Mr. Meade?"

"Matter! The International-" "Bert," exclaimed a joyous volce, as Helen Illingworth, smiling in delighted surprise, stepped through the open door and stood expectant with outstretched hands.

Young Johnson was as discreet as he was prompt and ready. He walked to the window out of which he stared, with his back ostentatiously turned toward them. After a quick glance at the other man, Meade swept the girl to his heart and held her there a moment. He did not kiss her before he released her. The woman's passionate look at him was caress enough and his own adoring glance fairly enveloped her with emotion. Johnson coughed and turned as the two separated. It was the woman who recovered her poise quicker.

"What were you saying about our bridge when I came into the room?" broken, helpless, dependent, at she began, and Meade fully understood the slight but unmistakable emphasis in the pronoun-our bridge, indeed-"I was lying down this afternoon, but when I awakened my maid told me about your urgent calls for father," she ran on, realizing that some trouble portended and seeking to help her lover by giving him time. "I knew something must be wrong, so I came here. I didn't expect to see you. Oh, what is it?" she broke off, suddenly realizing from the mental strain in her lover's face, which the sudden sight of her had caused him to conceal for a moment, that something terribly serious had happened, and she turned a little pale herself as she asked the question, not dreaming what the answer would be.

recklessly through the hills and over rectly to the office in the shortest possible time. "There is a deflection one inch and three-quarters deep in one of the com-

pression members, C-10-R," was the prompt and terrible answer. Colonel Illingworth had not been

president of the Martlet Bridge company for so long without learning something of practical construction. He was easily enough of an engineer to realize instantly what that statement meant.

"When did you discover it?" he napped out.

"Last night." "Is the bridge gone?"

"Not yet." "Why didn't you let us know?"

"I telegraphed father and, not hearing from him, I came down on the mid-



Into the Room Burst Colonel Illington.

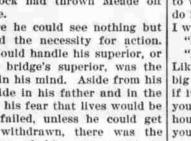
night train. It is a holiday in New York as well as here. I just happened to meet father in the office. He sent a telegram to you and not hearing from you, duplicated it an hour later. I tried half a dozen times to get you on the telephone and finally, by a happy chance, got hold of young Johnson."

"Where are your father's telegrams?" "Here."

Colonel Illingworth tore the first open with trembling fingers. "Why didn't you tell Abbott?" asked

the chief engineer.

"You know Abbott, He said the bridge would stand until the world caved in. Said he could jack the member into line. He wouldn't do a thing



natural that age, experience, reputation and authority shall carry the day. Although Bertram Meade, Jr., had never been persuaded in all particulars of the soundness of his father's design, and could not be persuaded, that vast experience, that great reputation, that undoubted ability with its long record of brilliant achievement had at last silenced him. He had accepted through loyalty that which he could not accept in argument. Once accepted, he acted accordingly, heartily seconding and carrying out the wishes of the older and, as the world would say, the abler man.

hardest was that this weakness was us on account of me. I won't stop work exactly what he had foreseen and a minute," he explained patronizingly. pointed out. It was the possibility of the inability of this great member to you don't do what I say, and paid in carry the stress that young Meade had another way, in blood. And it will be deduced by using the formula of your fault." Schmidt-Chemnitz. It was this point, and this point particularly, that he had dwelt upon with his father and other more resolute and fierce than which they had argued to a finish. So ever, strongly had he been impressed with the possible structural weakness of this member that he had put himself on record in writing to his father. The old man had overborne him and now the little curve, one and a half to one and three-quarter inches in sixty feet, established the accuracy of his unheeded contention. Vainly now he wished he had not let the old habit of affection and the little touch of awe with which he regarded his father persuade him against his reason.

He stopped, feeling suddenly ill, as a very nervous high-strung man may feel under the sudden and unexpected physical shock. He was weak still from the tonsilitis. He leaned against the diagonal at the end of C-10-R, clinging to it tightly to keep from falling. Abbott, who had followed more slowly, stopped by him, somewhat surprised, somewhat amused, more indignant than both.

erecting engineer joined him on the the interview was over. plerhead, "if you put another pound of load on that cantilever I will not be answerable for the consequences."

"What do you mean?"

"That deflection is nearly two inches will go."

"Yes, if it collapses, That's true," said Abbott, "but it won't."

unfortunately the wrong course with and attend to the grave affair. Noththe older man.

"Why, boy," said Abbott, "that bridge

He Stopped, Feeling Suddenly III.

The thing that smote the engineer There's going to be no penalty against

"There will be a bigger penalty if

Now both men were angry and in their passion they confronted each

"Look here," said Abbott, his fiery temper suddenly breaking from his control, "who are you anyway? You're only a kid engineer. Your father approved of the plan of this bridge. I guess we can afford to bank on his reputation rather than yours."

"Well, he doesn't know of this." "Nobody is on the bridge now, and

nobody is going to be on there until tomorrow morning. Wire him if you like. He'll wire Illingworth down at Martlet and we'll get word what to do."

"You won't put any men at work on the bridge until-"

the child of his father's old age. The "Not until tomorrow morning," said boy, as the old man thought of him, Abbott decisively, "if I don't hear from had ventured to dispute his father's somebody at Martlet tomorrow mornfigures, to question his father's design, ing the work goes on."

"But if my father wires you-" "I take orders from the Martlet company and no one else," was the short answer with which Abbott turned away "Abbott," said Meade fiercely as the in finality, so that the other realized

moment. Meade wasted no more pleas on Abbott. As ill luck would have it somegram when it had been sent. That day thing had happened to the telephone was a holiday-the birthday of one of and telegraph wires between the city the worthies of the republic-in some and the camp. Meade dressed himself, of the United States, New York and deep now and every ounce or pound of got a handcar, and was hurried to the Pennsylvania among them, and only by added weight you put upon it will make nearest town on the railroad's main chance had he come down to the office it greater. Its limit will be reached line. From there he sent a telegram mighty soon. If it collapses-" he and tried to get connection with New that morning. The wire was dated the night before. And he recalled that the threw up his hands-"the whole thing York by telephone, but failed. Moved by a natural impulse, in default of state from which the bridge ran did other means of communication, he not observe that day as a holiday. They would be working on the Internajumped on the midnight train for New "You're mad," said Meade, taking York. He would go himself in person tional as usual unless-

ing whatever could be so important. There had been some friction be-

will stand as long as creation. Look tween Abbott and Meade before on ocat it. That buckle doesn't amount to casions, not serious, but several times anything. It is only in one truss any- Meade had ventured to suggest some- ture as that which was to span the president there-the superintendent- ure. Back of him came Severence, the the red off of it."

The Death Message.

been cut out of his countenance by the

telegram crushed in his trembling

hand, despite the fact that his gray

face was the very picture of unwonted

weakness, of impotency, and abiding

horror. The message had struck him a

terrific blow. He had reeled under it

and had sunk down in the chair in a

The telegram fairly burned the

clammy palm of his hand. He would

fain have dropped it yet he could not.

Slowly he opened it once more. Ordi-

narily, powerful glasses stimulated his

vision. He needed nothing to read it

again. It is doubtful whether his eyes

saw it or not and there was not need.

for the message was burned into his

He read again the mysterious words:

There could be no mistake. The

One and three-quarter-inch camber in C-10-R.

name that was signed to it was the

name of his son, the young engineer,

but the elder man had overborne him

with his vast experience, his great au-

thority, his extensive learning, his high

reputation. And now the boy was right.

Strange to say some little thrill of

pride came to the old engineer at that

He tried to find out from the tele-

One and three-quarter inches of de-

flection ! No bridge that was ever made

could stand with a bend like that in

the principal member of its compres-

sion chord, much less so vast a struc-

pruning knife of time.

state of nervous collapse.

brain.

old. Meade, Sr., was an old man. Allast. . . . "Give me the blank," he answered, though unlike Moses his eye was dim

"I'll wire in your name." and his natural force abated, the evi-He repeated the telegram that he dences of power were still apparent, especially to the observant. There rose had sent to his father and added these the broad brow of the thinker. His words as he signed the old man's

name to it: Put no more load on the bridge. With-

draw men and traveler "I can't understand why we don't hear," said the young engineer two hours later, walking up and down the room in his agitation. "Two telegrams a great engineer could not be in spite and now we can't get a telephone conof all his scientific exactitudes, had not | nection, or at least any answer after our repeated calls." "It's a holiday there as well as here,"

said the older man. "There is no one He was a great engineer and looked it, sitting alone in his office with the in the office at Martlet."

> "I'll try the telephone again. Someone may come in at any time."

He sat down at the desk, and after five minutes of feverish and excited waiting he finally did get the office of the Martlet Bridge company. By a happy fortune It appeared that someone happened to come into the office just at that moment.

"This is Meade," began the young man, "the consulting engineer of the International bridge. Well, at ten-



All He Could Think of Was the Impending Ruin.

thirty this morning I sent a telegram to Colonel Illingworth and an hour later I sent another. What's that? Both telegrams are on the desk? Give me your name-Johnson-you're one of the clerks there? Well, telephone Colonel Illingworth at his home-

"Helen," said the young man, stepping toward her and taking her hands igain, "we're in awful trouble."

"If it is any trouble I can share, Bert," said the girl, flashing at him a look which set his pulses bounding-at least she was to be depended on-"you know you can count on me."

"I know I can," he exclaimed gratefully.

"Now tell me."

"The International bridge is about to fall."

The color came to her face again. Was that all? came into her mind. That was serious enough, of course, but it would not matter in the long run. Helen realized the awful gravity the terrible seriousness, of the situa tion of course. The bridge meant much to her even if in quite a different way. It was there he had saved her from the awful fall. It was there that he hy told her that he loved her. The brig might fall, but it was as eternal as, affection in her memory, Their, gagement, or their marriage, had made dependent upon the succe completion of the bridge. Wh that? The provise meant nothing her when she looked at the white agonized man to whom she ha herself.

"It is terrible, of course," st quietly. "But you can do nothin "If I could, do you think I'd bridge, and you, go without-" "I'm not going with the bridge, her quick and decisive interruption They had both forgotten the p ence of young Johnson, who was only decidedly uncomfortable, but des perately anxious. He was about to to shoot cr speak when, into this already broken the corn is liable to scene, came another interruption.

driveway outside, the roar of a motor, gun when the time is at hand. It Before Meade could answer the statement, into the room burst Colonel IIlingworth. He was covered with dust, his face was white his eyes filled with anxiety. The character of the sumwhat! He isn't at home? Is the vice mons had disquieted him beyond mens- bert-"Well, it doesn't seem to wear

except on direct orders from here. "Your father wires, 'put no more weight on the bridge.' What shall we do?" interposed Colonel Illingworth. "Telegraph Abbott at once."

"If the bridge goes it means ruin to the company," said the agitated vice president, who was the financial member of the firm and who could easily be pardoned for a natural exaggeration under the terrible circumstances.

"Yes, but if it goes with the men on, it means-Johnson, are you a telegraph operator?"

"Yes, sir."

"Take the key," said the colonel, who, having been a soldier, thought first of the men.

Johnson sat down at the table where the direct wire ran from the bridge company to the telegraph office. He reached his hand out and laid his fingers on the key. Before he could give the faintest pressure to the instrument, it suddenly clicked of its own motion. Everybody in the room stood silent.

"It is a message from Wilchings, the chief of construction foreman of," Johnson paused a moment, listening to the rapid click-"the International-" he said in an awestruck whisper. It had come!

hd it, man ! Read it, for God's cried the chief engineer. se bridge is in the river," faltered slowly, word by word, transe fearful message on the wire.

and one hundred and fifty men

at happens after the crash in the next installment. happens to the Meades lingworths, and the vast stirred up, makes thrillters.

E CONTINUED.)

the Loaded Gun turns from gun in

loss than a million cro kes There was a rush of wheels on the only a second to put a cartridge in a takes no longer to take it out.

## Blossom Remains,

Bacon-"Crimsonbeak says his wife keeps his nose to the grindstone." Eg-